



# WORLD PORTS TRACKER

EDITION 6  
(Quarter 4, 2023)

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# 1 WHAT IS THE IAPH WORLD PORTS TRACKER?

*We are pleased to present the sixth edition of the World Ports Tracker, an IAPH initiative to monitor and evaluate critical developments in the global port industry as they evolve. The IAPH World Ports Tracker provides ports with a timely understanding of strategic challenges that emerge regionally and globally.*

The first four editions of the tracker relied on a combination of two sources: survey-based results on cargo and passenger markets in ports and container port performance data. The first edition was released in May 2022, introducing this new data tool, which elaborated on the non-survey part of the tracker exercise based on four container port metrics. The second edition was released in July 2022 and presented the analysis of the first survey data, which had been collected in June 2022. The third edition of the IAPH World Ports Tracker was introduced in November 2022 and combined survey-based results with container port performance data for the first time. The fourth edition was released in February 2023 and considered both sources.

The fifth edition, for the first time, incorporated UNCTAD data on the Liner Shipping Connectivity Index (LSCI) on top of the IAPH survey data and S&P's container port performance data. The LSCI data provided by UNCTAD were aggregated into port regions to match the geographical classification of ports used in the survey part.

The IAPH survey part of this sixth report presents the analysis of data collected in February 2024. The IAPH World Ports Tracker survey includes questions revealing the trends in the container market, the other cargo markets (breakbulk and bulk), and the passengers/cruise business. Some of these questions ask about the current status of the ports, while other questions reflect the short-term expectations of port managers for the next quarter or the next twelve months. Along with questions on staff availability, these questions are answered by ports during every World Ports Tracker survey round. However, in this particular survey round, we also added four questions dealing with more general issues and strategic and operational considerations for seaports. These questions are focused on port investments, changes in the land use in port areas, new terminal capacity extensions becoming operational in the next 12 months and the impact of Red Sea crisis on world ports.

The survey was sent out in February 2024 to all IAPH members. A total of 58 valid answers were received, about 20 replies fewer than the three previous survey rounds. North Europe, the Mediterranean and Sub-Saharan Africa are the leading regions, with 13, 12 and 9 responding ports, respectively (Figure 1). The low representation of ports of the other regions necessitates that the regional discussion of the survey results will mainly focus on regions with the highest number of respondents.

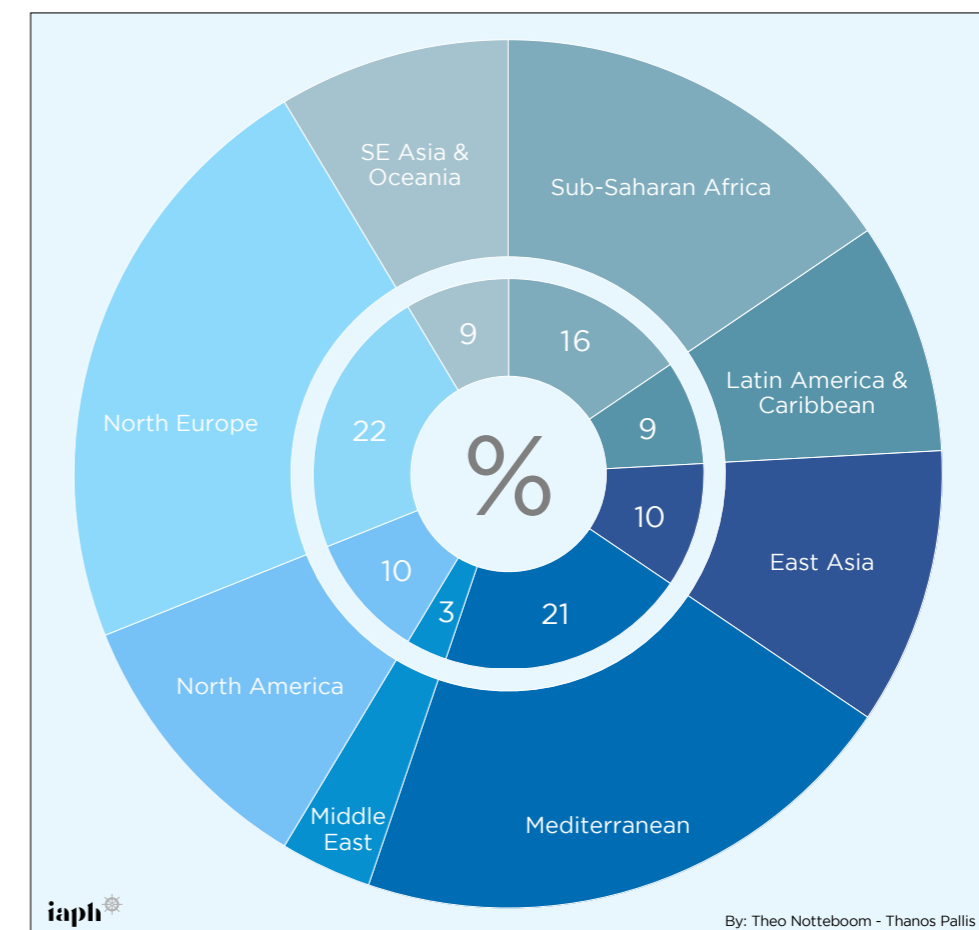
The non-survey part of the IAPH World Ports Tracker analyses quarterly container port statistics based on UNCTAD data on the LSCI and S&P Global Port Performance Program data. The latter statistics focus on four container port metrics, i.e., the number of vessel calls, the evolution of vessel size, the evolution of call size (number of TEUs handled per call), and port moves per hour, aggregated per region. This data report covers the period from Q1 of 2019 to Q4 of 2023, thus covering the last pre-pandemic year as well as the COVID-19 years of 2020 and 2021. The data analysis is based on an index-based evolution

(Q1 2019 = 100) in nine port regions. This report presents the evolution of the respective indexes on a year-on-year basis per region - comparing the calls in Q4 2023 with those of the same quarter of the year before, thereby avoiding any seasonality bias. This part of the analysis also discusses the trends per region, focusing on the changes in the last two quarters of 2023 and the level of volatility that might have occurred in the five years under examination.

The results are analysed and displayed in an aggregated manner per region and for the world as a whole. In view of analysing regional differences, each port is assigned to one of the following nine port regions: North America (the U.S. and Canada); Central and South America; East Asia; North Europe; the Mediterranean; Sub-Saharan Africa; the Middle East and Central Asia (including Arabian Gulf and Indian Subcontinent); and, South East Asia and Oceania (including New Zealand and Pacific Islands). All information obtained is treated confidentially, and only aggregated data is published. No reference is made to individual ports.

Revealing the most recent global and regional supply chain trends, the IAPH World Port Tracker enables ports to understand better the available prospects and the major challenges they might need to address. Via quarterly updates, the IAPH World Ports Tracker will guide ports and stakeholders in their efforts to improve services and develop their strategies. In addition, a summary of the report features in the IAPH Ports & Harbors magazine, with the full report circulated to the IAPH membership.

Figure 1  
Replies to the Survey (in %)





## 2

### THE RESULTS AT A GLANCE

*Before engaging in a more detailed analysis, the overall results of the survey and non-survey parts of the IAPH World Ports Tracker are summarised in dashboard-style tables.*

*Dashboards I to IV present the IAPH World Ports Tracker survey and non-survey results. The survey-based exercise covers the trends in world ports as of the end of the fourth quarter of 2023. The latest results for the world are also compared with the world results of the September 2023 survey (Q2 2023). The dashboards also report on the survey results at a regional level, using five responding ports as a critical threshold. You can find comprehensive data and a more detailed regional analysis of responses to the survey questions for cargo and passenger markets later in this report.*

## Dashboard I

### Trends in World Cargo Ports (February 2024)



Dashboard I summarises the trends in the number of vessel calls in the different cargo markets. Compared to the September 2023 survey, fewer cargo ports report year-on-year growth in the number of container vessel calls. Little change occurred at the level of bulk carriers and tankers. About 40% of respondents report a notable increase in other cargo vessel calls (up from 30% in Q2 2023). Sub-Saharan Africa (across the board) and Southeast Asia & Oceania (for other than other cargo vessels) present the highest shares.

#### Number of vessel calls: Percentage of ports with >2% growth Q4 2023 vs. Q4 2022

Container vessel	50%	53%	20%	42%	33%	100%	67%	-
Bulk carrier	33%	32%	-	25%	-	18%	40%	50%
Tanker and gas carrier	26%	27%	-	20%	-	30%	40%	50%
Other cargo vessels	40%	30%	-	36%	20%	25%	0%	67%

Note: empty cells = less than 5 respondents

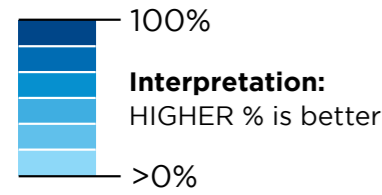
*Ports around the world are, on average, more optimistic than half a year ago about the expected traffic evolution in the next twelve months. In Sub-Saharan Africa, the vast majority of ports expect healthy growth.*

#### Traffic volume expectations: Percentage of ports with >2% growth expectation in the next 12 months

Containers (TEU)	55%	47%	40%	55%	40%	50%	75%	78%
Dry bulk (tonnes)	50%	41%	-	36%	-	25%	-	89%
Liquid bulk (tonnes)	48%	31%	-	60%	-	30%	-	75%
Other cargo (tonnes)	40%	25%	-	55%	20%	18%	25%	78%

Note: empty cells = less than 5 respondents

Close to 55% of ports expect a growth of at least 2% in the container throughput. This is the highest figure since the launch of the World Ports Tracker: this figure amounted to 47% in the September 2023 survey, 49% in the February 2023 survey and 52% in the November 2022 survey. The traffic volume expectations show an even stronger improvement for the other cargo markets. The regional figures reveal that the shares of responding ports expecting traffic volume growth above 2% in the next year, across the board, are lowest in North America and North Europe and the highest in Africa and the Mediterranean.



	Africa	Latin America & Caribbean	Mediterranean	Middle East & India	North America	North East Asia	Northern Europe	Oceania	South East Asia
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## Dashboard II

### Trends in Container Ports (February 2024)

Dashboard II covers two sets of data. The top part summarises the index-based changes in container ports per region between Q4 2022 and Q4 2023 for four indicators based on S&P Global Port Performance Program data. The index-based evolution of the vessel calls per region reveals that in Q4 2023 and on a year-on-year basis, seven out of nine regions showed growth in the number of container vessel arrivals compared with the calls of Q4 2022. In three regions this growth has been of a double-digit percentage, i.e., Northern Europe, South East Asia, and Latin America & Caribbean. The exemptions were in the Mediterranean and Oceania, where vessel calls declined by 1% and 11%, respectively. From a longer-term perspective, vessel calls remain lower compared to Q1 2019 in five of the nine regions, with vessel calls in Oceania even declining by more than 20%. Also, North East Asia, North America, Northern Europe, and South East Asia recorded double-digit declines in container vessel arrivals compared to the pre-COVID-19 period.

Between Q4 2022 and Q4 2023, the Middle East & India (+16%), the Mediterranean (+15%), and North America (+10%) reached double-digit growth in the share of calls by container ships of 8,501+ TEU capacity. A strong decrease in this share was recorded in North Europe (-12 %) and Southeast Asia (-8%). Oceania went from only 0.7% for 8,501+ TEU vessels of all container vessel arrivals in Q1 2019 to 7.8% in Q4 2023. In the same observation period, double-digit growth was observed in North America (+44%), North-East Asia (21%), and four other regions. In the past four and a half years, the share of 8,501+ TEU vessels decreased strongly in Africa (-21%) and North Europe (-5%).

On a year-on-year basis, the average call sizes show increases in only two of the nine regions: Africa and the Mediterranean (+6% each). The decline was a double-digit one in Northern Europe (-15%). The steep year-on-year increase in the number of vessel calls thus goes hand-in-hand with much smaller call sizes. When focusing on medium-term changes however the picture is different. Compared to Q1 2019, smaller call sizes are observed only in Northern Europe, where the change is marginal (-1%), and in the Middle East & India, where the percentage change is relatively low (-4%). Overall, since 2019 the TEU handled per container ship call has increased, with major increases in average call sizes compared to the pre-pandemic year 2019 recorded in North East Asia (+20%), Oceania (+17%) and South East Asia (+16%).

The regional data on port moves per hour demonstrate that five of the nine world's port regions had to accept a decline in Q4 2023 compared to the same quarter in 2022. Port productivity levels saw strong year-on-year growth in North America (+37%) and North East Asia (+13%), while they strongly declined in Africa (-13%), Latin America & Caribbean (-16%) and Middle East & India (-10%). When considering the trends in the past four and a half years, it becomes clear the number of port moves per hour saw a double-digit decline in Oceania (-30%), Africa (-21%), and Latin America & Caribbean (-13%) and a strong increase in North East Asia (+20%).

#### Evolution: (year-on-year) in container ports (index based evolution / Q4 2023 vs Q4 2022)

Number of Vessel Calls	3%	11%	-1%	1%	9%	4%	17%	11%	13%
Share of Container ships of > 8.500 TEU capacity	-5%	-3%	15%	16%	10%	3%	-12%	*	-8%
Call Size	6%	-2%	6%	-1%	-8%	-1%	-15%	-3%	-1%
Port Moves Per Hour	-13%	-16%	-5%	-10%	37%	13%	-2%	0%	5%

#### Evolution: (Long-term) in container ports (index based evolution / Q4 2023 vs Q1 2019)

Number of Vessel Calls	4%	3%	1%	1%	-15%	-16%	-13%	-21%	-10%
Share of Container ships of > 8.500 TEU capacity	-21%	12%	11%	11%	44%	21%	-5%	*	11%
Call Size	7%	13%	4%	-4%	9%	20%	-1%	17%	16%
Port Moves Per Hour	-21%	-13%	-6%	-2%	-7%	20%	-4%	-30%	10%

#### Evolution: (year-on-year) in LSCI of top 5 countries (index based evolution / Q1 2024 vs Q1 2023)

Best ranked country in region	8%	6%	1%	5%	-3%	3%	-3%	-3%	1%
Second best ranked country in region	2%	6%	5%	6%	2%	7%	2%	4%	1%
Third best ranked country in region	25%	3%	2%	8%		-4%	-2%	5%	1%
Fourth best ranked country in region	5%	9%	6%	-2%		5%	-4%	8%	-3%
Fifth best ranked country in region	2%	13%	6%	9%		1%	12%	10%	-10%

#### Evolution: (Long-term) in LSCI of top 5 countries (index based evolution / Q1 2024 vs Q1 2019)

Best ranked country in region	-8%	13%	10%	37%	3%	20%	-8%	-2%	3%
Second best ranked country in region	34%	13%	25%	12%	0%	15%	-6%	14%	8%
Third best ranked country in region	27%	14%	0%	19%		2%	-8%	11%	30%
Fourth best ranked country in region	52%	19%	-7%	24%		-13%	-15%	23%	13%
Fifth best ranked country in region	12%	9%	30%	31%		-3%	8%	11%	1%

\* In Oceania the size of such calls in 2019 was very small, thus the increase of the index is not detailed.

Source: own compilation based on S&P Global Port Performance Program data (first two sections of the table) and LSCI data provided by UNCTAD and MDS Transmodal (last two sections)



The bottom part of dashboard II summarises some of the findings related to the country-based Liner Shipping Connectivity Index (LSCI) data provided by UNCTAD. The five best-connected countries per region in terms of the LSCI values are listed. The year-on-year development and the Q1 2019-Q1 2024 evolution of the country-based LSCIs are shown.

The comparison of LSCI in Q1 2024 with the same quarter of 2023 illustrates, among others, a positive evolution of connectivity in sub-Saharan Africa, where all five best-connected countries recorded an improved LSCI, with a major rise incurring in Nigeria (24.6%). A similarly positive shift was recorded in Latin America and the Caribbean (LAC), with Ecuador registering a considerable (i.e., double-digit percentage) LSCI increase, and in the Mediterranean Sea. In the first quarter of 2024, liner shipping connectivity has also improved compared to the year before in most of the best-connected countries in the Middle East and Indian subcontinent, in Oceania, and to a lesser extent in North East Asia. In North America, trends in the US and Canada have gone different ways. On the other hand, in the same period, the LSCI of the best-connected countries in Southeast Asia has either improved marginally or, in the cases of Thailand and Indonesia, stands lower than a year before. North Europe is the region where three of the best-connected countries have seen the levels of their connectivity lowering (i.e., Netherlands, Belgium, and Germany), while positive or substantial improvements have occurred in the other two (the UK and Poland respectively).

Comparing the long-term trends, Dashboard II reveals a positive evolution of the LSCI in the best-connected countries in several parts of the world. Comparing the beginning of 2024 with a similar period of 2019, a significant LSCI growth was recorded in sub-Saharan Africa, where the scale of increase in four of the best five connected countries has been impressive, the Middle East and the Indian Sub-continent, where significant improvements spread in all best-connected countries. LAC and Oceania are three other world regions where widespread improvements are of a balanced magnitude. In the same period in North America, the LSCI increases presented single-digit percentages. The trends have also been positive in Southeast Asia, one of the best-connected regions. In this case, however, the LSCI growth in some cases, i.e., in Vietnam and Thailand, has exceeded the regional trends.

The trends in the last five years have been quite diverse in Europe. On the one hand, trends have been positive in the Mediterranean Sea. Three of the best-connected countries in the region have experienced double-digit percentage LSCI improvements, and trends have been marginal in the fourth and negative in the fifth. On the other hand, in North Europe, the four best-connected are considerably less connected today than five years ago, and a positive trend occurred in the fifth best-connected one.

In North East Asia, the region that hosts four of the best-connected countries in the world, the picture is a most illustrative example of the dynamics of liner shipping and ports serving the container market. In the last five years, liner shipping connectivity in the best two connected countries of the world, China and South Korea, the LSCI increase has been a double-digit one, but in the other cases, the trend has been positive to a lesser extent, or even negative. As Dashboard II hints and the regional analysis of the LSCI evolution in the forthcoming sections of the report reveals, the notable internal dynamics are present in all world regions.

## Dashboard III

### Trends in World Cargo Ports (February 2024)

Turning back to the survey results, the situation in hinterland transport shows very mixed results, although overall only a small number of ports face major disruptions (Dashboard III).

The situation for container transport by rail and barge slightly deteriorated, while the share of ports facing delays in trucking in Q4 2023 saw a further decline at the single-digit level with several regions reporting no problems at all.

However, hinterland transport of bulk/breakbulk flows shows more disruptions. The inland transport situation for barges in these market segments has only marginally deteriorated, although the share of respondents referring to delays remains below a quarter. One fourth and 29% of the responding African ports faces some issues with trucking of containers and bulk and breakbulk cargoes, respectively.

The situation in warehousing and distribution facilities showed a sharp drop for containerised cargo in Q4 2022 compared to Q3 2022. However, Q2 2023 showed a sudden increase from 16% to 26% which further increased to 29% in Q4 2023 with North America and North Europe showing the highest shares. In the dry bulk segment, however, the percentage of ports reporting underutilisation of facilities or capacity shortages has seen a steep decline. In the liquid bulk market, the situation slightly deteriorated although the overall percentages of ports reporting underutilisation or capacity shortages remained relatively small. There is a strong variation across market segments when considering the regions having the biggest challenges in terms of underutilisation or capacity shortages in the warehousing and distribution market.

The situation in terms of the availability of truck drivers shows a further improvement when compared to Q2 2023.

About 38% of all responding ports now report truck driver availability shortages compared to 45% in Q2 2023, 29% in Q4 2022, 37% in Q3 2022 and 40% in Q2 2022. North America is the region where truck driver availability concerns are minor, while in North Europe more than half of the ports report issues. The availability of dock workers has significantly deteriorated compared to Q2 2023, and approaches the figure of Q4 2022. The availability issues seem most acute in Southeast Asia & Oceania, while Northern Europe shows the least problems in this area. Technical-nautical staff availability issues have increased at a more moderate rate, with Sub-Saharan Africa having the highest share of ports reporting shortages.



#### Hinterland transport:

Percentage of ports with delays (6-24h), major disruptions (> 24h) or discontinued operations

	WORLD Q4 2023	WORLD Q2 2023	Central and South America	East Asia	Mediterranean	North America	North Europe	Southeast Asia Oceania	Sub-Saharan Africa
Container - Truck	6%	9%	-	-	0%	0%	0%	0%	25%
Container - Rail	11%	11%	-	-	18%	-	0%	-	-
Container - Inland barge	20%	16%	-	-	-	-	14%	-	-
Bulk/breakbulk - Truck	24%	27%	-	-	33%	-	20%	-	29%
Bulk/breakbulk - Rail *	88%	28%	-	-	-	-	-	-	-
Bulk/breakbulk - Inland barge	23%	15%	-	-	-	-	29%	-	-

Note: empty cells = less than 5 respondents

#### Warehouses/distribution facilities:

Percentage of ports with underutilised capacity or capacity shortages

	WORLD Q4 2023	WORLD Q2 2023	Central and South America	East Asia	Mediterranean	North America	North Europe	Southeast Asia Oceania	Sub-Saharan Africa
Containerised cargo	29%	26%	-	20%	25%	40%	42%	-	11%
Dry bulk	18%	31%	-	-	25%	-	8%	-	0%
Liquid bulk	17%	13%	-	-	27%	-	20%	-	0%
Other cargo	14%	19%	-	-	20%	-	11%	-	0%

Note: empty cells = less than 5 respondents

#### Staff availability:

Percentage of ports reporting moderate to severe shortages

	WORLD Q4 2023	WORLD Q2 2023	Central and South America	East Asia	Mediterranean	North America	North Europe	Southeast Asia Oceania	Sub-Saharan Africa
Dock workers	30%	19%	-	-	27%	33%	17%	60%	33%
Technical-nautical services	30%	23%	-	-	27%	17%	15%	40%	56%
Truck drivers	38%	45%	50%	50%	36%	17%	54%	40%	25%

\* Based on only 8 respondents globally in Q4 2023





## Dashboard IV Trends in World Passenger Ports (February 2024)

### Number of passenger vessel calls: Percentage of ports with >2% growth Q4 2023 vs. Q4 2022

	Q4 2023	Q2 2023	East Asia	Mediterranean	North Europe	Sub-Saharan Africa
Cruise vessels	40%	64%	-	27%	42%	43%
Ferries	24%	32%	-	43%	17%	-

Note: empty cells = less than 5 respondents

In the passenger markets (Dashboard IV), the share of ports reporting an increase in cruise vessel calls decreased strongly compared to Q4 2022, while this share decreased from 32% to 24% for ferry calls.

### Cruise activity expectations: Percentage of ports with >2% growth expectation in the next 12 months

	Q4 2023	Q2 2023	East Asia	Mediterranean	North Europe	Sub-Saharan Africa
Cruise vessel calls	52%	62%	100%	45%	33%	86%
Cruise PAX movements	63%	68%	100%	70%	50%	86%

Note: empty cells = less than 5 respondents

In February 2024, fewer ports expected growth in cruise vessel calls in the next twelve months (52% in February 2024 vs 62% in September 2023, 65% in March 2023, 69% in November 2022 and 71% in June 2022). Also, the share of ports foreseeing growth in cruise passenger movements in the next twelve months has declined slightly from 77% in March 2023 to 68% in September 2023 and 63% in February 2024 (note that it was 73% in November 2022 and 64% in June 2022).

### 3

## TRENDS IN CARGO PORTS: EVOLUTION OF VESSEL CALLS

*What was the trend in the number of calls in the most recent quarter of the year (Q4 2023) compared to the same period of the past year (Q4 2022)? We asked ports to provide their estimation distinguishing between four merchant vessel categories: container vessels, dry bulk carriers, tankers and gas carriers, and other cargo vessels.*

### 3.1. Overall survey results

Considering the global population of seaports, Q4 2023 revealed about 50% of respondents experiencing a positive trend in the calls of container ships, i.e., a year-on-year growth of more than 2%. For dry bulk carriers, tankers and gas carriers, and other cargo vessels, these figures amounted to 33%, 26% and 26% respectively.

**13% of the responding ports realised a growth of more than 10% in container vessel calls. The percentage of liquid bulk and dry bulk ports recording in Q4 2023 a double-digit percentage growth is 7% and 10% respectively.**

The number of ports that in Q4 2023 recorded a lower number of calls compared to the same quarter of the year before has remained significant. About 40% of the ports reported a drop in container vessel calls, a figure that is the same for tankers and bulk carriers. However, in the latter cases, the share of ports reporting a decline of more than 10% is much higher: 14% for tankers and gas carriers, and other cargo vessels, 19% for dry bulk carriers and only 8% for container ships.



Figure 2  
Evolution of vessel calls (Q4 2023 compared to Q4 2022)

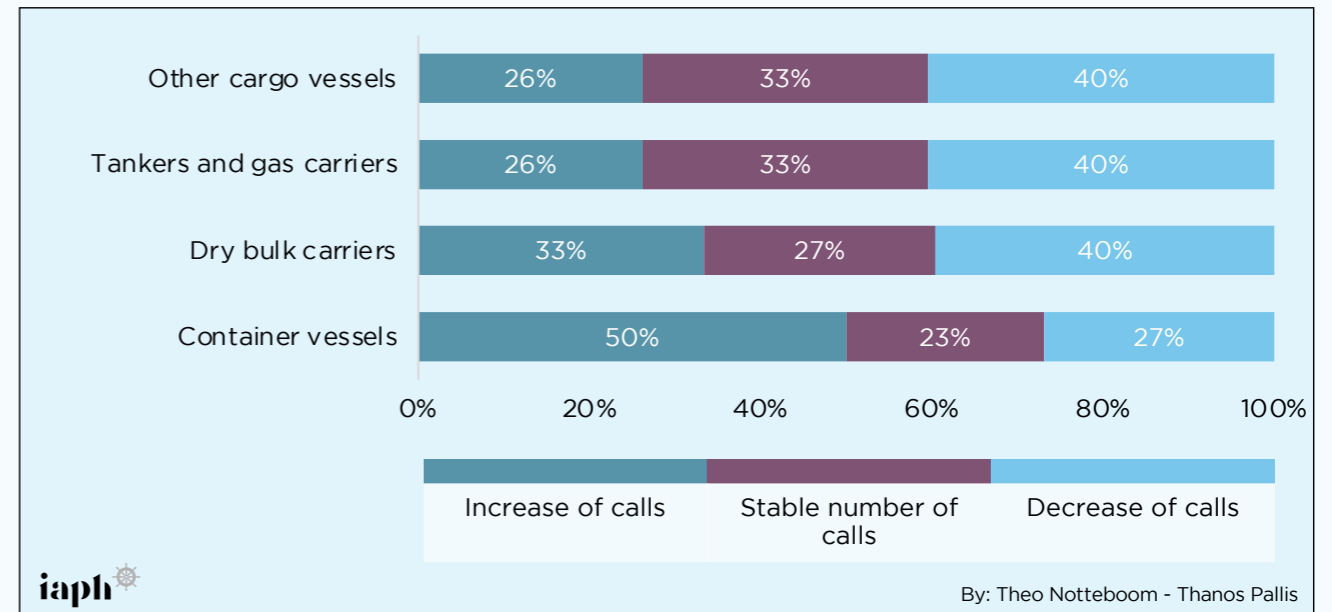
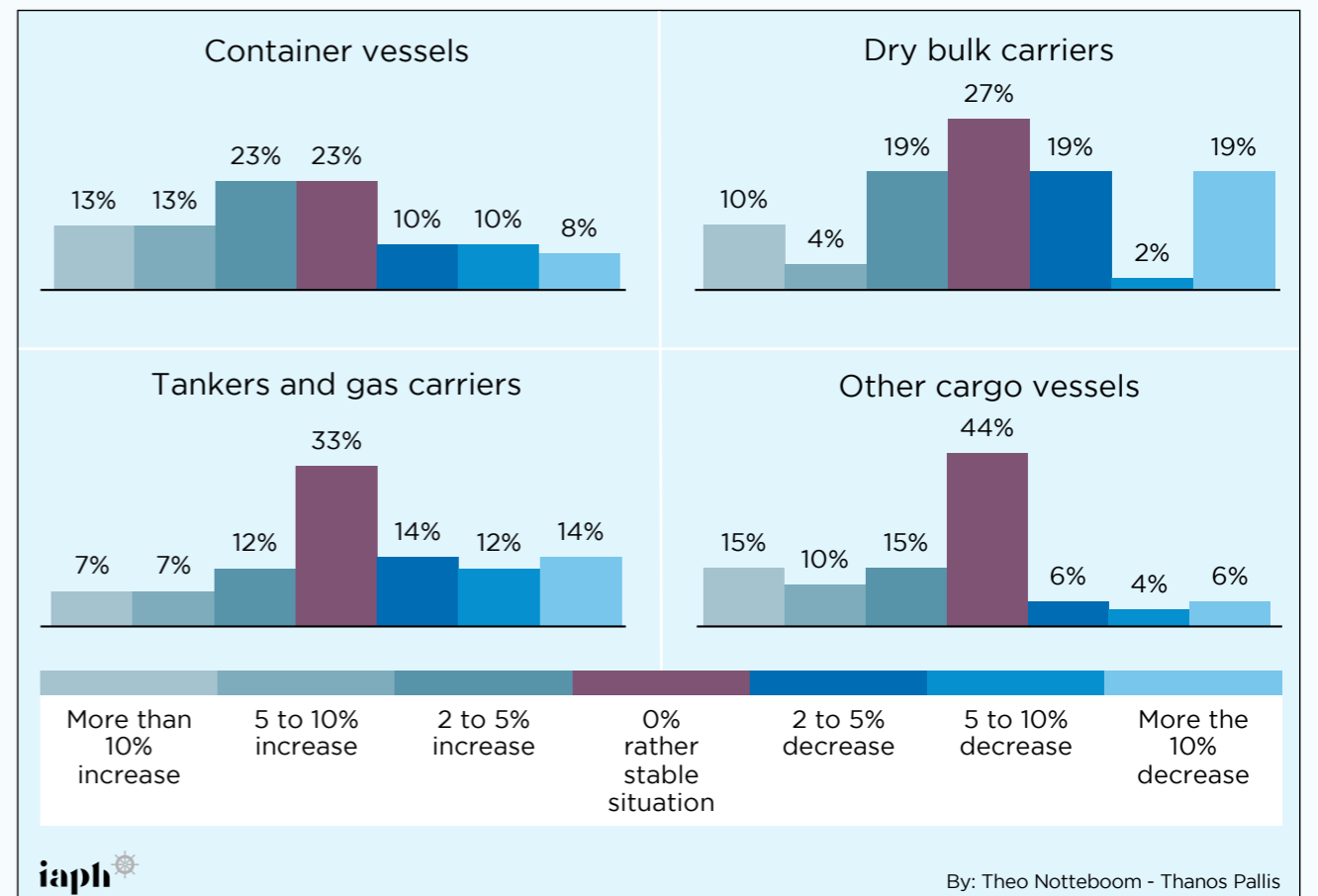


Figure 3  
Evolution of vessel calls per type of vessel (Q4 2023 vs Q4 2022)



### 3.2. Regional Perspectives

The regional analysis focuses on four regions, i.e., North Europe, the Mediterranean, North America and Southeast Asia & Oceania.

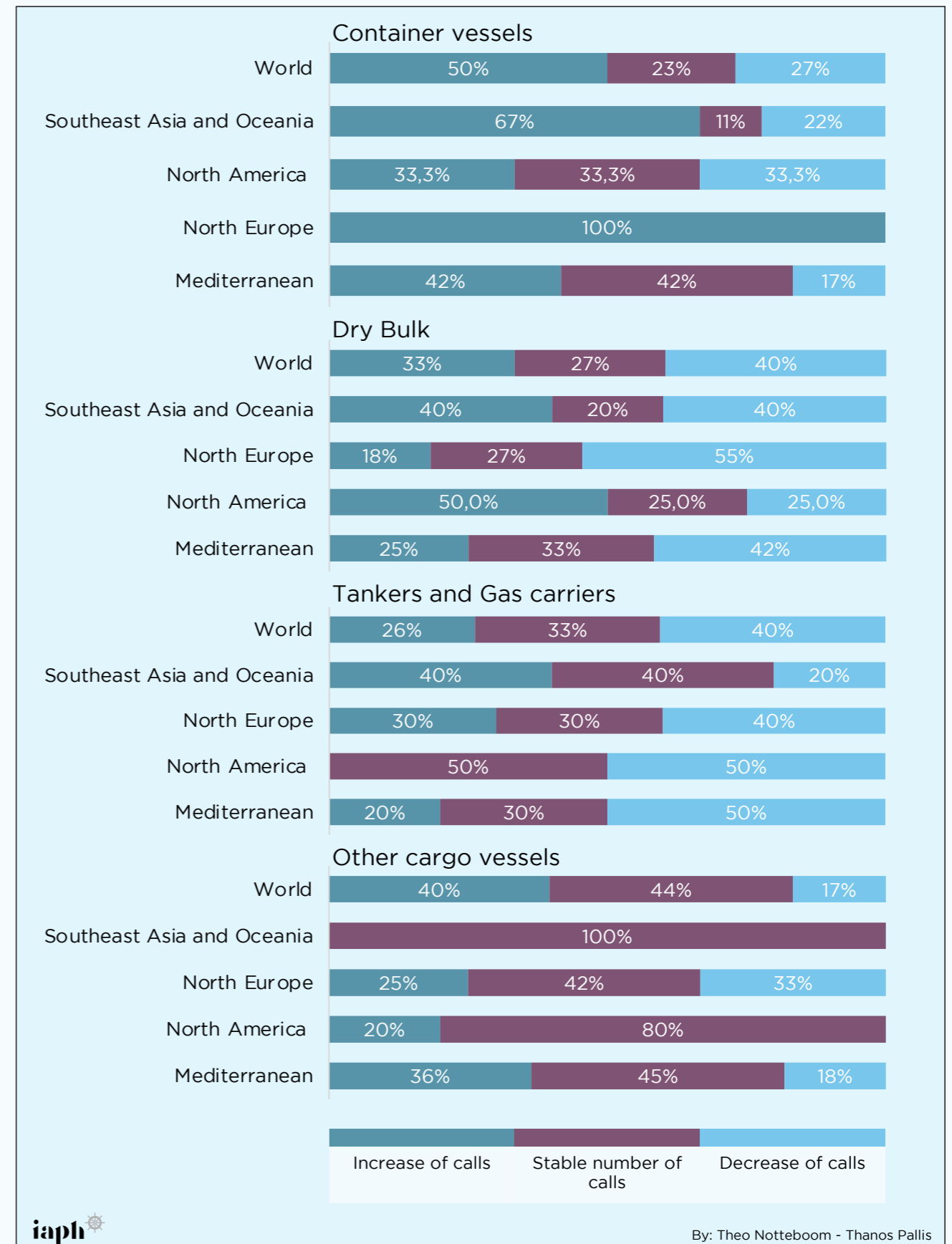
Responding ports from North Europe all report an increase in container vessel calls of a minimum 2%. The Southeast Asia & Oceania port region shows the second most positive figures for container vessel calls, with about 67% of the ports expecting growth above 2%. North America offers the least promising figures regarding trends in the number of containership calls: one-third of North American container ports record more than 2% growth.

For dry bulk vessels, all regions, except for North Europe and North America, show fairly similar results regarding the share of ports, indicating a decrease in vessel calls. Some differences are observed regarding the share of respondents reporting an increase in vessel calls of more than 2%, ranging from 50% in North America to 18% in North Europe.

For tankers and gas carriers, 40% of the respondents in South East Asia & Oceania realised an increase in liquid bulk vessel calls, compared to 20% for the Mediterranean and even zero percent in North America. The share of ports expecting a (sharp) decline is the highest (at 50%) in North America and the Mediterranean.



Figure 4  
Evolution of vessel calls per type of vessel in selected world regions (Q4 2023 vs Q4 2022)



# 4

## TRENDS IN CARGO PORTS:

### VOLUME EXPECTATIONS IN THE NEXT TWELVE MONTHS

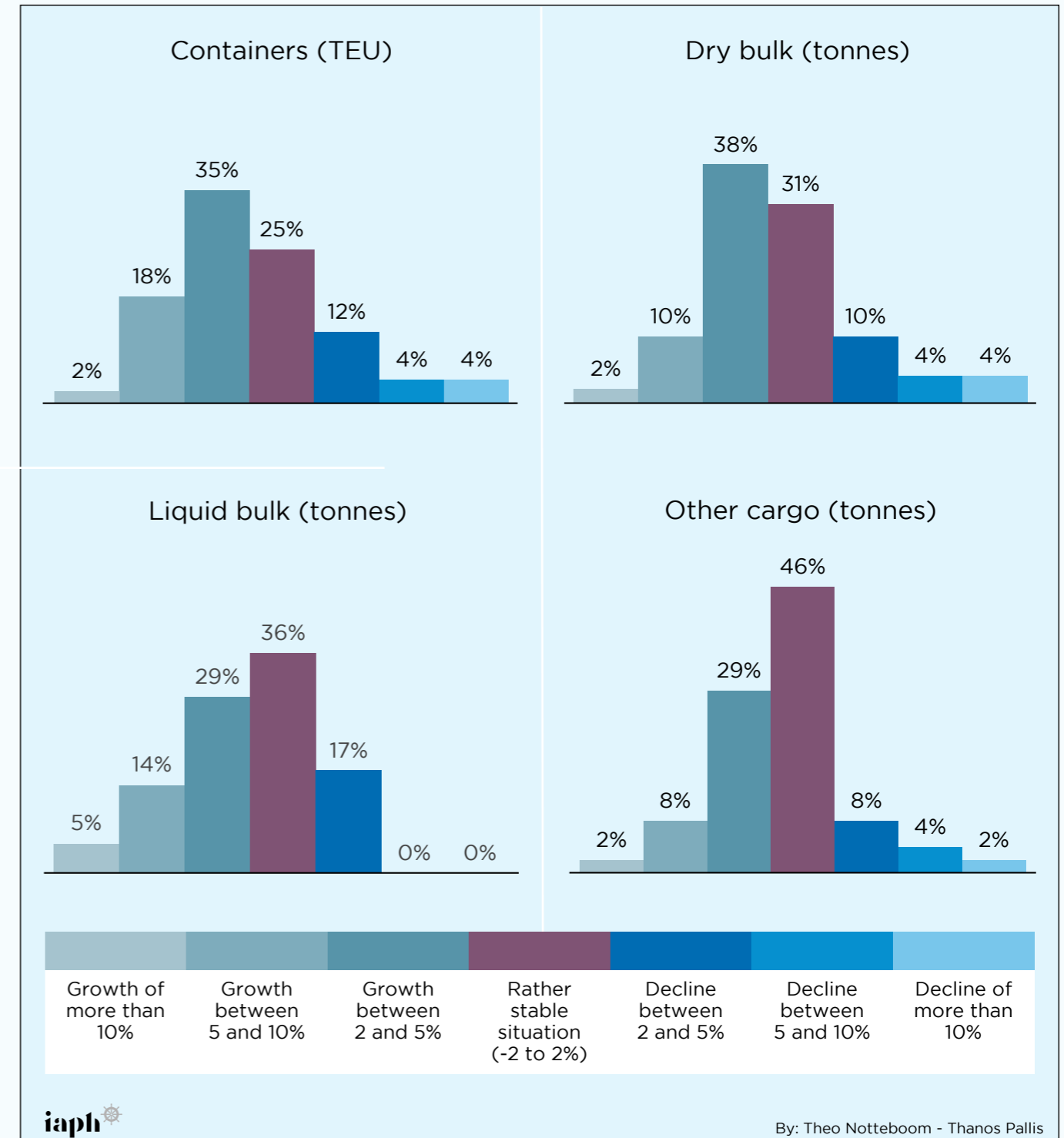
*One of the survey questions aims to reflect the short-term prospects for cargo volumes in world ports for the next twelve months: “In the next twelve months, do you expect the cargo throughput at your port to increase or decline?”. The answering scale includes three positive growth categories (>10%; +5 to +10% and +2 to +5%), three negative growth scales (-2 to -5%; -5 to -10%; and < -10%) and one reflecting a rather stable cargo traffic situation (-2 to +2%). Also, a distinction is made here between containerised cargo, dry bulk, liquid bulk and other cargo (conventional general cargo and breakbulk). The traffic expectations use TEU as a basis for container volumes and metric tonnes for the other goods categories.*

### 4.1. Overall survey results

The overall results show that 55% of respondents expect a year-on-year annual growth rate in container volumes of more than 2% for the next twelve months. About one quarter of ports do not expect major changes in the handled TEU volume, while about 20% are preparing for a volume decline.

In the dry bulk market, about half of the ports expect growth in calls over 2%, with more than one third of ports forecasting a mostly modest volume decline. For liquid bulk flows, 48% of ports forecast growth of more than 2% in the next twelve months, with about 17% predicting a volume decline. In the 'other cargo' category, quite a few ports expect a positive volume development for project cargo, mainly related to energy transition projects.

 Figure 5  
Cargo volumes in world ports for the next twelve months: Expectations as of February 2024.



## 4.2. Regional perspectives

The regional analysis reveals that, among the four selected port regions, the port system in Southeast Asia and Oceania shows the highest share of respondents counting on a minimum container volume increase of 2% over the next twelve months, followed by the Mediterranean and North Europe. Up to a quarter of the responding ports of the four regions expect a TEU drop of more than 2% in the next twelve months.

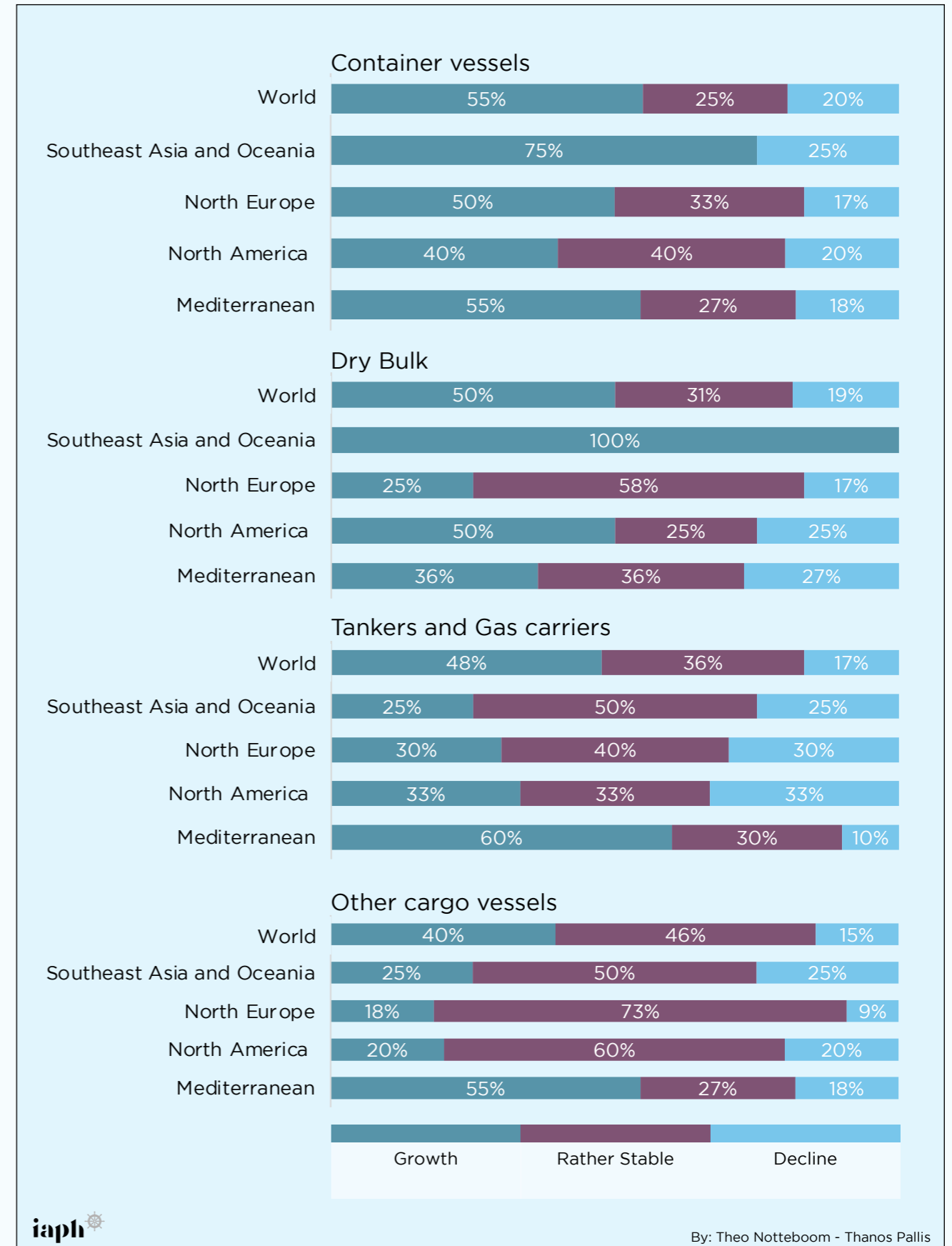
Southeast Asia and Oceania also has the highest volume expectations in the dry bulk market. The Mediterranean has the highest share of ports expecting a decline in dry bulk volume in the next 12 months. There are significantly more ports expecting volume increases in dry bulk compared to those counting on volume drops.

In the tanker and gas carrier market, only the Mediterranean shows a share above 50% of ports expecting a volume growth of at least 2%. Half of the ports in Southeast Asia & Oceania count on a stabilisation of volumes, while the expectations in North America are evenly split between growth, stabilisation and decline. Also, in North Europe there is a fairly equal distribution between the three categories.

The “other cargo” category includes mainly breakbulk and conventional general cargo. This category thus consists of a myriad of different cargo flows such as project cargo (for example, power generation equipment, equipment for the oil and gas industry, mining equipment, and heavy machinery), iron and steel products, non-containerised forest products, reefer vessel trades and break-bulk shipments of smaller lots such as big bags, skidded, and palletised cargoes. This diversity in goods and the different market prospects that go with each specific commodity and trade flow might explain why the spread in growth expectations is relatively large when comparing port regions.



Figure 6  
Cargo volumes in world ports for the next twelve months:  
Expectations in selected port regions as of February 2024.





# 5

## TRENDS IN CARGO PORTS:

### VESSEL ACTIVITY AND PRODUCTIVITY IN CONTAINER PORTS

*This section of the report provides an in-depth analysis of vessel activity and productivity in container ports. The analysis is based on quarterly container port statistics compiled as part of the S&P Global Port Performance Program. We focus on four container port metrics covering the period from Q1 of 2019 to Q4 of 2023, i.e., the number of vessel calls, the evolution of vessel size, the evolution of call size (number of TEU handled per call), and port moves per hour, aggregated per region. We start the analysis with an ‘in focus’ discussion of container port productivity expressed in port moves per hour, followed by a regional analysis of the non-survey data results.*



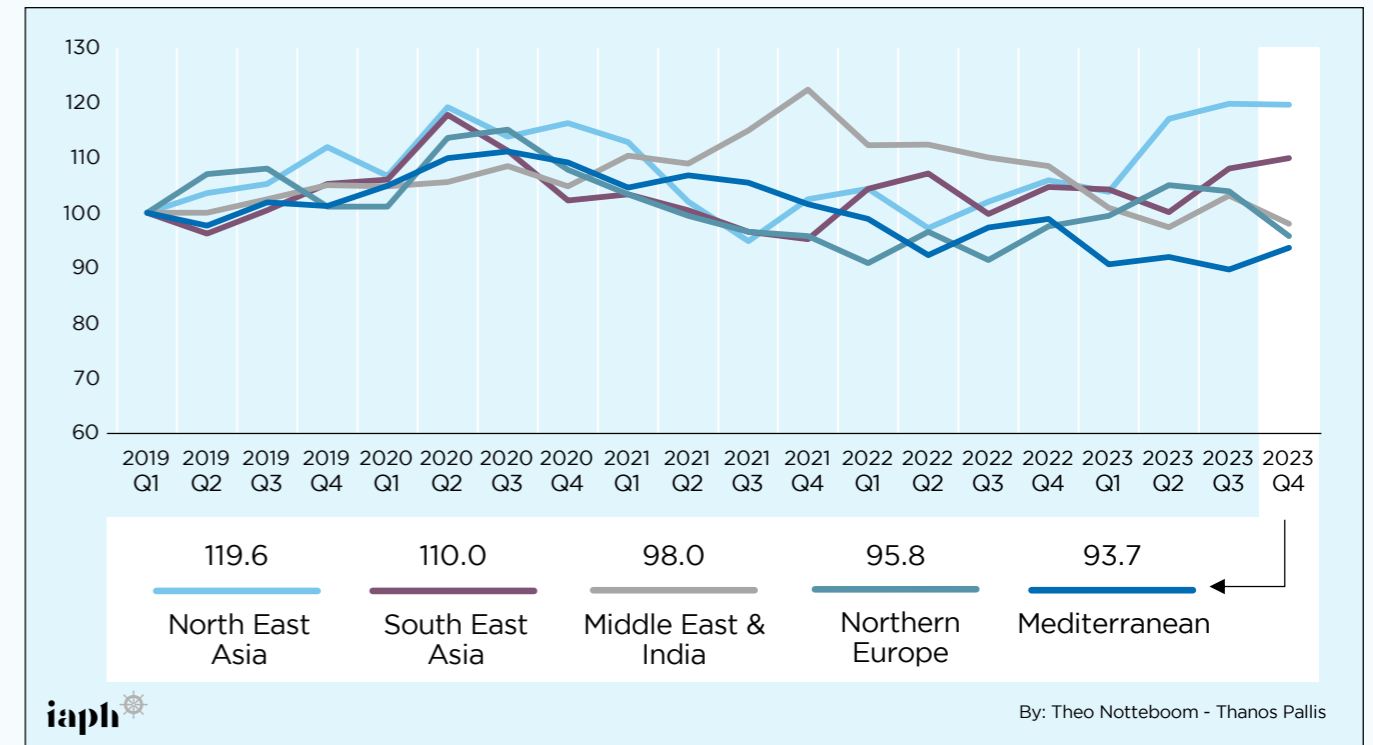
## 5.1. In focus: Port Moves Per Hour

On a year-on-year basis, port productivity in Q4 2023 increased in only three of the nine world regions. Growth in average port moves per hour was recorded in North America (+37% compared to Q4 of 2022), North East Asia (+12.9%) and South East Asia (+5%).

The year-on-year productivity drop was the biggest in Latin America (from an index of 104 to 87 or -16.5%) followed by Africa (-13%). The long-term picture is somewhat different. Compared to the beginning of 2019, the number of port moves per hour stands higher only in North East Asia (+19.6%) and South East Asia (+10%). Some regions have recorded significant drops in average port moves per hour. The situation remains particularly concerning in Oceania (-30% compared to Q1 of 2019) and Africa (about -20%). The sudden drop in Latin America in Q4 2023 is in sharp contrast to the relative stable and positive development of the index throughout the remainder of the observation period. The productivity in North America shows major changes during the observed period. During 2021 and 2022 the average port moves per hour in this region dropped to an index as low as 62.9 due to port congestion and the supply chain crisis, before recovering strongly to an index of 101.8 in Q2 2023. By Q4 2023, the index for North America had declined gradually to reach 92.9. Compared to the other regions, productivity in Northern Europe, the Mediterranean and Middle East & India remained relatively stable compared to Q1 2019, although the respective indexes dropped below 100 in Q4 2023.



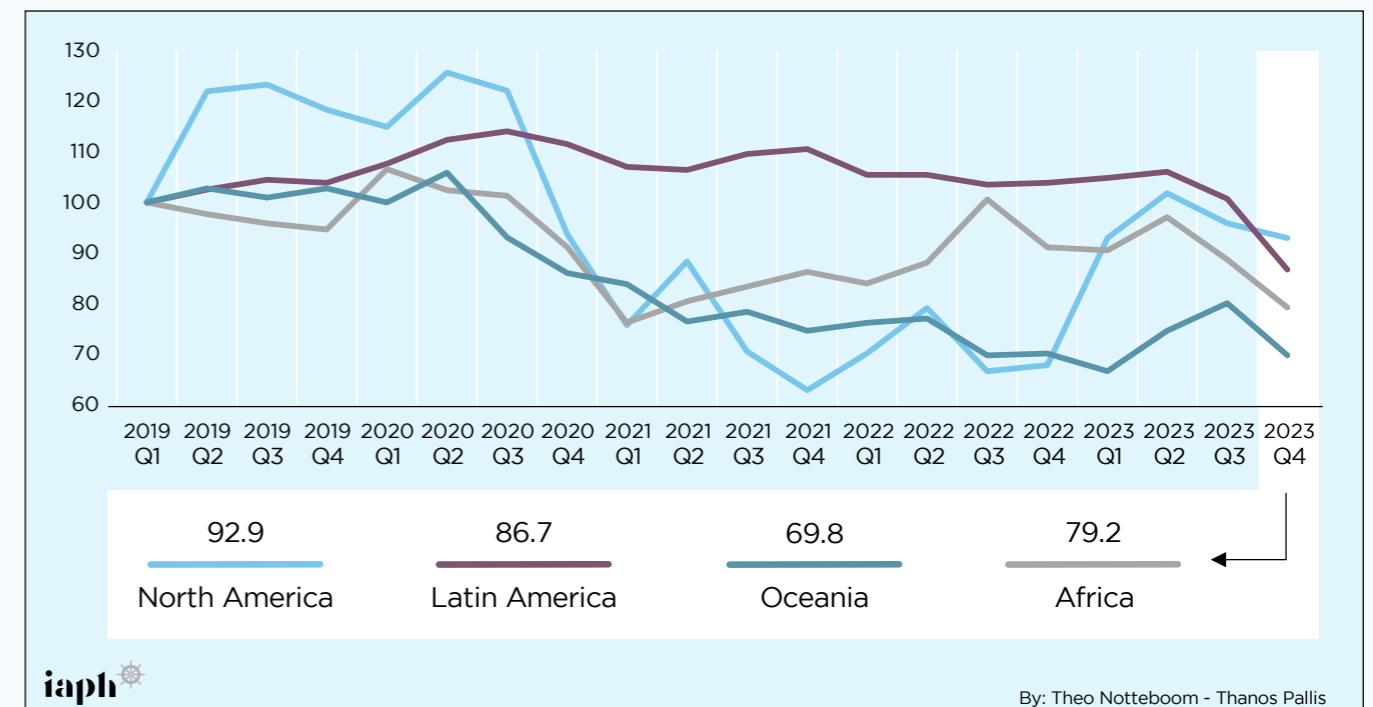
Figure 7  
World Regions with the highest index values for container ports productivity compared to 2019 (Q4 2023 vs Q1 2019; Port Moves Per Hour per region)



Source: own compilation based on S&P Global Port Performance Program data.



Figure 8  
World Regions with the lowest index values for container ports productivity compared to 2019 (Q4 2023 vs Q1 2019; Port Moves Per Hour per region)



Source: own compilation based on S&P Global Port Performance Program data.

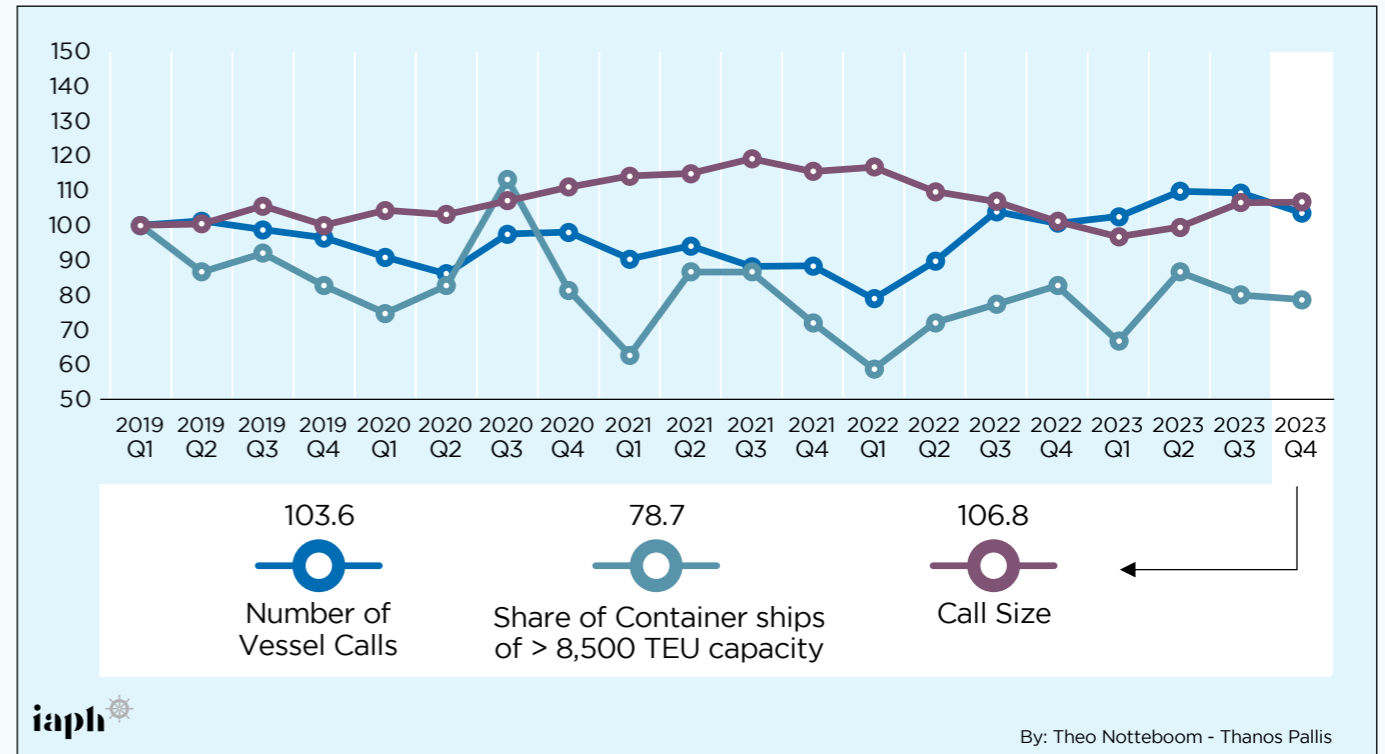
## 5.2. Regional focus: Africa

The African container port network includes large gateway ports and an extensive array of small and medium-sized ports in the East, West, and South of the continent. The large-scale transshipment hubs in Northern Africa are not considered here as they have been included in the Mediterranean region. In Q4 2023, the number of vessel calls evolved towards just above the level of Q1 2019. The number of calls had gradually decreased to reach its lowest point during Q1 2022. The share of 8,501+ TEU vessels in total vessel calls remained relatively stable on a year-on-year basis: 6.2% in Q4 2022 versus 5.9% in Q4 2023. However, the longer-term trend reveals that since 2019 the larger vessel share has declined by more than 20%. Compared to Q1 2019, the average call sizes in African ports in Q4 2023 were 6.8% higher. The average call sizes peaked at +19.2% in Q3 2021 compared to early 2019 but showed a downward trend till early 2023. A negative change in the port moves per hour in African ports was recorded the last two quarters of 2023. This key indicator ended up 20% lower compared to Q1 2019 and is now at the same level as in COVID-19 year 2021.



Figure 9

Evolution of Number of Vessel Calls, Share of Containerships of > 8.500 TEU capacity, and Call Size (Ports in Africa; index-based: Q1 2019 = 100)

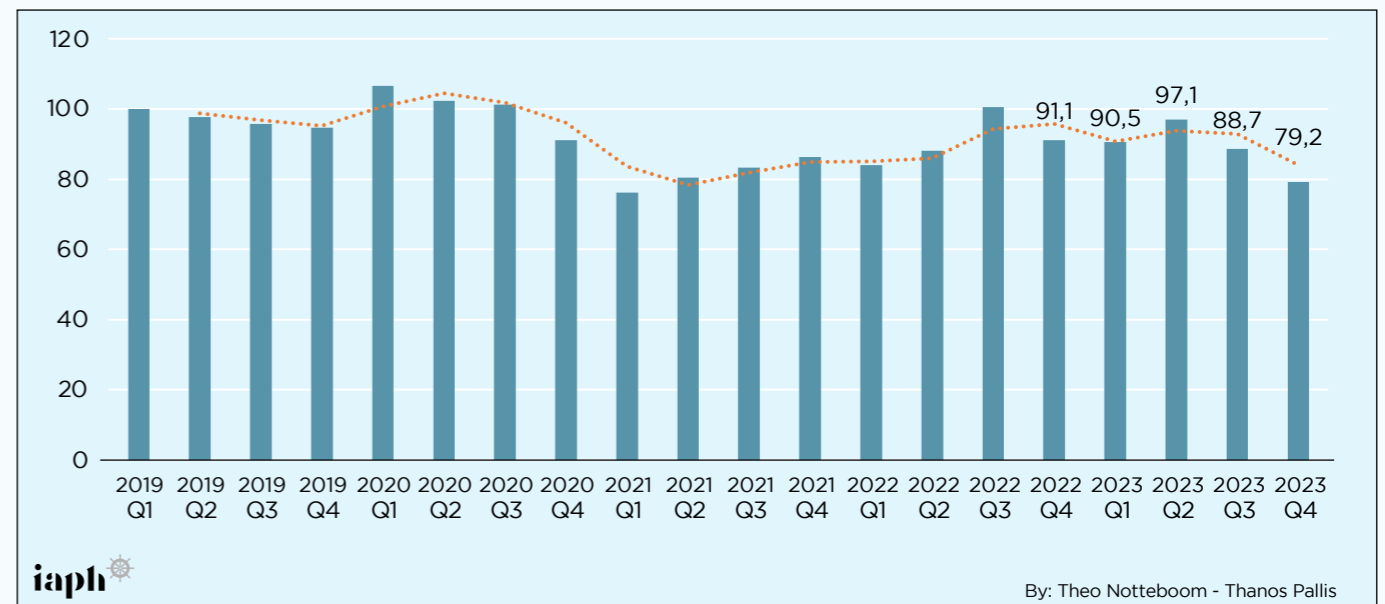


Source: own compilation based on S&P Global Port Performance Program data.



Figure 10

Evolution of Port Moves per Hour (Ports in Africa; index-based: Q1 2019 = 100)

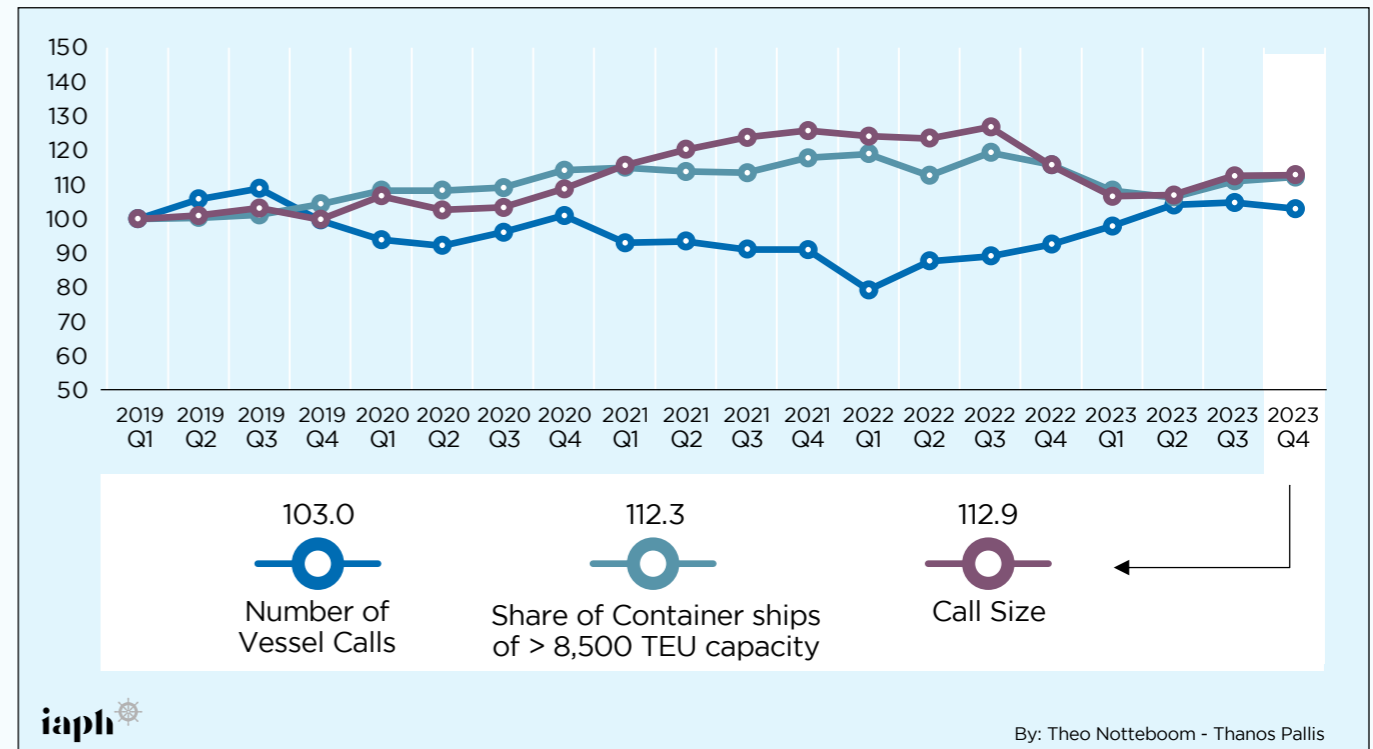


Source: own compilation based on S&P Global Port Performance Program data.

### 5.3. Regional focus: Latin America

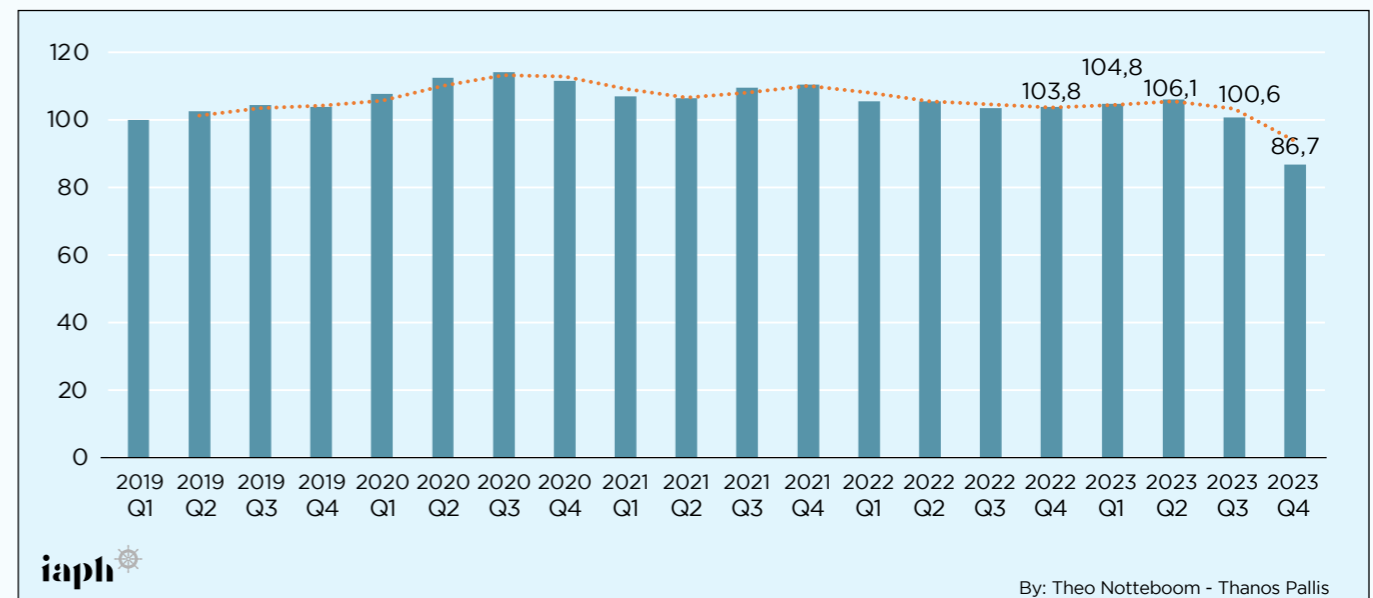
The number of container ship calls in Latin America saw a stabilisation in the last two quarters of 2023. The index of the total number of calls surpassed the 100 index level for the first time since late 2020. In late 2020, the number of calls in Latin America started to decline gradually to reach a bottom in Q1 2022. In Q4 2023, the number of container ship calls was 3% above the level of early 2019. Latin American ports do not receive calls from the largest container ships in the world (i.e., vessels over 20,000 TEU capacity), as such vessels are deployed in other regions. Yet, the share of 8,501+ TEU vessels, as a percentage of the total container vessel calls in the ports of the region, increased to reach a record index value of 119.4 in Q3 2022. After an initial drop in the last quarter of 2022, the index is on the rise again reaching 112.3 in Q4 2023. The average call sizes at Latin American ports saw a gradual increase to reach an index of 126.8 in Q3 2022. Since then, call sizes dropped significantly in the first half of 2023, to recover somewhat in the second half of 2023. In Q4 2023, both the share of 8,501+ ships and the average call sizes remained well above the figures for Q1 2019, but still below the record levels observed in late 2022. Despite the substantial changes in the size of vessels and call sizes, Latin American ports did not manage to increase their productivity. In the last quarter of 2023, the average port moves per hour dropped suddenly by 13.8% compared to the previous quarter to reach a level far below the Q1 2019 figure for the first time.

**Figure 11**  
Evolution of Number of Vessel Calls, Share of Containerships of > 8.500 TEU capacity, and Call Size (Ports in Latin America; index-based: Q1 2019 = 100)



Source: own compilation based on S&P Global Port Performance Program data.

**Figure 12**  
Evolution of Port Moves per Hour (Ports in Latin America; index-based: Q1 2019 = 100)



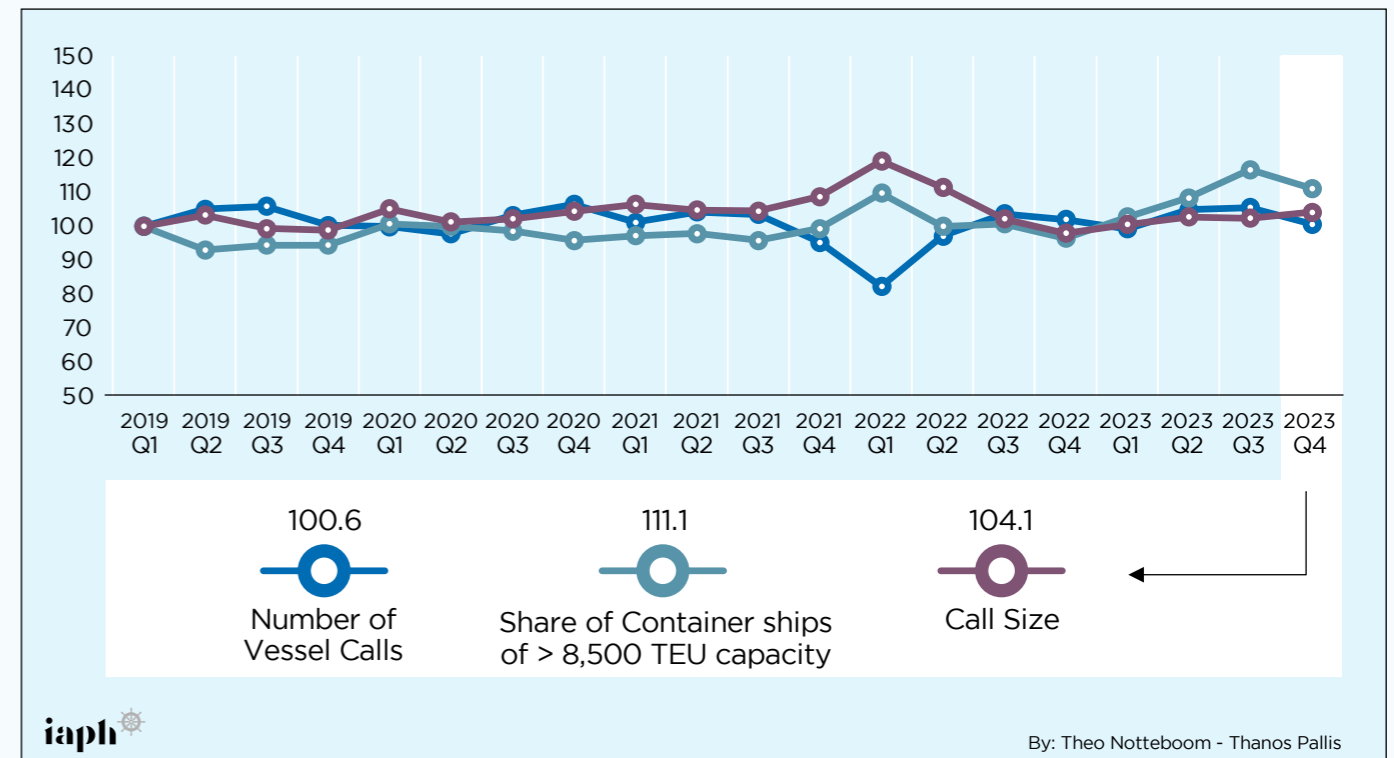
Source: own compilation based on S&P Global Port Performance Program data.

### 5.4. Regional focus: The Mediterranean Sea

Throughout the observation period, the number of container ship calls, the call size, and the share of 8,501+ TEU vessels in ports of the Mediterranean Sea remained almost stable, with only short-lived fluctuations in Q1 2022 and late 2023. Despite the disruptions in the maritime and other supply chains in the region following the outbreak of the COVID-19 pandemic, Mediterranean ports have managed to keep their productivity at more or less the same level. The port moves per hour in Q4 2023 in the Mediterranean ports reached an index of 93.7. Four of the five lowest quarterly index figures during the observation period relate to the year 2023.



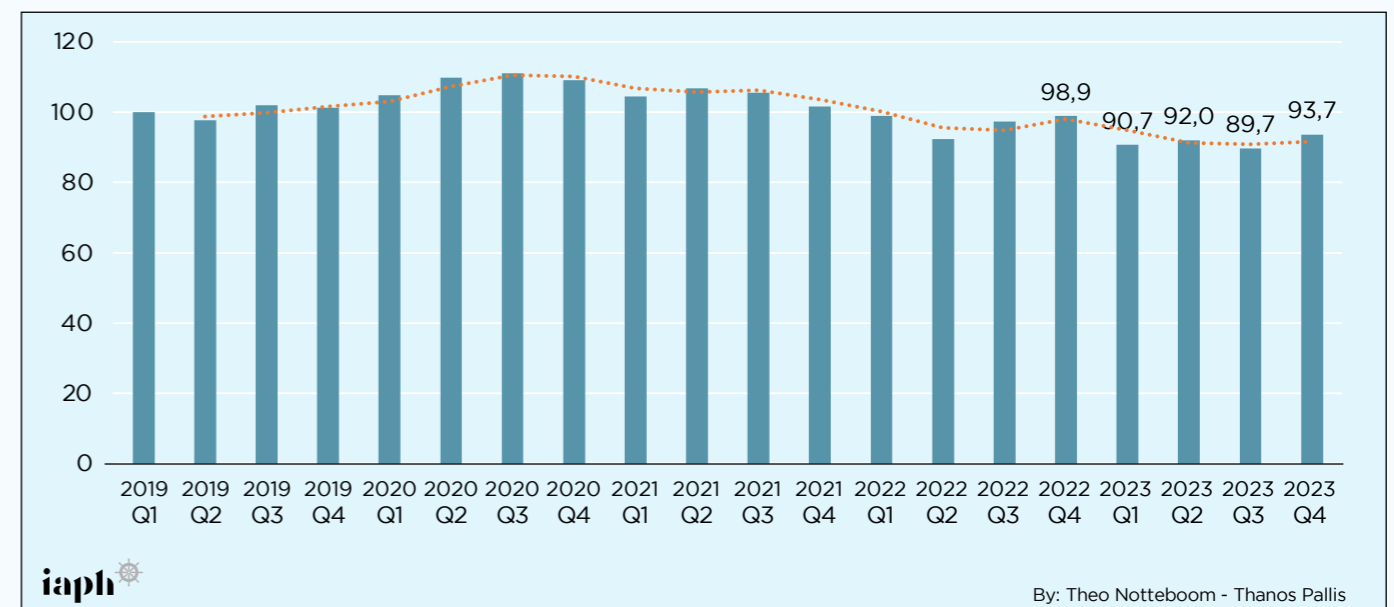
**Figure 13**  
Evolution of Number of Vessel Calls, Share of Containerships of > 8,500 TEU capacity, and Call Size (Ports in the Mediterranean Sea; index-based: Q1 2019 = 100)



Source: own compilation based on S&P Global Port Performance Program data.



**Figure 14**  
Evolution of Port Moves per Hour (Ports in the Mediterranean Sea; index-based: Q1 2019 = 100)



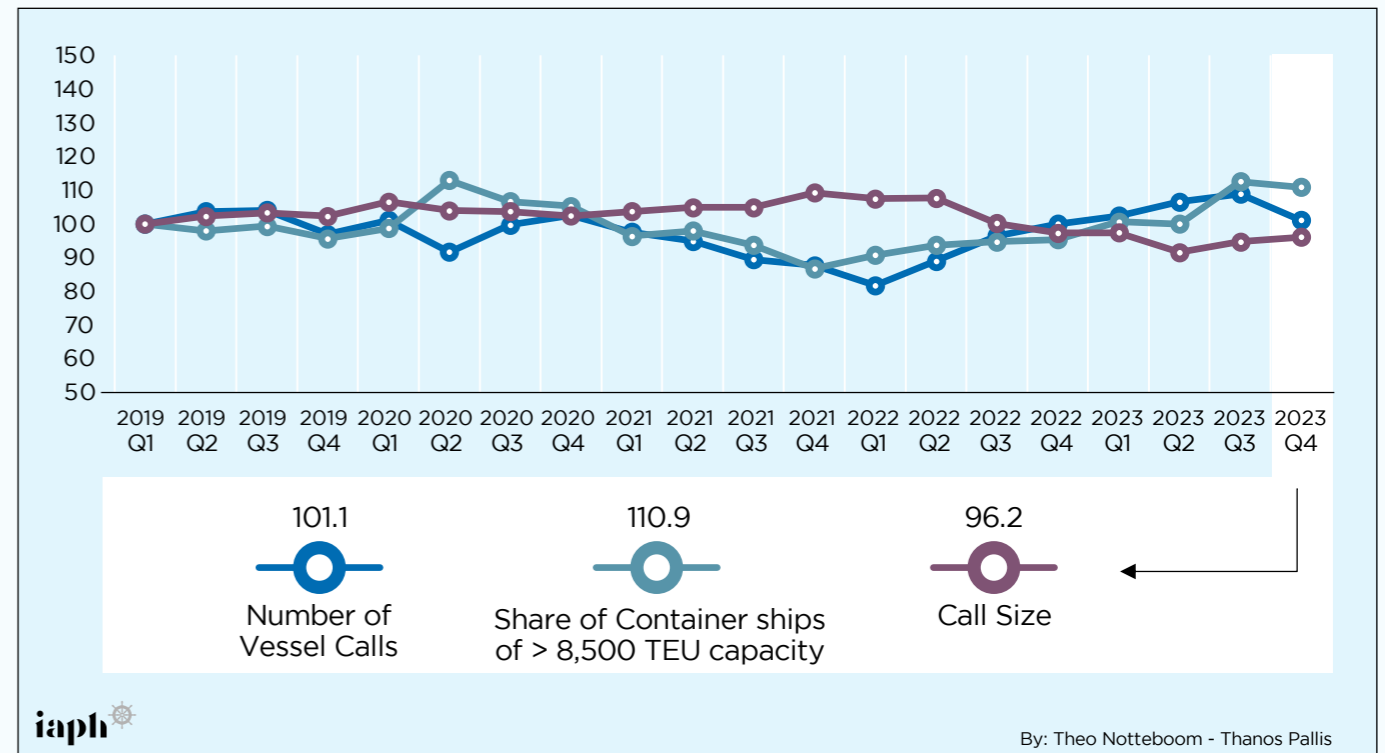
Source: own compilation based on S&P Global Port Performance Program data.

### 5.5. Regional focus: Middle East & India

The container port network of the Middle East and India spans a large number of Arabian, Persian and Central Asian countries, as well as seaports in Pakistan, India, Sri Lanka and Bangladesh. In addition, the region is home to transshipment and many small, medium-sized and large gateway ports. In 2021, a gradual decline was observed in the number of vessel calls and the share of the larger container ships. This trend reversed in 2022 and 2023 with the number of vessel calls becoming 10.9% higher in Q4 2023 compared to Q1 2019. The index of the call sizes stayed above the 2019 level till late 2022 before showing a downward tendency to reach an index of 91.6 in Q2 2023. Two quarters later the index recovered somewhat to 96.2. The Middle East and India is the only region in the world that managed to substantially increase the port moves per hour in 2021 compared to the base quarter Q1 2019 (+22% in Q4 2021). These are relative figures showing the development path. These figures say nothing about container handling productivity in absolute figures compared to other regions. Thus, 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. However, after an upward trend in the period 2019-2021, productivity levels declined in 2022 and 2023 with a year-on-year change from a record index of 122.4 in Q4 2021 to 98 in Q4 2023. This implies the average moves per hour are now below the Q1 2019 level.



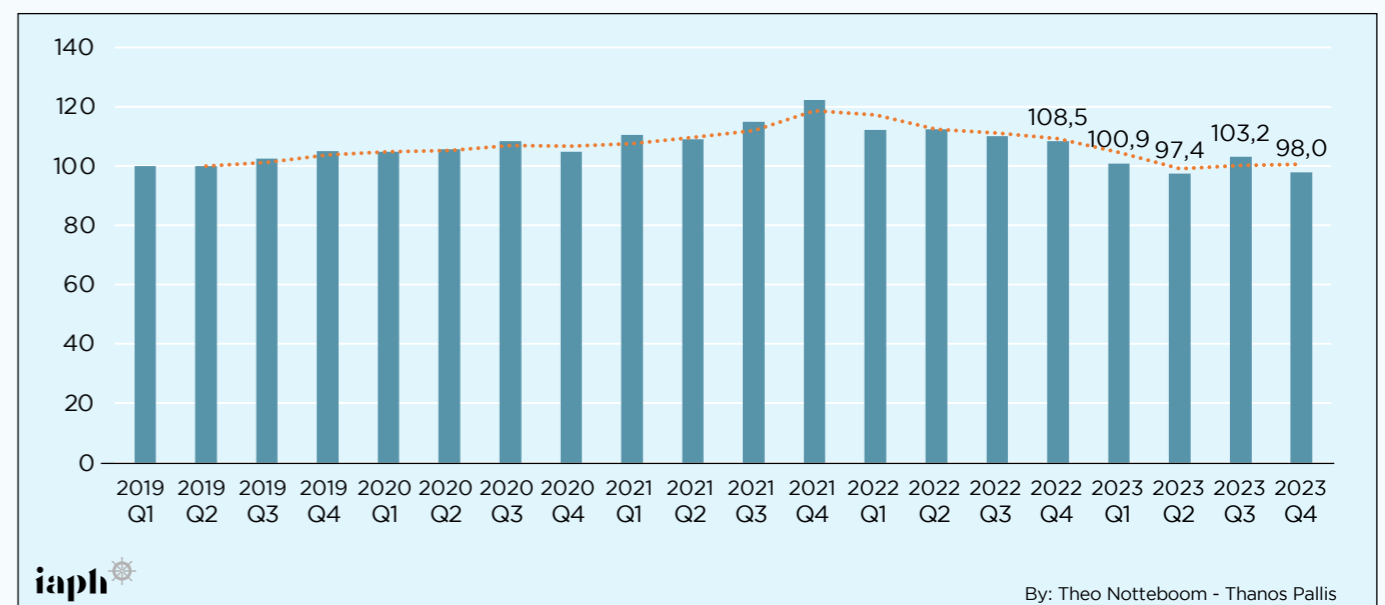
**Figure 15**  
Evolution of Number of Vessel Calls, Share of Containerships of > 8,500 TEU capacity, and Call Size (Ports in the Middle East and India; index-based: Q1 2019 = 100)



Source: own compilation based on S&P Global Port Performance Program data.



**Figure 16**  
Evolution of Port Moves per Hour (Ports in the Middle East and India; index-based: Q1 2019 = 100)



Source: own compilation based on S&P Global Port Performance Program data.

## 5.6. Regional focus: North America

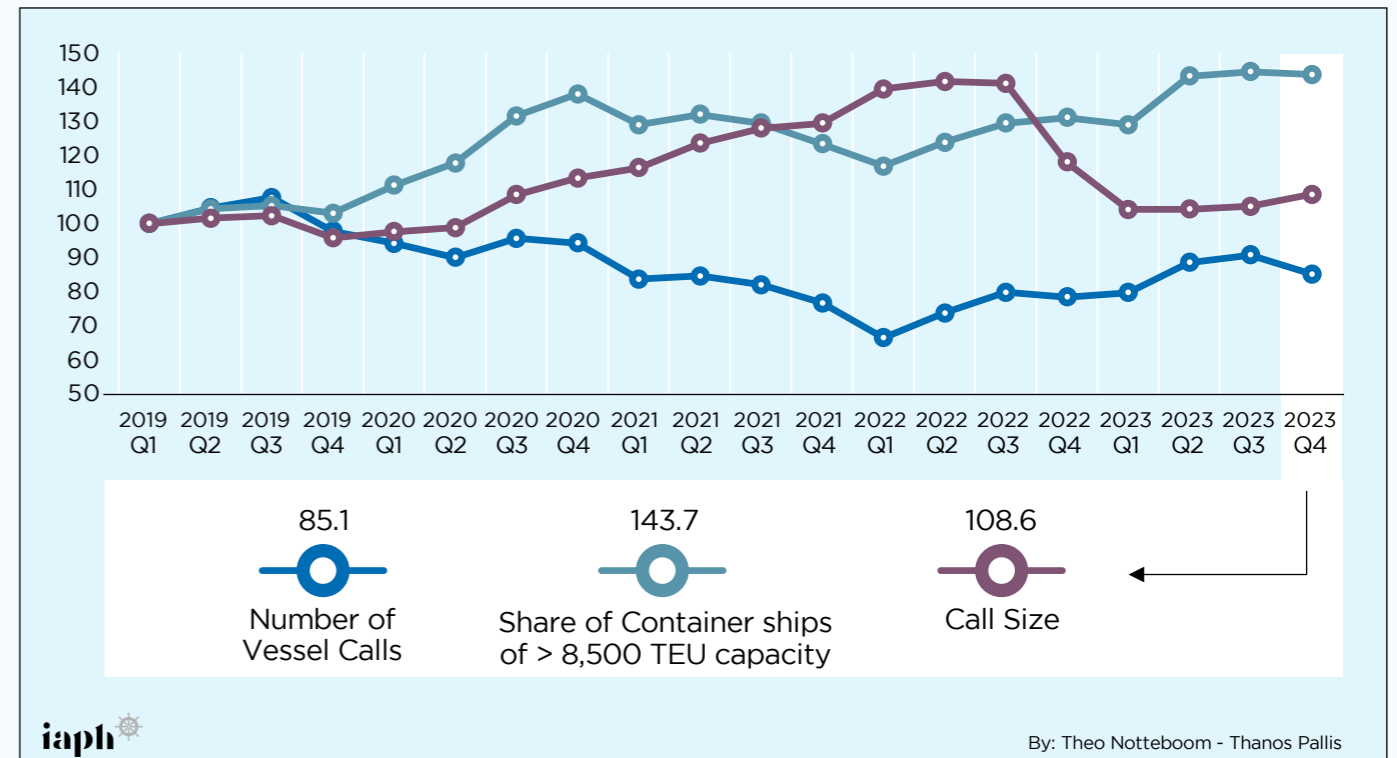
The North American container port system consists of gateway ports in the United States and Canada along the West Coast, the East Coast and the U.S. Gulf Coast. In the period early 2019 to early 2022, this port system has witnessed a combination of larger vessels and bigger call sizes, with significant drops in vessel calls and port moves per hour. In Q1 2022, the number of vessel calls was 33.6% lower than in Q1 2019. Since then, the curve has been moving upward to reach an index figure of 85.1 in Q4 2023. Port moves per hour recovered strongly in 2023. However, the Q4 2023 index remained below the 2019 level. At the same time, North American ports are welcoming more large container vessels in relative terms to reach a record index of 143.7 in Q4 2023. After an initial strong increase, call sizes dropped since Q4 2022, bringing the average call size almost back to the level of Q1 2019 (an index of 108.6 in Q4 2023). This sudden decline is one of the most remarkable observations with respect to North America, as it coincides with an upward trend in the number of vessel calls and a strong recovery of port moves per hour.

*With port congestion in the region easing at the end of 2022, terminal productivity figures in North America started to recover strongly in the first half of 2023. Port moves per hour evolved from an index of 62.9 in Q4 2021 to 101.8 in Q2 2023. The region has difficulty in keeping the momentum going as the index declined to a level of 92.9 in Q4 2023.*



Figure 17

Evolution of Number of Vessel Calls, Share of Containerships of > 8.500 TEU capacity, and Call Size (Ports in North America; index-based: Q1 2019 = 100)

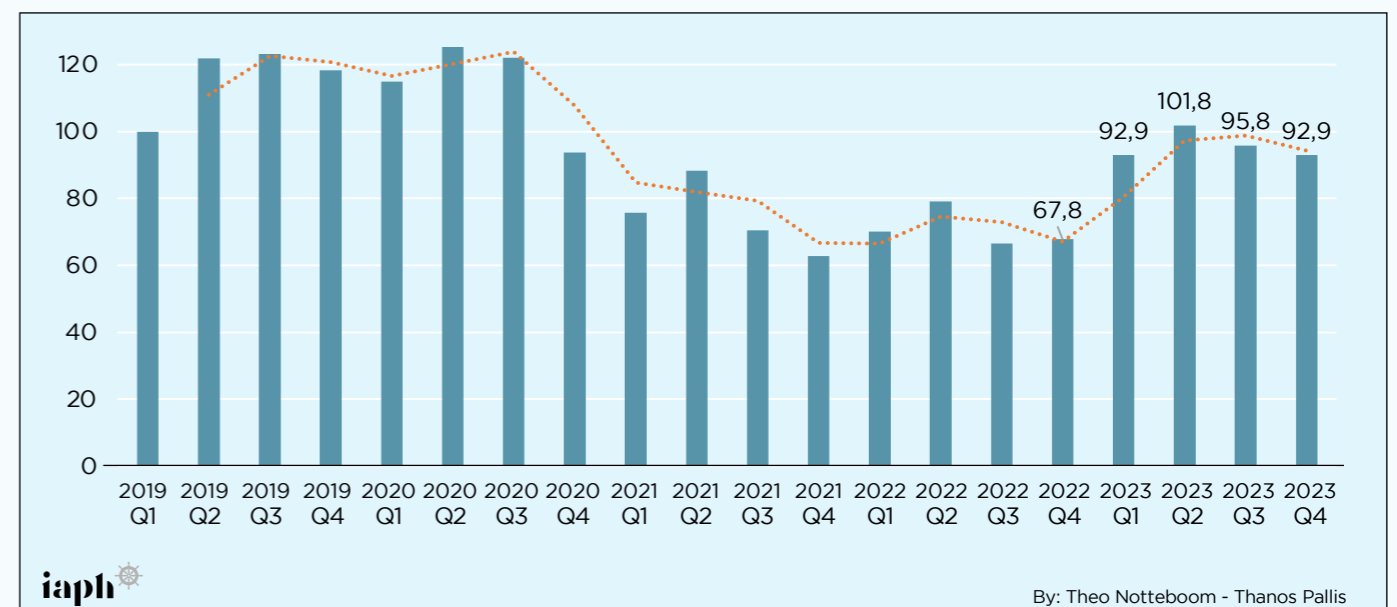


Source: own compilation based on S&P Global Port Performance Program data.



Figure 18

Evolution of Port Moves per Hour (Ports in North America; index-based: Q1 2019 = 100)

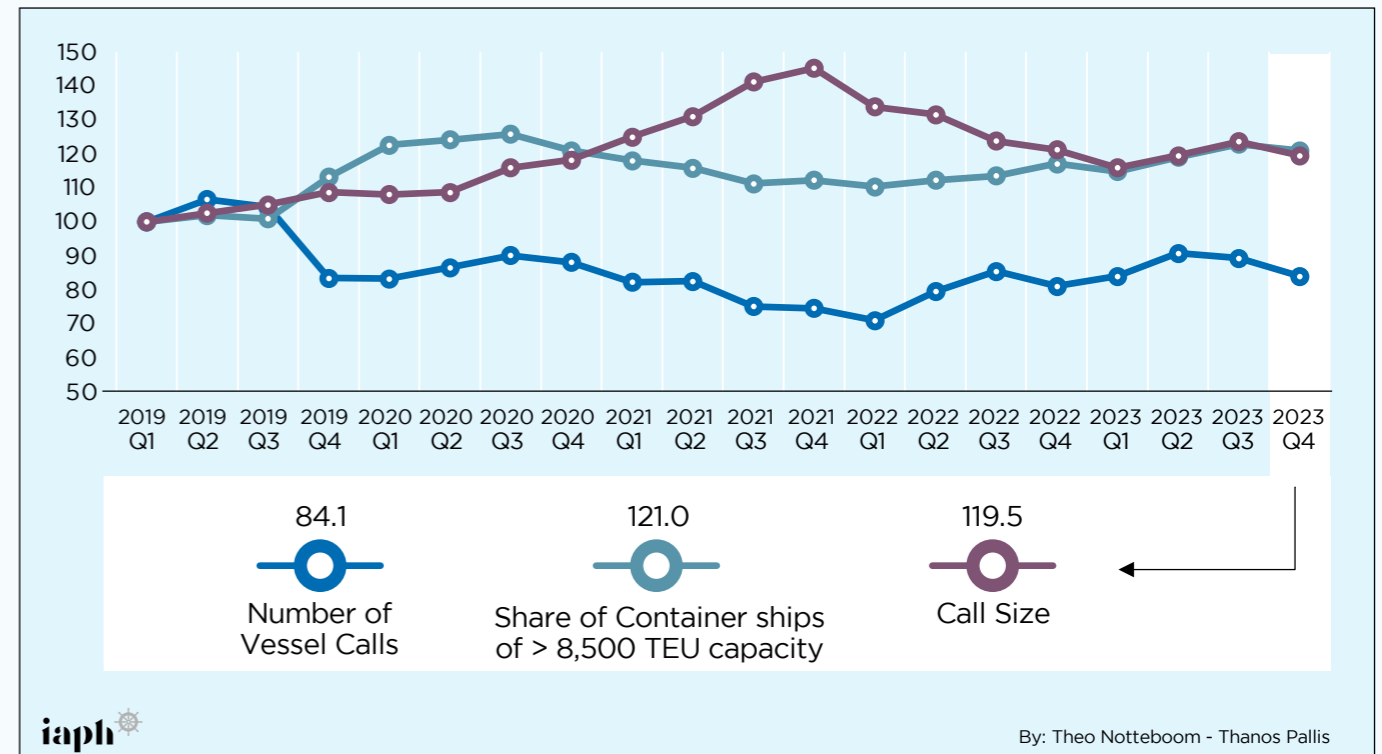


Source: own compilation based on S&P Global Port Performance Program data.

### 5.7. Regional focus: North East Asia

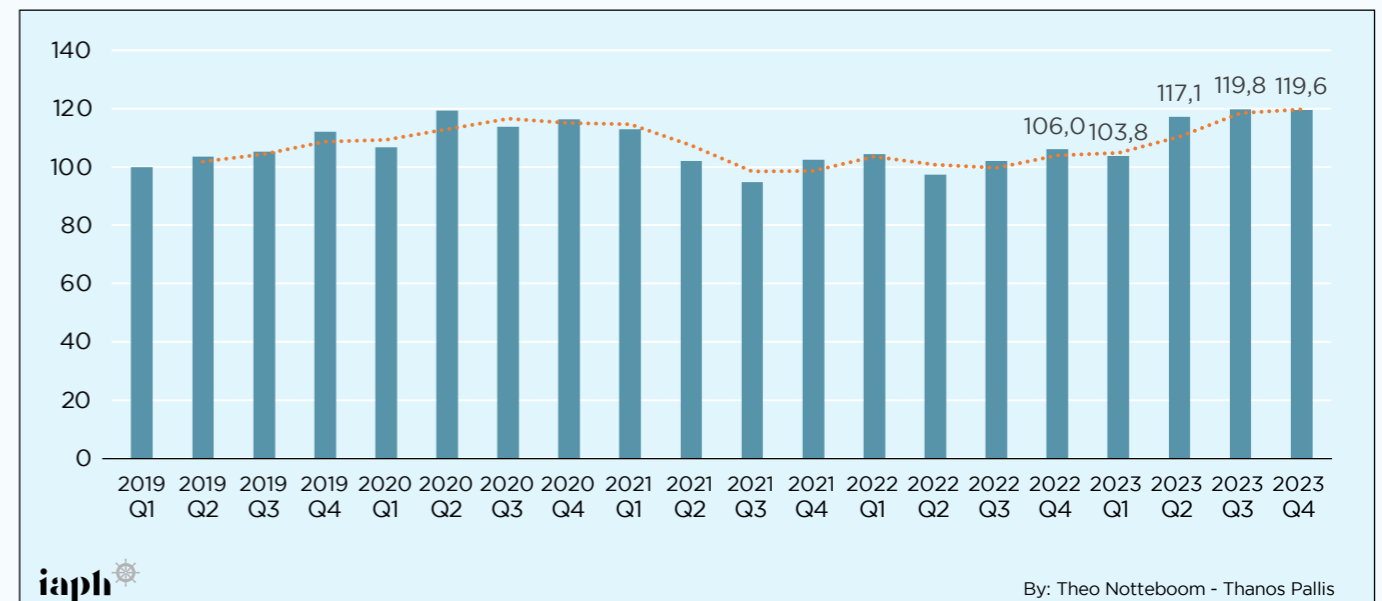
The North East Asian container port system covers Japanese, South Korean, mainland Chinese and Taiwanese ports. The number of vessel calls in North East Asian ports has dropped about 16% since early 2019, but the changes have remained relatively small since late 2019. The call sizes increased significantly to peak in Q4 2021 (+45.2% compared to Q1 2019). Throughout 2022, call sizes have gradually dropped before levelling off at an index of 119.5 in late 2023. The share of 8,501+ TEU vessels in total container vessel calls amounted to 37.5% in Q4 2023 compared to 31% in Q1 2019, the highest share of all port regions around the world. The port moves per hour in North East Asia fluctuated only mildly throughout the analysed period with an increase of about 20% by late 2023.

**Figure 19**  
Evolution of Number of Vessel Calls, Share of Containerships of > 8.500 TEU capacity, and Call Size (Ports in North East Asia; index-based: Q1 2019 = 100)



Source: own compilation based on S&P Global Port Performance Program data.

**Figure 20**  
Evolution of Port Moves per Hour (Ports in North East Asia; index-based: Q1 2019 = 100)

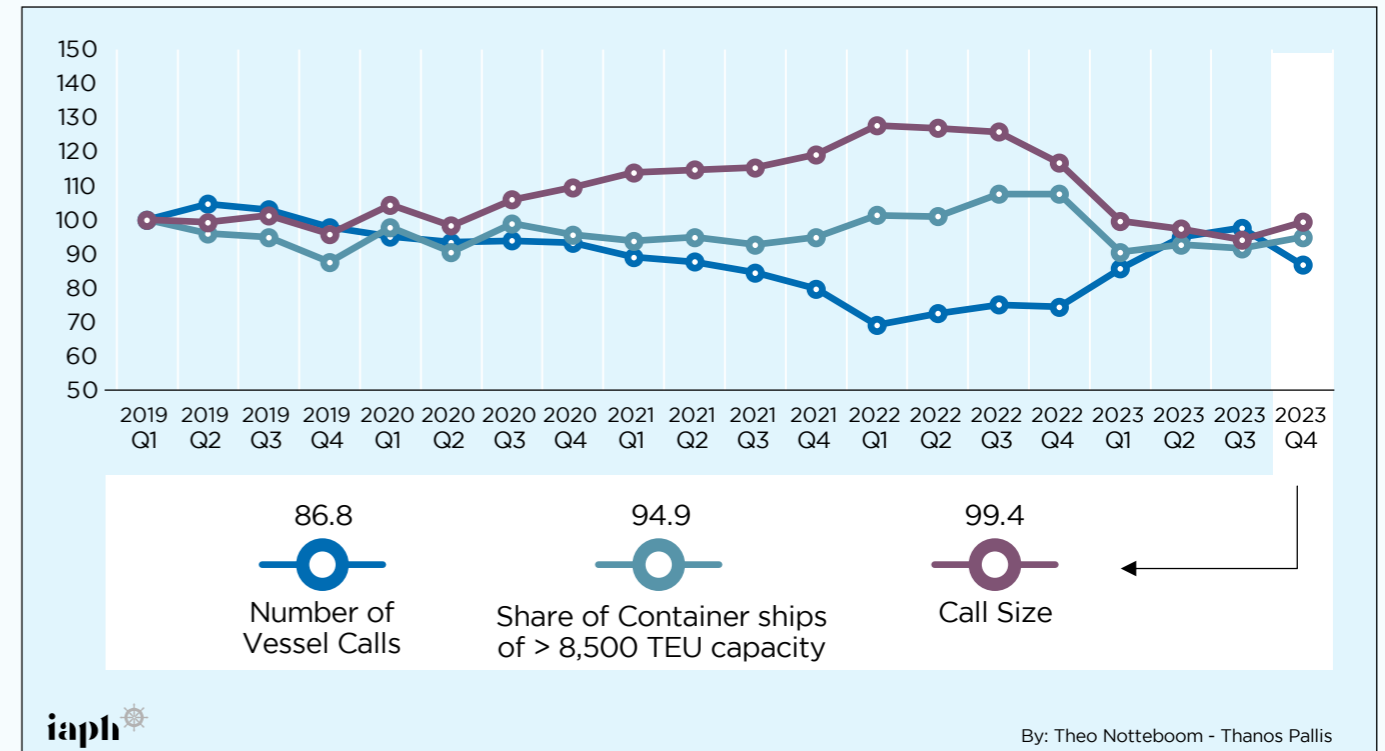


Source: own compilation based on S&P Global Port Performance Program data.

### 5.8. Regional focus: Northern Europe

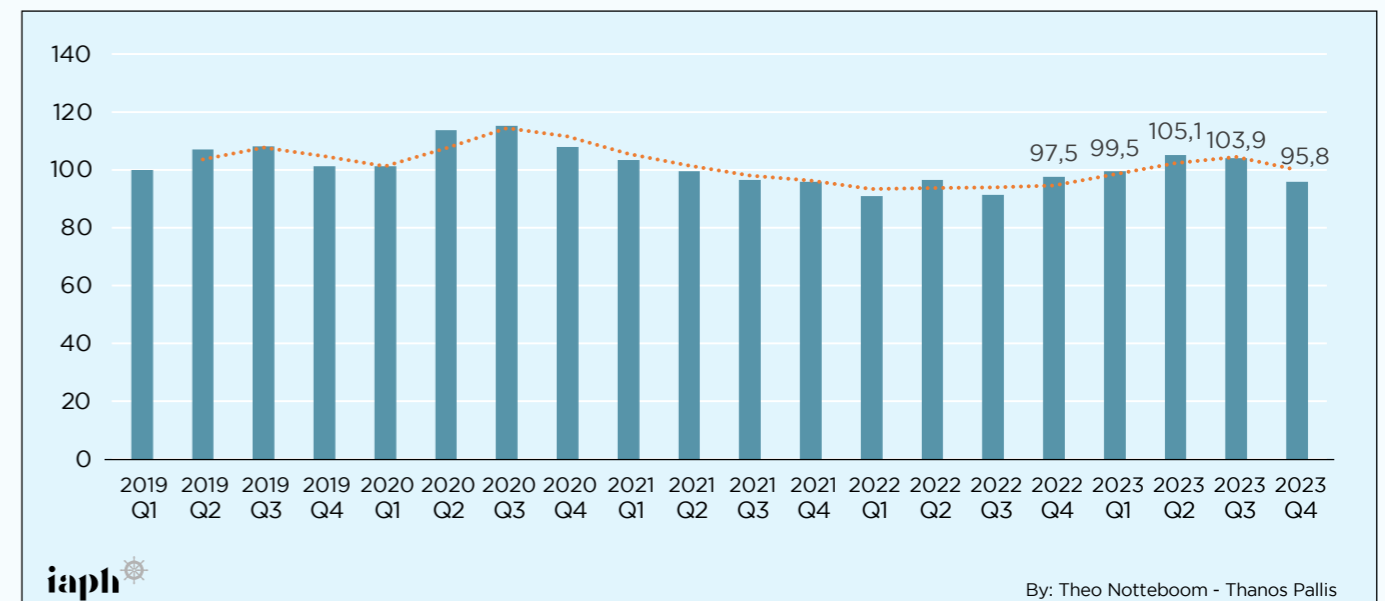
The North European port system features established large ports, as well as a series of medium-sized to smaller ports. The clear strong rising trend in the average call sizes was abruptly reversed in Q4 2022. In Q1 2022, average call sizes were 27.7% above the Q1 2019 level, while by Q4 2023 this figure had dropped significantly to just below the Q1 2019 figure. The share of the larger container ships remained fairly similar in North Europe, fluctuating between 24% and 30% of all vessel calls. In Q4 2023, 26.2% of all container vessel calls involved ships of over 8,501 TEU capacity. The rise in call sizes since Q2 2020 went hand-in-hand with a gradual decline in the port moves per hour. However, the decrease in port moves per hour remained relatively small compared to the North American situation. Q2 2023 brought a strong recovery in port productivity with the index above 100 for the first time since early 2021. Two quarters later, the index stayed about 4% below the 100 base. Vessel calls have gradually decreased between mid-2019 and 2022, with some stabilisation at an index value of 70 to 75 throughout 2022. In the first three quarters of 2023, the number of vessel calls saw a strong recovery, followed by a sudden drop to an index of 86.8 in Q4 2023.

**Figure 21**  
Evolution of Number of Vessel Calls, Share of Containerships of > 8.500 TEU capacity, and Call Size (Ports in Northern Europe; index-based: Q1 2019 = 100)



Source: own compilation based on S&P Global Port Performance Program data.

**Figure 22**  
Evolution of Port Moves per Hour (Ports in Northern Europe; index-based: Q1 2019 = 100)



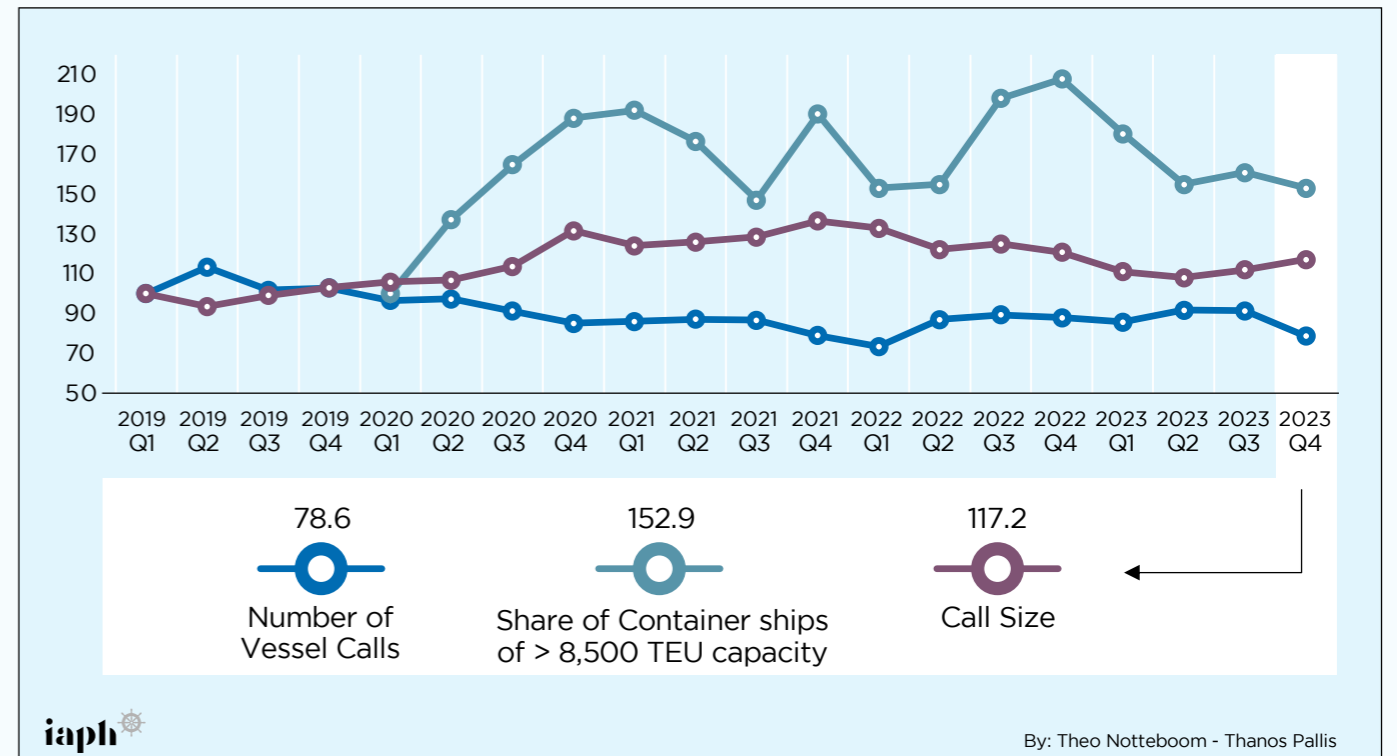
Source: own compilation based on S&P Global Port Performance Program data.



### 5.9. Regional focus: Oceania

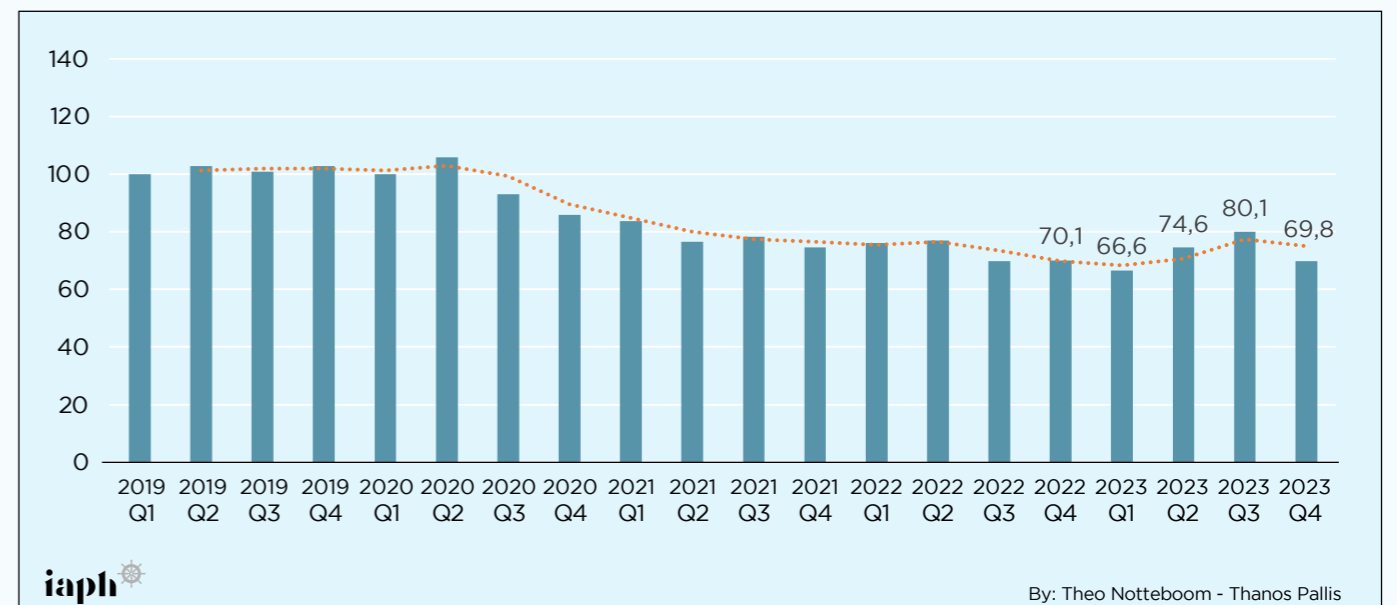
The container port system in Oceania includes the ports in Australia, New Zealand and some smaller port facilities in Pacific Island economies. The share of 8,501+ TEU vessels saw a significant increase from 0.7% (index 100) in Q1 2019 to 10.6% in Q4 2022 (index 1514) of all container vessel calls, showing that this ship class is finding its way to Oceania. The share fell to 7.8% in Q4 2023. In Q4 2023, the number of vessel calls decreased to below the 80 value threshold. The average call sizes continued its recovery after a strong declining trend between early 2021 and mid-2023. The ports in Oceania recorded a strong fall in port moves per hour since the second half of 2020. Such a development can also be seen in some other regions such as North America. However, while the North American port system saw a strong recovery in port moves per hour in the past year, Oceania struggles to increase productivity again. Productivity levels in Q4 2023 were still about 30% below the Q1 2019 level.

**Figure 23**  
Evolution of Number of Vessel Calls, and Call Size (Ports in Oceania; index-based: Q1 2019 = 100) and Share of Containerships of > 8.500 TEU capacity (index-based: Q1 2020 = 100)



Source: own compilation based on S&P Global Port Performance Program data.

**Figure 24**  
Evolution of Port Moves per Hour (Ports in Oceania; index-based: Q1 2019 = 100)



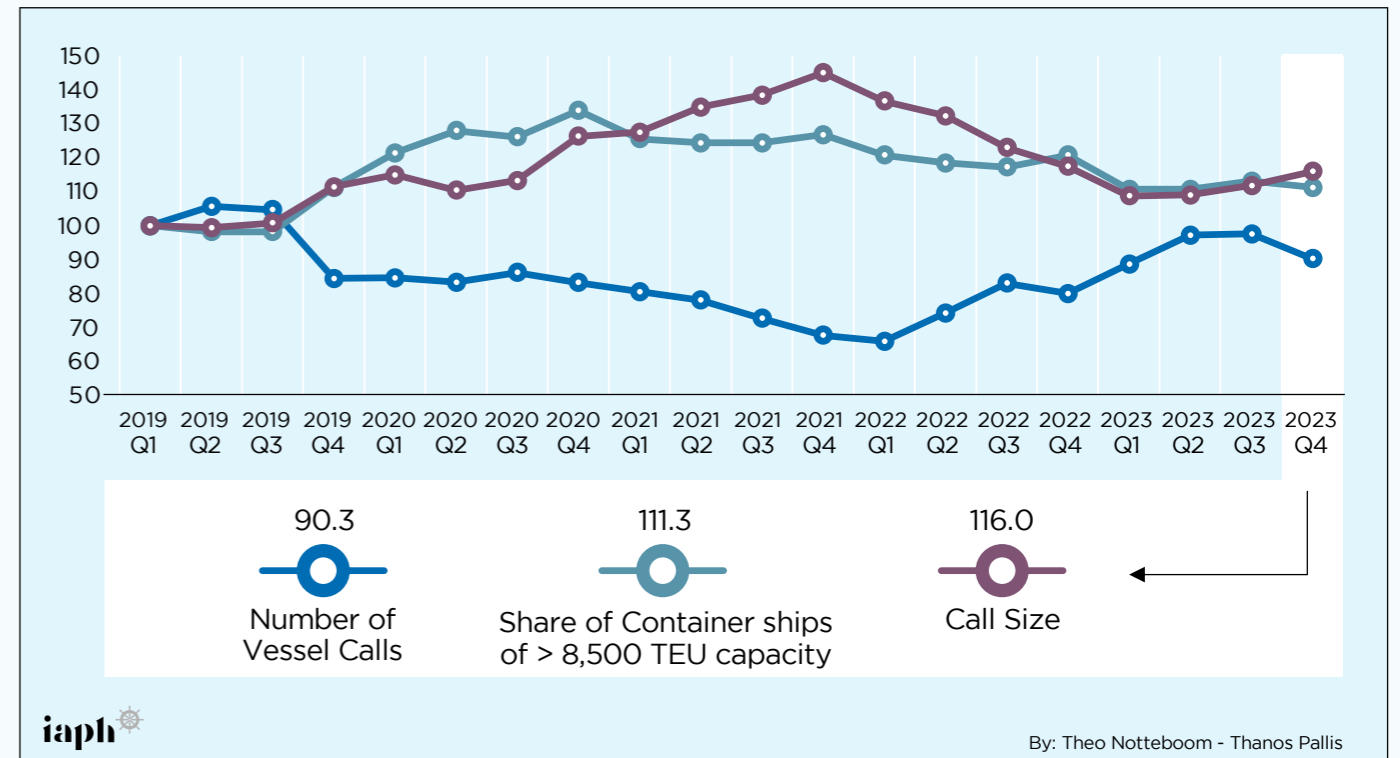
Source: own compilation based on S&P Global Port Performance Program data.

### 5.10. Regional focus: 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. Until late 2021, South East Asia witnessed a significant decrease in the number of vessel calls. This drop was already initiated in late 2019 but further deepened during the COVID-19 years. However, the vessel call number is on the rise in 2022 after reaching its lowest index level of 66 in Q1 2022. The index growth accelerated in 2023, bringing the number of vessel calls almost back to the Q1 2019 level by Q3 2023, followed by a decline to 90.3 in Q4 2023. As observed in many other regions, the call sizes saw a strong upward trend throughout 2020 and 2021 (+45% by Q4 2021). However, average call sizes started to decline in early 2022. This downward trend somewhat levelled off in Q4 2023 to reach an index of 116, thus firmly above Q1 2019. In early 2019, about 17% of vessels calling at the South East Asian port system were larger than 8,501 TEU. By late 2020, this share had risen to 22.5%. In Q4 2023, the share of 8,501+ TEU vessels in total container vessel calls decreased slightly to 18.7% or 11.3% higher than in early 2019. The port moves per hour went up in the early months of the pandemic (+18% between Q1 2019 and Q2 2020). However, the global supply chain crisis resulted in small decrease in productivity figures in late 2020. Terminal productivity improved in 2022 and 2023, with Q4 2023 productivity levels at 10% above the 100 index line.



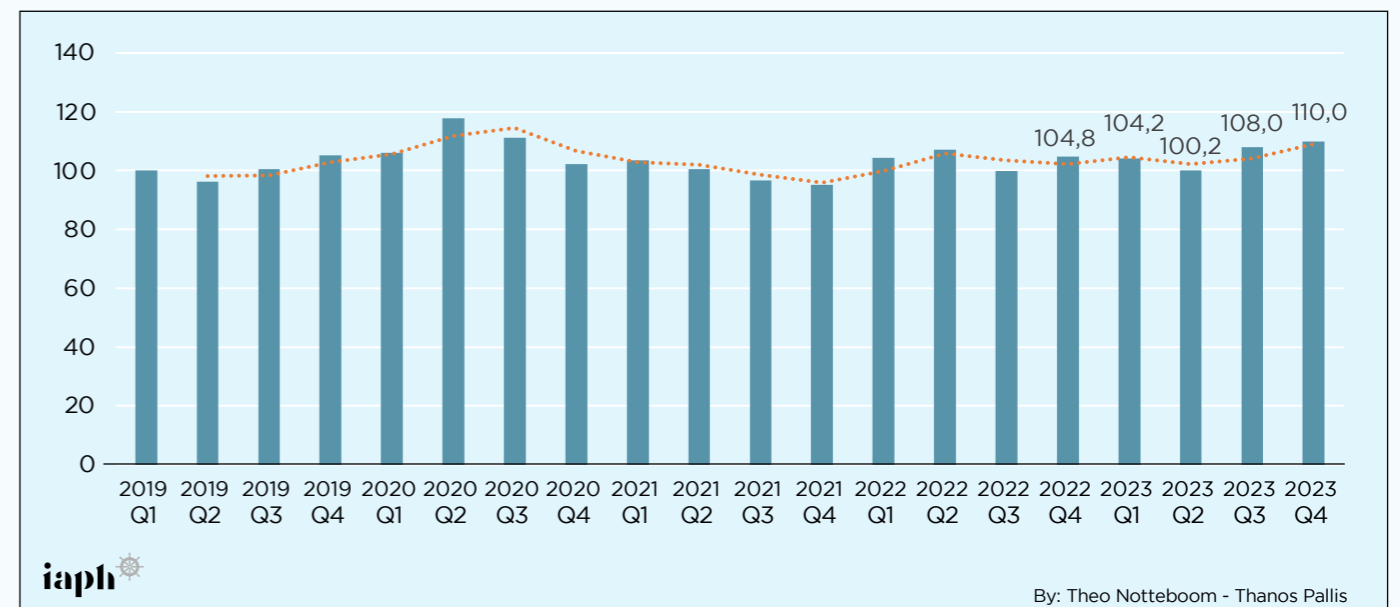
**Figure 25**  
Evolution of Number of Vessel Calls, Share of Containerships of > 8.500 TEU capacity, and Call Size (Ports in South East Asia; index-based: Q1 2019 = 100)



Source: own compilation based on S&P Global Port Performance Program data.



**Figure 26**  
Evolution of Port Moves per Hour (Ports in South East Asia; index-based: Q1 2019 = 100)



Source: own compilation based on S&P Global Port Performance Program data.

# 6

## TRENDS IN CARGO PORTS:

### LINER SHIPPING CONNECTIVITY

This sixth edition of the World Ports Tracker incorporates UNCTAD data on the Liner Shipping Connectivity Index (LSCI) on top of the IAPH survey data and S&P's container port performance data.

The LSCI aims to capture the level of integration into the existing liner shipping network by measuring liner shipping connectivity. It can be calculated at the country and the port level. LSCI can be considered a proxy for accessibility to global trade through the shipping network. The higher the index, the easier it is to access a high capacity and frequency global maritime containerised freight transport system and effectively participate in international trade. Therefore, LSCI can be jointly considered as a measure of connectivity to maritime shipping and as a measure of trade facilitation.

The index is calculated based on six components:

- Scheduled ship calls: the number of ships that are calling on a weekly basis.
- Deployed capacity: the total capacity of the liner services
- Number of shipping companies. This relates to how many shipping companies are servicing the country or the port
- How many scheduled services carriers are using to provide this coverage.
- Maximum vessel size. The size of the largest ship deployed on services to the country or port as a proxy to the available economies of scale since they convey lower shipping costs per TEU; with the reference point in time n being Q1 2023.
- Directly connected ports. This is the number of ports directly connected to the reference port.

At the beginning of 2024, UNCTAD revised the measurement of maximum vessel size at ports, with the new reference point being Q1 2023 (instead of Q1 2006, as in all previous editions). The World Ports Tracker proudly reports in advance analysis of the revised LSCI exclusively to IAPH members – the revised LSCI will be made publicly available on March 15, 2024.

## 6.1. In focus: LSCI evolution for the ten best connected countries in the world

At the beginning of 2024, the evolution of LSCI reveals some notable improvements over the last years in most of the best-connected countries around the globe. The best-connected countries list includes seven Asian countries, the U.S., and two European countries. China (LSCI=1,187.1), South Korea (640.3), and Singapore (591.3) top the list, followed by the U.S. (493.8). The latter is the only country of the best-connected ones that did not experience any improvements in its liner shipping connectivity over the last year. Spain (403.5) is the best-connected European country and the eighth best-connected globally.

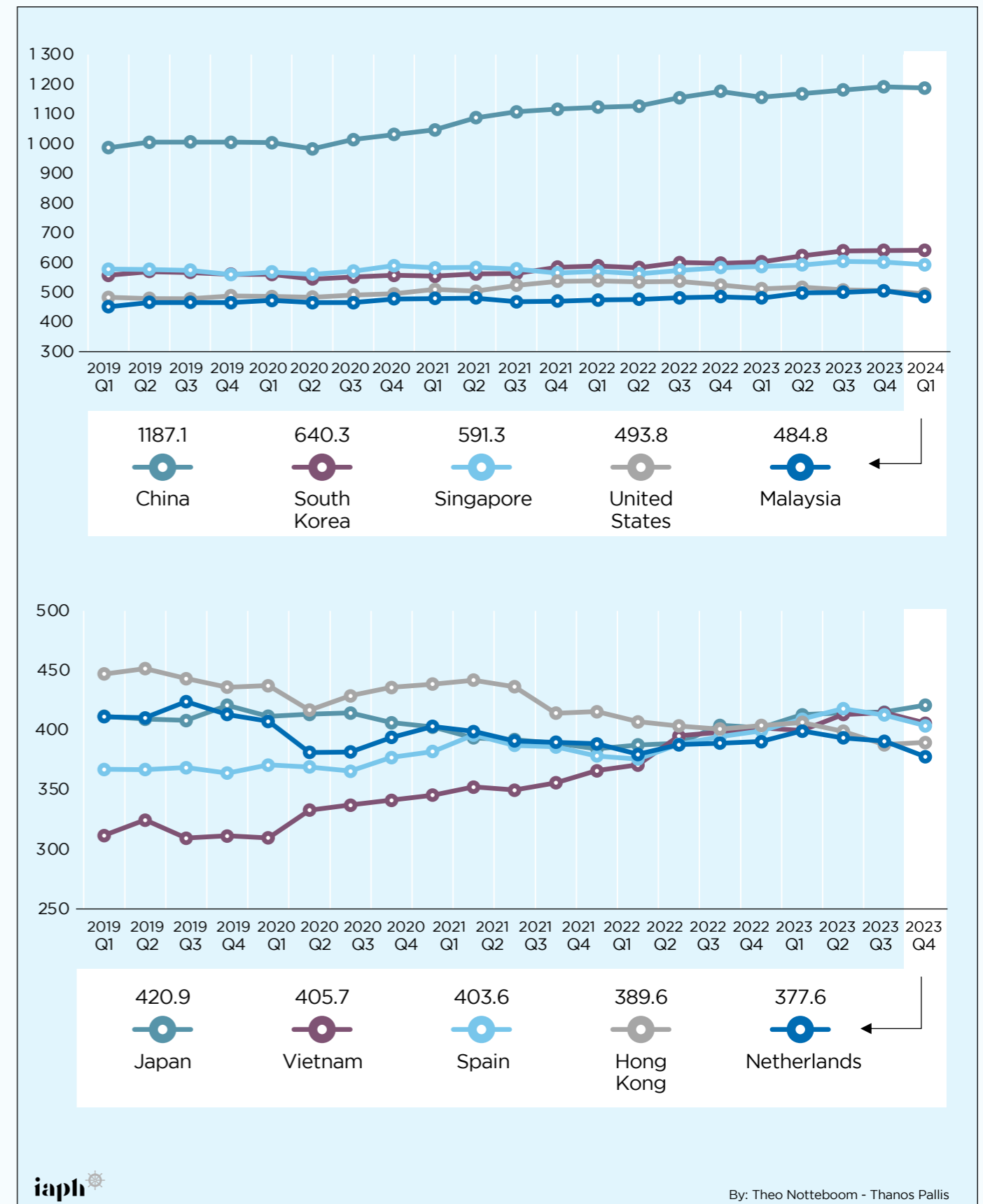
Compared to a year before, i.e., Q1 2023, the percentage increase of LSCI in South Korea (+6.5%), Japan (+4.8%), and China (+2.7%) exceeded the improvements that took place in the other countries of the list. In four more of the best-connected countries in the world - Malaysia, Spain, Singapore, and Vietnam - at the beginning of 2024, the LSCI stands at 1% higher than a year before. The other three countries, i.e., the Netherlands (-3.3%), the United States (-3.3%), and Hong Kong (-3.5%) are the three cases of the ten best-connected list where in Q1 2024, liner shipping connectivity stands lower than a year before. This evolution is reflected in the ranking by the rise of Japan from the eighth best-connected country in the world to the sixth one, with Hong Kong standing ninth, i.e., three positions lower than a year before.

*The Liner Shipping Connectivity Index (LSCI) increased in seven of the ten best-connected countries. LSCI continues to rise faster in South Korea, Japan, and China. The countries topping the list (China and South Korea) continue to increase the gap with the rest.*

The LSCI evolution in the best-connected countries that was observed in recent times continues the longer-term trends in liner shipping connectivity. Comparing the latest LSCI (Q1 2024) with the LSCI five years before (Q1 2019), LSCI has improved in eight of the best 10. Within these five years Vietnam has experienced the highest improvement (+30%). As a result, it emerged from the 14th best-connected country in the world in early 2019 to the seventh best-connected one. The gap between China, where LSCI increased by 20.4%, and South Korea (+15%), Malaysia (+8%), Singapore (3%), the U.S. (+2.5%), and Japan (+2%), increased. Spain (+10%) is the fourth country on the list that experienced a dynamic double-digit increase of LSCI since the beginning of 2019. As a result, it emerged from the 11th-best-connected country in the world in 2019 to the eighth best-connected in early 2024. The LSCI stands today lower than five years ago in two of the best-connected countries of the world. These are the Netherlands (-8%), that dropped from the eighth best-connected country to the 10th, and Hong Kong (-13%), that dropped from sixth to ninth. The countries on this list five years before were the United Kingdom and Belgium, which have dropped from ninth to 11th and from 10th to 12th, respectively.



Figure 27  
LSCI trends in the ten best-connected countries of the World (LSCI evolution, Q1 2019 - Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.

By: Theo Notteboom - Thanos Pallis

## 6.2. Regional focus: Africa

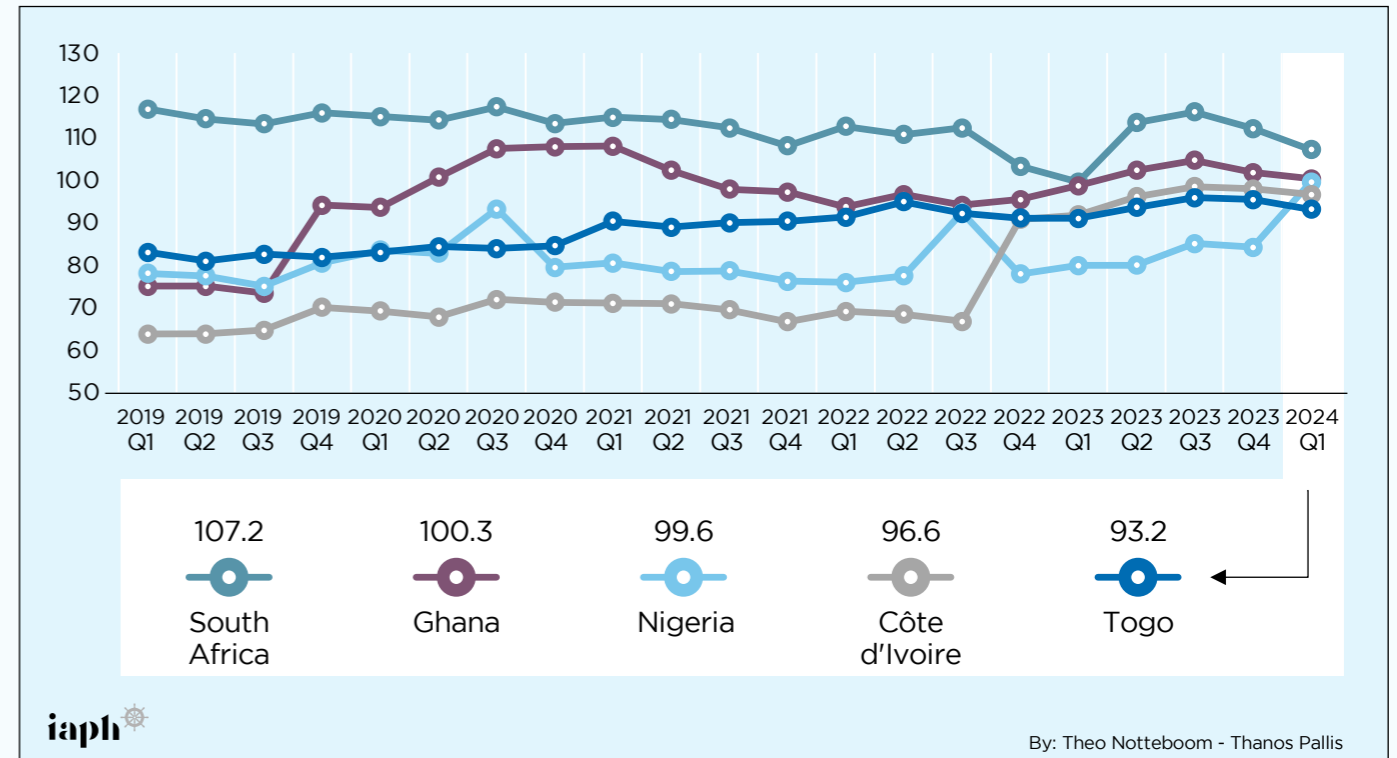
The five best-connected countries in sub-Saharan Africa in Q4 2024 are South Africa (the 49th best connected in the world), Ghana (52nd), Nigeria (which in the last year emerged in the ranking of the best-connected countries in the world from the 62nd best-connected country to 54th), Côte d'Ivoire (55th) and Togo (56th). South Africa recorded a 7.7% increase on a year-on-year basis. In Ghana, LSCI stands 1.6% higher than a year ago. In Nigeria, the increase compared to the beginning of 2023 is 25%. Positive trends occurred in Côte d'Ivoire (a 5.2% improvement) and Togo (2.3% higher than a year before).

In Q1 2024, the LSCI of South Africa stands 8% higher than five years before, yet in the related global rankings, the country stands eight positions lower than in Q1 2019. Due to a notable 34% rise in connectivity levels since 2019, Ghana has improved its global positioning as regards its connectivity by eight positions. Following the remarkable progress of the LSCI in the last year and a 37% LSCI increase since 2019, Nigeria stands eight positions higher in the global ranking than five years earlier and is the second best-connected African country. Since 2019, LSCI in Côte d'Ivoire increased by 52%. This is the most dynamic development in sub-Saharan Africa over this time. and the country has emerged 17 positions higher in the global rankings and the fourth best connected in Africa. Since 2019, LSCI in Togo improved by 12%.

In 22 Sub-Saharan African countries, the recorded LSCI was higher in Q1 2024 than in Q1 2023. Liberia, Comoros, Mayotte, Sierra Leone, and Guinea top the percentage growth list, followed by Nigeria and Eritrea. On the other hand, the LSCI was lower than in the same quarter of 2023 in 12 Sub-Saharan African countries. Major declines were observed in Djibouti, Gambia, and Namibia. The LSCI remained unchanged on a year-on-year basis in one African country. Compared to Q1 2019, 14 Sub-Saharan African countries have a higher LSCI index today. Côte d'Ivoire (+52%), Guinea-Bissau (+47%), Mozambique (+43%), and Congo Republic (+40%) are the countries that experienced a major improvement in their liner shipping connectivity levels. In 21 countries, the LSCI today stands lower than in the first quarter of 2019.



Figure 28  
LSCI trends in the five best-connected countries in Africa (LSCI evolution, Q1 2019 - Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.



Table 1  
Countries with major LSCI increase in Africa in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
Liberia	23.6	54.8%	137	↑ 13	10%	↑ 3
Comoros	16.5	33.3%	148	↑ 8	-12%	↓ -2
Mayotte	17.4	30.3%	145	↑ 10	-4%	↑ 2
Sierra Leone	23.8	25.9%	136	↑ 6	34%	↓ 12
Guinea	29.4	25.2%	114	↑ 18	-14%	↓ -3



By: Theo Notteboom - Thanos Pallis

Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00

### 6.3. Regional focus: Latin America and the Caribbean

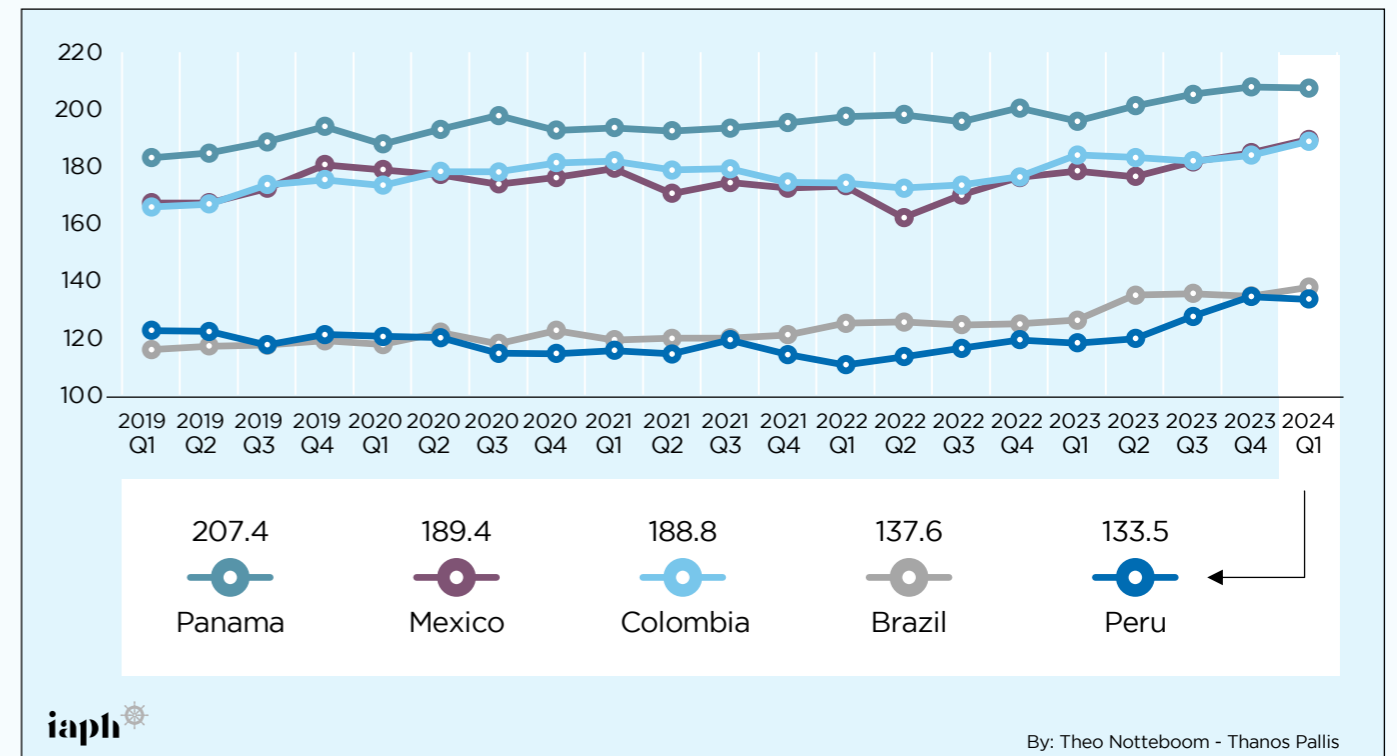
The five best-connected countries in LAC in Q4 2024 are Panama (26th best-connected country in the world), Mexico (28th), Colombia (29th), Brazil (36th) and Peru (37th). All five best-connected countries in LAC improved their levels of connectivity compared to a year before, now standing in the 40 best-connected countries of the world.

In Panama, Mexico, and Colombia, the LSCI stands higher today than the year before by 6%, 6%, and 3%, respectively. As a result, Mexico exchanged positions with Colombia, the second-best-connected country in the region and the 28th-best-connected in the world. Brazil continues to emerge in the rankings as the LSCI increased by 9% yearly and today stands 12 positions higher than in Q1 2023. In the case of Peru, LSCI increased by 13% since Q1 2023, which was enough for the country to return to the list of the five best-connected countries in LAC.

A total of 26 countries and territories in LAC recorded in Q1 2024 an LSCI higher than the respective LSCI in Q1 2023. Due to a 17.3% increase, El Salvador gained 11 positions in the global rankings. The second biggest increase occurred in Venezuela (+16%). This represents a recovery from some negative connectivity trends in recent times, yet the connectivity of the country continues to be 26% lower than five years ago (it dropped 15 positions globally). Honduras (13.6%), Peru (13%), and Ecuador complete the top-five percentage growth list and have gained eight, four, and three positions in the relevant global ranking. On the other hand, in Q1 2024, the LSCI was lower than in the same quarter of 2023 in 10 LAC countries and territories. Compared to Q1 2019, 22 LAC countries and territories have a higher LSCI index today. Antigua and Barbuda (+76%; improved its global ranking by 32 positions), Nicaragua (+39%; improved its global ranking by 27 positions), and Paraguay (+31%; improved its global ranking by nine positions) are the countries that experienced a major improvement in their liner shipping connectivity levels. In 20 countries, the LSCI stands today lower than it did in the first quarter of 2019.



Figure 29  
LSCI in the five best connected countries in LAC (LSCI evolution, Q1 2019 – Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.



Table 2  
Countries with major LSCI increase in LAC in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
El Salvador	26.0	17.3%	126	↑ 11	-23%	↓ -13
Venezuela	35.5	16.2%	103	↑ 8	-26%	↓ -15
Honduras	68.3	13.6%	69	↑ 8	14%	↑ 10
Peru	133.5	13.0%	37	↑ 4	9%	↑ 1
Ecuador	118.9	11.7%	43	↑ 3	15%	↑ 3



By: Theo Notteboom - Thanos Pallis

Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00

## 6.4. Regional focus: The Mediterranean Sea

The five best-connected countries in the Mediterranean Sea in Q4 2024 are Spain (8th best-connected country in the world), Turkey (17th), Italy (18th), France (19th), and Morocco (20th). All five best-connected countries in the Mediterranean Sea improved their levels of connectivity compared to a year before, now standing among the 20 best-connected countries of the world.

For Spain and Italy, the LSCI stands in Q1 2024 higher than a year before by 1% and 1.9%, respectively. In the same period, Turkey (+5.1%), France (+5.6%), and Morocco (+6.1%) experienced a higher percentage LSCI increase. In the case of Turkey and Morocco, this has also been observed in past years. Since Q1 2019, the LSCI increased in Turkey by 25%, and the country improved its global ranking by two positions). In Morocco, the LSCI increased by 30% (and the country improved its global ranking by five positions). France is the only one of the best-connected countries in the Mediterranean Sea where LSCI at the beginning of 2024 is lower than in Q1 2019. Within the last five years, following an LSCI decline of 7.5%, France has dropped four positions in the global ranking of the best-connected countries.

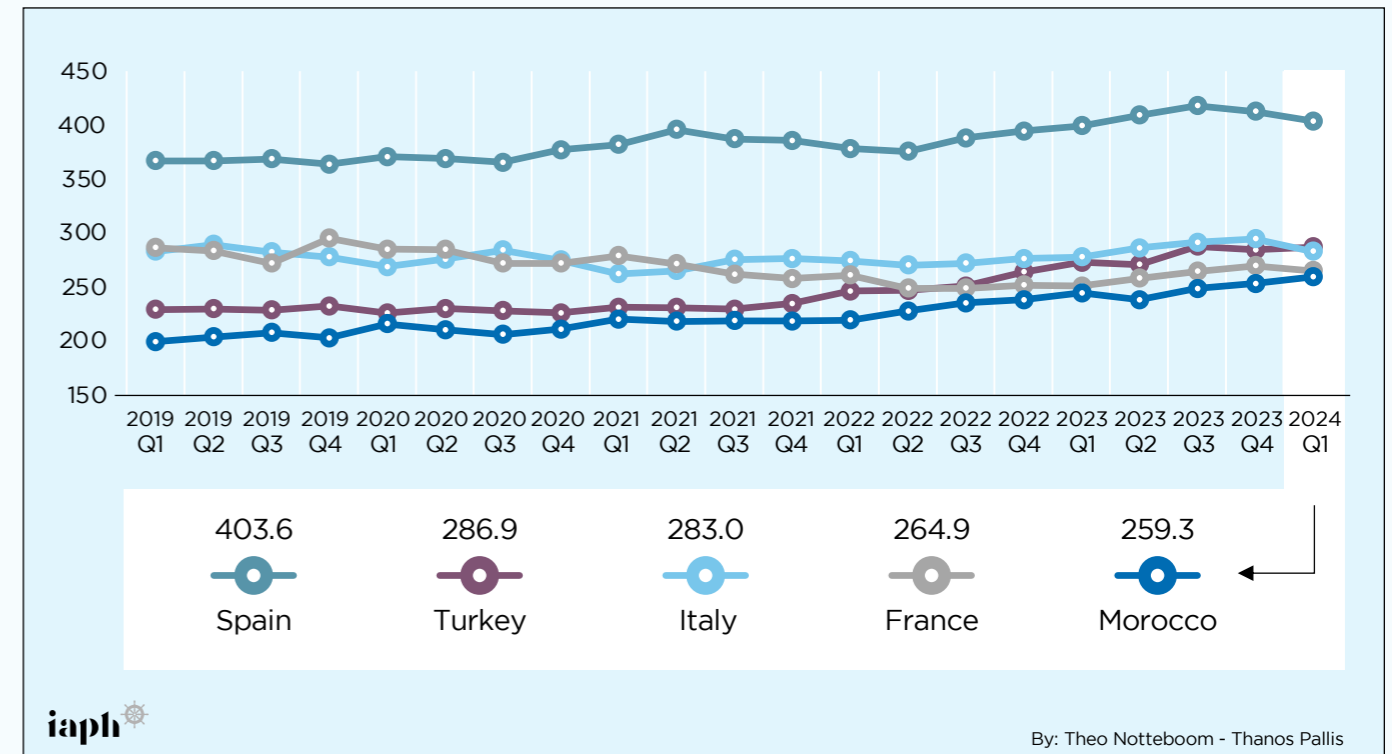
Notably, all countries in the Mediterranean Sea apart from Israel improved their connectivity levels in the last year: the LSCI recorded in Q1 2024 stands higher than the respective LSCI in Q1 2023. Tunisia (+22%; improved its global ranking by 15 positions), Romania (+20%; improved its global ranking by six positions); Lebanon (+17%; improved its global ranking by eight positions), Bulgaria (+14%; improved its global ranking by seven positions) and Algeria (+13%; improved its global ranking by seven positions) are the five countries that experience a double-digit percentage increase and top the relevant list. In Israel, the LSCI in Q1 2024 is 29% lower than a year before; no records are available for Ukraine, where activities are minimal.

As regards the five-year trend, the list of the Mediterranean Sea countries shows that connectivity levels are higher today in 13 cases. Romania (+32%; improved its global ranking by six positions), Morocco (+30%; improved its global ranking by three positions), and Bulgaria (+30%; improved its global ranking by seven positions) top the list. Turkey, Slovenia, Greece, and Spain are the other countries that experienced a double-digit increase. The list of Mediterranean Sea countries with lower connectivity levels is lower today in 8 cases, while the LSCI remains unchanged in Italy. Beyond the countries where conflicts occurred, the most notable negative trends were experienced in Tunisia (-21%; dropped in the global rankings by 14 positions), which recorded a recovery in recent times, Albania (-18%), and Cyprus (-13%).



Figure 30

LSCI trends in the five best connected countries in the Mediterranean Sea (LSCI evolution, Q1 2019 - Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.



Table 3

Countries with major LSCI increase in the Mediterranean Sea in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
Tunisia	29.5	21.9%	113	↑ 15	-20.8%	↓ -14
Romania	79.9	19.6%	62	↑ 6	32.7%	↑ 16
Lebanon	112.0	17.2%	45	↑ 8	7.8%	→ 0
Bulgaria	31.6	14.3%	108	↑ 7	29.6%	↑ 20
Algeria	70.4	13.2%	66	↑ 7	9.1%	↑ 3

Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00

## 6.5. Regional focus: Middle East and Indian Sub-continent

The five best-connected countries in the Middle East and the Indian sub-continent in Q4 2021 are India (14th best-connected country in the world), United Arab Emirates (15th best-connected in the world), Sri Lanka (22nd), Saudi Arabia (23rd), and Pakistan (34th).

Four of the five best-connected countries improved their levels of connectivity compared to the year before. Since Q1 2023, LSCI increased in India by 5.1% and in UAE by 5.7%. The latter improved its ranking in the list of the best-connected countries in the world by one position. LSCI increased by 7.5% in Sri Lanka, improving its global rankings by two. Saudi Arabia is the only one of the best-connected countries in the region where LSCI stands today lower than in Q1 2023, though this decline is on the marginal side. Following a 1.7% decline, the country dropped two positions in the global ranking. In the case of Pakistan, the LSCI stands in Q1 2024 higher by 8.9% compared to the LSCI a year before. As a result, Pakistan surpassed Oman in terms of connectivity and is now included among the five best-connected countries in the region.

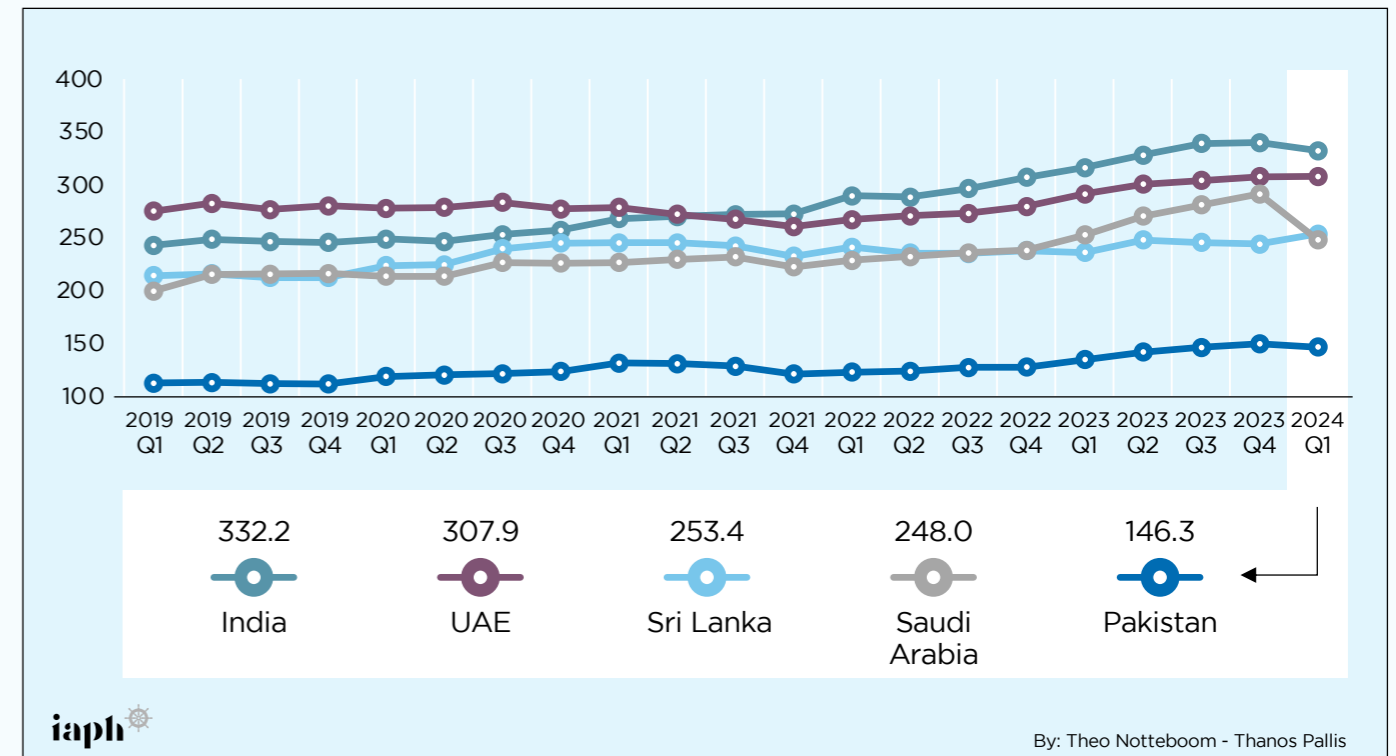
Liner shipping connectivity levels in Q1 2024 were higher than in Q1 2023 in six countries in the Middle East and the Indian subcontinent. These are Yemen (+47.3%; improved global ranking by 33 positions), Pakistan, Iraq (+17.4%; improved global ranking by one position), Sri Lanka, UAE, and India. In the same period, An LSCI decline occurred in nine countries in the region. Jordan (-26.9%; dropped in the global rankings by 20 positions), Bahrain (-15.3%; dropped in the global rankings by 14 positions), Oman (-12.4%; dropped in the global rankings by seven positions), and Syria (-11.1%; dropped in the global rankings by 17 positions), are the four countries that experienced a double-digit percentage LSCI decline.

As regards the five-year trend, notable double-digit percentage LSCI increases since 2019 occurred in nine countries. Yemen doubled its connectivity levels and gained 33 positions in the global connectivity rankings, India (+37%; improved its global ranking by four positions), Pakistan (+31%; improved its global ranking by nine positions) and Saudi Arabia (+24%; improved its global ranking by three positions) and Qatar (+23%; improved its global ranking by six positions) are those that top the list. On the other hand, Bahrain (-39%), Jordan (-27%), Oman (-20%) and Kuwait (-15%) are the only countries in the Middle East and the Indian sub-continent that LSCI in Q1 2024 is lower than in Q1 2019, with Syria (-27%) being a particularly acute case.



Figure 31

LSCI trends in the five best-connected countries in the Middle East and Indian Sub-continent (LSCI evolution, Q1 2019 - Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.



Table 4

Countries with significant LSCI increase in the Middle East and Indian Sub-continent in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
Yemen	31.7	47.3%	107	↑ 33	109%	↑ 48
Pakistan	146.3	8.9%	34	↑ 1	31%	↑ 9
Iraq	73.4	7.8%	65	↑ 1	13%	↑ 3
Sri Lanka	253.4	7.5%	22	↑ 2	19%	↑ 1
UAE	307.9	5.7%	15	↑ 1	12%	↑ 2

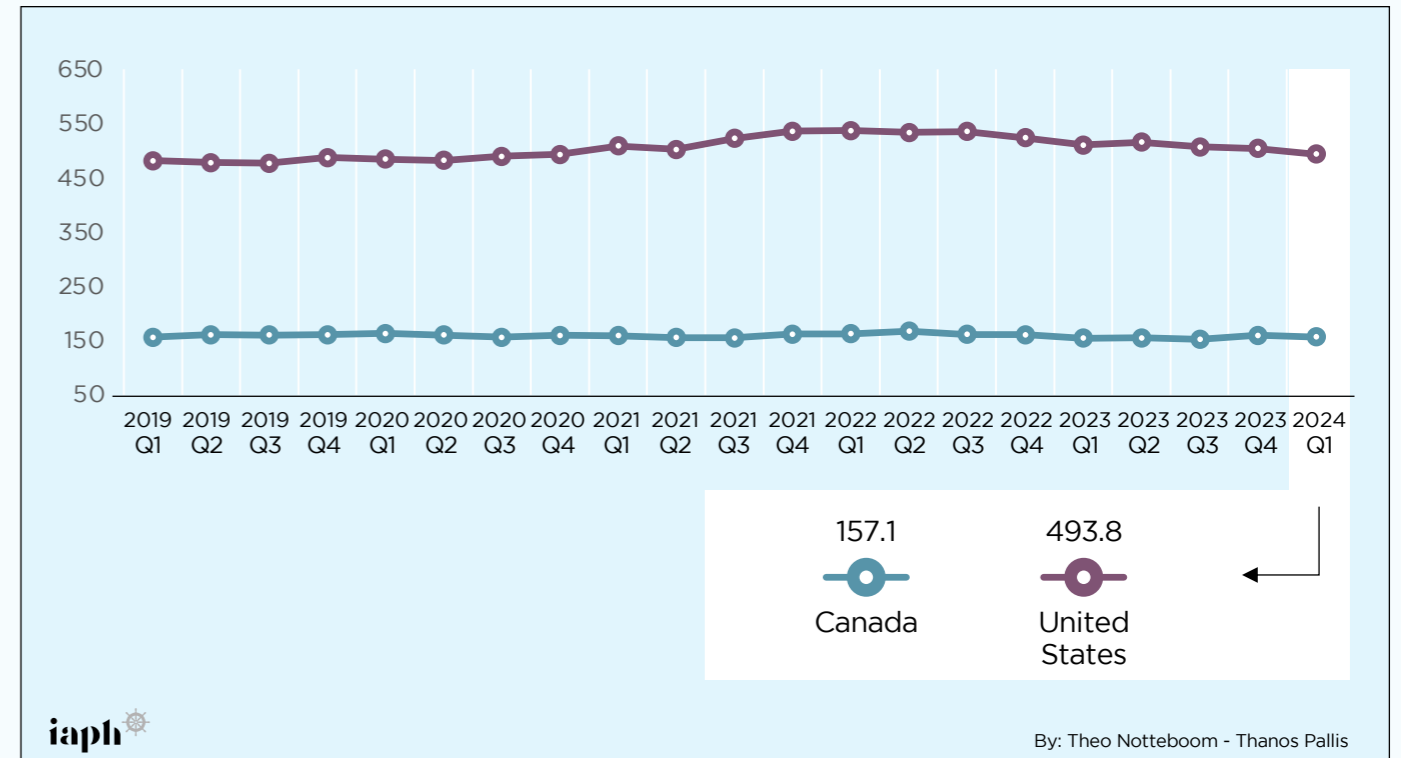
Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00



## 6.6. Regional focus: North America

Despite a 3.3% decline in its liner shipping connectivity index year-on-year, the U.S. remained in Q1 2024 as the fourth best-connected country globally. Since Q1 2019, the LSCI growth in the U.S. has improved by 3%, with the U.S. position in the global connectivity rankings standing unchanged. When comparing the first quarter of 2024 with the same quarter a year before, liner shipping connectivity levels in Canada increased by 1.8%. This was a recovery from some recent (minor) negative changes that resulted in an unchanged LSCI since 2019. Canada continues to stand as the 33rd best-connected country in the world.

**Figure 32**  
LSCI trends in North America (LSCI evolution, Q1 2019 – Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.

**Table 5**  
LSCI in North America in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
United States	493.8	-3.3%	4	↑ 15	→ 0	3%
Canada	157.1	1.8%	35	↑ 6	↓ -1	0%

Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00

## 6.7. Regional focus: North East Asia

The list of five best-connected countries/territories in North East Asia in Q1 2024 includes the two best-connected countries in the world, China and South Korea, as well as Japan (6th, best connected in the world), Hong Kong (9th) and Chinese Taipei (12th).

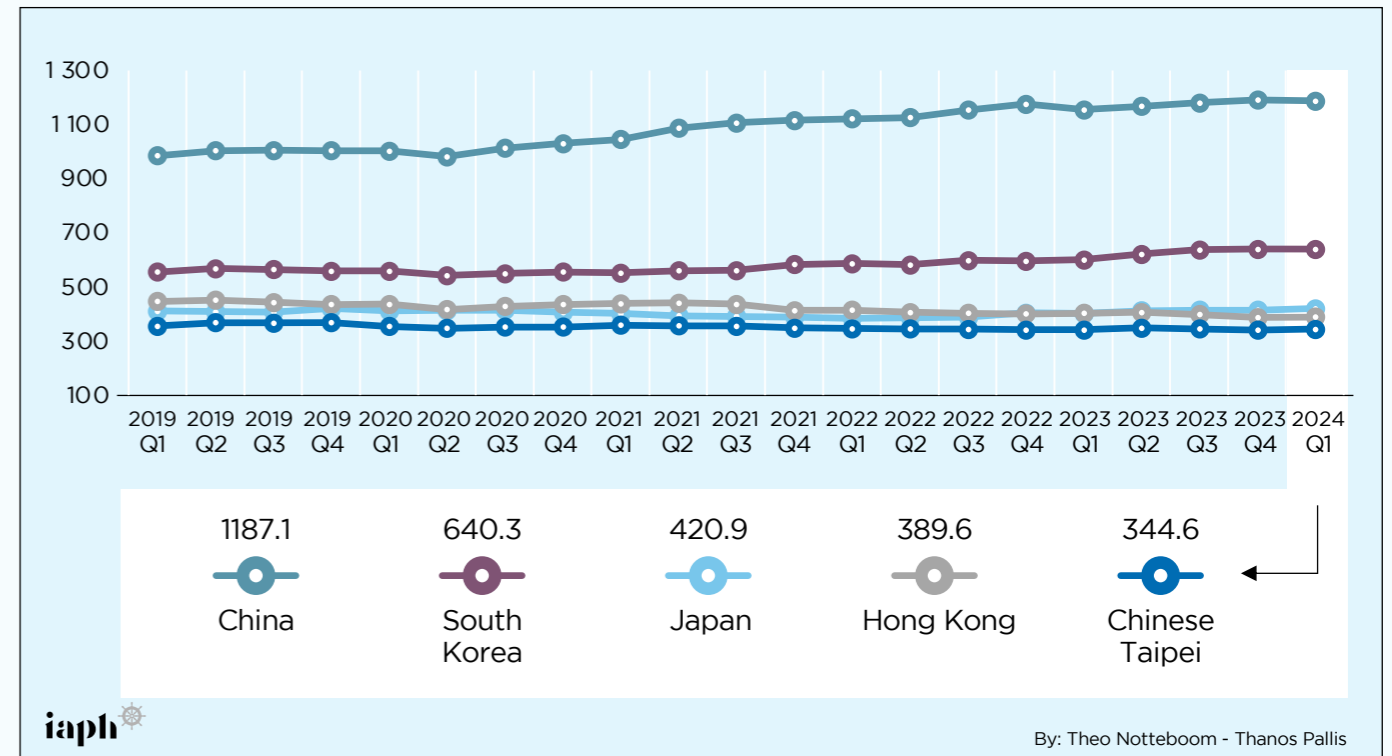
Since Q1 2023, the LSCI of the best-connected country in the world, China, increased by 2.7%. In the same period, the increase in South Korea stood at 6.5% and Japan at 4.8%. The latter emerged from the eighth best-connected country in the world in 2023 to the sixth best-connected one in 2024. In the case of Chinese Taipei, the levels of liner shipping connectivity improved by +0.7%, improving its position in the global rankings by one. Hong Kong is the only case on the list where the LSCI declined yearly (-3.5%), which led to Hong Kong dropping in the global rankings from the sixth best-connected place in the world to the ninth. Comparing the situation in Q1 2024 and Q1 2023, a significant increase in liner shipping connectivity is recorded in Russia. However, that is essentially a recovery from the highly negative trends produced by geopolitical events – the LSCI in the case of Russia stands today at 17% lower than in Q1 2019.

In both China (+20%) and South Korea (+15%), the LSCI increased since 2019 by a double-digit percentage. As a result, China reinforced its positioning as the best-connected country in the world, and South Korea moved from the third best-connected country to the second one. Since Q1 2019, the LSCI increased in Japan by 2%, while in Chinese Taipei, it decreased by 3%. During the same period, Hong Kong's LSCI declined by 13%, with Hong Kong standing three positions lower in the global rankings compared to Q1 2019.



Figure 33

LSCI trends in the five best-connected countries in North East Asia (LSCI evolution, Q1 2019 – Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.



Table 6

Countries with major LSCI increase in North East Asia in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
Russia	166.1	39.0%	32	↑ 7	-17%	-8
South Korea	640.3	6.5%	2	0	15%	↑ 1
Japan	420.9	4.8%	6	↑ 2	2%	↑ 1
China	1,187.1	2.7%	1	0	20%	→ 0
Chinese Taipei	344.6	0.7%	12	↑ 1	-3%	↑ 1

Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00

## 6.8. Regional focus: North Europe

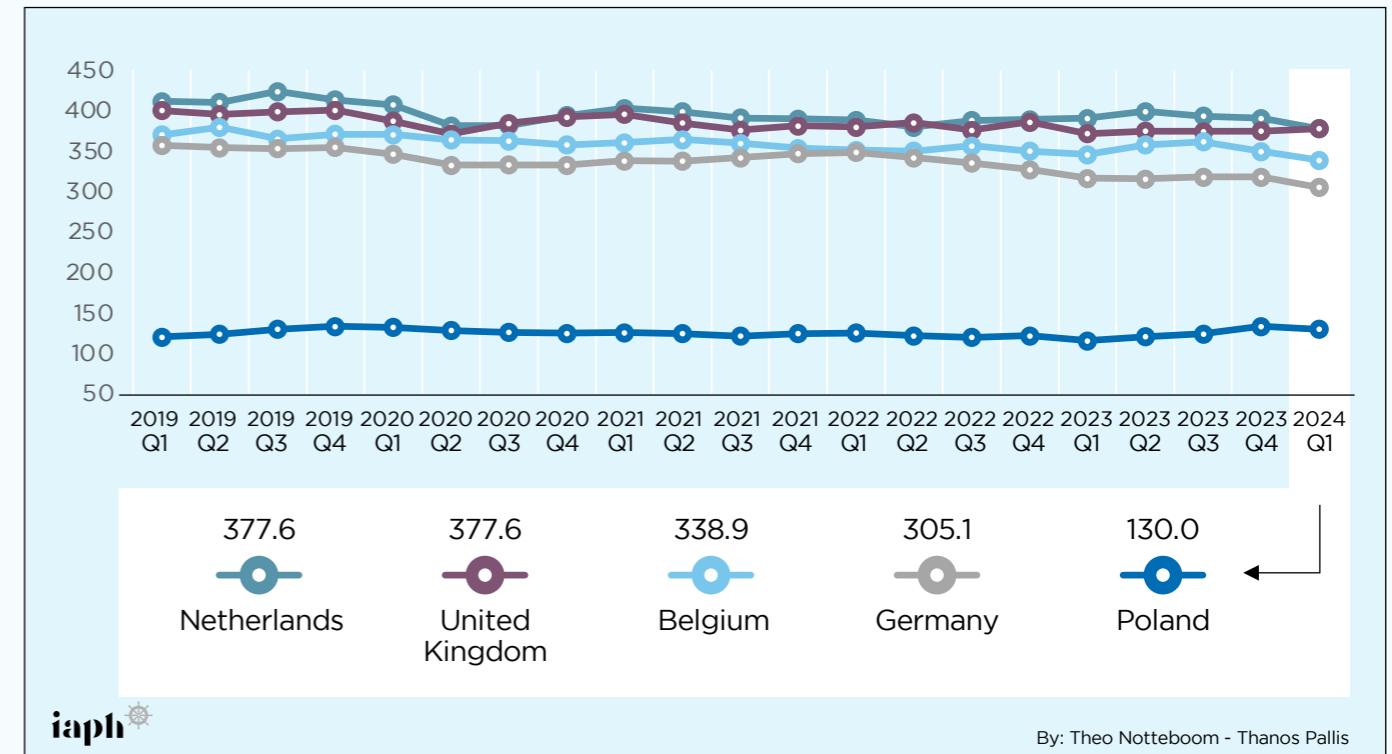
The five best-connected countries in North Europe in Q1 2024 are the Netherlands (10th best-connected country in the world), United Kingdom (11th), Belgium (13th), Germany (16th), and Poland (38th).

Overall, on an annual basis, the LSCI levels in the region remained relatively stable. In the Netherlands (-3.3%), Belgium (-2%) and Germany (-3.5%), the LSCI in Q1 2024 stands lower than in Q1 2023. Notably, these declines have been consistent in the last five years. Since Q1 2019, the LSCI in the Netherlands and Belgium decreased by 8%, and the countries dropped their global ranking by two and three positions, respectively. In Germany, the deterioration has been even more significant: an LSCI decline by 15% means that Germany has dropped from the 12th best-connected country in the world to the 16th. The LSCI in the United Kingdom is 1.7% higher in Q1 2024 than a year before. This has contributed to a partial decrease of the decline that the UK has experienced in the past years but has yet to be enough to keep the country in the top 10 connected countries of the world. Since 2019, the decline of the LSCI in the UK has been 6%, and the country has dropped to 11th in the global rankings. Poland has experienced a 12.3% growth of its liner shipping connectivity index in the last year and an 8% compared to Q1 2019. Today, it stands five positions higher in the rankings of the best-connected countries in the world than it stood a year ago.

Latvia (+17%; improved its global ranking by seven positions), Iceland (+8%; improved its global ranking by five positions), Lithuania (+8%; improved its global ranking by two positions), and Sweden (+4%; improved its global ranking by one position) are the four other countries in the region where the growth of liner shipping connectivity increased on a year-on-year basis. In the same period, Estonia recorded the most notable LSCI drop in Q1 2024 (-21%; it dropped its global ranking by 17 positions). The LSCI increases since 2019 have occurred mainly in some of the least connected countries of the region. In Latvia and Iceland, LSCI improved by almost one-third; in Faeroe Islands and Lithuania, it improved by double-digits. On the other hand, in Estonia (-24%), Finland (-16%), Denmark (-15%), and Germany, the LSCI is today notably lower than in Q1 – the list of the eight North European countries where the LSCI declined contains most of the best-connected countries in the region.



Figure 34  
LSCI trends in the five best-connected countries in North Europe (LSCI evolution, Q1 2019 – Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.



Table 7  
Countries with major LSCI increase in North Europe in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
Latvia	44.0	17%	92	↑ 7	30%	↑20
Poland	130.0	12%	38	↑ 5	8%	↑ 1
Iceland	28.0	8%	118	↑ 6	30%	↑ 21
Lithuania	70.2	8%	67	↑ 2	11%	↑ 6
Sweden	115.6	4%	44	↑ 1	-3%	↓-4

Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00

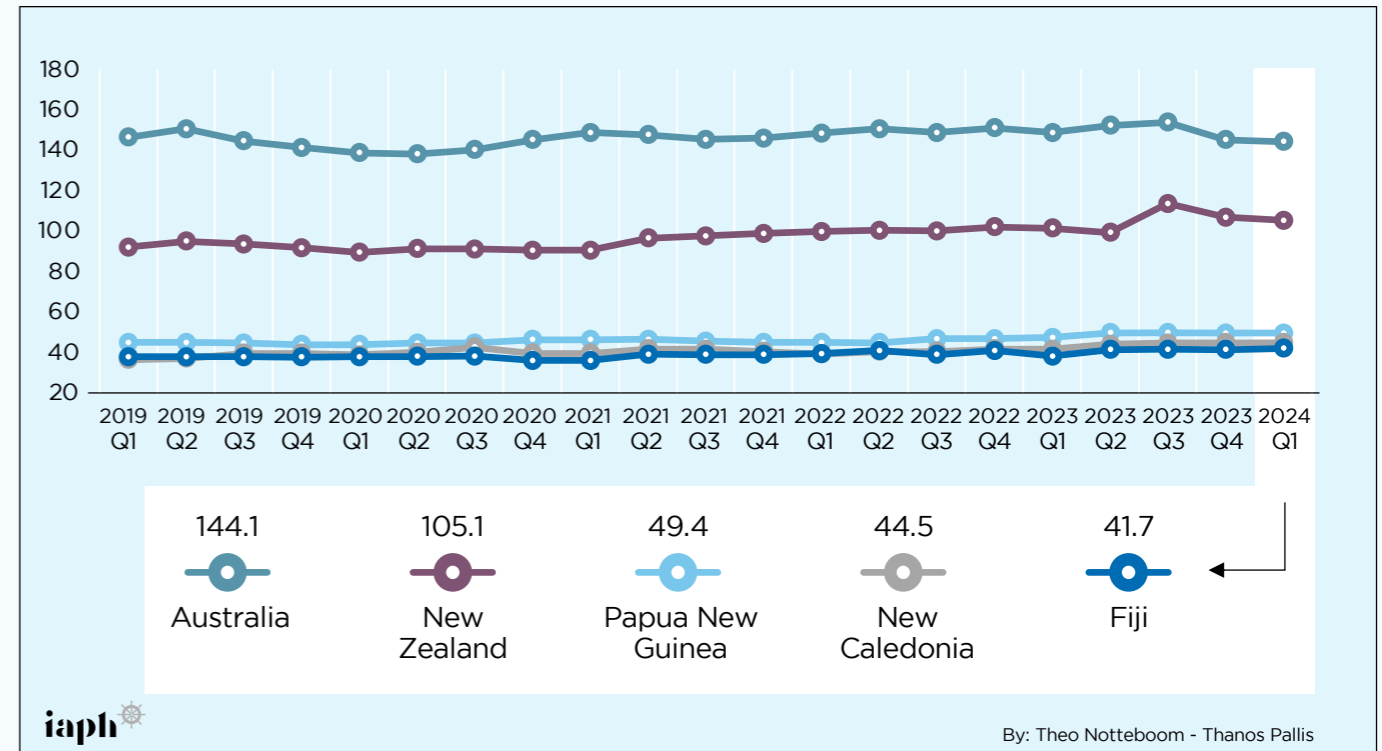
### 6.9. Regional focus: Oceania and the Pacific

In Oceania and the Pacific in Q1 2024, Australia’s LSCI is 3% lower than a year before. Australia is the 35th best-connected country in the world (two positions lower than a year before. In the same period, the change in New Zealand was positive but on a small scale. However, despite a 3.7% increase, the country dropped from 48th to 50th best connected globally. Yet, when comparing the present situation with Q1 2019, the LSCI in New Zealand stands 14% higher. Improvements over the last year are recorded in the other three best-connected countries/territories in the region, New Guinea (4.8%; 48th best-connected in the world), New Caledonia (+7.8%), and Fiji (+10%). In all these cases, the LSCI has increased since 2019 by double-digit percentages.

Focusing on the longer-term trends, the current LSCI in most countries/territories in the region stands higher than the respective LSCI in Q1 2019 – the most notable exception being the decrease in LSCI that occurred in Australia (-2%).



Figure 35  
LSCI trends in the five best-connected countries in Oceania and the Pacific (LSCI evolution, Q1 2019 – Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.



Table 8  
Countries with major LSCI increase in Oceania and the Pacific in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
Fiji	41.7	10%	95	↑ 3	11%	↑ 6
New Caledonia	44.5	8%	91	↑ 3	23%	↓ -2
Vanuatu	25.1	7%	129	↑ 2	13%	↓ -7
Papua New Guinea	49.4	5%	87	↑ 2	11%	↑ 27
Kiribati	16.8	5%	147	↑ 1	233%	↑ 37

Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00

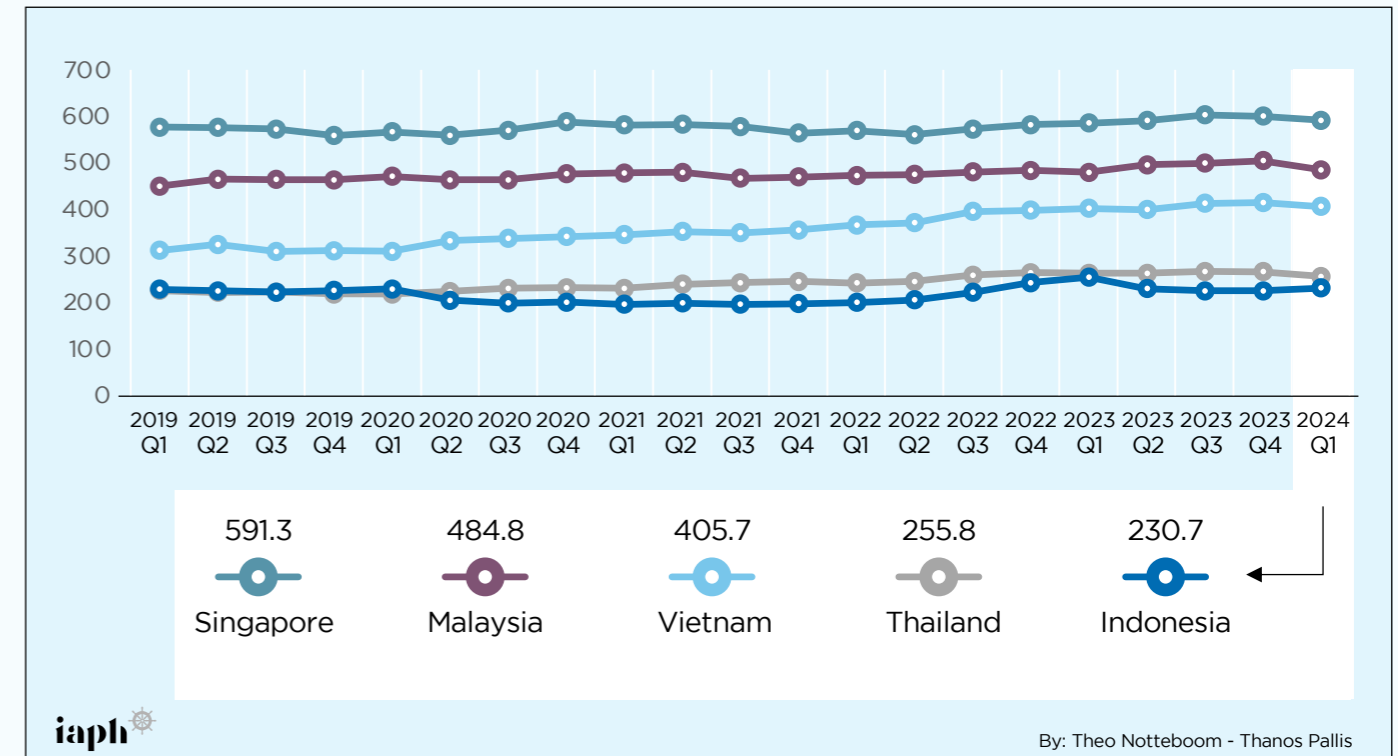
## 6.10. Regional focus: South East Asia

Singapore and Malaysia (102.47), which are the 3rd and 5th best-connected countries in the world, top the list of the best-connected countries in South East Asia in Q1 2024. They are followed by Vietnam (7th best-connected country in the world), Thailand (21st), and Indonesia (25th).

In Q1 2024, the LSCI of the three first countries stands higher than in Q1 2023 by 1%, and their positioning in the global ranking of the best-connected countries of the world remains unchanged. The picture is different in the case of Thailand, where LSCI declined by 2.5% and dropped two positions in the global rankings, and in Indonesia, where LSCI declined by 10.1% and dropped five positions in the global rankings. These are the only two countries in the region that, in the last year, experienced a decline in the respective Liner Shipping Connectivity Indices. East Timor (14,5%; improved its global ranking by three positions) and Cambodia (11%; improved its global ranking by two positions) are the two countries in the region that experienced some major LSCI improvements since Q1 2023, followed by Brunei (7.7%; improved its global ranking by five positions) and the Philippines (5.2%).

The long-term picture is even better as all Southeast Asian countries have improved connectivity since Q1 2019. Cambodia (+39%; moved 19 positions higher in the global rankings), Vietnam (+30%; moved from 14th to seventh in the global rankings), Myanmar (+24%); improved its global ranking by 16 positions), Brunei (+19%; improved its global ranking by 11 positions) and Thailand (+13; global position unchanged) recorded a double-digit percentage growth. Singapore (+3%) and Indonesia (+1%) recorded the lowest growths in the region since Q1 2019 and dropped their global ranking by one and five places, respectively.

**Figure 36**  
LSCI trends in the five best-connected countries in South East Asia (LSCI evolution, Q1 2019 - Q1 2024)



Source: Analysis of data provided by UNCTAD and MDS Transmodal.

**Table 9**  
Countries with major LSCI increase in South East Asia in Q1 2024 (LSCI evolution)

Country	LSCI Q1 2024	Δ Q1 2024/ Q1 2023	Global Ranking LSCI, Q1 2024	Change in Global Ranking Q1 2024 vs Q1 2023	Δ Q1 2024/ Q1 2019	Change in Global Ranking Q1 2024 vs Q1 2019
East Timor	11.58	10%	158	↑ 3	6%	↑ 2
Cambodia	31.52	8%	90	↑ 2	39%	↑ 49
Brunei	38.41	7%	124	↑ 5	19%	↑ 10
Philippines	86.31	5%	31	0	5%	↑ 3
Myanmar	73.25	5%	94	↓ -1	24%	↑ 46

Source: Analysis of data provided by UNCTAD and MDS Transmodal; Countries/territories with an LSCI > 5.00

7

**TRENDS IN CARGO PORTS:**

**HINTERLAND TRANSPORT SITUATION**

*The survey also explores the evolution of hinterland transport conditions in ports around the globe. In particular, the IAPH World Ports Tracker survey investigates to what extent the responding ports are facing delays and disruptions in inland transport operations by truck, rail, and barge (where available).*

Multiple causes produce these delays or disruptions in inland transport, including low availability of transport equipment such as containers, chassis, or wagons; congestion or disruptions in terminal operations; low availability of personnel such as truck drivers; and heavy congestion/capacity issues in the inland transport network. These can negatively affect inland transport operations in/out of the port and hinterland areas. In view of recognising potential differences in market dynamics per cargo type, the survey distinguishes between container transport and bulk and breakbulk cargo transport.

*The hinterland transport of containers has normalised after incurring major disruptions during the COVID-19 period, although delays in barge transport and rail are somewhat higher compared to the previous survey of September 2023.*

Container supply chains seem to face less pressure today than those recorded in early 2022, thus bringing the market closer to conditions in which both users and service providers can plan and better predict the length of maritime supply chains. When it comes to inland container transport, only 4% of the responding container ports report delays (6-24 hours) in road transportation, and none of the ports are facing major disruptions (> 24 hours). In Q4 2023, 28% of container ports experienced some minor delays (< 6 hours) in road transportation to/from the port. The percentage of ports that did not register delays continues to be well above 60%. In Q4 2023 it reached 66%, slightly down from 69% in Q2 2023.

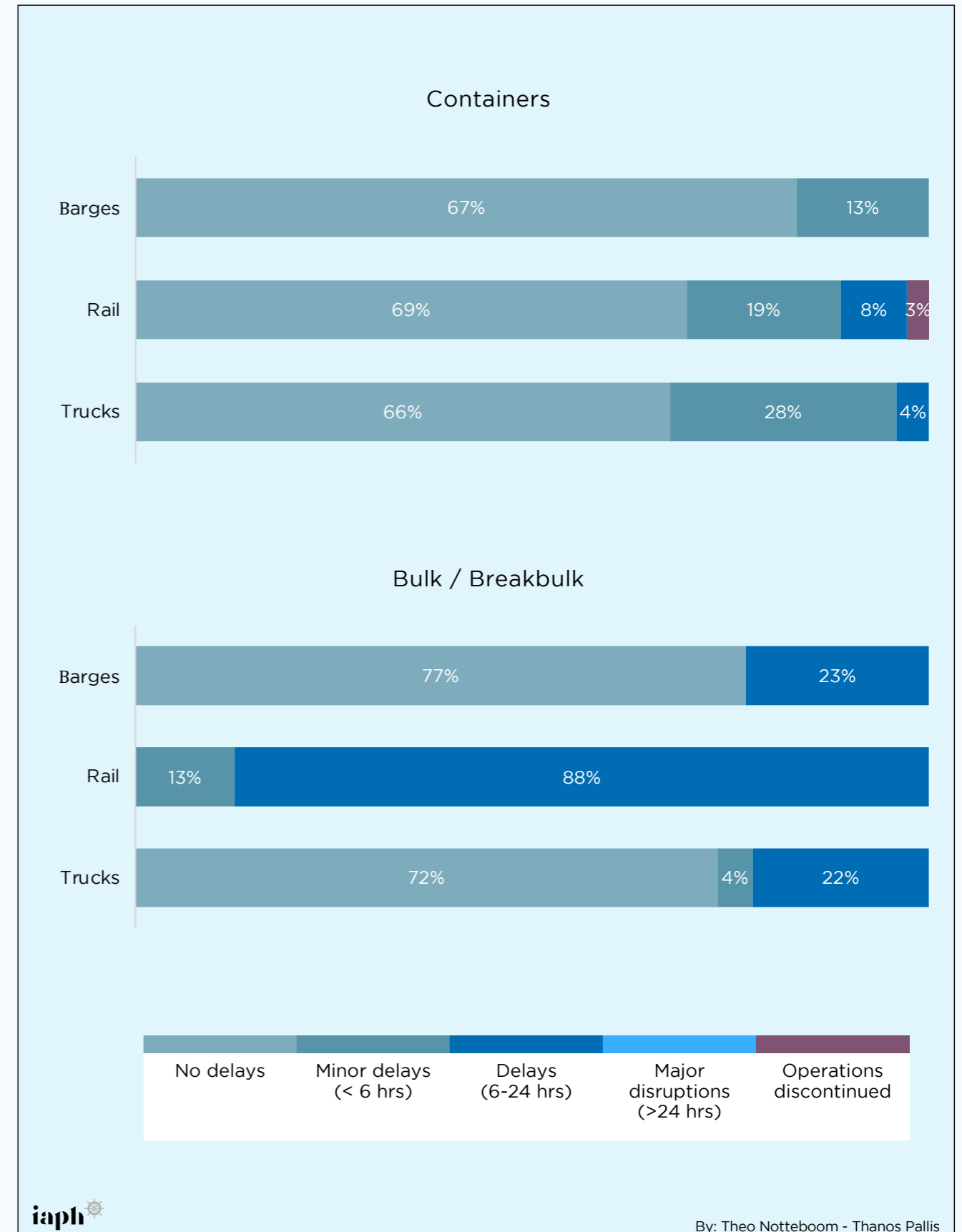
About 8% of ports report delays (6-24 hours) in container transport by rail. Compared to 2022, rail services in world ports improved considerably in Q4 2023: 69% of the responding ports' trains serve trade exchanges without any delays (-5% compared to Q2 2023, +4% compared to Q4 2022, and +18% compared to Q3 2022). Minor delays (<6 hours) occurred in 19% of all responding ports.

*The collected data suggest a deterioration of hinterland conditions in the bulk and breakbulk markets compared with the last three months of 2022, although the overall disruption levels are still relatively low.*

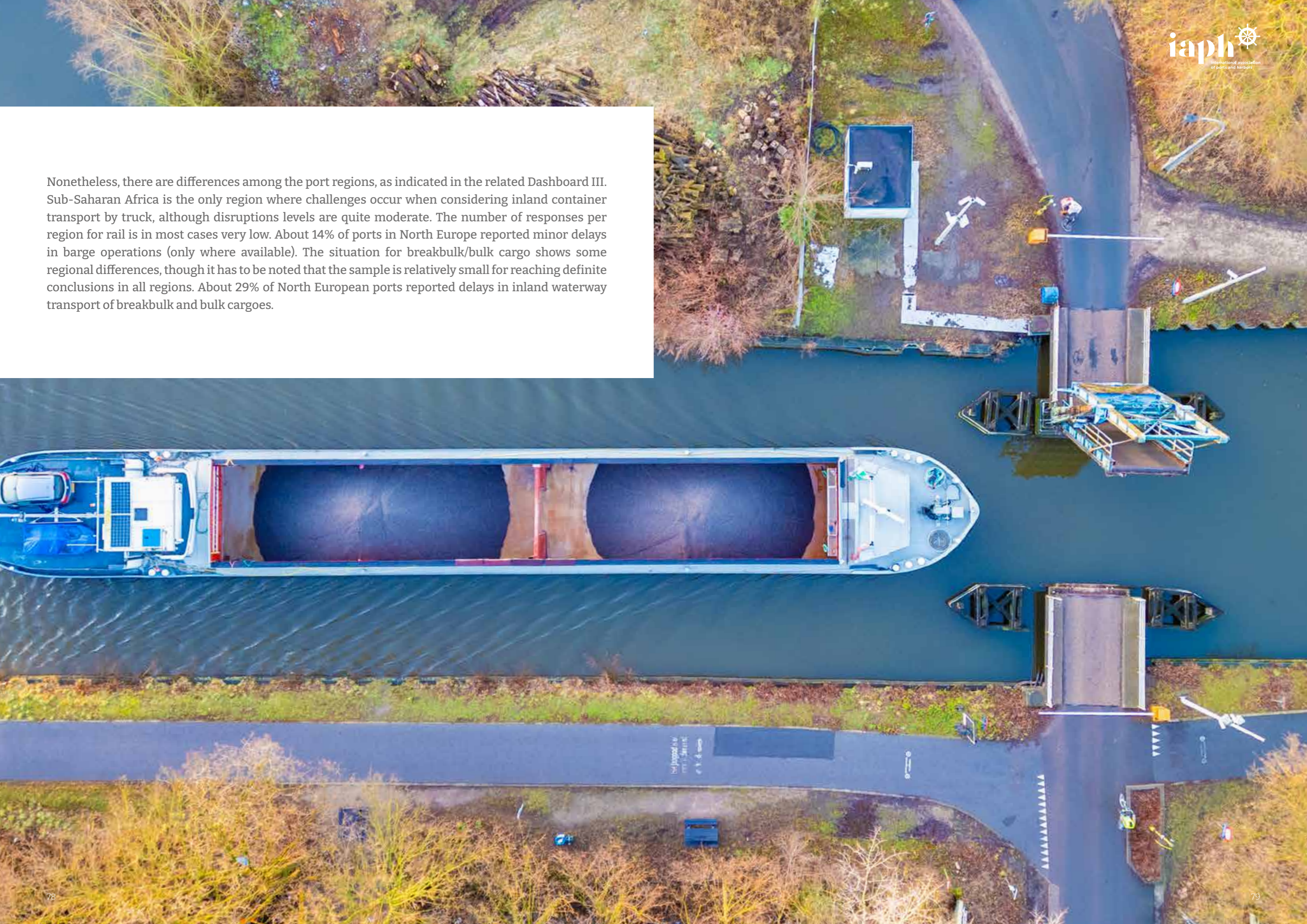
The picture is quite different in the case of inland transportation activities for bulk and breakbulk cargo, particularly in the case of rail. The good news is that over 72% of respondents are not facing truck transport delays, and 77% reported no delays in inland barge transportation in Q4 2023. However, breakbulk/bulk inland transport is hampered by delays of over six hours for a massive 88% of ports for rail, 22% for trucking, and 23% for barge transport.



Figure 37  
Hinterland transport conditions in ports (Q4 2023)



Nonetheless, there are differences among the port regions, as indicated in the related Dashboard III. Sub-Saharan Africa is the only region where challenges occur when considering inland container transport by truck, although disruptions levels are quite moderate. The number of responses per region for rail is in most cases very low. About 14% of ports in North Europe reported minor delays in barge operations (only where available). The situation for breakbulk/bulk cargo shows some regional differences, though it has to be noted that the sample is relatively small for reaching definite conclusions in all regions. About 29% of North European ports reported delays in inland waterway transport of breakbulk and bulk cargoes.





8

**TRENDS IN CARGO PORTS:  
CAPACITY UTILISATION IN  
WAREHOUSING AND  
DISTRIBUTION ACTIVITIES**



Another question in the Tracker survey focuses on the current capacity utilisation of warehouses/distribution facilities in world ports. In view of capturing the particularities associated with different goods flows, this part of the Tracker survey distinguishes between the warehousing/distribution situation for containerised goods, dry bulk, liquid bulk, and other cargo (conventional general cargo and breakbulk). Warehousing and distribution activities in ports may change due to demand and inventory (re)stocking of traders, importers, and retailers. Tank storage parks for liquid bulk, and oil products in particular, might see shifts in their utilisation degree caused by changes in oil prices, the demand for oil products, and the strategies of major traders.

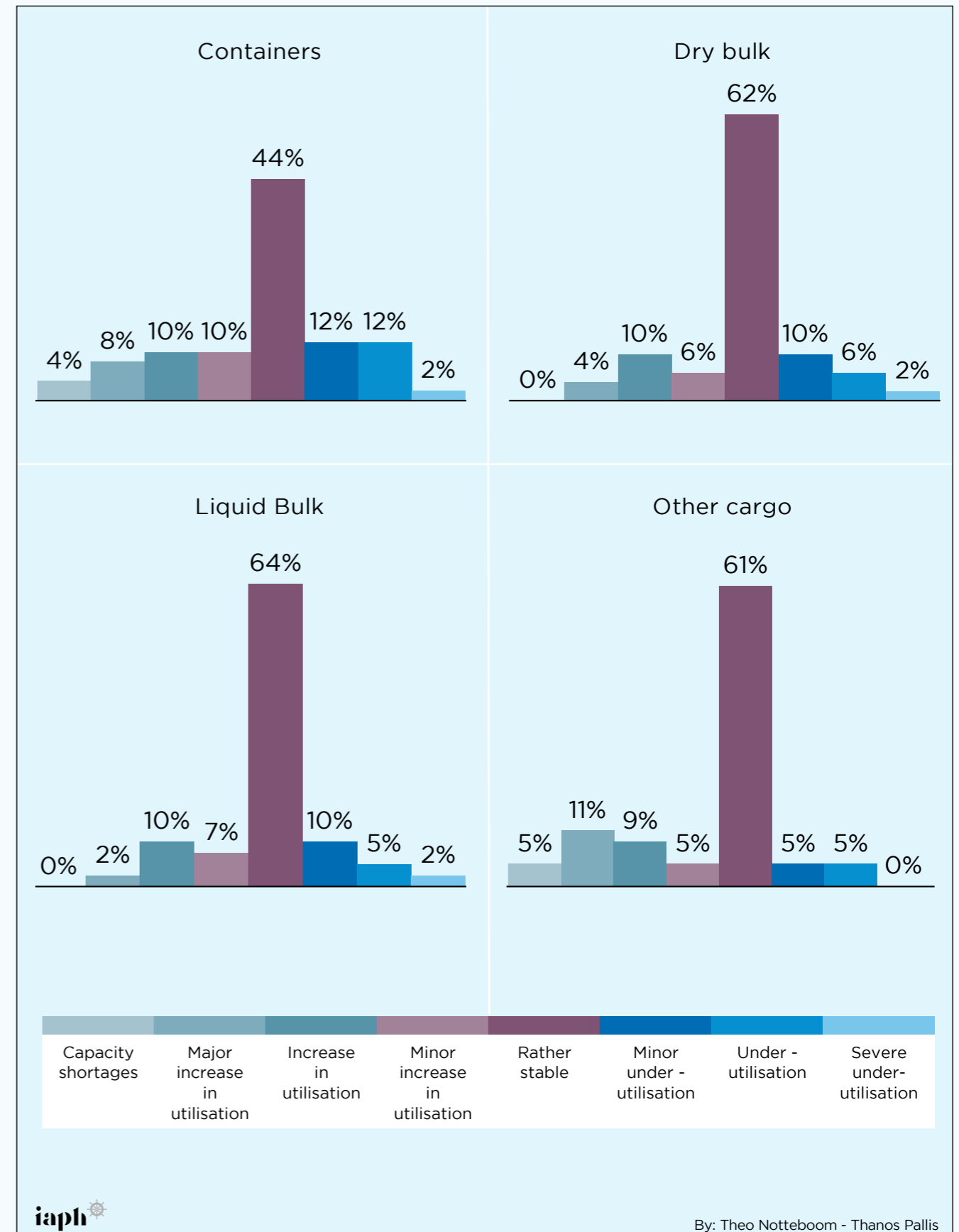
The survey results show 18% of ports reporting an increase or major increase in the utilisation of warehousing and distribution facilities for containerised goods, and a further 10% reported minor increases. Only 4% reported capacity shortages, which is only 1% higher than the figures for Q2 2023 and Q4 2022, and substantially lower than the percentage of ports that reported such shortages in Q3 2022 (13%). The percentage of respondents reporting an under-utilisation of warehousing and distribution facilities has increased from 11% in Q3 2022, 14% in Q4 2022 and 21% in Q2 2023 to 16% in Q4 2023.

*There is an improvement overall*  
*in storage availability for dry bulk.*

In the other goods categories, the share of ports with underutilised capacity shows mixed results. This share amounts to 18% for dry bulk, 17% for liquid bulk, and 9% for other cargo. While 14% of the ports observe an increase or major increase in the utilisation degree of dry bulk storage facilities, none of the ports face capacity shortages. In the liquid bulk market, 12% of surveyed ports face (major) increases in facility use, with also here none of the ports confronted with a lack of warehousing and distribution services capacity.



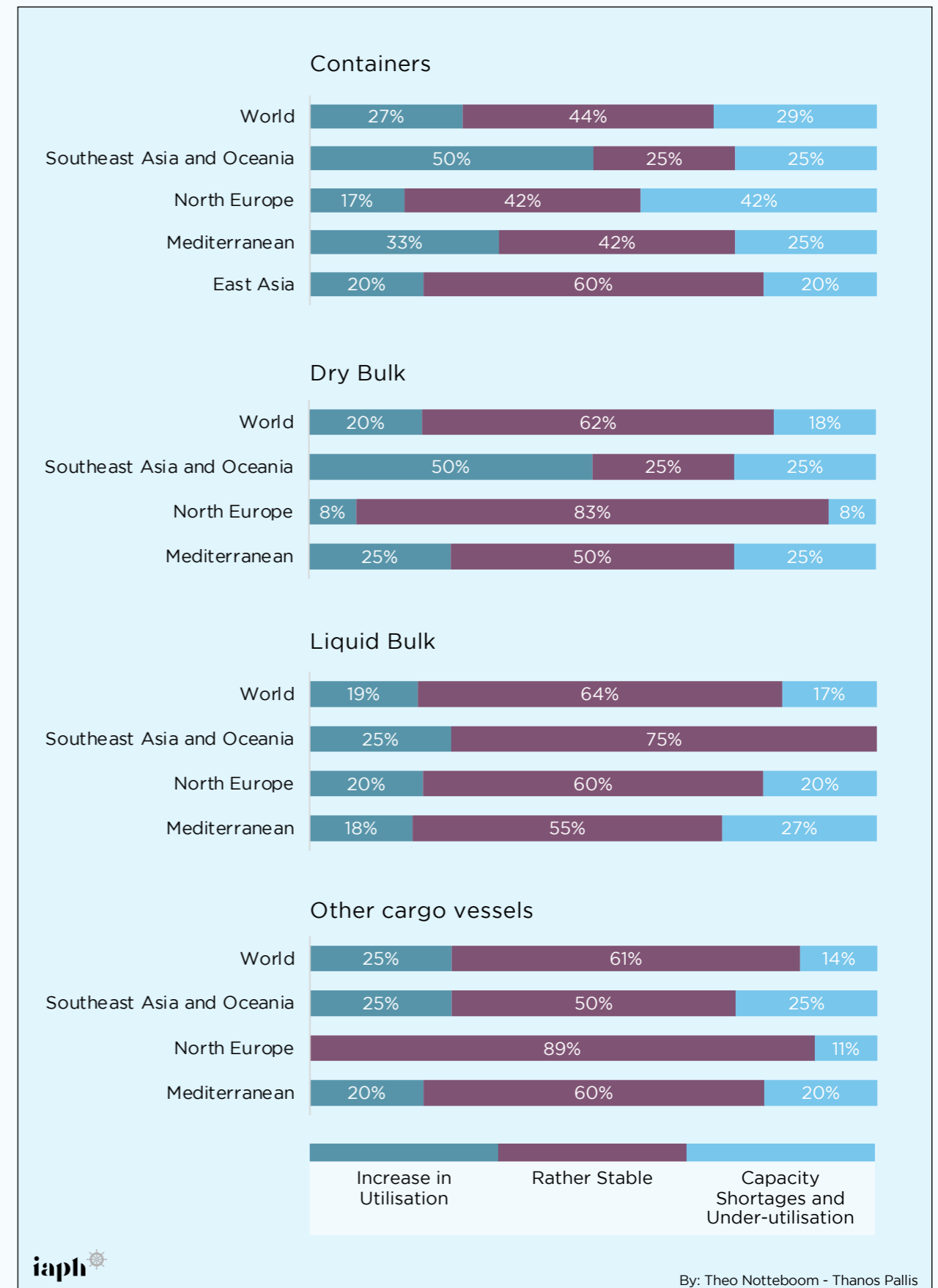
Figure 38  
 Warehousing and Distribution Services: Capacity Shortages and Under-Utilisation per market (Q4 2023)



When it comes to containerised cargo, the regional analysis reveals a rather stable situation in East Asia, and an increase in utilisation in half of the ports in Southeast Asia & Oceania. In the dry bulk sector, the situation is very different across the selected regions. North Europe and the Mediterranean show an even distribution between capacity shortages/under-utilisation and increase in utilisation with the majority of ports facing a stable situation. In Southeast Asia and Oceania, half of the ports face increases in utilisation in warehousing for dry bulk cargo. Southeast Asia & Oceania report no underutilisation of liquid bulk storage facilities, while these shares are low in the other regions. 18% to 25% of ports observe an increase in utilisation. Thus, the vast majority of ports report a rather stable situation in liquid bulk storage facilities.



Figure 39  
Warehousing and Distribution Services: Capacity Shortages and Under-Utilisation in selected Regions: (Q4 2023)



# 9

## TRENDS IN WORLD PASSENGER PORTS

*In this section of the tracker, questions are raised to those ports receiving cruise and passenger vessels around the world. The cruise and ferry sectors were the shipping segment most impacted by the COVID-19 pandemic, so measuring sentiments and trends of cruise and ferry ports around the world in the post pandemic period will gauge the degree of recovery this sector is experiencing.*

Passenger ports continued to surge following the collapse in all passenger-related activities in 2020 and 2021 due to the COVID-19 pandemic. As a result, traffic growth in passenger ports in 2022 and 2023 has been almost widespread.

*With the resumption of cruise activities in the post-pandemic period, the number of cruise vessel calls in most world cruise ports continued to increase in 2022 and early 2023, reaching a level of activity approaching the pre-pandemic period in late 2023.*

In Q2 2023, 34% of the ports participating in the survey experienced a double-digit percentage year-on-year growth of cruise vessel calls. A further 25% of the responding ports experienced single-digit growth. Compared to Q4 2022, the share of double-digit increases in Q4 2023 was down to 20%, with 17% of ports having single-digit growth. This shows that the speedy return to pre-pandemic levels is slowly starting to level off as the number of calls in world cruise ports has strongly recovered over the past two years.

On the other hand, the ‘re-booting’ of cruise shipping has happened for most but not all cruise ports. For 18% of the reporting ports, the number of calls in Q4 2023 was lower than in the same period of 2022 by more than 18%. Furthermore, a single-digit decline in the number of cruise calls was observed in 6% of the participating ports. This seems to suggest the post-COVID-19 era brought some level of redeployment of cruise ships by cruise lines and a respective restructuring of the itineraries offered to cruise passengers, thereby intensifying competition between cruise ports.

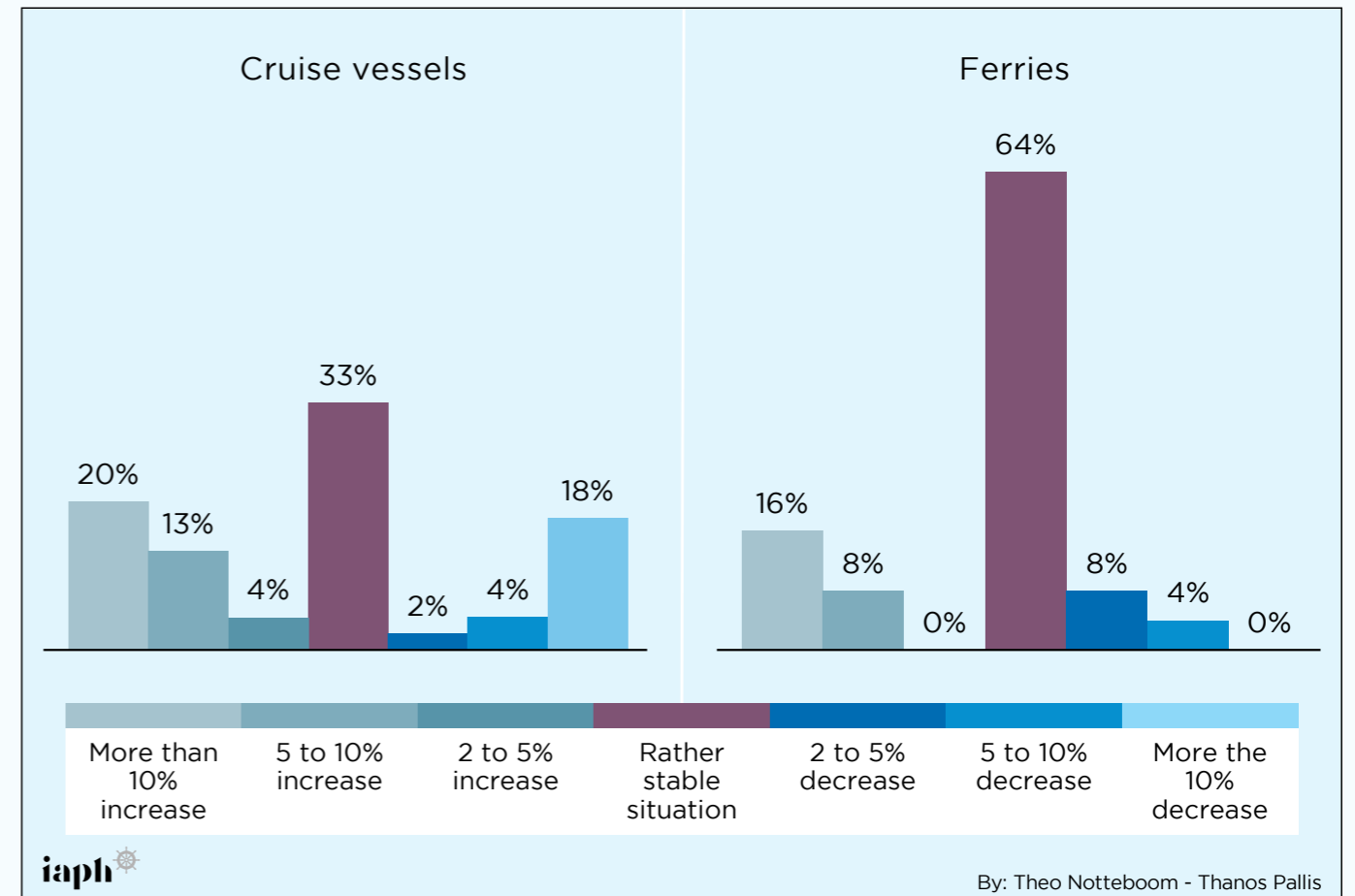
*Cruises in Asia re-started later than in other cruise markets worldwide as the post-pandemic opening of several Asian economies happened later than elsewhere.*

Turning to the regional analysis, increases in cruise calls occurred in all parts of Asia. The two European cruise markets, the Mediterranean and North Europe, respectively, are the two cases where some ports experienced a double-digit percentage decline in the number of cruise ship calls on a year-on-year basis.

Another positive trend is revealed when observing the evolution of ferry calls. Of the responding ports, and within the period under examination, 16% realised a more than 10% growth in ferry calls. A further 8% experienced single-digit growth. The percentage of passenger ports recording a decline in ferry calls in Q4 2023 is 12%, with none of the reporting ports realising a drop in ferry calls exceeding 10%.



Figure 40  
Evolution of cruise and ferries calls in passenger ports (Q4 2023 compared to Q4 2022)





10

## EXPECTATIONS IN CRUISE PORTS FOR THE NEXT TWELVE MONTHS

*The tracker includes a question for ports on prospects for cruise and ferry traffic in the coming twelve-month period, in order to gauge fleet deployment, seasonal changes between regions and potential redeployments depending on demand..*

The industry-wide estimation is that the positive trend of cruise activities in 2022 and 2023 will continue in 2024, though at a much slower pace due to the ironing out of rapid restart effects post-COVID-19

In February 2024, the percentage of cruise ports that are expecting the number of cruise vessel calls they will serve in the next 12 months to increase has reached 52%. This percentage is lower than in September 2023 (62%), February 2023 (66%) and November 2022 (68%). Most importantly, 23% of ports participating in the survey expect the scale of this growth to be a double-digit percentage. The respective share in the previous issues of the IAPH World Ports Tracker reported stood at 25% in September 2023, 29% in February 2023 and 40% in November 2022. This decline in the share is an expected evolution given that cruise shipping is close to the activity level of before COVID-19, and the rapid restart period of the industry is now behind us.

About 23% of ports expect fewer cruise calls in the next twelve months – the return of cruise operations continues to generate a rethink of the itinerary programs of cruise lines or even the deployment of some cruise vessels in different regions than before

At the same time, a quarter of the ports expect the number of cruise ship calls to remain relatively stable (i.e., between 2% growth and 2% decline). About 23% of ports expect fewer cruise calls in the next twelve months, an additional hint that the return of cruise operations continues to generate a rethink of the itinerary programs of cruise lines or even the deployment of some cruise vessels in different regions than before.

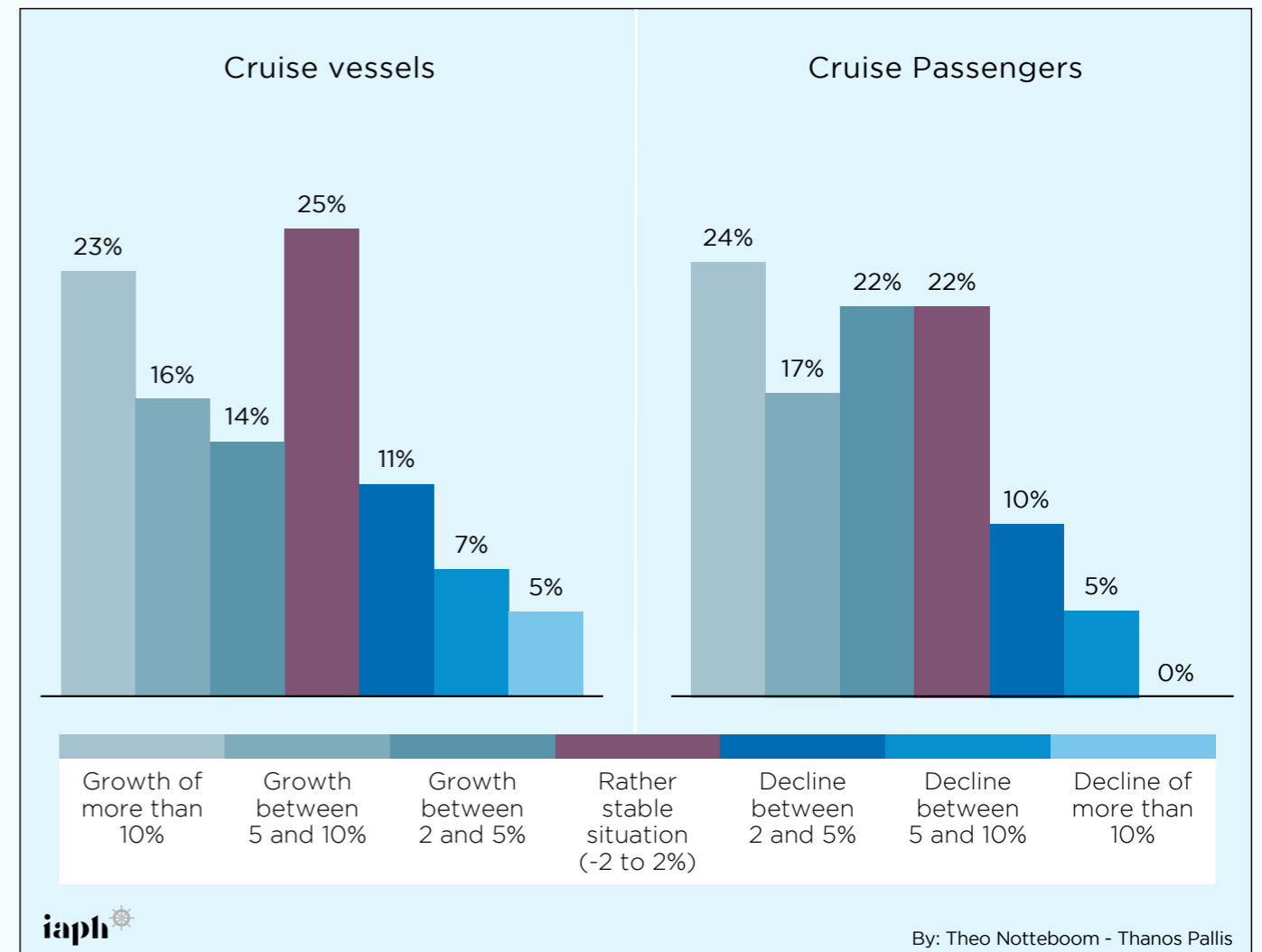
The magnitude of the anticipated growth of cruise passenger movements is more or less in line with the expectations for the number of vessel calls. Just under two-thirds of the respondents expect growth of cruise passengers to be hosted in the next 12 months, with one quarter of ports anticipating this growth to be more than 10%. Thus, expectations of growth in the number of cruise passengers visiting the respective ports are slightly higher than those referring to cruise ship calls. A key reason for this is that in 2022 the operating capacity of cruise vessels was around 65% of the original capacity. This figure increased in 2023, and thus, some of the reporting ports estimate that the number of cruise calls might not increase, but the calling cruise ships will carry more passengers. About 15% of cruise ports expect the number of cruise passenger movements to be lower in the next twelve months.

The survey revealed that ports in the more traditional major cruise markets (i.e., Latin America and Caribbean, the Mediterranean, North Europe and, to a lesser extent, North America) show lower expectations than ports in East Asia and Sub-Saharan Africa (see also Dashboard IV).



Figure 41

Cruise ship calls and passenger movement in world cruise ports for the next 12 months: Expectations as of February 2024.



**11**

**STRATEGIC AND OPERATIONAL  
ISSUES IN PORTS**



## 11.1. Staff availability

The survey also addresses the staff availability issues in world ports by focusing on three categories of port-related workers: dock workers, truck drivers and staff working in nautical-technical services (technical personnel of towage companies, pilots, mooring specialists, lock operators, etc.).

The availability of the needed port-related workers is an important strategic and operational consideration in world ports. The importance of monitoring gaps in the availability of port workers, administrative personnel, and related workers – such as truck drivers – was further highlighted by measures to fight COVID-19 that affected the availability of all different types of port-related workers. However, the IAPH-WPSP Port Economic Impact Barometer on the impact of COVID-19 on world ports in the period April 2020 to April 2021 demonstrated that, by the end of that period, the level of impact limiting ports' capacity to operate was relatively small: initial shortages were addressed. Since then, shortages have been decreasing. However, staff availability issues resurfaced in early 2021 in some parts of the world, contributing to supply chain disruptions.

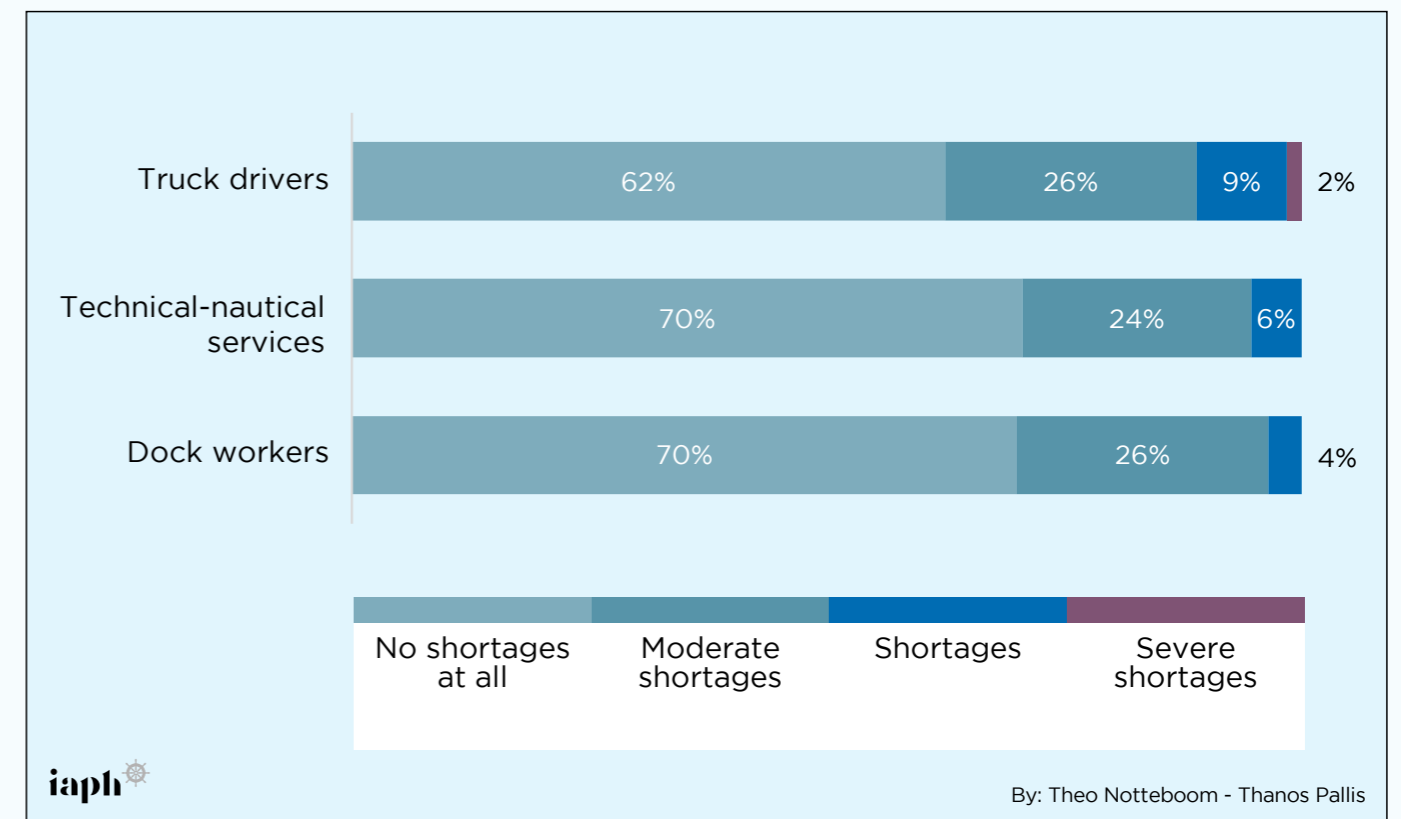
The Q4 2023 survey results reveal that the vast majority of responding ports face insignificant shortages of dock workers and operational workers in the technical and nautical fields. The total of responding ports that recorded no shortages in the case of dock workers decreased to 70% (compared to 81% in Q2 2023) and is back at the level of Q4 2022. The same percentage of the responding ports recorded no shortages in the case of personnel offering technical-nautical services. This implies the share of ports facing minor or major shortages of dock workers declined from 29% in Q4 2022 to 19% in Q4 2023, followed by an increase back to 30%. For technical-nautical staff, it evolved from 20% in Q4 2022 to 23% in Q2 2023 and 29.6% in Q4 2023.

*The availability of truck drivers in ports worldwide remains a greater concern. In Q4 2022, 71 % of ports reported the absence of shortages of truck drivers. In Q2 2023, this figure declined to 55% with a small recovery to 62% in Q4 2023.*

About 38% of all responding ports now report availability issues compared to 40% in Q2 2022, 37% in Q3 2022, 29% in Q4 2022 and 45% in Q2 2023. However, those facing severe shortages were fewer (2% in Q4 2023 compared to 3% in Q2 2023 and 7% in Q4 2022). Dashboard III shows that truck availability concerns are the lowest in North America and Sub-Saharan Africa. In North Europe, more than half of responding ports point to some level of truck driver shortage.



Figure 42  
Staff availability in World Ports (Q4 2023)



## 11.2. Investments in ports

Decisions on investments, including implementing plans, are a subject of strategic and operational importance for ports and all current and potential service providers, port users, and stakeholders. The issue is examined in this edition of the IAPH World Ports Tracker. At the beginning of the calendar year, we asked ports to reflect on the progress of two types of investments they are planning.

 *The survey did not identify delays or cancellations of port investments in any particular region of the world*

The first type of investments examined are those devoted to advancing infrastructure. The overall picture is positive. In 2023, such investments were executed as planned in more than half of the ports (53%) and incurred only minor delays in the other four (41%). Considerable delays occurred in only 4% of the reporting ports. A tiny percentage of the ports that participated in the survey (2%) cancelled or shelved their existing infrastructure development or upgrade projects that they had planned by the end of the year. None of the responding ports succeeded in advancing their investments faster than anticipated. The number of ports that did not have any infrastructure development plans for 2023 stands at 11%. A noteworthy observation is the global nature of these trends: the survey did not identify delays or cancellations of port investments in any particular region of the world. Beyond upgrades of existing infrastructure, reported investments included, among others, new container terminals (in some cases with advanced forms of automation) and investments targeting intelligent digitalised infrastructures. In addition, reporting ports also mentioned the development of investments focusing on the expected increase of the demand for electric vehicles, investing in constructing facilities, and developing processes such as pre-delivery inspecting centres for operating state-of-the-art terminals that will serve automotive and commercial vehicle trades.

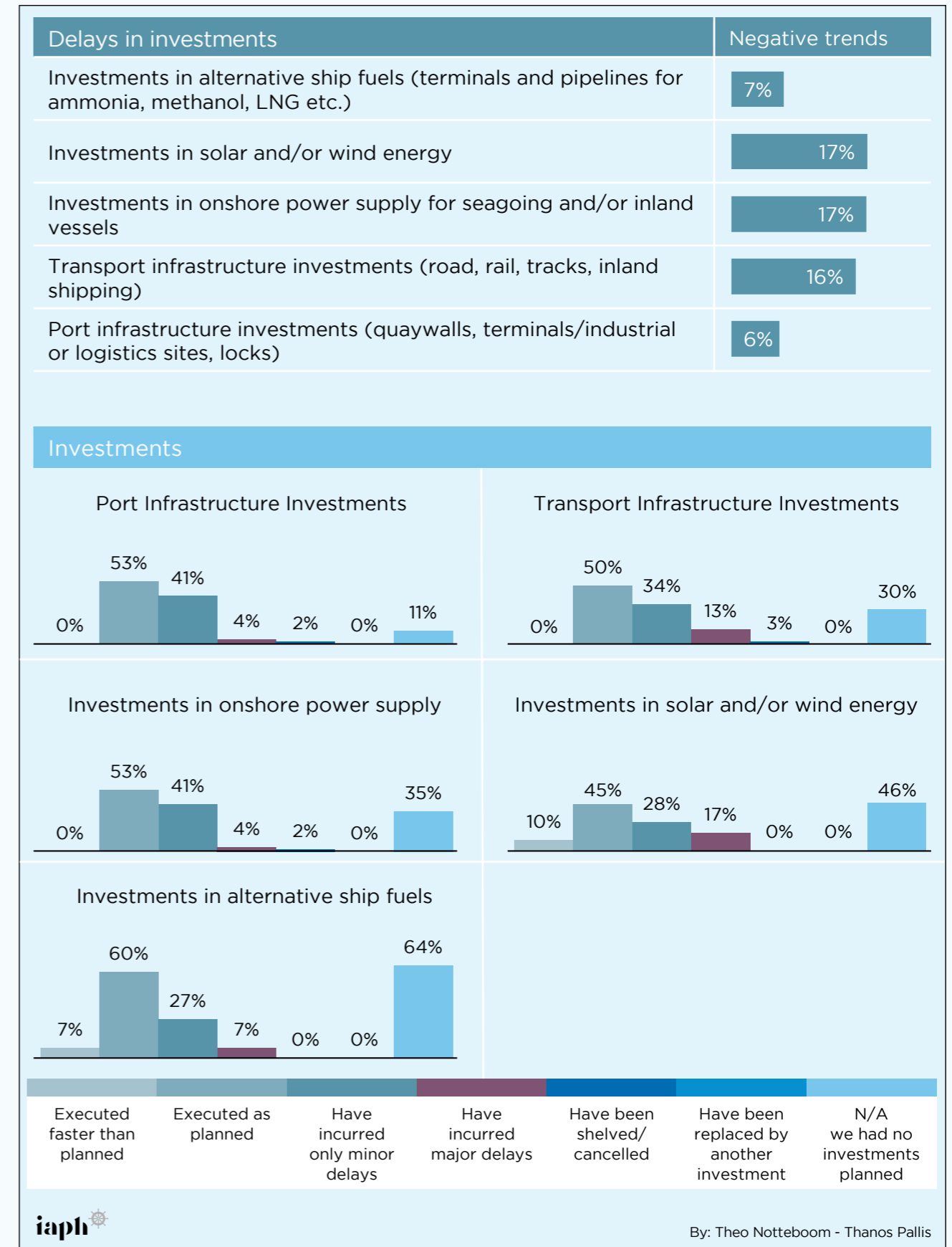
The second type of investments examined are those focusing on transport infrastructure such as roads, railway tracks, inland waterway infrastructure, and pipelines. The survey revealed that during 2023 half of these investments were executed as planned (50%) or were subject only to minor delays (34%). However, significant delays were incurred in 13% of the reporting ports, with 3% of ports shelving or cancelling such inland transport-related investments.

The third type of investment considered in the survey focuses on the onshore power supply (OPS) for seagoing vessels and inland vessels (where available). About 35% of ports indicate they did not have such investments planned in 2023. Among the ports that are investing in OPS, 49% are executing these investments as planned, 31% incurred only minor delays and a rather significant 17% had to deal with major delays. An interesting note is that 3% of ports executed OPS projects faster than planned.



Figure 43

Situation for the majority of the infrastructure investments that ports had planned for 2023 (% , as of February 2024)



Investments in solar and/or wind energy constitute the fourth investment category of the survey. The results are rather mixed, with 10% executing the investments faster than planned, while 17% incurring major delays. Remarkably, almost half of the ports report they had no such investments planned in 2023 despite the rising demand for green electricity. Another interesting finding is that none of the responding ports have shelved or cancelled planned investments in wind or solar energy.

A last investment category relates to making alternative ship fuels available in ports. This category includes investments in fuel production plants, bunkering facilities, and associated line infrastructure (such as pipelines) for methanol, ammonia, green hydrogen, biofuels, and others. A sobering observation: only slightly more than one-third of ports report they had such investments planned in 2023. Six out of ten of these ports are executing the investments as planned, with 7% of ports moving faster than planned and an equal share incurring major delays. Also here, there have been no reports by the responding ports on the shelving or cancelling of such projects.



### 11.3. Capacity expansion

The choices made regarding the expansion of port capacities are related to investment decisions. The IAPH World Ports Tracker survey explored the priorities of ports and the forthcoming changes in the available capacity for all types of port activities. In particular, one of the survey questions aims to reveal which particular markets are prioritised by ports for expansion or upgrades to their capacity, and whether the capacity expansion will become operational in the immediate future.

**About 39% of container ports point to major container terminal capacity expansion or upgrades becoming operational in 2024**

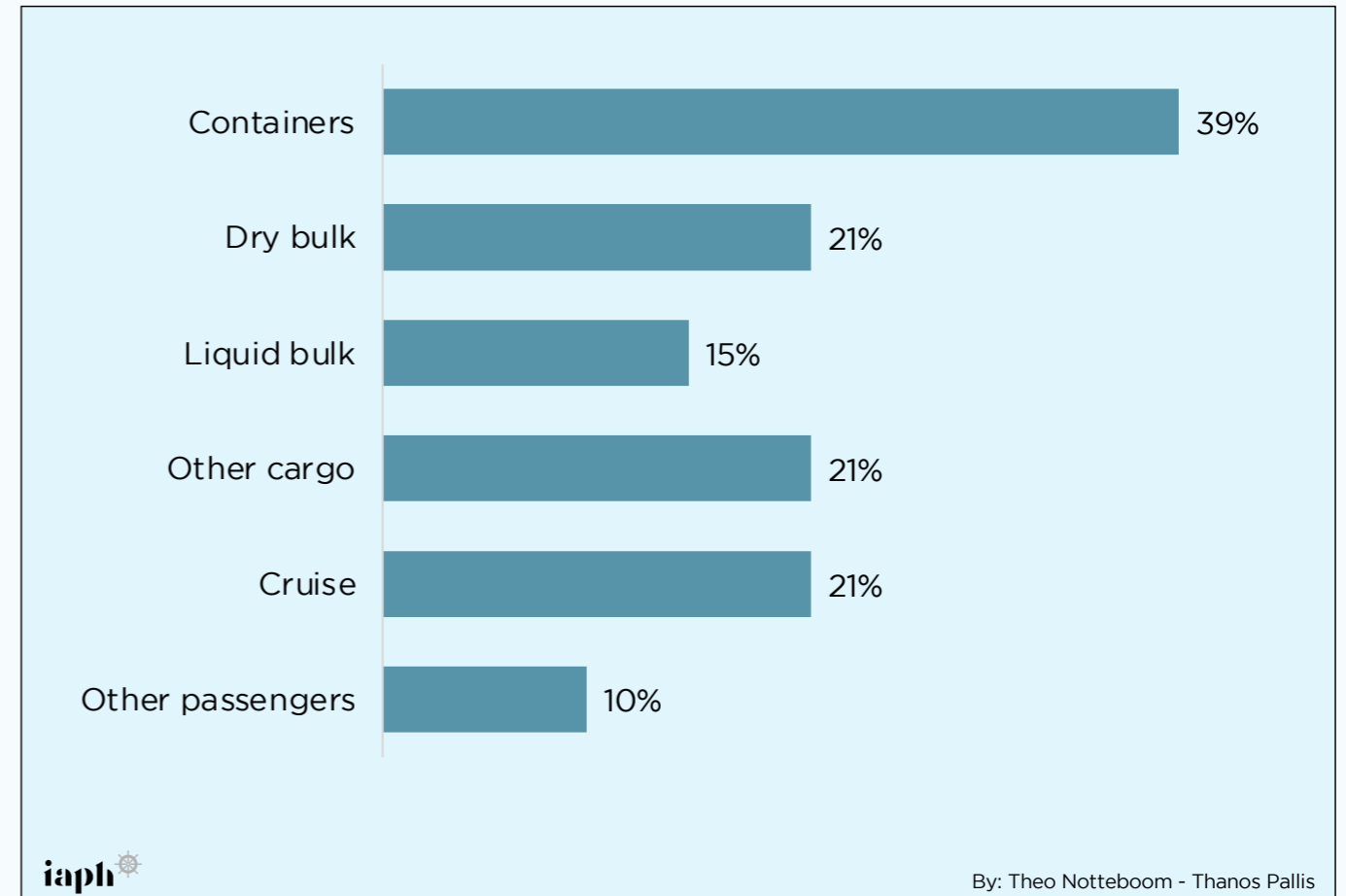
Similar upgrades and expansions are taking place in the bulk market and will be operational in 21% of the reporting ports. Capacity upgrades or expansions are less frequent in the liquid market (15%).

In issue 4 of the World Ports Tracker (March 2023), passenger ports reported fewer initiatives in the cruise sector in Q4 2022 than for freight terminals: only 15% of ports reported a terminal capacity expansion or major upgrade. Perhaps the major implications and standstill of activities experienced during the pandemic had stalled plans to expand infrastructures and capacities, at least until passenger markets (cruise or coastal shipping) return to the 'new' normal. In February 2024, however, 21% of cruise ports plan to operate either a new capacity or an upgraded version of the current levels. The number of ports progressing capacity expansion and/or upgrades in non-cruise port activities is 10%.



Figure 44

Ports where terminal capacity expansion or major upgrades will become operational in 2024 (% , per market, as of February 2024)



## 11.4. Land Use

The next question of the IAPH World Ports Tracker survey examines the trends in land use in ports. Growing maritime transportation, containerised or not, is increasingly integrated into complex supply chains. These supply chains demand capacity and additional space, either for accommodating cargo flows or developing logistics and distribution activities. At the same time, ports are places where land is allocated to industrial activities, real estate, and energy production or even used for urban/city functions. World ports were asked to reveal any significant changes in land use that are expected to unfold in 2024.

**41% of the ports stated that they intend to devote more land to logistics and distribution activities; this is the most frequent port land-use change to occur in 2024**

Some rather significant land-use changes will reportedly occur in the coming months. 41% of the ports stated that they intend to devote more land to logistics and distribution activities; this is the most frequent port land-use change to occur in 2024.

**38% of ports intend or plan to expand land use to accommodate non-fossil energy production**

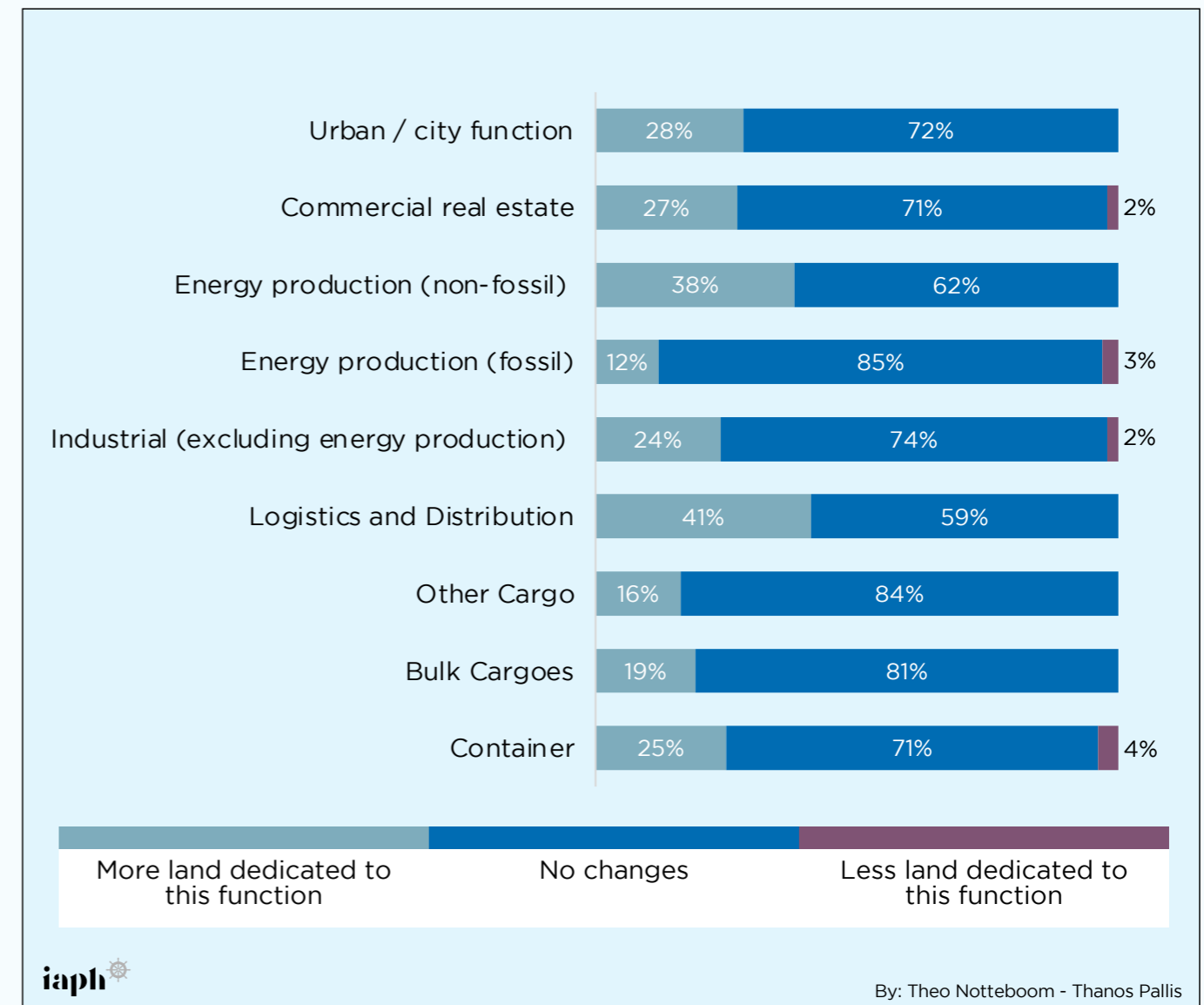
The second most frequent change is the intended/planned expansion of the land used for accommodating non-fossil energy production; such developments are expected to happen in 38% of the ports. Only 12% of ports indicate that they will dedicate more of the port area to fossil energy production and 3% even point to lowering land availability for these activities. These results point to an energy transition process taking place in world ports also at the level of land allocation decisions.

One in four ports plans to devote more land to containers and non-energy-related industrial activities. About 27-28% of ports refer to increased land use for either commercial real estate or urban/city-related functions.



Figure 45

Ports that plan any major change in the land use in the next 12 months (% , as of February 2024)



## 11.5. Impact of the Red Sea Crisis on ports

The final question of this edition of the IAPH World Ports Tracker survey examines the impact of the Red Sea Crisis as reported by ports in February 2024. In mid-November 2023, Houthi rebels based in southern Yemen started to attack merchant vessels passing through the Red Sea, the Strait of Bab al-Mandab and parts of the Gulf of Aden. By early February 2024, some forty ships had been attacked by drones, anti-ship missiles, and/or gunmen on speedboats; one vessel had been sunk and another had been seized and its crew held hostage. Despite several major counterstrikes by the US and UK military (supported by several other Western countries) on strategic Houthi bases in Yemen, the attacks did not cease.

The rerouting of vessels around the Cape of Good Hope instead of using the Suez Canal has been the most visible shipping outcome of the security situation in the Red Sea. The critical security situation, combined with the vessel rerouting wave, resulted in higher freight rates, increased transit times on key trade routes, higher ship emissions, and supply chain disruptions. So far, the impact on world ports has been less documented. Hence, a question on the Red Sea crisis was included in this issue of the World Ports Tracker survey.

*When asked on the impact of the Red Sea crisis, 63% of ports report no noticeable delays in vessel arrivals, 28% point to minor delays (a few days), and only 9% face major delays with ships being delayed by a week or more*

The results show that the overall impact so far has been quite manageable: 63% of ports report no noticeable delays in vessel arrivals, 28% point to minor delays (a few days), and only 9% face major delays with ships being delayed by a week or more. As expected, the ports facing such considerable delays in vessel arrivals are found on the main East-West trade routes such as in North America, North Europe, and the Mediterranean. Remarkably, none of the responding ports of East and Southeast Asia have had to deal with widespread major delays in vessel arrivals up to now.

For about three-quarters of the responding ports, the Red Sea Crisis, up to now, had no significant impact on the number of vessel calls. From a regional perspective, this figure amounts to 92% for North Europe, 80% for North America and 75% for the Mediterranean. At a global level, the remaining ports are equally divided over a noticeable increase in vessel calls and a noticeable decrease (13% each). 40% of the few East Asian respondents report a noticeable increase in vessel calls.



Figure 46

Impact of the Red Sea Crisis on the scheduled arrival of vessels at ports (% as of February 2024)

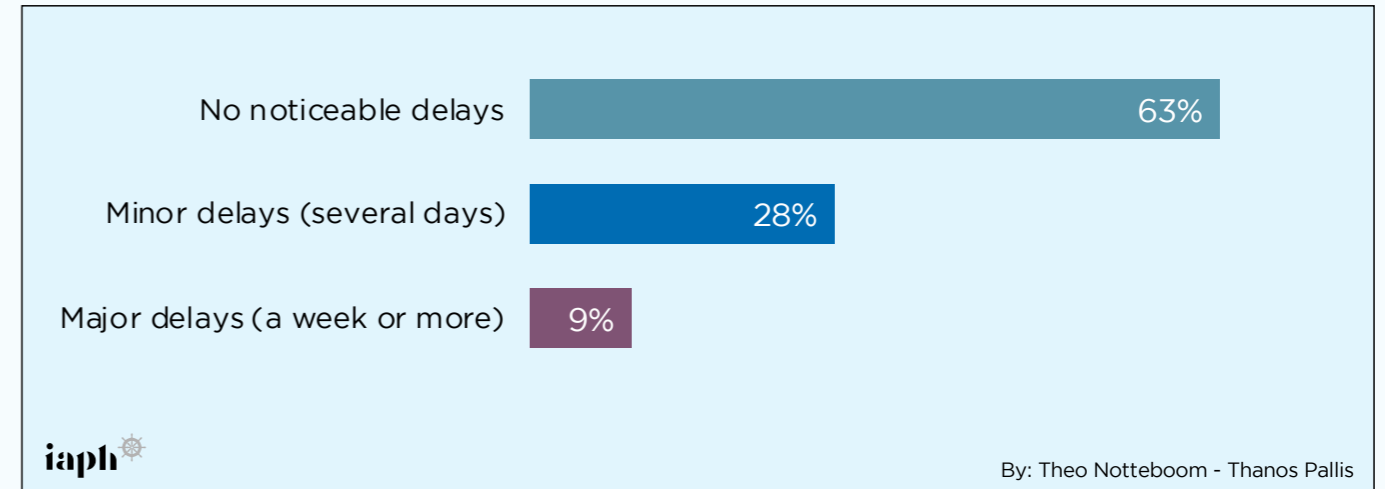
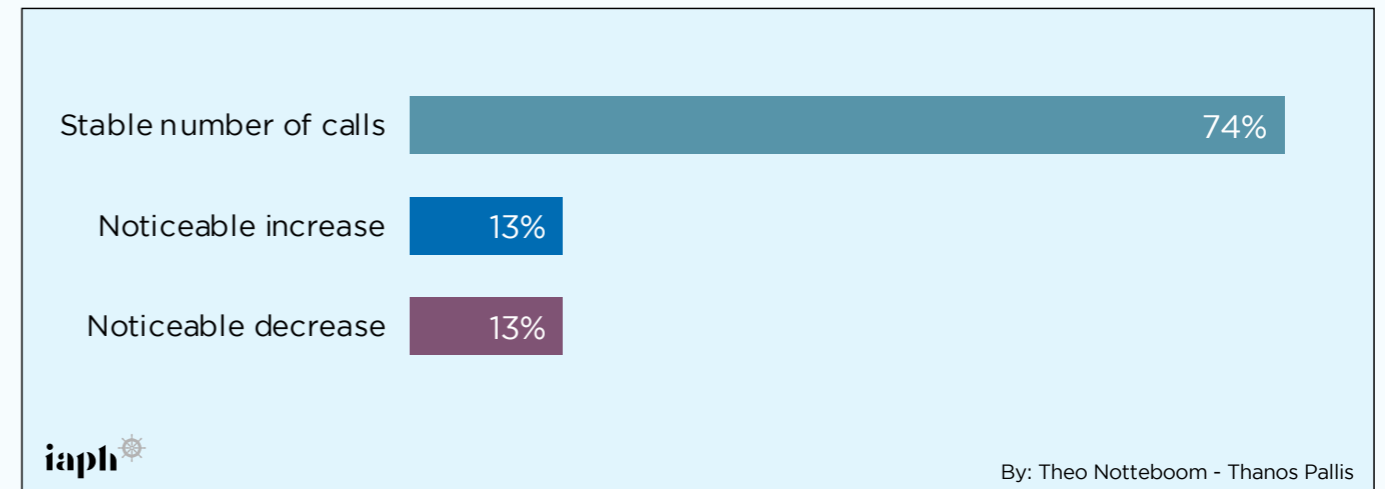


Figure 47

Impact of the Red Sea Crisis on the Number of Vessels Arrivals at ports (% as in February 2024)



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