IAPH-WPSP Port Economic Impact Barometer Half Year Report:

A survey-based analysis of the impact of COVID-19 on world ports in the period April to September 2020

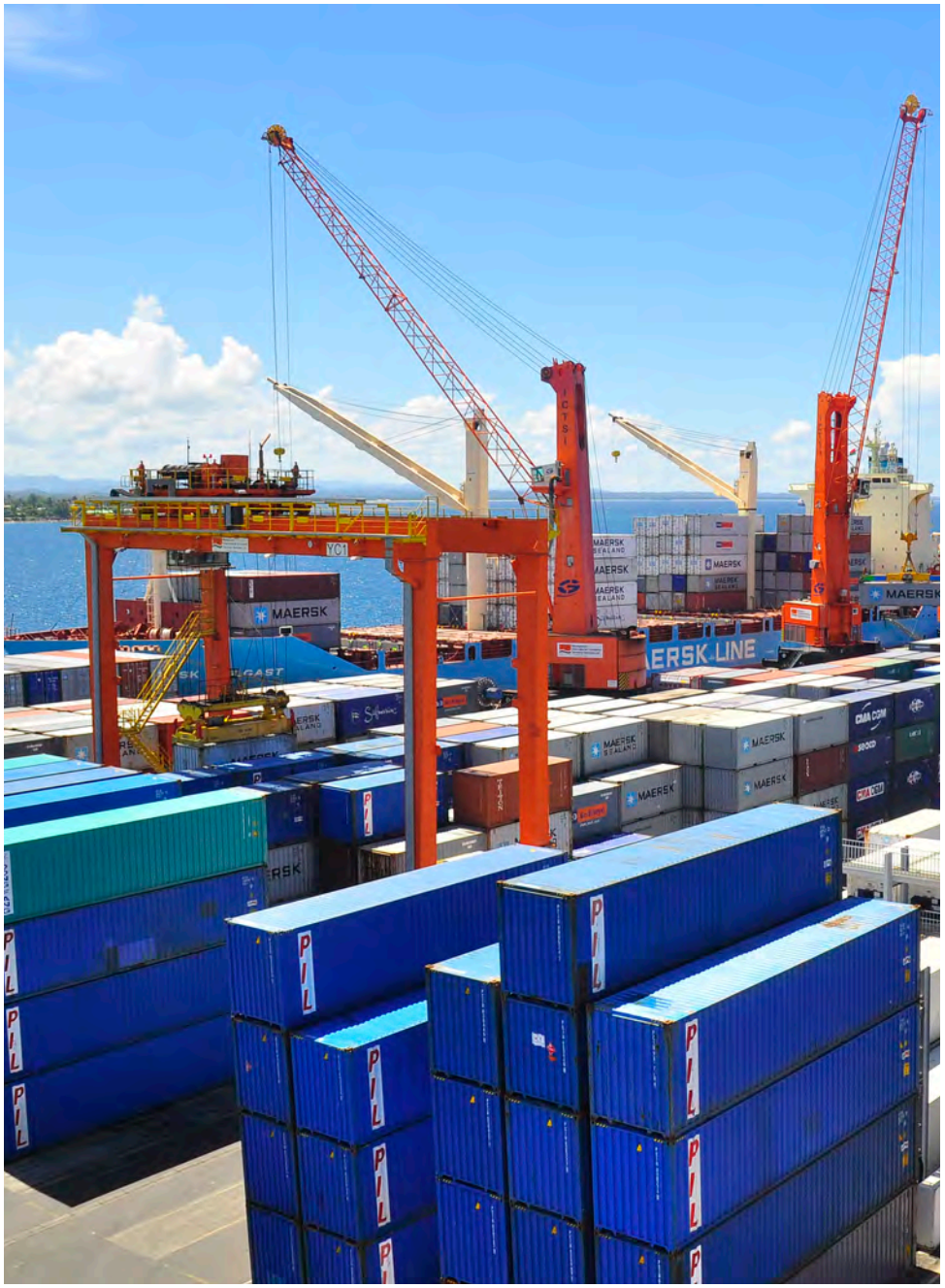
Authors : Professor Theo Notteboom (Shanghai Maritime University, Ghent University and University of Antwerp)

Professor Thanos Pallis (University of the Aegean and Universidad de Los Andes)

16 September 2020

IAPH
International Association of Ports and Harbors

WPSP
WORLD PORTS SUSTAINABILITY PROGRAM



CONTENTS

1. Theme setting

The COVID-19 pandemic led to the second global crisis since the 2009 financial crisis with a significant impact on global supply chains at every level, including the port and shipping industry. The pandemic COVID-19 is unfolding in several phases.

The first phase in early 2020 consisted of a supply shock in China where lockdown measures resulted in a de facto extension of sharply decreased Chinese production during their New Year period. The lockdown affected most of the workforce and curtailed the industrial base between mid-January and early March 2020.

The second phase began in mid-March 2020 and consisted of a (global) demand shock. The lockdown and semi-lockdown measures implemented across the world resulted in a decline in global derived demand due to lower consumer and industrial confidence and limited retail activity. The lockdown of a large consumer base removed people from the active workforce and shifted consumption patterns to essential goods (food and personal items). The suspension of travel, tourism (such as cruising), and the entertainment industries, as well as the temporary closure of bars and restaurants, further depressed consumer demand. The lower economic activity level and uncertainty about the path to economic recovery also generated a steep drop in the price of several commodities, such as petroleum.

In the third phase, many regions in the world started to relax the COVID-19 measures with most economic sectors resuming activity. However, deferred demand levels remain uncertain. New local outbreaks of the Coronavirus, particularly in developing economies such as Brazil and India, and the ongoing presence of the first wave in several countries resulting in new forms of restrictions on economic and social life, have further lowered the chance that initially-deferred demand will turn into actual demand.

At the time of writing, the world economy has yet to reach the final phase, which will encompass a clear and consistent recovery and a return to normal demand patterns. When such a recovery phase commences, it might go hand in hand with an increased risk for protectionism to support national production, as many economies will be trying to recover from low demand. Moreover, nearshoring and reshoring strategies are being considered to reduce the dependence on overseas production, to develop essential economic activities at the regional/local level, and to increase supply chain resilience.

Port demand is a derived demand. A sudden drop in demand has an immediate impact on port activity levels. In March 2020, the World Ports Sustainability Program (WPSP) and International Association of Ports and Harbours (IAPH) set up a COVID-19 Task Force to monitor these impacts and to facilitate information exchange between ports on procedures and practices in dealing with COVID-19. The WPSP was launched by IAPH in March 2018. Guided by the 17 UN sustainable development goals (SDGs) the program wants to enhance and coordinate future sustainability efforts of ports worldwide and foster international cooperation with partners in the supply chain.

The American Association of Port Authorities (AAPA), the European Sea Ports Organisation (ESPO), the International Association of Cities and Ports (AIVP) and the World Association for Waterborne Transport Infrastructure (PIANC) signed up as strategic partners of the World Ports Sustainability Program.

IAPH is the global ports' forum for industry collaboration and excellence. IAPH's mission is "Promoting the interest of ports worldwide through strong member relationships, collaboration and information-sharing that help resolve common issues, advance sustainable practices and continually improve how ports serve the maritime industries."

Soon after its inception, the IAPH-WPSP COVID-19 task force took the initiative to launch an "IAPH-WPSP Port Economic Impact Barometer" to gather information on the short-term impacts of COVID-19 on ports in the area of vessel calls, hinterland transport, distribution activities, procedures and staff availability. This resulted in the publication of eleven Barometer reports in the period between early April – mid July 2020 prepared by port economists Professor Theo Notteboom and Professor Thanos Pallis.

This report analyses and summarizes the main trends and findings of the IAPH-WPSP Port Economic Impact Barometer. The results of the past 11 Barometer reports are revisited, while an update on the current situation is provided through an additional survey round for week 36 (early September 2020).

2. The survey set-up

The IAPH-WPSP survey on the impact of COVID-19 was launched in early April 2020 with the aim of monitoring the current situation in world ports and trends compared to previous weeks. The survey was sent to port authorities and port operators with responses sent anonymously on a weekly basis. The first survey results were collected in week 15 of 2020 (April 6). The survey initially consisted of six identical questions each associated with a scale of potential answers:

1. How would you best describe the number of vessel calls in your port in the past week, compared to what would be expected in the same week under normal conditions for this period?
2. Were there any extra restrictions on vessels introduced in the past week, for either cargoes or ship crews?
3. Were there any extra delays during the past week due to changes in port call procedures (hygiene inspections, distancing of workforce, disruption of port or related services etc.)?
4. How has hinterland transport been affected by the COVID-19 situation compared to normal activity during the past week?
5. What is this week's situation in terms of capacity utilisation, including warehousing and distribution activities in your port?
6. What was the availability of port workers last week?

From week 23 onwards, the survey has been sent out on a bi-weekly basis and the number of questions has been reduced to four, thereby omitting questions 2 and 3 on restrictions on vessels and port call procedures. A fifth question was added in weeks 27 and 29 dealing with the status on crew changes in ports.

The 11 reports and associated press releases can be downloaded from the following links of the WPSP website:

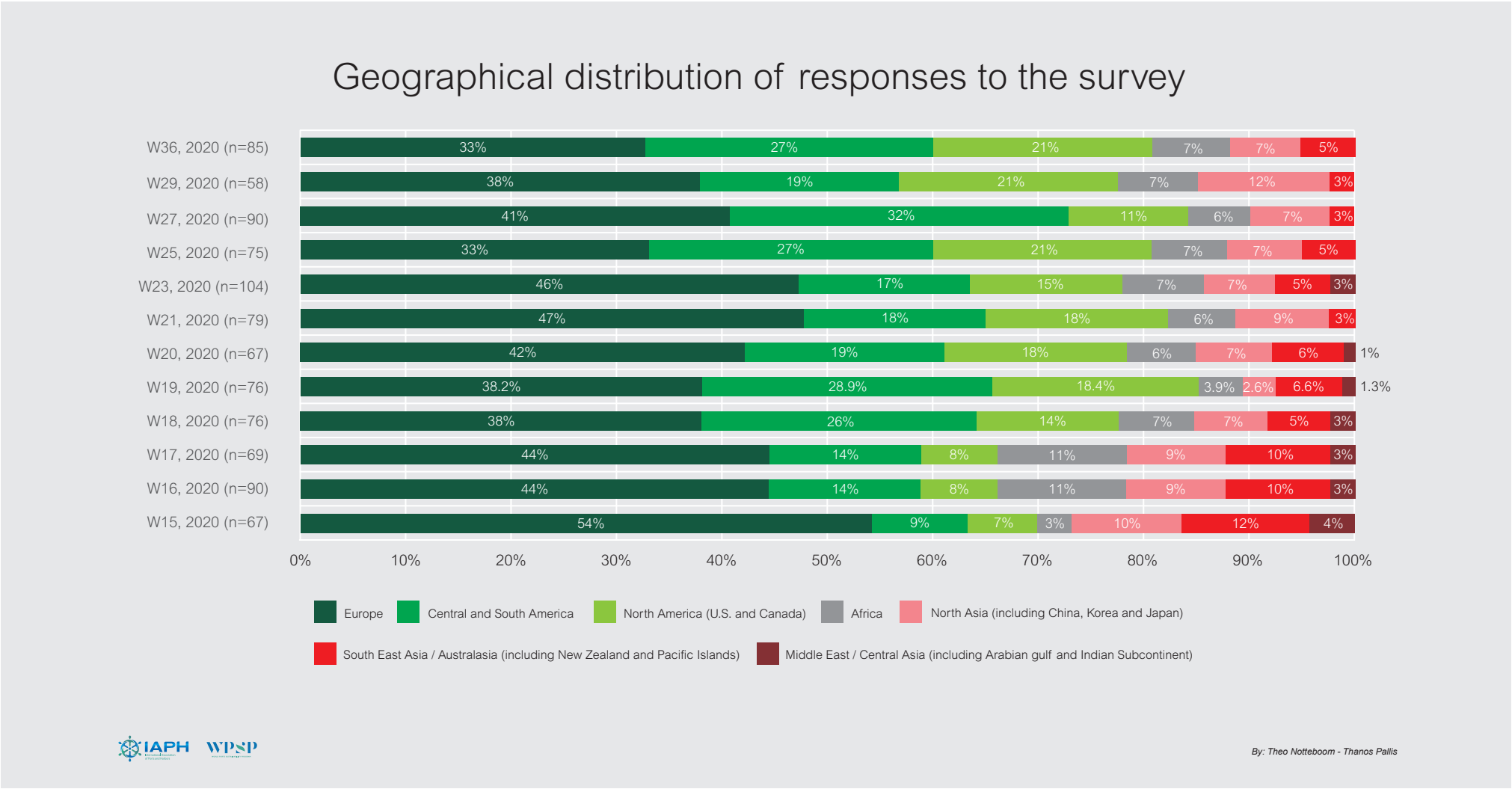
- 1st report : Port Economic Impact Barometer confirms cargo build up at some ports and fairly stable port worker availability
- 2nd report : Some ports seeing significant changes in storage utilization at ports with some overcrowded car terminals
- 3rd report : Third COVID-19 world ports survey report : the impact of blank sailings starts kicking in
- 4th report :WPSP COVID19 Port Economic Impact Barometer for Week 18 reports stabilization or slight improvements
- 5th report : European ports impacted more by reduced cargo vessel calls than other global regions
- 6th report : Latest global port survey : pendulum swing from over-capacity to under-utilization at some port storage areas
- 7th report :Global Survey on impact of COVID19 on ports: regional differences becoming more pronounced
- 8th report : WPSP Survey: ports report regional transshipments on the rise with cargo call volumes flat-lining or falling
- 9th report : WPSP Survey week 25 : first passenger and ro-pax services restarting with limited capacity in some regions
- 10th report : WPSP Survey : High volume vessel calls as a result of blank sailings put pressure on port operations
- 11th report : WPSP Barometer confirms overall improvements in hinterland transport, capacity utilization and port worker availability

The 11th report, published in mid-July, presented the findings for week 29 (July 15, 2020). This 11th Barometer study was initially planned to be the last barometer report. However, a resurgence of COVID-19 cases in many countries around the world and the emergence of a first wave in several other countries resulted in the IAPH COVID-19 Task Force deciding to reinitiate the Barometer exercise, this time on a monthly basis. Therefore, the current report also includes the results collected in week 36 (early September 2020). One question on the status of planned port infrastructure projects was added in the week 36 survey, next to the four questions that were already included in earlier surveys.

3. Participation level of world ports

The total number of valid answers varied throughout the survey period. From week 15 to 21, the number of responses fluctuated between 67 and 79, with an outlier of 90 in week 16. In week 23, a peak of 104 answers was recorded. Only 58 valid answers were received in week 29, which could be explained by the holiday season and some signs of survey fatigue. Week 36 (early September) brought the response level back to an elevated 85 answers.

Throughout the survey period, Europe remained the leading region with between 33 and 54% of the total. The number of responses received from Central and South American ports increased significantly from week 18 onwards. North America was also represented well with 21% in the last two survey rounds, the highest share to date. A limited number of ports from North Asia, South East Asia and Australasia took part in the surveys, but the ones who participated did so on a consistent basis. African ports remained underrepresented throughout the entire Barometer exercise, while in the past four survey weeks no answers were received from ports of the Middle East or Central Asia.



IAPH WPSP

By: Theo Notteboom - Thanos Pallis

4. The Dashboard: the survey results at a glance

The results of the Barometer are summarized in the Dashboard. The percentages indicated in the blue bars of the Dashboard highlight the level of impact of COVID19 contagion on world ports based on the responses to the main questions of the survey, subdivided into relevant categories (vessel, modal, cargo and port worker). The results on the crew changes and on planned port infrastructure projects will be discussed using separate graphs. You can find comprehensive data and more detailed explanations of responses to all questions in separate sections in this report. The analysis also includes a regional comparison between the regions with the highest number of responses, i.e. Europe, Central and South America and North America.

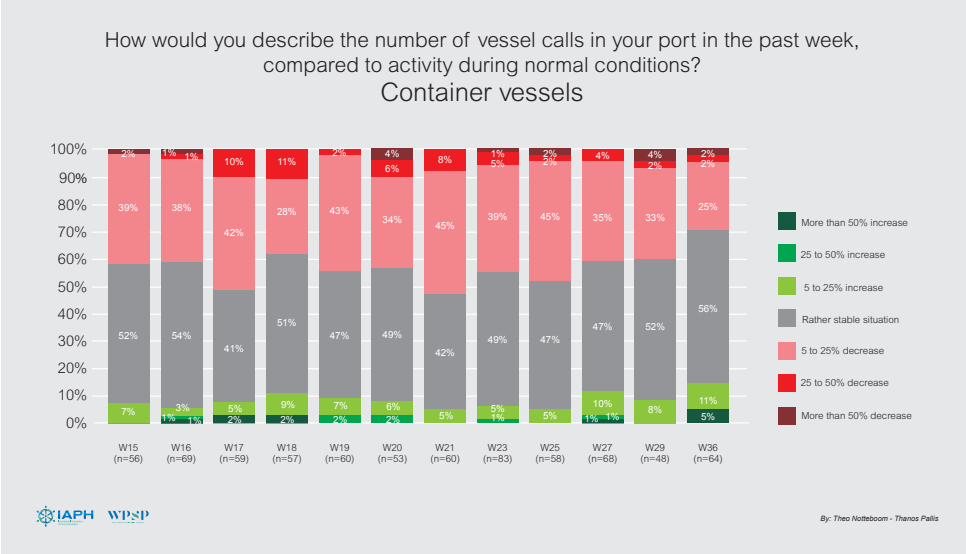
		Week 15 April 06	Week 16 April 13	Week 17 April 20	Week 18 April 27	Week 19 May 05	Week 20 May 12	Week 21 May 19	Week 23 June 02	Week 25 June 16	Week 27 July 01	Week 29 July 15	Week 36 Sept 02
Ports with decline in vessel calls (last week compared to normal conditions, %)	Container vessels	41%	41%	53%	39%	45%	43%	53%	45%	48%	40%	40%	28%
	Other cargo vessels	41%	39%	47%	44%	42%	46%	51%	42%	33%	33%	37%	41%
	Passenger vessels	77%	77%	76%	71%	85%	68%	73%	74%	78%	64%	70%	66%
Ports facing hinterland transport delays (last week compared to normal conditions, %)	Trucks (cross-border)	43%	41%	35%	37%	38%	26%	28%	23%	28%	15%	9%	13%
	Trucks (in/out port)	37%	33%	35%	35%	16%	15%	23%	8%	11%	15%	11%	12%
	Rail services	28%	21%	32%	13%	22%	17%	19%	14%	13%	8%	9%	14%
	Inland barge services	41%	23%	40%	21%	19%	21%	20%	20%	18%	3%	9%	13%
Ports facing high capacity utilization of warehousing and storage facilities (last week, %)	Foodstuff & medical supplies	35%	34%	33%	25%	25%	20%	14%	16%	8%	15%	10%	20%
	Consumer products	27%	28%	25%	18%	19%	9%	12%	13%	10%	12%	10%	17%
	Liquid bulk	21%	22%	20%	15%	20%	17%	13%	17%	16%	16%	16%	18%
	Dry bulk	16%	17%	13%	12%	17%	13%	10%	9%	18%	15%	10%	19%
Ports facing shortages in port-related workers (last week, %)	Dock workers	16%	16%	16%	22%	19%	17%	16%	13%	13%	14%	5%	15%
	Technical-nautical services	7%	9%	4%	12%	11%	6%	8%	7%	7%	7%	4%	12%
	Harbor master services	4%	8%	7%	10%	4%	8%	10%	5%	4%	6%	2%	9%
	Port authority	28%	22%	22%	26%	16%	22%	12%	12%	21%	8%	7%	15%
	Truck drivers	no data	no data	21%	16%	12%	9%	11%	10%	3%	7%	5%	12%
Ports with extra restrictions on vessels (last week, %)	Container vessels	49%	22%	33%	20%	19%	10%	7%					
	Other cargo vessels	47%	23%	34%	25%	20%	6%	12%					
	Passenger vessels	51%	38%	31%	26%	25%	17%	16%					
Port call delays due to extra procedures (last week, %)	Container vessels	42%	35%	33%	27%	27%	18%	17%					
	Other cargo vessels	35%	28%	32%	30%	25%	20%	19%					
	Passenger vessels	53%	40%	49%	44%	34%	30%	32%					
	Inland barges	27%	21%	19%	21%	16%	8%	19%					

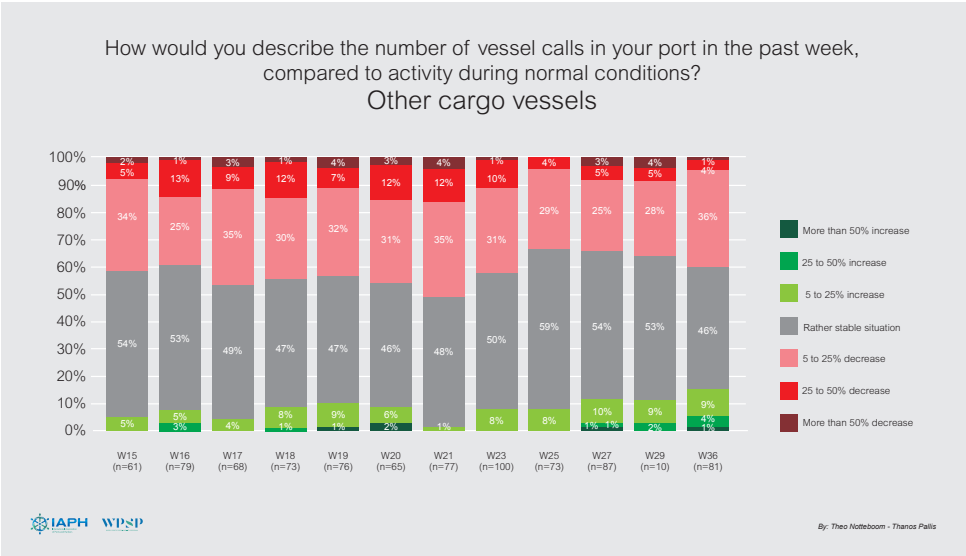
IAPH WPSP

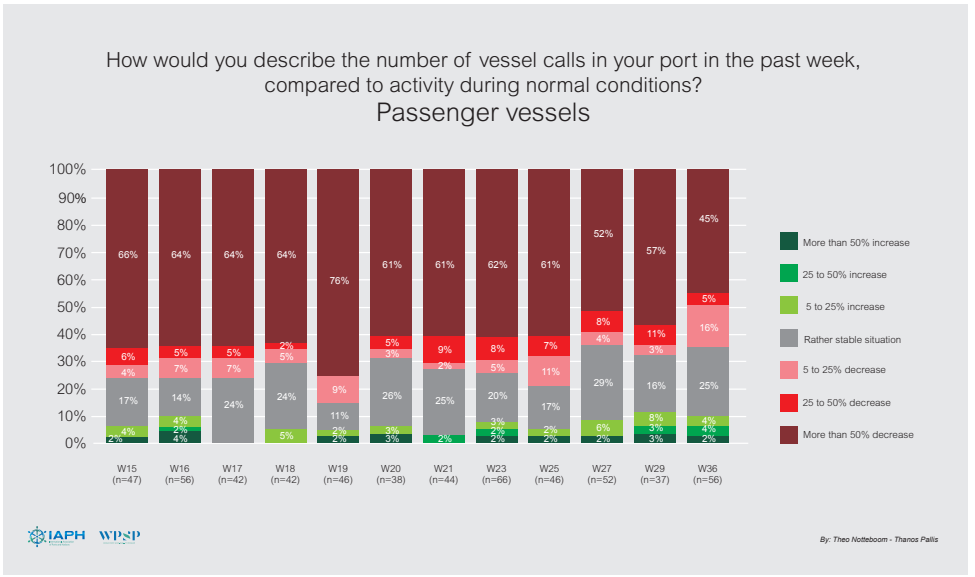
By: Theo Notteboom - Thanos Pallis

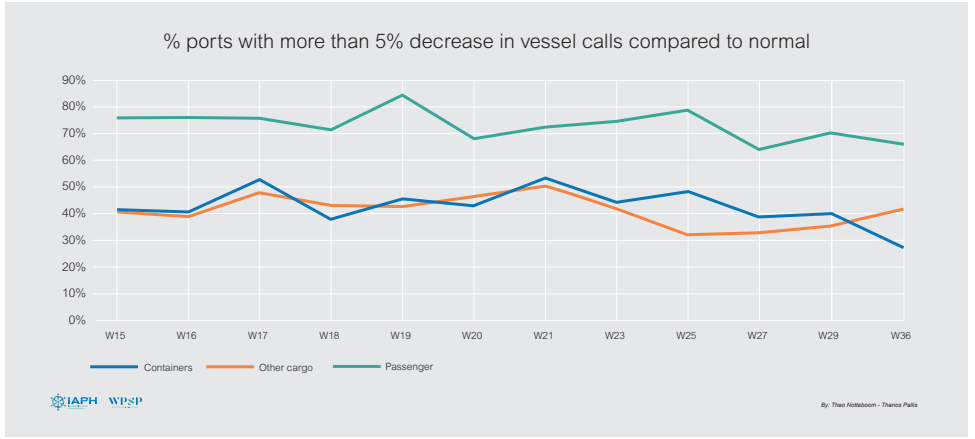
5. Impact of crisis on vessel calls

The first survey topic deals with the vessel activity in ports. The bar charts provide the distribution of answers per vessel category, while a line graph details the percentage of ports that reported more than 5% decrease in vessel calls each week.









Furthermore, five line graphs are presented to demonstrate the evolution in vessel calls in the world as well as in three regions, i.e. Europe, North America and Central and South America. Two graphs depict the situation for container vessels with another similar pair of graphs focusing on other cargo vessels. The fifth graph zooms in on passenger vessels. We first discuss the results for the world, i.e. all ports who responded to the survey, followed by a regional analysis.

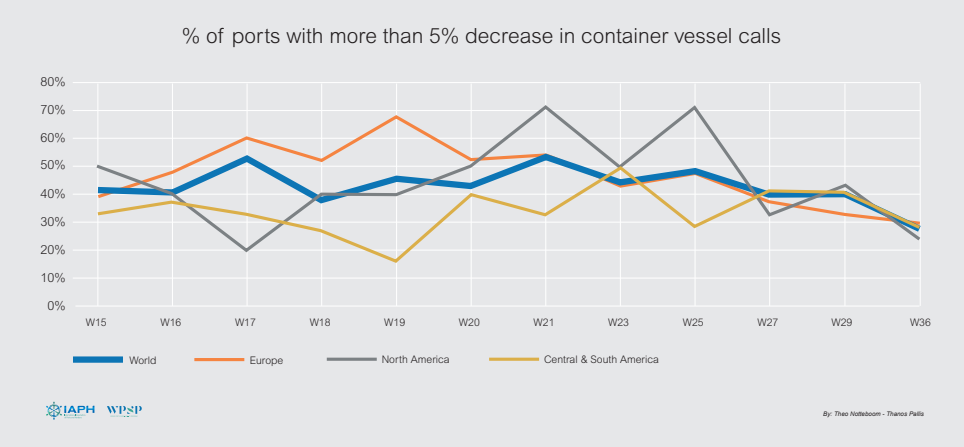
5.1. Container vessels

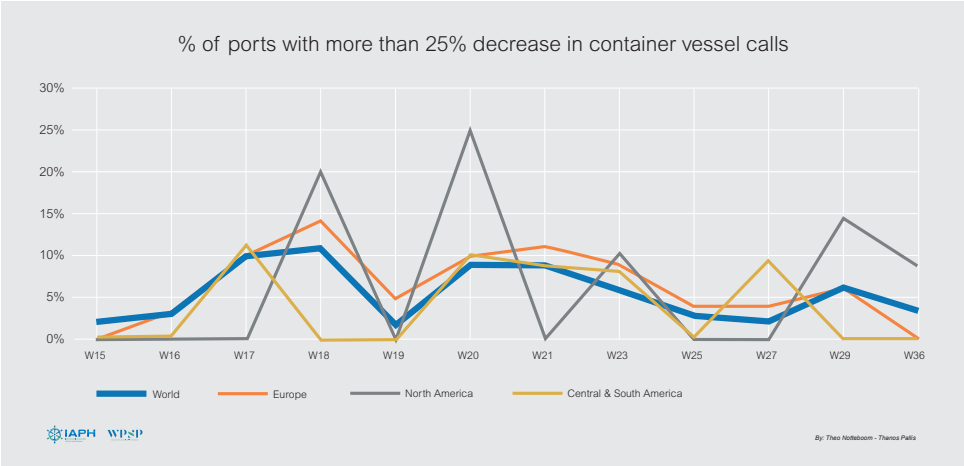
Blank sailings, mainly on trade routes with the Far East, heavily affected the weekly results for container vessels throughout the survey period. In the period between early April and mid-July 2020 between 40% and just over 50% of all respondents indicated that container vessel calls were down by more than 5%. However, the situation improved considerably by September 2020 (week 36) to reach a much lower 28%.

Some 56% of ports are now reporting similar numbers of container vessel arrivals comparable to the same period last year, which is the highest percentage to date. With generalized lockdowns now limited, the return of vessels and the lower numbers of blank sailings continue, yet these happen at a slower pace. About 16% of the respondents even point to increased vessel activity. This figure was lower than 8% in the period April to July 2020 (except for weeks 18 and 27). The share of ports facing a significant drop (in excess of 25%) in container vessels calls reached 3% in early September, a figure that is about 7 to 8 percentage points below the results of weeks 17, 18 and 20, but still higher than the 2% we could observe in weeks 15 and 16 (when the full impact of blanked sailings was not visible yet in Europe and North America).

Some of the ports that experience a decline of the number of container ships calls reported that further improvement is present but not entirely captured (i.e. vessel calls were just over 5% less than normal).

In the current conditions and given the sharp decline in the numbers of blank sailings, an increasing number of ports are heading to almost similar numbers of calls compared to the same period the year before. At the same time, maritime trade volumes have also started to increase, as several economies, or major parts of them, have returned to operations and increased number of transactions.



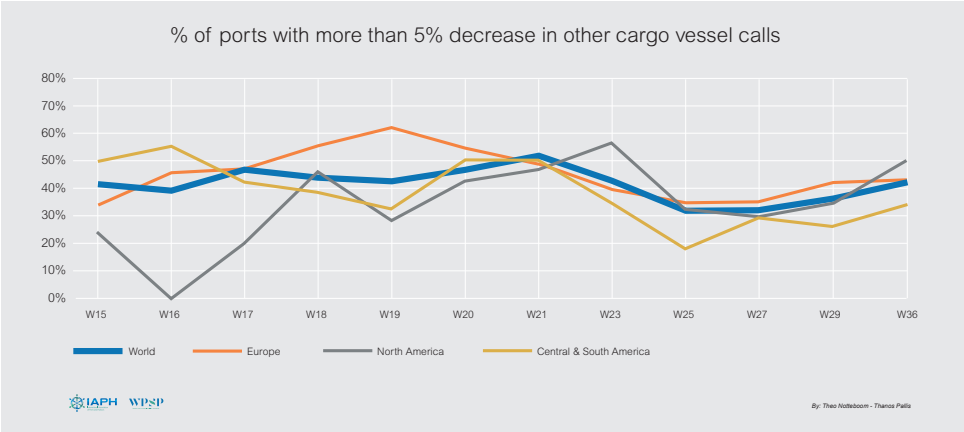


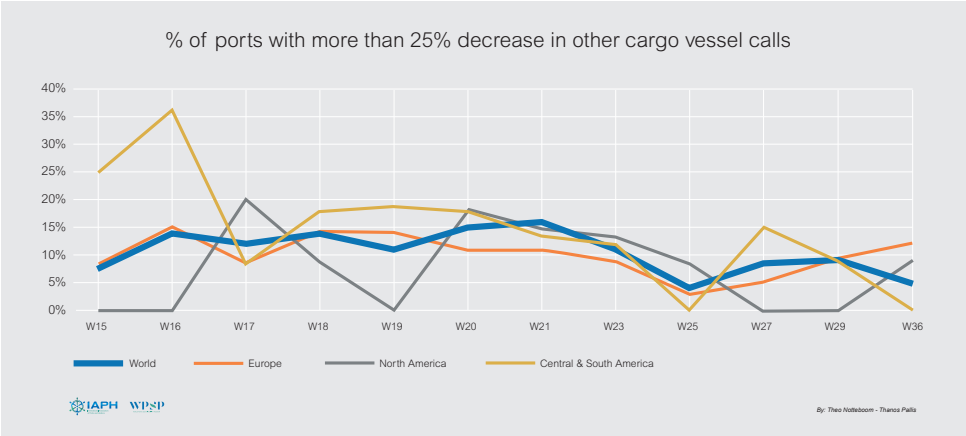
5.2. Other cargo vessels

The share of ports reporting reductions in other cargo vessel calls of more than 25% gradually decreased from 16% in week 21 to 4% in week 25, which is also far below the 12 to 15% observed throughout weeks 16 to 20. However, in weeks 27 and 29 the figure went up again to reach 9%.

In recent weeks, the overall evolution has been a positive one, with only 4.9% of all ports reporting reductions in other cargo vessel calls of more than 25% in September.

Globally, the share of ports reporting that the number of calls by other cargo vessels is rather stable compared to a normal situation fluctuated between 46 and 59% with the lowest shares recorded in weeks 18 to 21 and in week 36. In the latter week, about 14% of ports reported a rise of more than 5% in other cargo vessel activity compared to last year, the highest figure since the start of the Barometer.





Cargo vessel calls were not only impacted by the economic downturn but also by a series of measures. For example, at the start of the survey exercise, some countries in regions such as South East Asia imposed trade restrictions. This meant that despite the fact that ports were operating normally, only essential cargoes were permitted for delivery. Only certain window periods were allowed for delivery of non-essentials to and from the port. Container vessels calling at these ports carrying import cargo for local consumption faced delays, and most cargoes were still stored in port storage areas. In the same cases, tanker and ro-ro calls fell significantly due to restrictions on direct deliveries.

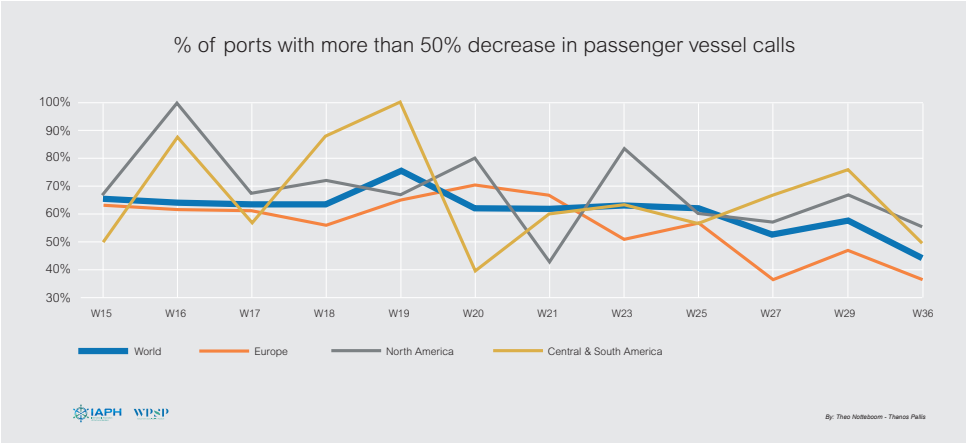
5.3. Cruise/passenger vessels

The cruise/passenger market remains the most affected by the COVID-19 contagion, although the results since week 27 show some improvement. In week 36, 45% of respondents indicate that passenger vessel calls are down more than 50%, in many cases even down more than 90%. In the period from week 20 to week 25 this figure was 61-62% while in weeks 15 to 18 this figure amounted to two thirds of respondents with a peak of 76% in week 19.

In the early weeks of the Barometer reporting, these figures were caused by a virtual full cessation of cruise activities. Cruise lines decided to cease operations and cruise vessels ended up at berth for lay-up (no passengers, only crew), with some ports limiting the number of crew remaining on board.

Ro/Ro and passenger traffic also continues to be impacted by COVID19. Passenger ships restarting operations continue with half the numbers of passengers on board, as the restrictions preventing these vessels from carrying more than 50 to 60% of their capacity continue to apply.

In recent weeks only a few cruise operators have resumed some cruise activity, albeit on a very small scale compared to normal activity levels. For some ports, this implies that cruise ship calls will no longer remain at almost zero levels. Even though the COVID19 cases are on the rise in many countries, cruise lines' announcements to return to operations have become more frequent in previous weeks. To give an example, in the light of recent EU-produced interim advice for restarting cruise ship operations after lifting restrictive measures in response to the COVID-19 pandemic, TUI announced its 'blue cruises' programme, where passengers remain on-board and at sea for the entire cruise, embarking and disembarking from Hamburg. Costa Cruises, Hapag Lloyd Cruises, MSC, Ponant and Silversea are among those that followed suit in restarting scheduled operations. A handful of small cruise vessels (i.e. Hurtigruten, Paul Gaugin, etc) have also returned to operation.



In the early days of the pandemic, measures applied to all cargo and passenger ships included vessels with suspected cases onboard remaining in quarantine for 14 days with testing afterwards. Other measures included foreign crew not being permitted ashore unless due to a medical emergency, and requests for crew medical certificates with elementary health checks by VTS operators before permitting entry. Aside from the overall ban by authorities on foreigners in many ports, neither passengers nor crew of cruise vessels were or are still allowed to go on land.

5.4. Regional comparison

The five graphs on vessel calls presented earlier also contain relevant information on the situation in specific regions. Regional differences are becoming much more pronounced as the world's ports respond to the Coronavirus crisis.

In the remainder of section 5, we elaborate further on the evolution in the number of vessels calls by comparing global results with regional ones. Three regions are considered: Europe, North America and Central and South America. The regional findings for Africa, Asia and Oceania are not reported separately given the insufficient responses.

On a global level, about 28% of the ports currently are facing a drop of more than 5% in the number of container vessel calls compared to a normal situation. This figure has been fluctuating between 40% and 53% in the rest of the survey period.

The regional results clearly demonstrate that the situation in Europe peaked in week 19 and has shown gradual improvement since then. In the Americas, the full impact of COVID-19 has been felt later than in Europe. The situation started to improve in week 27 after having reached peaks of 70% in weeks 21 and 25.

September 2020 responses provided a rosier picture: only 1 out of 4 ports now reports that container vessel calls are down more than 5% compared to the same period last year. The trend in Central and South America is not entirely clear, although there are some early signs that the situation is improving since late June.

In early September 2020, a small minority of 3% of ports on a global scale faced a decline in container vessel calls of more than 25%. This share reached 10-11% in weeks 17 and 18. The European port system follows the global path, while the results for the Americas in the +25% decrease category are highly volatile.

COVID-19 also affects port calls of other cargo vessels. The global results show that about 41% of the ports currently report a decrease of more than 5% in the number of other cargo vessel calls compared to a normal situation. Since the first week of the survey, this indicator has been moving up and down in a bandwidth of 33-51%.

The European results show a peak in week 19 followed by fast improvement till week 25 followed by a gradual moderate increase in the past few months to reach 42% in week 36. The situation in North America is getting worse again after a levelling off at around 30% in weeks 25 to 29. Central and South America is moving in the wrong direction after having reached its best results (i.e. 20%) in week 25.

The share of ports reporting reductions in other cargo vessel calls of more than 25% dropped from 16% in week 21 to 5% in week 36, which is below the 12 to 15% range for weeks 16 to 20.

The European results showing a 25% or higher decline in other cargo vessel calls were, for a long time, clearly below the global survey outcomes. However, in week 36 about 1 out of 8 ports faced a sharp decline in other cargo vessel calls (more than two times the world figure).

The Americas show strong fluctuations, although the situation in the past two months seems to be evolving in a favourable direction. It has not been only cargo vessels that have been impacted by local slowdowns. The logistics market has also been affected with some companies reorganizing their supply chain and focusing on essential operations. As mentioned earlier, the cruise/passenger market has been heavily impacted by the COVID-19 contagion. Except for weeks 20 and 21, the situation in European ports is a little bit better than the global picture.

The results for the Americas show a high level of volatility. In weeks 15 to 17, the curves for North America and Central and South America still followed a similar path. Since week 18, however, the weekly survey results point to a high level of divergence between the two regions.

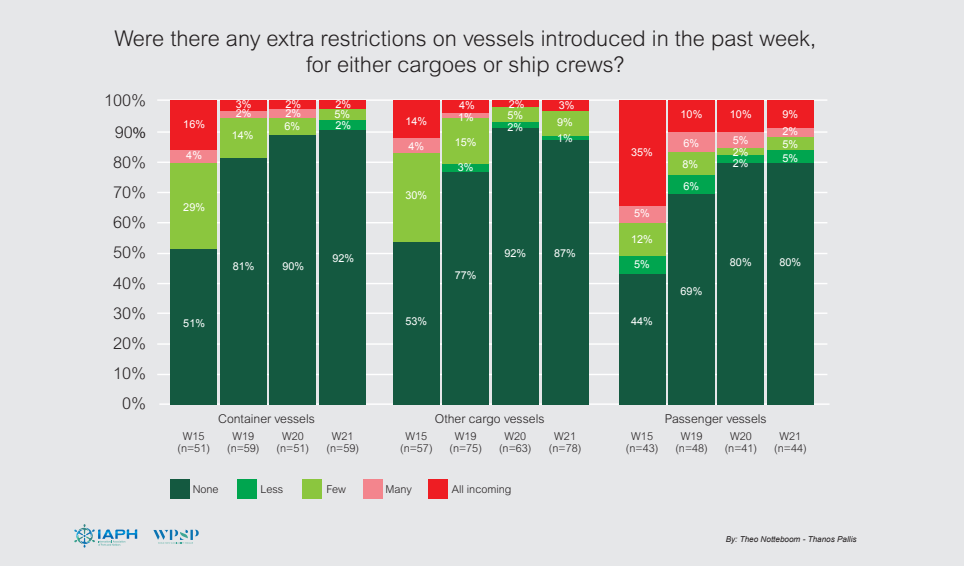
As regards passenger services, several European countries, such as Finland, Greece, Italy and Spain, have lifted previous restrictions on passenger transport excluding cruises. Cruise services remain suspended in most places around the globe. In some cases, this is the outcome of policy decisions by government impacting the entire year. In other cases an interim governmental decision has been taken (i.e. by one of the Ministries of Health).

However, some ports have reopened cruise terminals, shops and restaurants under strict conditions such as liquid antiseptic use, large ventilation fans and social distancing. In other countries such as Canada, cruise ships have been banned and in many cases all passenger services suspended by federal government decisions.

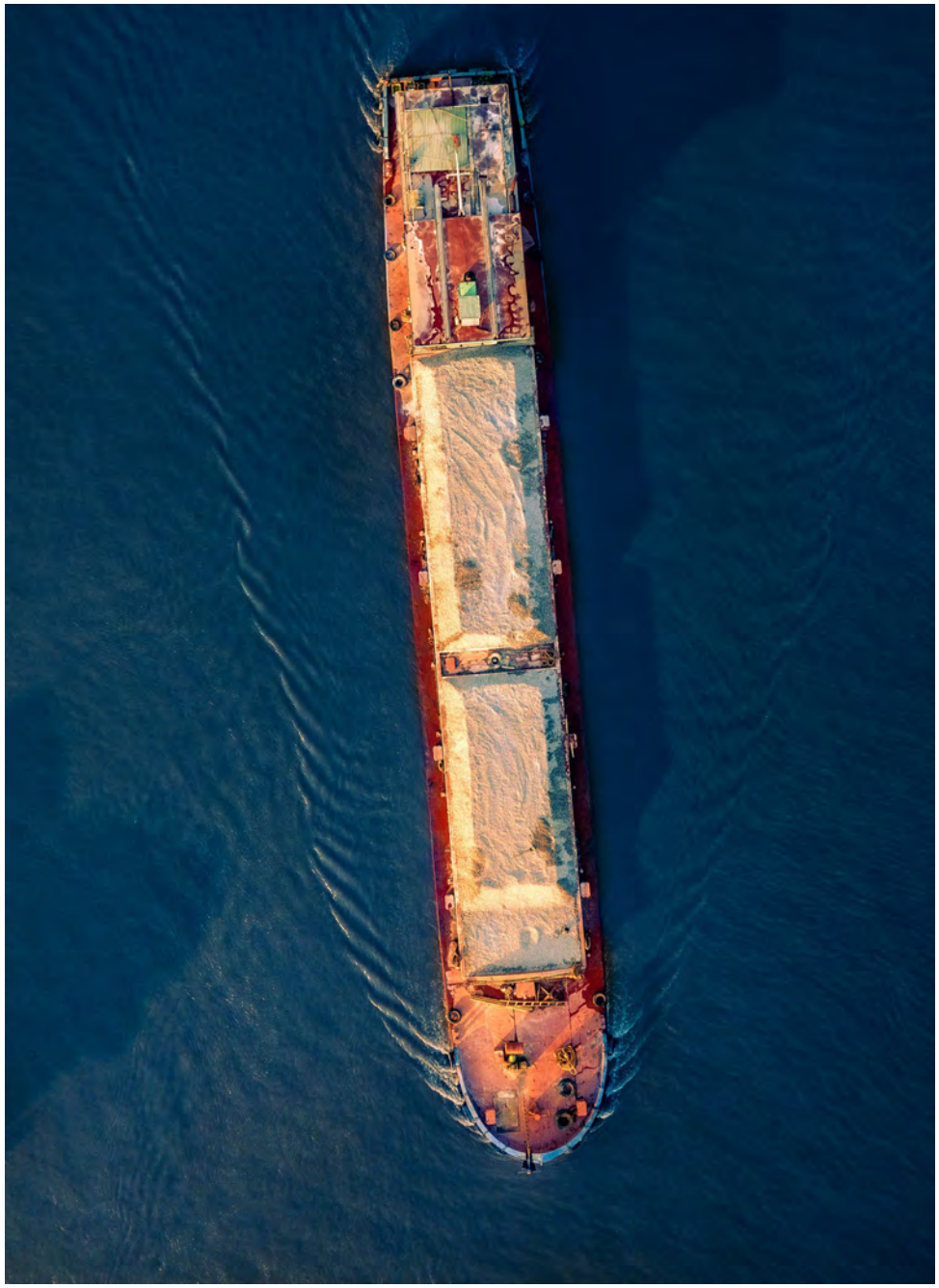
6. Extra restrictions on vessels

The COVID-19 resulted in some extra restrictions on vessels. The survey focused on this issue from week 15 to week 21. The overall results show that the share of ports imposing restrictions on container and other cargo vessels started to decrease in week 19. In week 21, about nine out of ten ports did not impose any restrictions on container vessels and other cargo vessels. The situation for passenger vessels also improved strongly by week 21: 80% of the responding ports did not impose additional restrictions (same as in week 20; 69% in week 19 and 44% in week 15). The share of ports imposing extra measures on all incoming passenger vessels reduced from 35% in week 15 to 9% in week 21, the lowest figure in the time series.

The applied restrictions have remained the same since mid-March. All vessel operations are performed in accordance with local biosecurity procedures in order to avoid any impact on terminal performance. In some cases, vessels are inspected alongside. In other cases, vessels are all inspected before berthing when the medical team boards the vessel. The green light for the vessel to berth is given only after checking there are no suspected cases. There are no extra restrictions on vessels as long as health declarations remain clear. In many cases, only the truck drivers are allowed to board ferries. Health protocols are in most cases designated by the national health authorities.



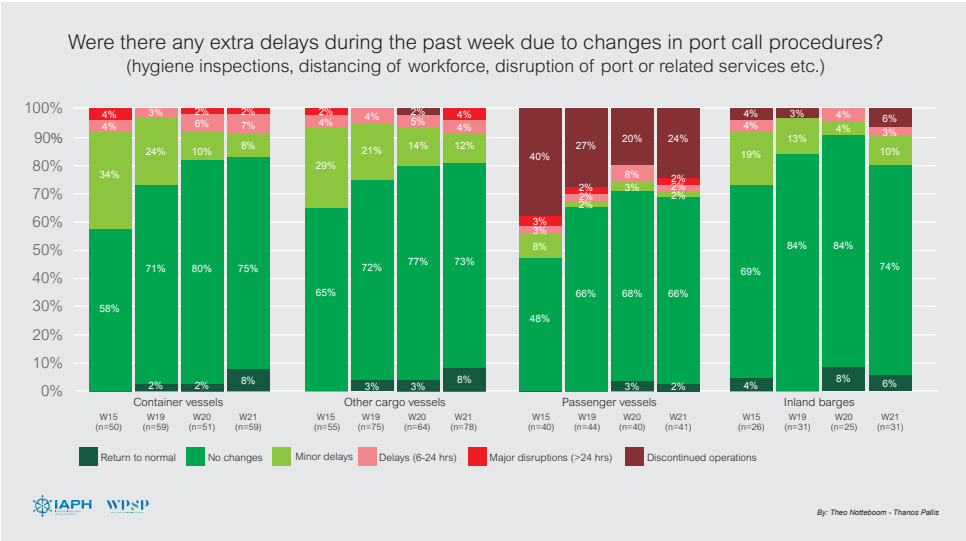
Permissions for crew to disembark remained limited. In some countries, due to the preventive measures adopted by governments for port facilities, it is recommended that no member of the crew should leave their ship, unless it is deemed necessary for operational reasons and in accordance with security measures to prevent the spread of COVID-19. In other cases, the crew is restricted to 4-hour shore leave for essential purposes only.



7. Extra delays due to changes in port call procedures

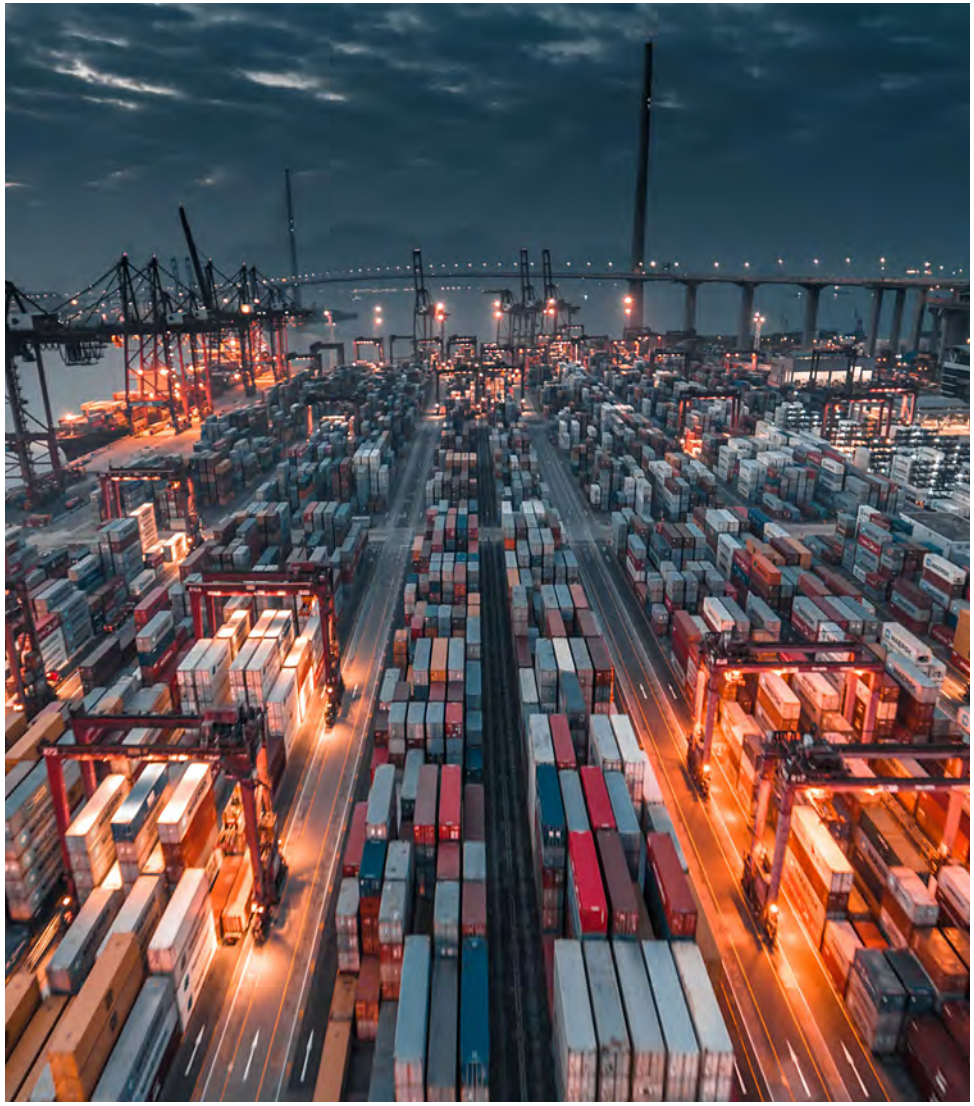
In the first Barometer report of early April 2020, nearly 7 out of 10 ports with inland barge operations reported no extra delays during the past week due to changes in call procedures (e.g. hygiene inspections, distancing of workforce, disruption of port or related services), while some 2 out of 10 ports reported minor delays (longer than 6 hours). For container vessels and other cargo vessels, more than 90% of the ports indicated zero or only minor delays. Also here, the worst situation was found in the passenger sector: 40% of the ports discontinued this type of operation, while nearly half of the ports reported no additional delays.

By week 21, the situation had changed. For inland barge operations, some 80% of ports indicated that activities were normal/back to normal and there were no extra delays during the past week due to changes in call procedures, down from a record 92% in week 20. For container vessels and other cargo vessels, slightly less ports reported delays or major disruptions, which was mainly caused by a decline of the share of respondents facing minor delays. The passenger segment remained the most affected vessel category and the improvement observed in week 20 continued throughout week 21: while 24% of the port operations of this type had discontinued (down from 27% in week 19 and 33% in weeks 17 and 18), 68% of the ports reported no additional delays (similar to weeks 19 and 20, but much higher than the 50-51% in weeks 17 and 18).



The reported delays were only those minor ones that take place due to the sanitary controls that were being carried out on ships, land transport and port workers in order to prevent the spread of Covid-19. Beyond these, there were no reasons for delays and regular conditions applied. Workers in many ports are at normal numbers and operations have therefore not suffered disruptions. The presence of fewer ships and fewer vessels than expected also naturally helps the case of avoiding delays.

However, in specific countries delays were caused by landside operations. For instance, the mandatory testing of truck drivers in the short run resulted in a slowing of turnaround times. In some ports, all truck drivers were or are still required to have a Covid-19 free certificate, with testing taking relatively longer than expected. This is affecting truck turnaround time. Further re-opening of the economies is expected to see these problems ease off. Nonetheless there are also concerns that it might result in the implementation of new procedures in the respective countries.

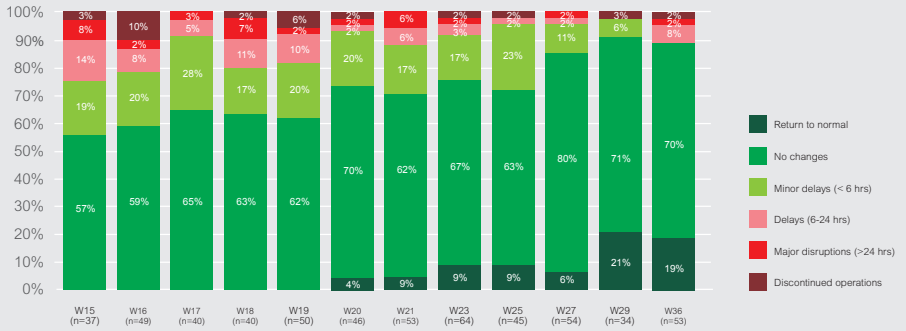


8. Impact of crisis on hinterland transport

Lockdowns, operational limitations, border checks, a lower availability of truck drivers and disruptions in terminal operations can negatively affect trucking operations in and out of the port area as well as to hinterland destinations.

How has hinterland transport been affected by the COVID-19 situation compared to normal activity during the past week?

Trucks (cross-border)

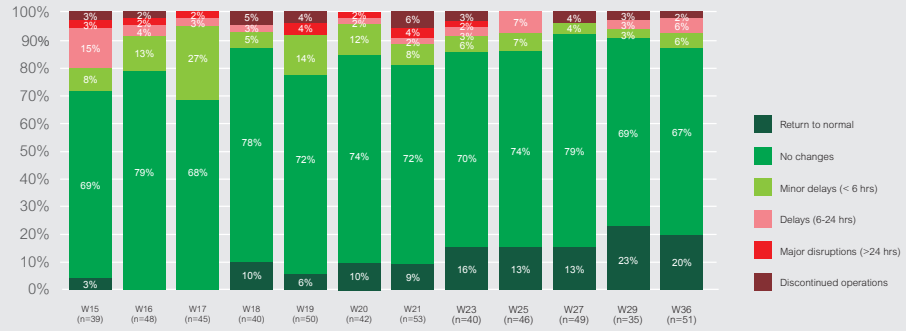


IAPH WPSP

By: Theo Notteboom - Thanos Pallis

How has hinterland transport been affected by the COVID-19 situation compared to normal activity during the past week?

Rail services

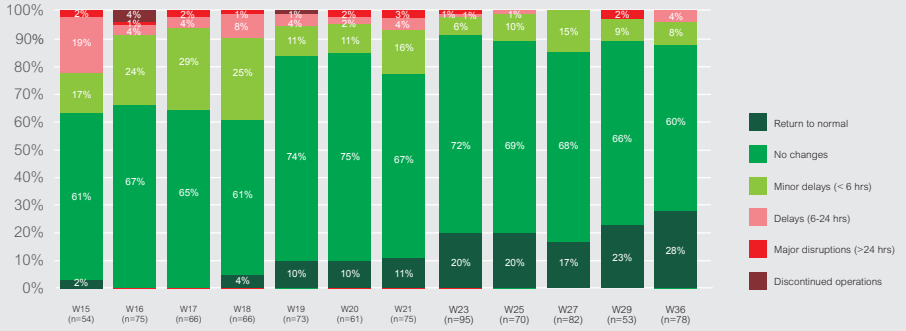


IAPH WPSP

By: Theo Notteboom - Thanos Pallis

How has hinterland transport been affected by the COVID-19 situation compared to normal activity during the past week?

Trucks (in/out port area)

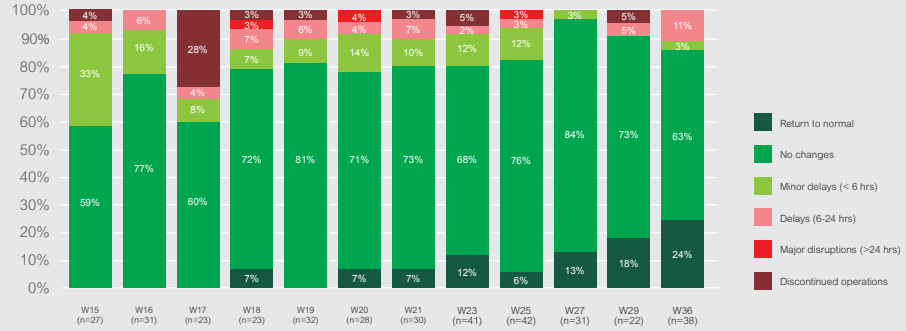


IAPH WPSP

By: Theo Notteboom - Thanos Pallis

How has hinterland transport been affected by the COVID-19 situation compared to normal activity during the past week?

Barge services



IAPH WPSP

By: Theo Notteboom - Thanos Pallis

8.1 Truck operations

Following the COVID-19 outbreak (i.e. week 15 and week 16) more than 40% of ports were in a precarious position, reporting delays (6-24 hours) or heavy delays (> 24 hours) in cross-border trucking activities compared to normal conditions. The restrictions preventing entry into neighboring countries, the need for truck drivers to quarantine for 14 days before continuing their trip, the suspension of operations by many truck companies, and the shortage of public health staff at borders were among the many issues that contributed to such delays.

Administrative problems due to the different approaches of neighboring countries were not insignificant; delays particularly occurred in the absence of cooperation between national administrations. Reports by several ports of this situation have come in from the Americas and Africa.

Fortunately, the situation has progressively improved, with the percentage of ports facing delays being lower than 30% since week 20. In week 29, some 92% of ports witnessed a return to normal operations in cross-border transport by truck or were already back to a normal situation. Even though this remains the highest figure since the start of the survey, the results of the week 36 survey reconfirmed the strong improvement. Only 11% of the ports were experiencing some challenges in cross-border trucking operations in week 36, with most of them being in North America. These challenges mostly relate to minor delays of less than 6 hours.

For trucks arriving or leaving the port, the percentage of ports that experienced problems in the first weeks of the pandemic reached 39%, rather evenly split between minor delays (less than 6 hours) and more severe disruptions. In certain cases, trucks (in/out port) were also affected by governmental restrictions allowing delivery within districts. Due to lockdowns, or other restrictions in force, in several parts of the world only essential items were allowed to be moved to and from ports, while several took action to avoid congestion by scheduling non-essential cargo to move during specific time windows.

The trend started to reverse in week 18 when ports reported that the situation was stabilizing with less major delays. Further improvement has led to 88% of ports reporting normal activity in week 36, versus 85% in week 27, and 78% in week 21.

Overall, the impact on hinterland transport has been relatively low. Lower cargo volumes have impacted overall absence in delays. With lower maritime volumes arriving/leaving ports, road haulage has remained operational by and large in most regions of the world, securing the delivery of essential goods and more. During the re-opening of the economies the reasons for delays in road transportation included the need to isolate increasing numbers of truck drivers who tested positive, and congestion problems due to essential road maintenance, which had been suspended due to COVID-19 restrictions.

With cargo back on the rise and passengers and tourists start moving via ports, keeping major lanes/roads closed to traffic started to create some delays for freight transportation to/from ports. These concerns intensified in the initial phase of the re-opening due to instructions to avoid public transportation combined with the preference of the general public to use private means of transportation. Learning curves have been followed.
To give an example, in the case of trucks moving in/out the port, the initial extra minor delays recorded due to the prolonged registration procedures restricting the entry and exit of the trucks have receded.

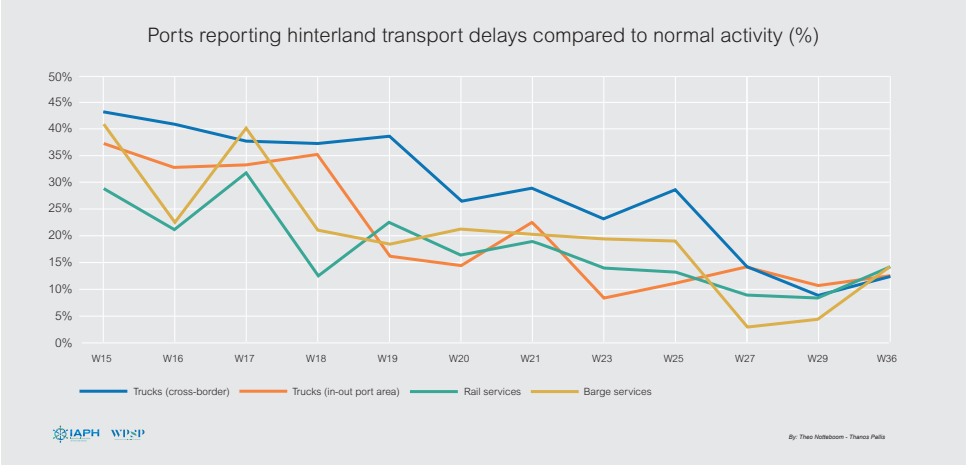
Interestingly, some positive developments were also reported. In particular there has been better programming by the port operators to load and unload cargo from and onto trucks and rail cars while cargo reductions are experienced. In other cases, reports have been received of trucks rapidly adopting the terminals' adjusted booking systems for a quick, coordinated release of containers.

8.2 Rail transport

Almost 30% of ports reported that rail traffic had fallen in the early days of the pandemic – to some this was even due to the fact that motorways became totally free of traffic, while others reported that the potential generated from observing new protocols led, quite curiously, to a renewed interest in rail services. Soon, the situation improved quite substantially, and in week 27 only 8% of ports still faced disruptions in rail services. In week 29 rail services to/from ports were indeed back to normal, given that for a second time the percentage of ports facing rail service delays compared to the same period last year reached a single digit. In week 36 however, this percentage has increased again reaching 14%, mostly due to some difficulties reported in North America. The situation in other parts of the world has continued to improve.

8.3 Barge transport

The situation for barge services is also positive today, following an initial shock. According to the survey results this shock lasted until week 17. Barge services were affected with most ports reporting, in most cases, less than 6 hours delays. Thereafter, inland waterway transport picked up: since week 27, 9 out of 10 ports have been reporting normal operations, compared to 8 out of 10 throughout the weeks 19 to 26, and only 59% at the start of the survey. The most recent survey, conducted in week 36, suggests that problems of barge services in specific regions (i.e. Europe) have returned to normal in all ports, and only 13% of ports continue to face some moderate delays.



8.4 Regional comparison

Three regions are considered in the regional comparison as regards the impact of the COVID-19 pandemic on port related hinterland transportation: Europe, North America and Central and South America. The regional findings for Africa, Asia and Oceania are not reported separately given the low number of responding ports. For Central and South America, we do not report all figures given the low number of respondents (< 5) for some of the weeks or on some of the sub-questions.

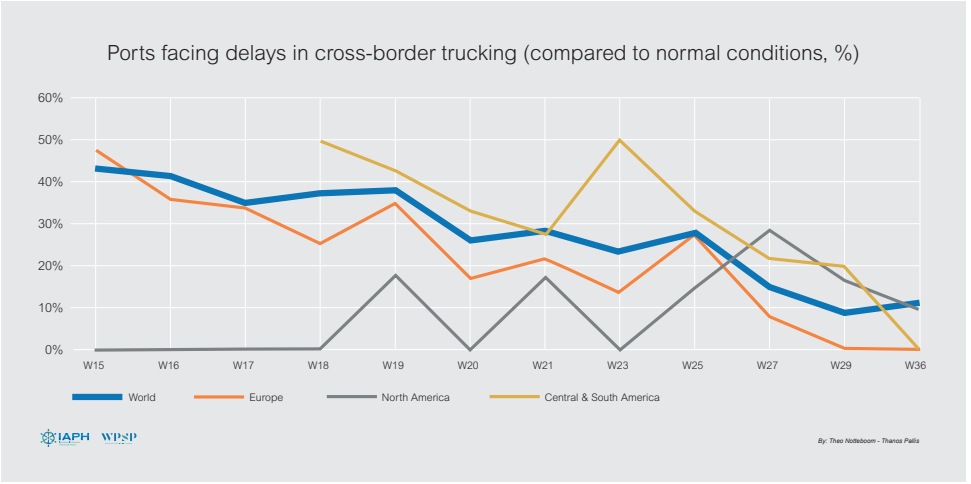
The situation with respect to cross-border trucking is heavily affected by the situation along the borders and related policies at national and or regional level. Among the regions considered, cross-border trucking in North America seems to have been affected the least by the Coronavirus, while the figures in Central and South America are the highest. European ports experienced a gradual improvement of the situation till week 23, with a (temporary) increase in week 25. Since then the situation in Europe has improved dramatically, and since week 29 there are no ports reporting any such delays.

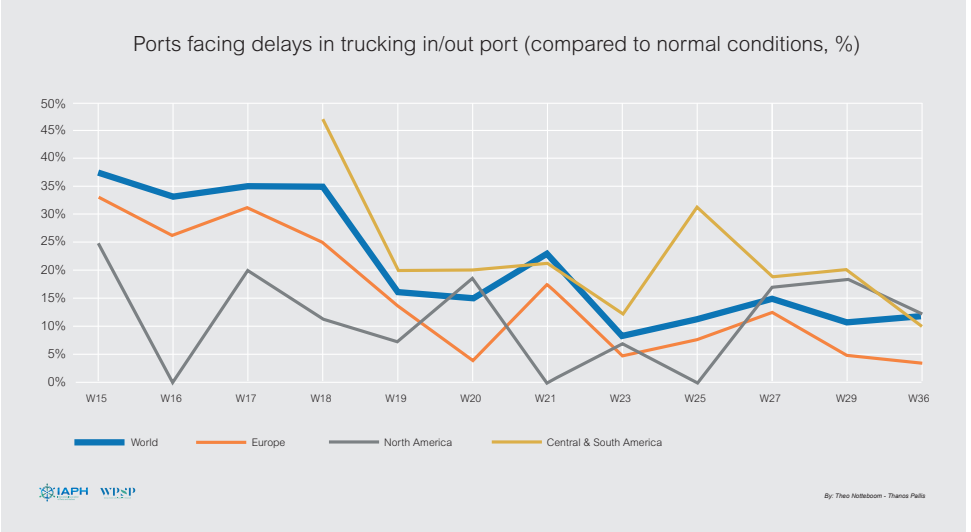
For trucks arriving or leaving the port, the situation continues to improve on a global scale: only 4% of European ports still report delays (all of them less than 6 hours) versus a hefty 33 to 25% in weeks 15 to 18. The situation has been most precarious in Central and South America, where 47% of ports experienced delays comparing to normal in week 18. Since then the situation improved considerably; in week 27 and week 29 approximately 20% of ports in the region reported delays (mostly moderate ones), with these percentages decreasing recently to 10% (week 36). North American ports were the ones that faced less challenges, with no delays reported in some weeks (i.e. week 25 and week 27). Delays have reappeared since week 27, and as of week 36, 12% of North American ports were facing delays in the case of trucks arriving or leaving the port. In this region though it is worth considering the presence of other developments, such as strikes of dockworkers, which disrupted expected flows in several North American ports.

In week 36 some 12% of ports still faced disruptions in rail services, but less than 4% of ports reported a discontinuation of operations. The rail delay figures for Europe and North America have been fluctuating with a slow downward trend for Europe pointing towards an improvement of the situation. Only 8% of European ports were facing delays comparing to normal in week 36. The situation is rather different in North America, where some issues regarding rail services were reported by one out of four ports, whereas in week 29 there was no port reporting such delays. The figures for Central and South America are not analysed further given the low number of responses from that region on this specific transport mode.

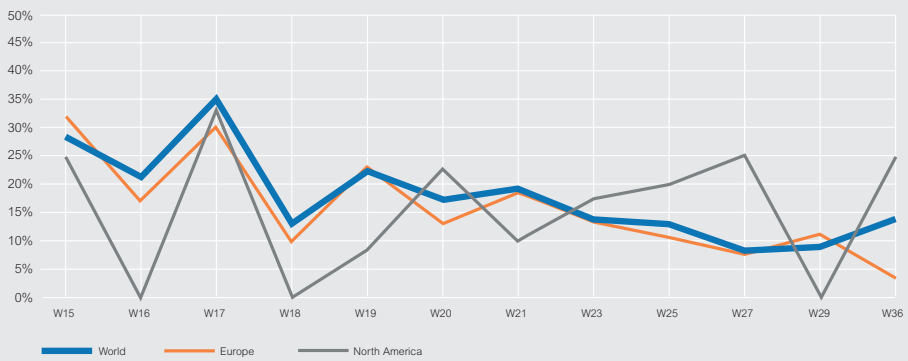
European ports were the ones that have been confronted with challenges in terms of barge services. In the beginning of the crisis, problems occurred in almost half of the European ports that are served by barges. Since then the situation has been evolving positively: since week 27 no European port has reported any such problems. Inland barge operators in Europe were considerably affected by lower cargo availability. The market situation did however worsen due to other reasons unrelated to the COVID-19 outbreak (i.e. low water levels on the Rhine and some other important river systems).

North American ports have been less affected. In fact such problems in North American ports have been sporadic, and observed in the range of 10% and 17% of ports served by barges. The two most recent observations however (week 29: 17%, and week 36: 11%) suggest that some delays compared to normal continue to be present in the region. Even though these are moderate delays (less than 6 hours), it is worth monitoring the trend and further exploring the underlying causes. As in the case of rail, the figures for Central and South America are not included in the graph given that less than five ports reported on the situation in the inland navigation sector.





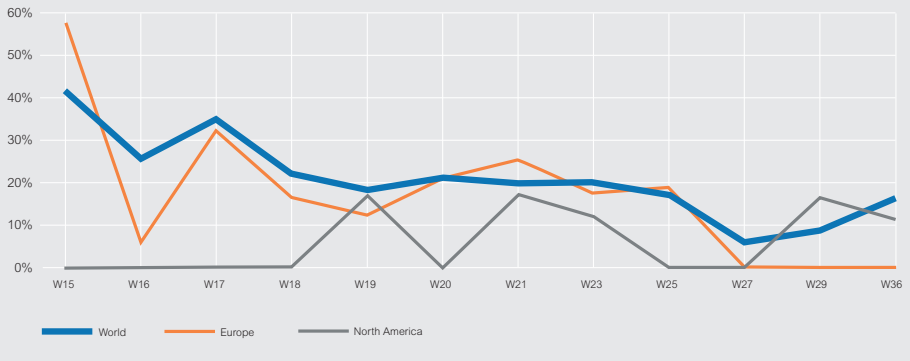
Ports facing delays in rail services (compared to normal conditions, %)



IAPH WPSP

By: Theo Notteboom - Thanos Pallis

Ports facing delays in inland barge services (compared to normal conditions, %)



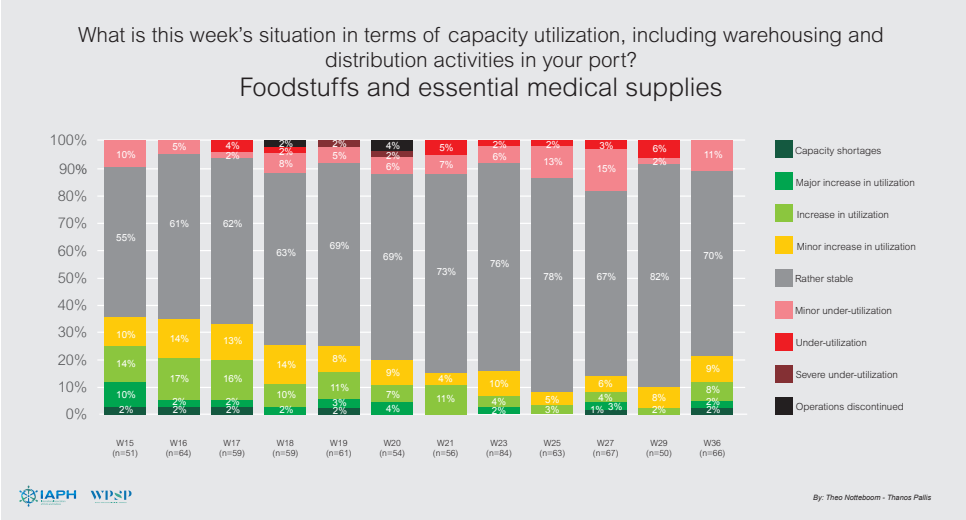
IAPH WPSP

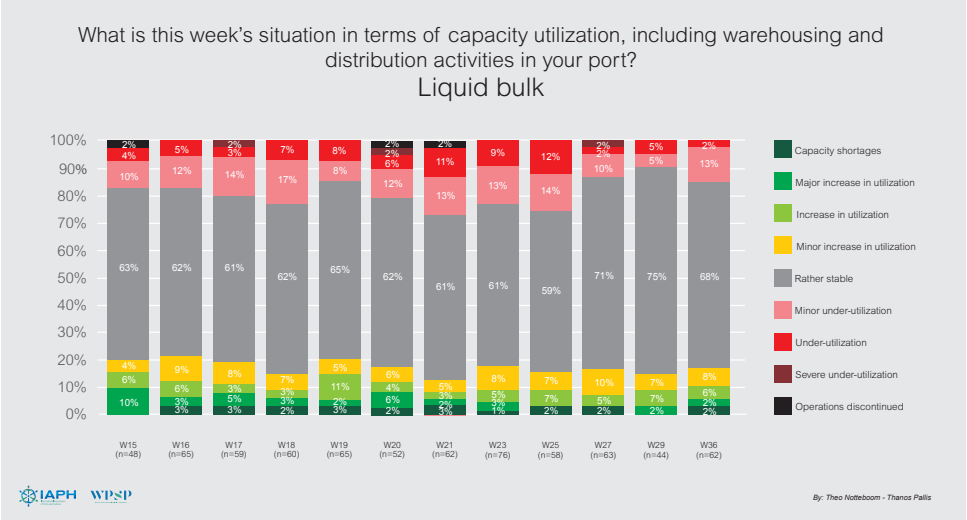
By: Theo Notteboom - Thanos Pallis

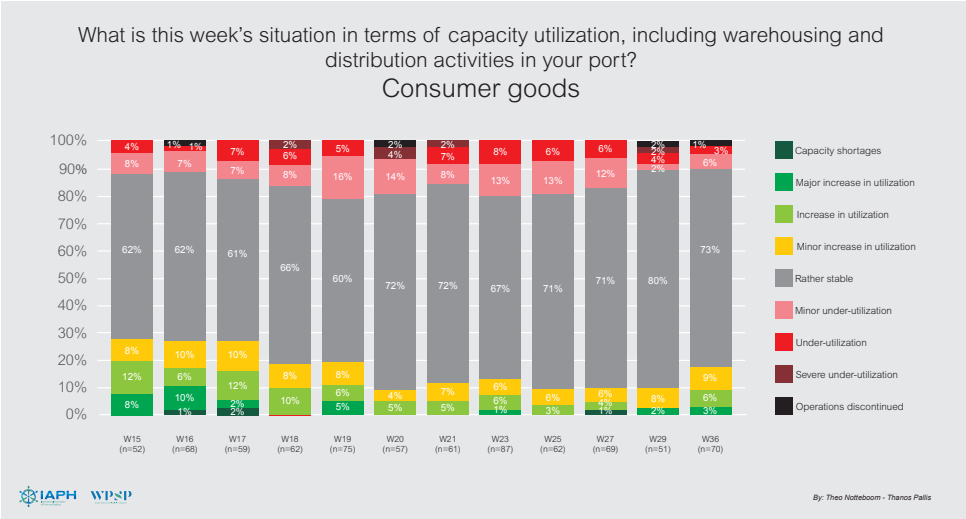
9. Impact on capacity utilization including warehousing and distribution activities

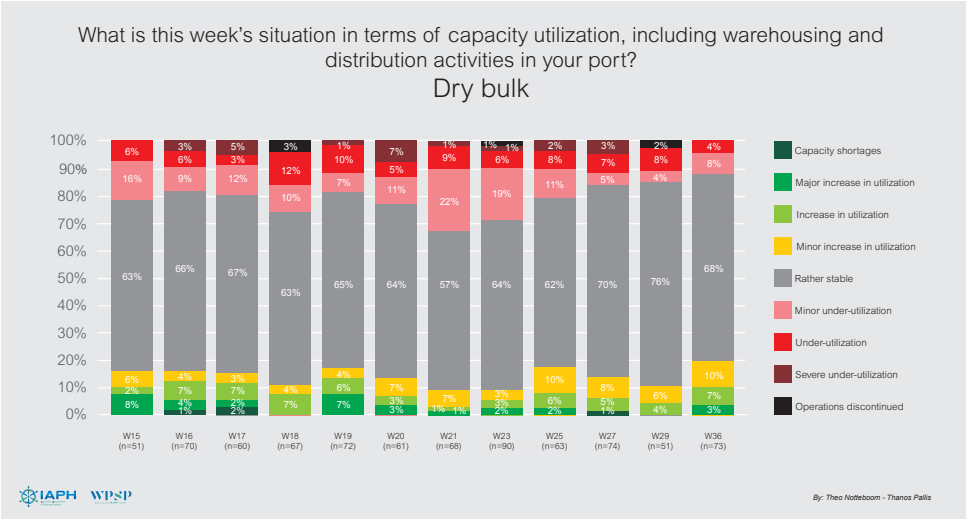
Warehousing and distribution activities in ports have in some cases seen changes due to the fall in demand for consumer products or the closure of factories in countries with partial or full lockdown measures still in place. Utilization levels such as tank storage parks for liquid bulk, and oil products in particular, have to some degree been impacted by the sharp decline in the oil price at the start of the COVID-19 crisis.

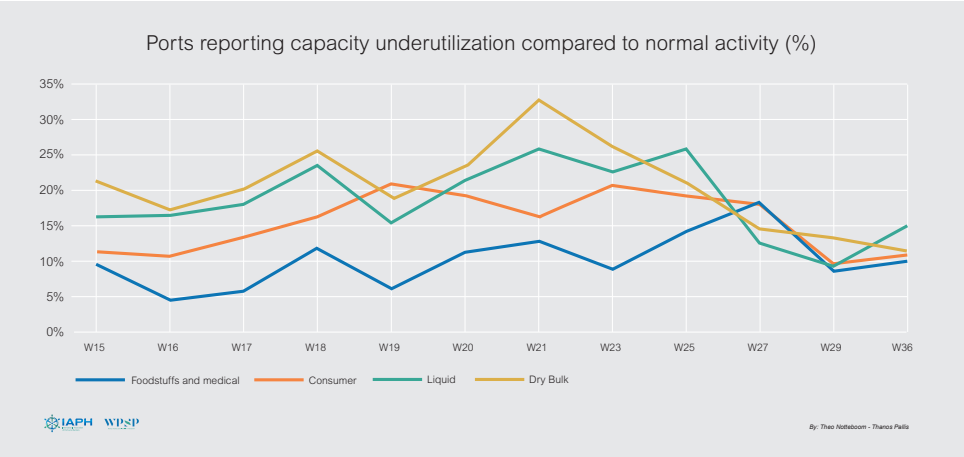
The bar charts below provide the distribution of answers per goods category, i.e. foodstuffs and medical supplies, consumer goods, liquid bulk and dry bulk, while the line graph details the percentage of ports that reported capacity underutilization compared to normal activity each week.









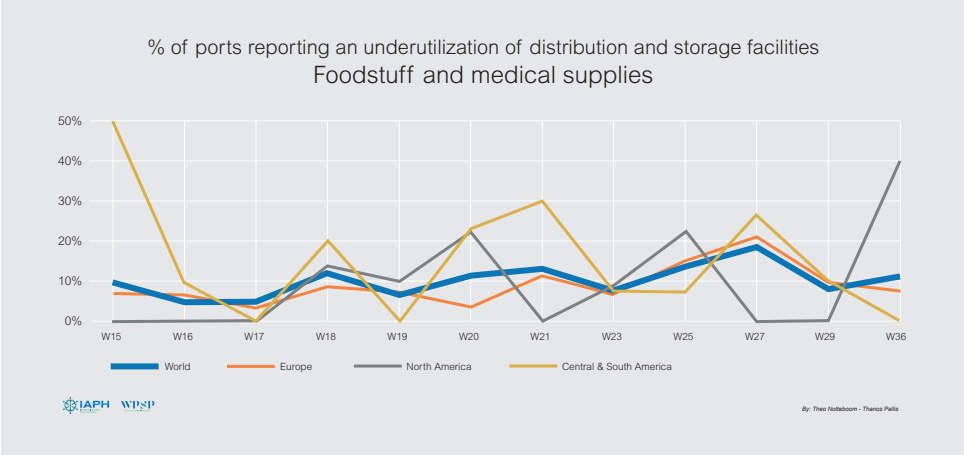


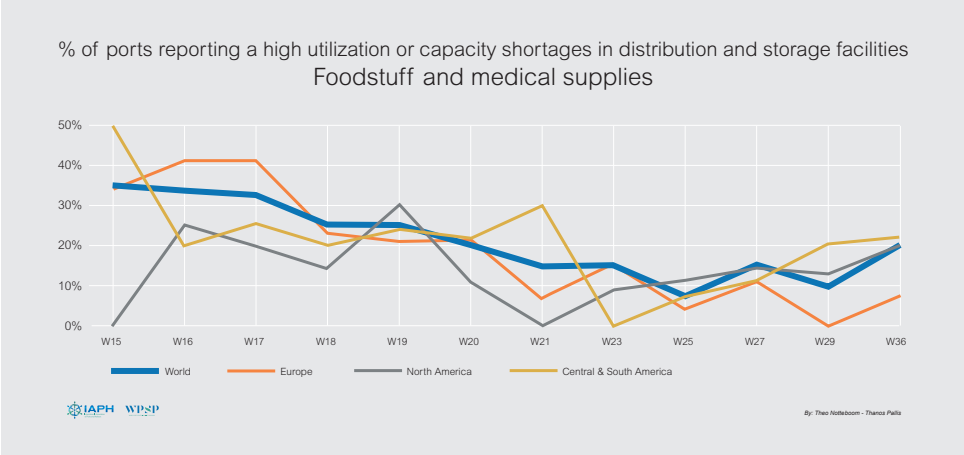
Furthermore, we present eight graphs that provide further insight on the utilization level of storage and distribution facilities for four groups of cargo. For each of these groups, we present a graph showing the share of ports (globally but also on a regional level) reporting underutilization of storage facilities and a second graph depicting the percentage of ports facing increased utilization or even capacity shortages. The discussion below primarily focuses on the results for all ports of the survey, as the separate results for Europe, North America and Central and South America are mostly showing strong fluctuations throughout the observed period. In one case, i.e. storage facilities in liquid bulk, we did not include the results for Central and South America given a very low number of responding ports.

9.1. Foodstuffs and medical supplies

The survey results for week 36 show the COVID19 crisis has resulted in 20% of ports reporting an increase in utilization of warehousing and distribution facilities for foodstuffs and medical supplies, a doubling of the figure compared to week 29. This figure is higher than between mid-May and mid-July but still far below the 35% in week 15. Due to the increase in demand for food, ports serving such cargo have reported moving more than ever before (in tons).

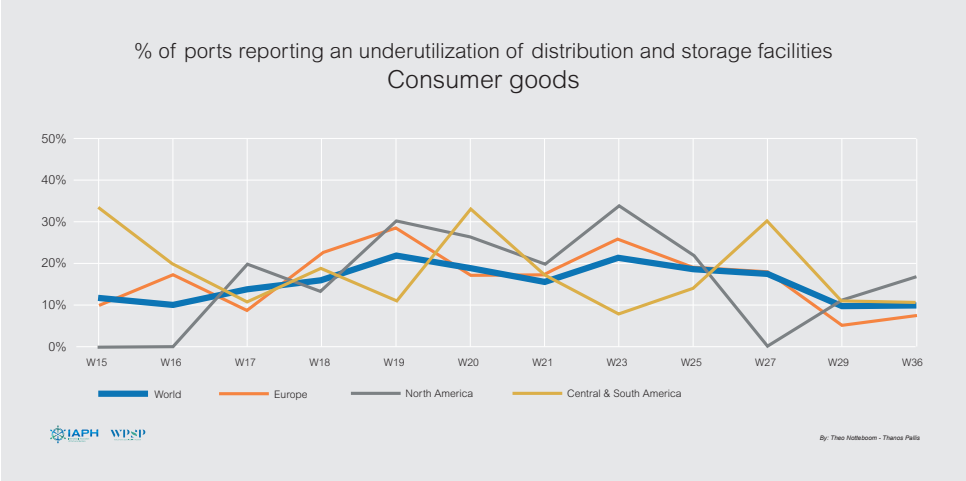
At the other side of the spectrum, we see a small increase in the share of ports facing an underutilization of storage capacity for foodstuffs and medical supplies, although this figure of 10.6% remains far below the peak share of 18% in week 27.

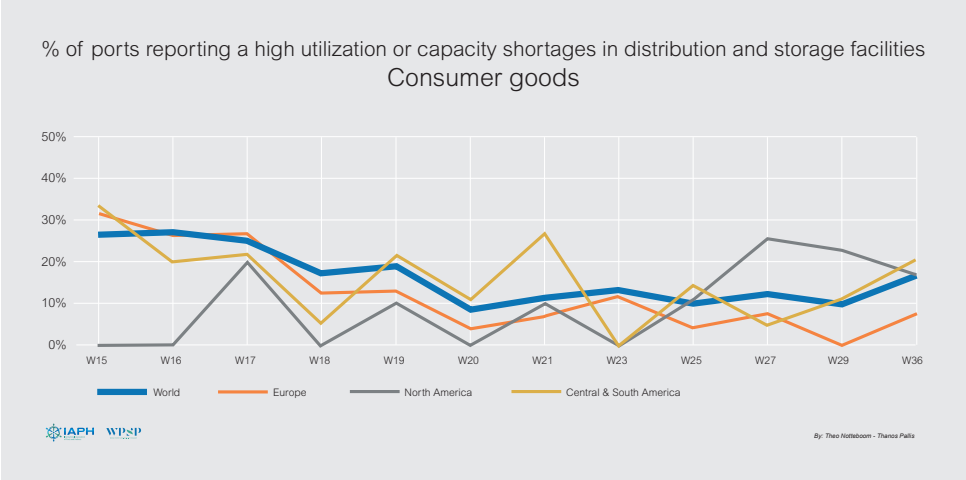




9.2.Consumer goods

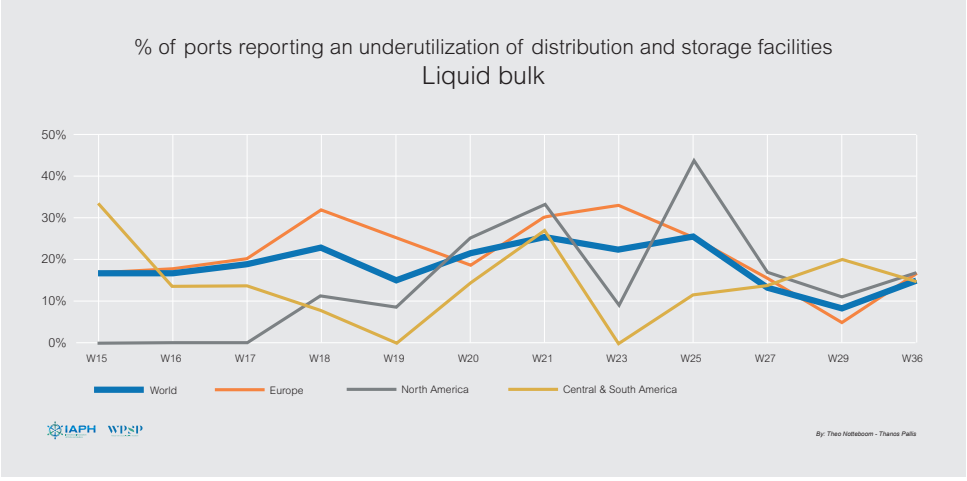
For consumer goods, 1 out of every 10 ports faced underutilized facilities in week 36 and 17% of ports report increases in utilization. In weeks 15 to 17 only 10 to 14% of respondents witnessed underutilization and 25 to 28% of ports mentioned an increased usage of facilities or even capacity shortages. From week 19 to week 27 (six survey weeks in a row), more ports faced underutilization than higher utilization levels. The figures reached a balance in week 29 (10% each), but as mentioned earlier week 36 tilted the balance again towards increased usage of facilities.

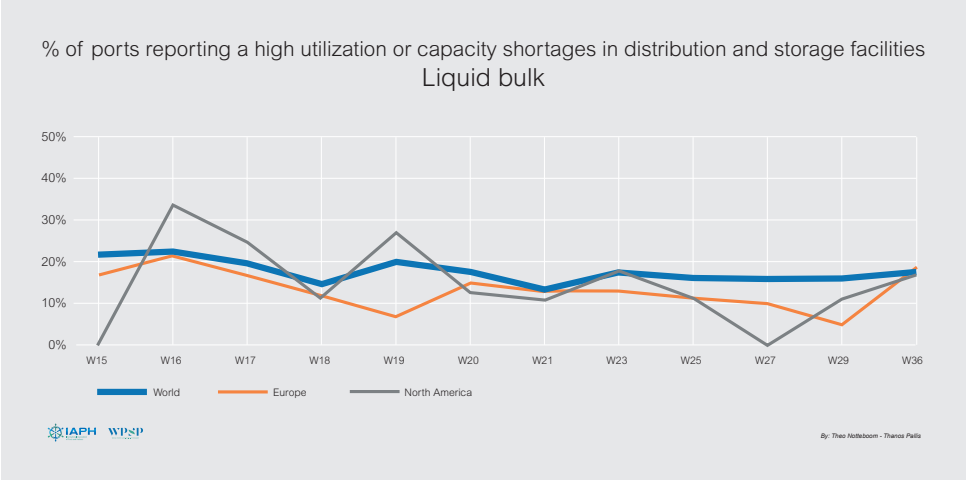




9.3. Liquid bulk

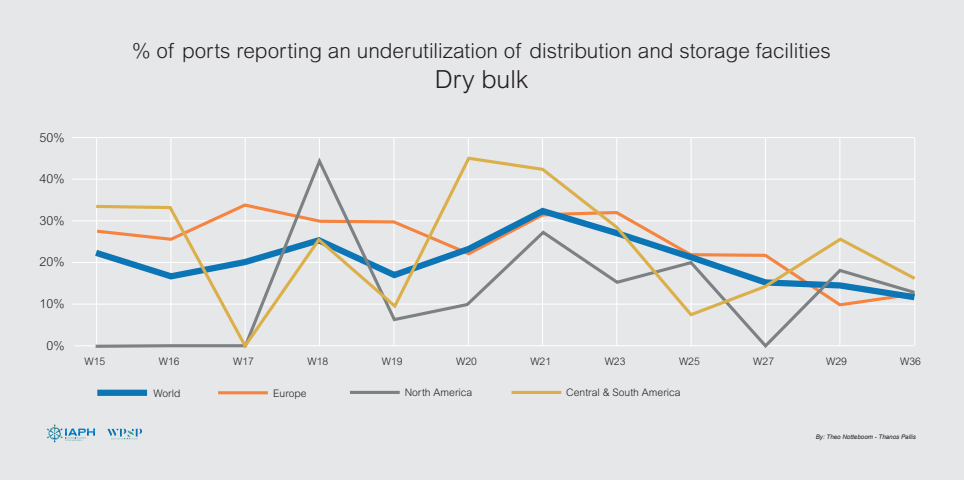
In the liquid bulk market, 68% of the respondents have seen no changes in utilization levels, a higher figure compared to the 59-63% range in weeks 15 to 25. About 15% of ports are reporting underutilization of liquid bulk storage facilities in September 2020, a rise of approximately 5 percentage points compared to week 29 which was the lowest figure since the start of the surveys recorded. This figure fluctuated between 15 to 26% in the first nine survey weeks. The share of ports with increased utilization levels in liquid bulk storage facilities has remained stable at 16-18% since week 23.

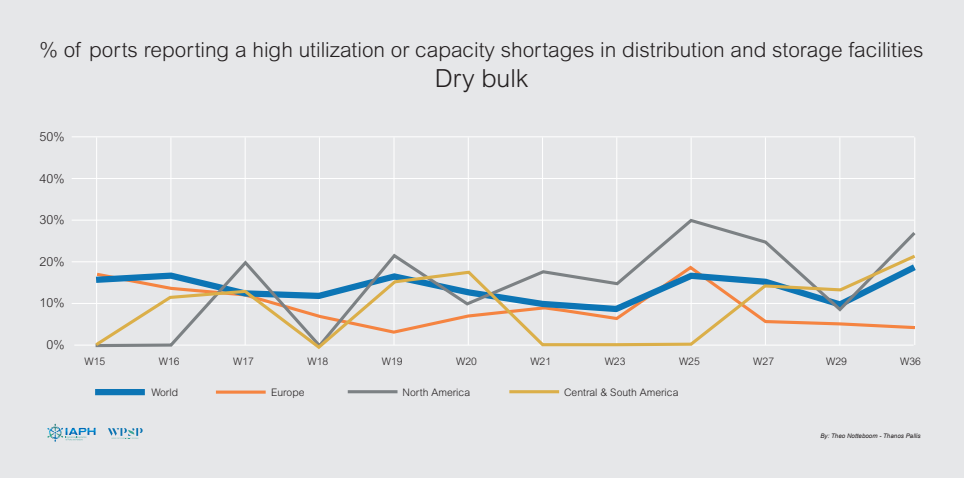




9.4. Dry bulk

In the dry bulk sector, 12.3% of the ports reported an underutilization of facilities in September 2020. This figure has gradually decreased since the peak value of 32% in mid-May (week 21). The share of ports with increased utilization levels in dry bulk storage reached 19% compared to 10% in week 29. Overall, this indicator has been going up and down in a narrow band of 10 to 20% since the start of the survey with no clear observable trend.



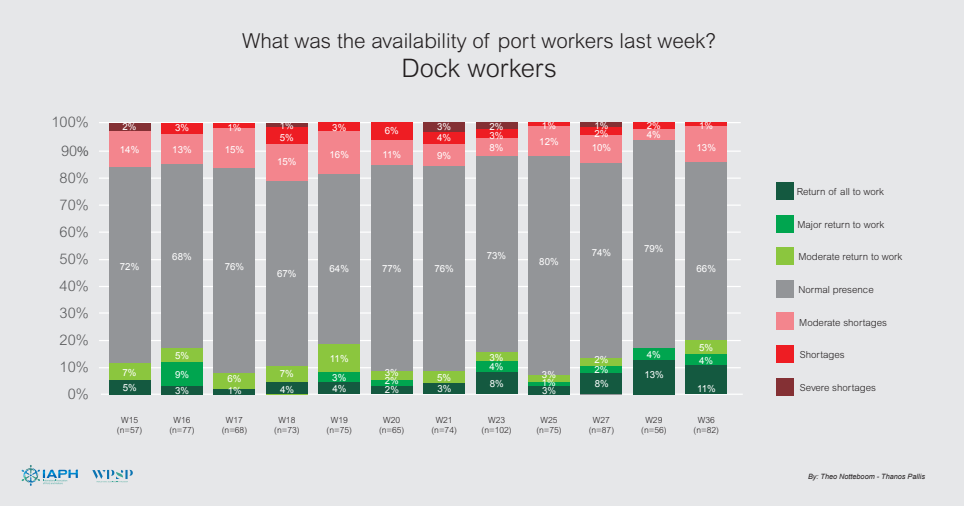


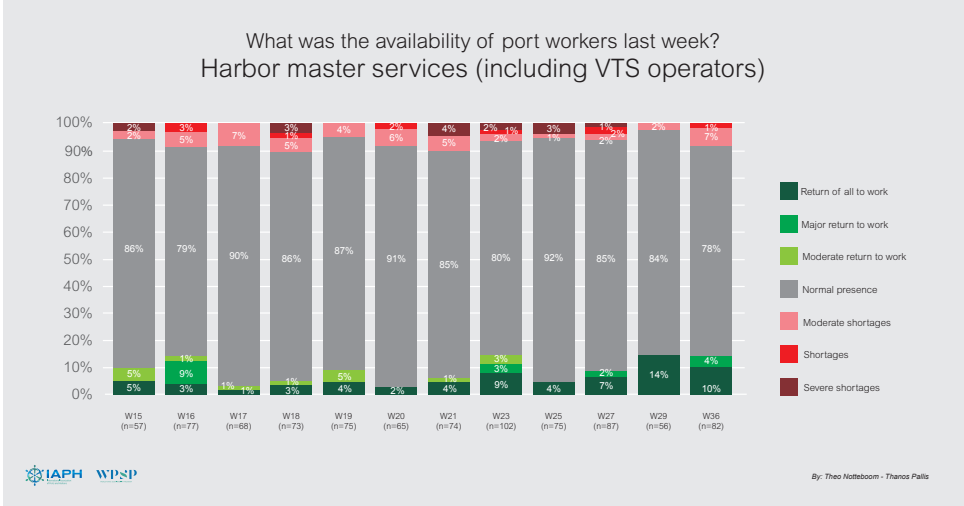
For three out of the four categories of cargoes that are examined - namely foodstuffs and medical supplies, consumer goods, and liquid cargoes – week 29 was the first time since the launch of the Barometer in week 15 of 2020, that less than 10% of ports reported underutilization of warehousing and distribution facilities with only minor changes recorded in week 36 except for liquid bulk. In the fourth category – namely dry bulk cargoes – this percentage reached 13.7% in week 29 followed by a further reduction to 12.3% in week 36 (the lowest figure ever); in mid-May it was standing at over 32%.

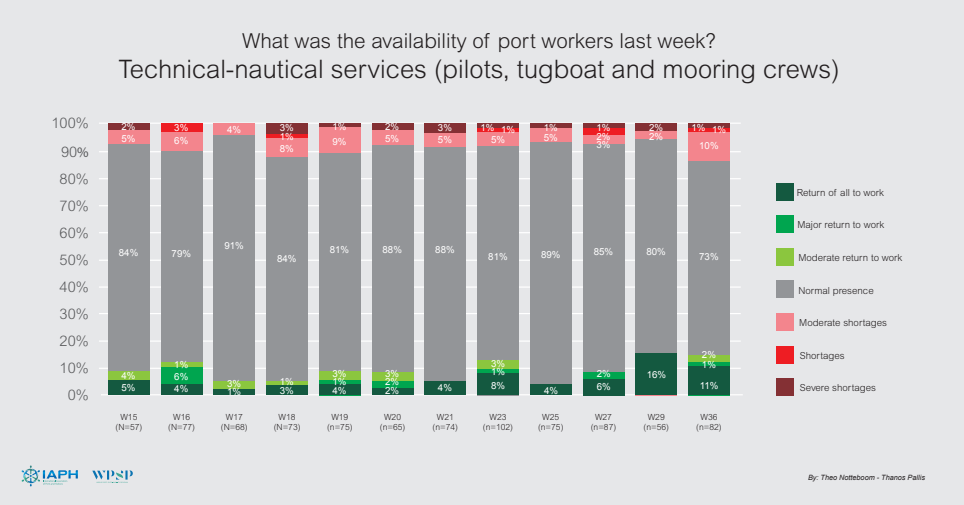
It has to be noted that capacity utilization including warehousing and distribution activities are anything but uniform. For example, in April and May some ports reported an increase in port and terminal utilization due to an increase in the imports of essential goods, such as grains (rice, wheat). Stockpiling practices of importers also emerged and as a result a major increase in capacity utilization for these deliverables was not uncommon. For exporting countries, the outlook for some bulk cargoes was or still is bleak, and for other bulk commodities such as ores, utilization was close to zero. Liquid bulk provides a similar picture. For some ports these cargo volumes fell during the lockdown period due to less demand for petrol and diesel. For others, demand for liquid bulk, especially for imported fuels and power generation-related products, was very low due to a lack of industrial production and the mild climate. Nonetheless some ports reported or still report strategic storage of liquid bulks by traders in anticipation of future commodity price developments.

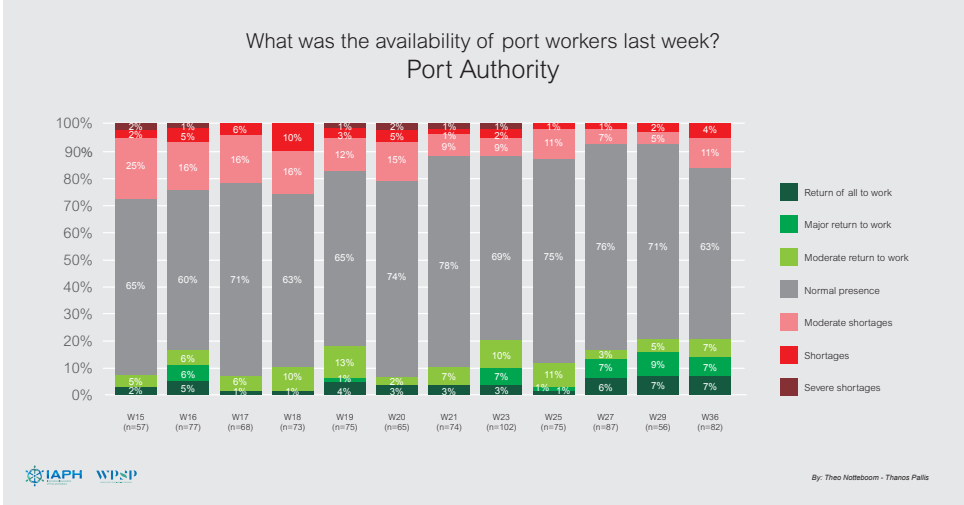
10. Impact on availability of port-related workers

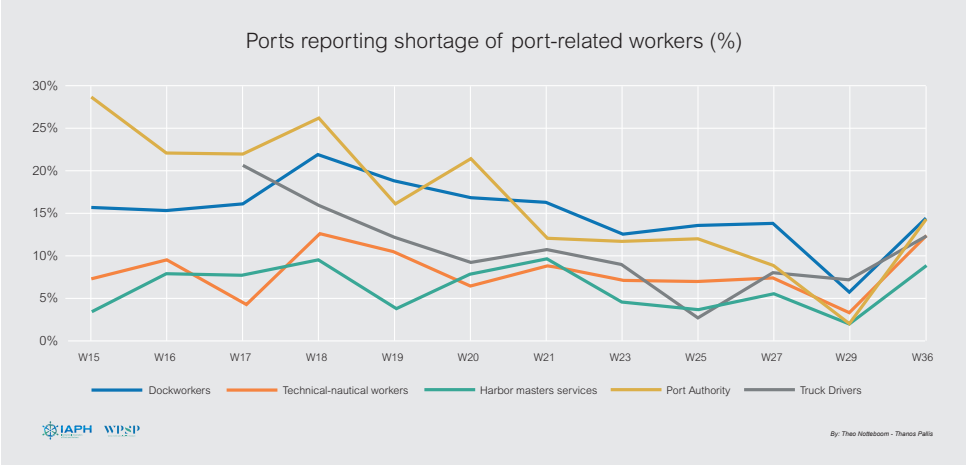
The measures to fight the COVID-19 outbreak did affect the availability of port related workers. However, the level of impact limiting ports' capacity to operate was limited. The shock of the first weeks resulted in some serious difficulties, with shortages of at all levels of personnel and workers reaching their peak in week 18. These initial shortages were due to dockers and administrative personnel remaining at home for the first weeks following the COVID-19 pandemic. At the same time, the impact of any workforce shortages was alleviated by a number of industries linked with ports remaining inoperative, with less goods transported to and/or from ports. Since then shortages have been decreasing, with the most improved situation occurring in week 29. The survey conducted in week 36 reveals that, while ports are confronted with an increase in worker shortages, they remain moderate in the vast majority of those that have been affected.





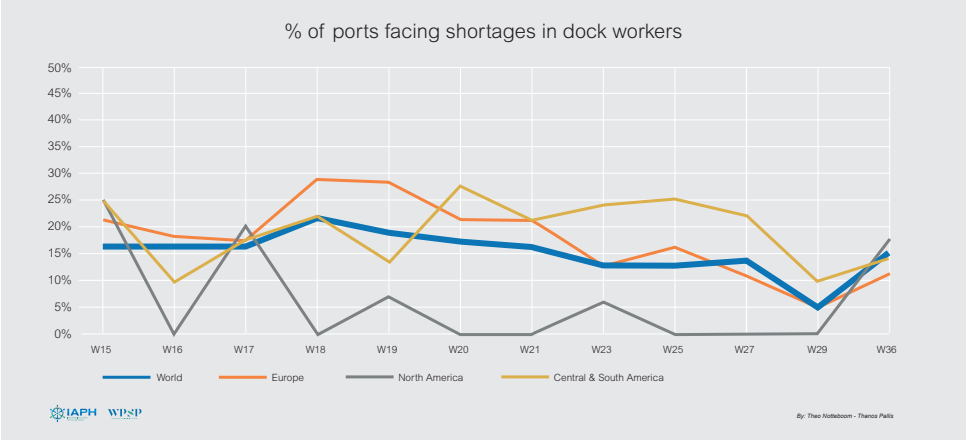






10.1 Dockworkers

In weeks 15 to 23 the ports facing shortages of dockworkers ranged between 13% and 22%, with only 2-5% ports reporting severe shortages. The situation has improved since then. Dockworkers were soon to return to work, although a few of the ports reported that a number of the dockworkers stayed home longer due to lack of work, with the State paying part of their salary. Working on site normally took place with some extra safety arrangements in place and in some ports only dockworkers under sixty years of age were allowed to return to work. Given the lack of cruise calls, some dockworkers serving these operations were among those that stayed at home receiving social security support. In week 29 only 6% of the ports mentioned any shortages of dockworkers, a figure below the 12-13% range in weeks 23 to 27, and significantly lower than the peak of 22% in week 18. The survey results for week 36 however report that moderate shortages of dockworkers have started to emerge again, as 13% of the ports have to address such shortages. Few ports (1%) need to address some serious shortages.

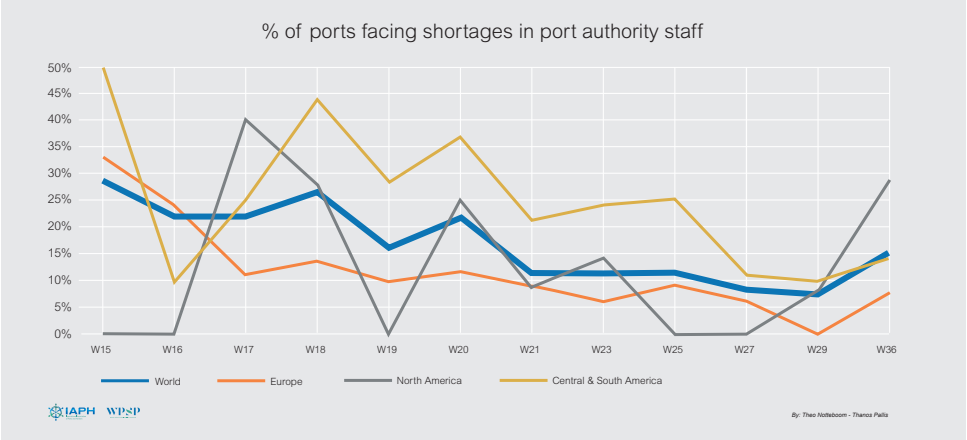


10.2. Technical-nautical staff and harbour master services

That the COVID-19 crisis continues to have a moderate impact on the availability of port related workers is also evident in the case of shortages for the delivery of technical- nautical services (pilots, towage, mooring). In week 36, 10% of the ports were confronted with moderate shortages, and 2% by major ones. These percentages are considerably higher than those observed in week 29 when only 4% of the sample faced shortages for the delivery of technical-nautical services. Problems with harbor master services (including VTS operators) have been lower throughout the pandemic – never exceeding 8%. Notably in week 36 an 8% of the sample ports are short of personnel for harbor master services, a percentage that is only 1% shy to the peak shortage of week 18. Still in all these ports this shortage is minor.

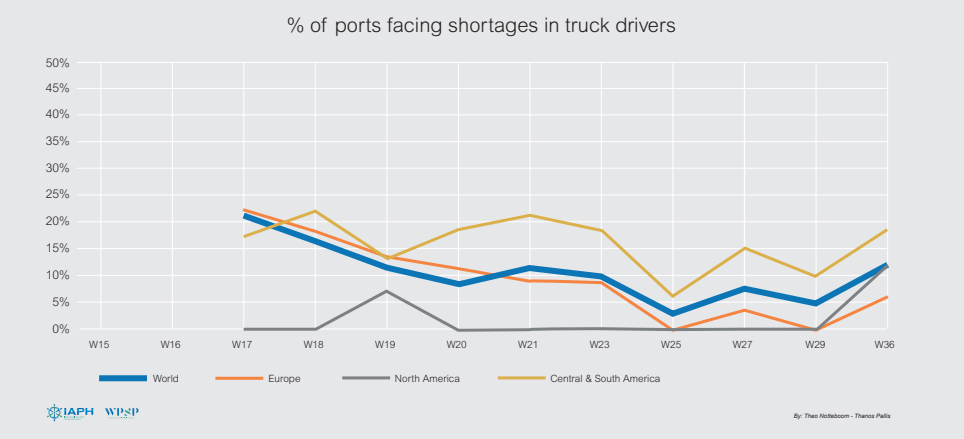
10.3. Port authority staff

The major difficulties were observed in the case of port authority personnel. One third of ports experienced such difficulties following the COVID-19 outbreak, when government-enforced rules and lockdowns imposed staff to work from home with only essential staff working from port. Adjusting to teleworking and social distancing took some weeks. The peak of the problem was week 15 when nearly 30% of ports were experiencing problems. Since week 16 port authorities confronted with personnel shortages ranged between 22% and 26% (week 18). Teleworking expanded, transforming working from home as a regular practice, especially for employees in administrative services. Working in shifts became another adopted practice, in order to avoid a whole section/department being quarantined should one of the staff suffer infection. Operational workers attended work as normal in spite of port workers having to respect safety measures (i.e. longer checks; personal protection equipment etc.) in order to prevent direct contact (e.g. social distancing). As adaptation to the 'new normal' continued, shortages since then were limited to approximately 10% of the ports or less; in week 27 and week 29 that percentage was a single digit one. In week 29 only 1.8% of the port authorities reported a moderate to more serious decline in staff availability, by far the lowest figure to date. The Week 36 survey however indicates that the situation has not improved further. On the contrary, 11% of port authorities face some moderate shortages of personnel and 4% more some more serious problems.



10.4. Truck drivers

Since week 17, the Barometer has monitored the availability of truck drivers. Following an initial period of considerable shortages, i.e. at 21% in lockdown conditions in many economies (week 17), the situation improved. Less than 15% of ports have faced shortages of truck drivers since week 19 (i.e. 12 in week 19, 9% in week 20, 11% in week 21). The availability of truck drivers remained stable at lower levels since week 23, at 7% or lower of the reporting ports. However, in week 36 shortages of truck drivers were on the rise again – 10% of the surveyed ports faced some moderate shortages and 2% some more serious ones.



10.5 Regional comparison

The following three graphs provide regional insights on the availability of three groups of port related workforce: dock workers, port authority personnel, and truck drivers.

North American ports are the ones that have faced comparatively fewer shortages in dockworkers and truck drivers. That the U.S. opted not to apply generalized lockdowns had an impact on these results. Following an initial shock (i.e. 25% of North American ports faces some shortages in week 15), the situation improved rapidly and there were no shortages since week 20. The results of the recent survey for week 36 do differ. Some 17% of North American ports reported some minor shortages. It remains to be seen, however, whether this finding is due to the COVID-19 pandemic or due to other developments (such as strike action by port workers in the region or otherwise). Nonetheless, the former reason has probable significance given that in week 36, 11% of the reporting North American ports (a percentage similar to the world average one) were confronted with minor shortages of truck drivers as well, whereas since week 20 there have been no North American port reporting any shortage of truck drivers.

Week 36 survey also revealed that 28% of North American ports face moderate shortages of port authority personnel. Even though staff at most ports are now back to work at the office on a full-time basis, following the necessary protocols (e.g. frequent hand washing, physical distancing, wearing of masks, avoidance of touching face areas, disinfecting surfaces frequently, installation of plexiglass barriers, etc.), others ports seem to experience some difficulties in the current conditions. Notably, during the early days of the pandemic (week 17), 40% of the ports in North America faced the challenge of operating with a shortage of personnel.

In Europe, the percentage of ports that experienced some shortage of dockworkers during the first weeks of the pandemic (week 15 to week 25) was higher than the world average. From week 15 to week 17, the percentage of European ports experiencing such shortages was almost 20%. The peak was observed during weeks 18 and 19 when in approximately 30% of European ports the number of dockworkers was lower than required. The situation improved, reaching the lowest point in week 29. As the European economies continued to ease restrictions, only 5% of the ports experienced shortage of dockworkers. In Week 36, however, European ports reported a resurgence of these shortages to double-digit percentages: 11% of them faced a shortage of dockworkers. However in the vast majority this shortage is moderate. In terms of truck driver availability: the shortages of the early days (i.e. week 17 (22%), week 19 (14%)) eased to single digit in week 21 (9%) and disappeared since week 23. The results of week 36 suggest that some shortages of truck drivers are back in the case of 11% of the ports.

A similar pattern has been also observed in the case of European port authority staff. An improvement in processes led to the percentage of ports having fewer people available than needed to lower from 33% (week 15) to approximately 10% (week 19 to week 21). Single digit percentages were reported since then, before all problems ceasing in week 29. In week 36, the situation was rather more challenging; 7% of European ports reported the presence of moderate shortages of port authority personnel. Conversely, in some cases this shortage is only ‘nominal’ as a number of personnel are combining the home-office model of work with partial attendance at port offices.

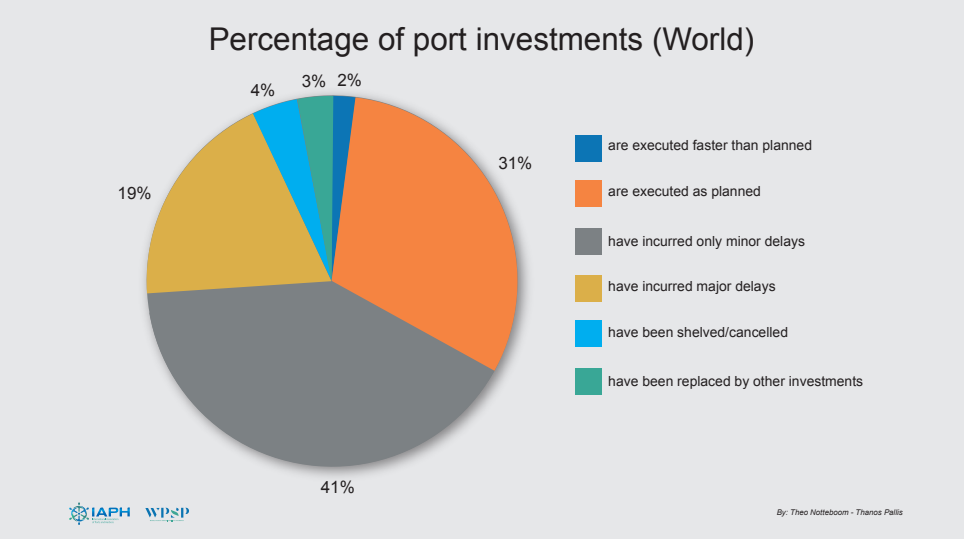
Central and South American ports are the ones that have faced the greatest problem in terms of availability of port related workers. From week 20 to week 27 the percentage of ports in the region facing shortage of dockworkers ranged between 20% and 25% before the situation improved in week 29 (10%). It currently stands at approximately the world average in week 36 (14%). A similar picture is observed in the case of truck drivers. Since the COVID-19 outbreak just short of 20% of ports in Central and Latin America were confronted by a shortage of truck drivers. Since week 25 the situation improved. However week 36 results point towards an increased number of ports in the region (standing at 18% of the total) experiencing a shortage of truck drivers.

Ports in Central and South America appear to have experienced extensive issues with respect to the presence of port authority staff, at least during the initial period of the crisis. In week 17 a shortage of port authorities personnel was observed in 40% of ports in the region. This percentage decreased progressively to approximately 25% during weeks 21 to 25, and to less than 20% during weeks 27 and week 29. In week 36 the conditions remain better than the period that followed the COVID-19 outbreak, with only 14% of the ports in the region facing some (moderate) port authority personnel shortages. Similarly to other regions, working personnel are respecting applicable new protocols and controls.

11. Impact on planned port infrastructure projects

A major crisis, economic or else, might have long-term effects on both the development and operations of world seaports. Plans and investments in upgrading existing infrastructures, or constructing new ones, might be revisited, advanced earlier or later than had been initially scheduled, even cancelled and/or replaced by new ones that emerge as essential with the new situation. These effects are not present during the outbreak of the crisis, when the necessity for ports to remain operational and serve essential trade prevails. However, they might emerge later in time, when the magnitude of the crisis is further realised.

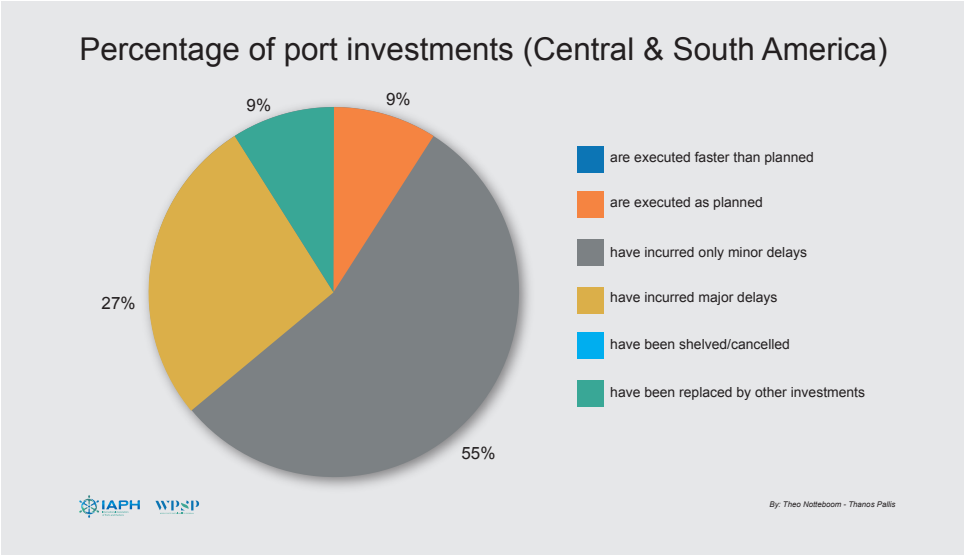
Six months after the day that the World Health Organisation declared COVID-19 a pandemic, in week 36, 69% of the surveyed ports reported that the majority of their investment plans have been delayed in some way or even amended. 41% of the reporting ports informed that the delays in investment have been, at least for the moment, minor. Due to the changing conditions, major investment delays are occurring in 19% of the ports. A few ports (4%) have decided to shelve or cancel existing investment plans, while 3% of respondents have already decided to replace specific investments by other ones. Notably, three of the surveyed ports reported that given the emerging conditions they decided to accelerate their existing investment plans and execute them faster than initially scheduled.



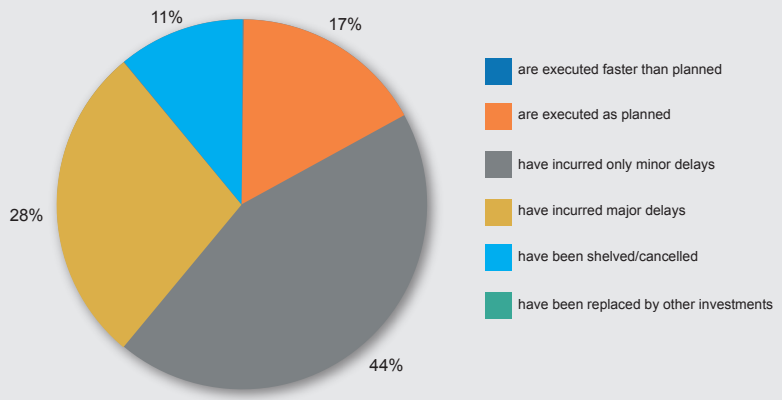
Regional comparisons highlight a rather remarkable variation in implications of COVID-19 pandemic on investment decisions in different regions of the world. While a negative impact of COVID-19 crisis on investment plans (i.e. minor or major delays or cancellation of investments) has been reported by 83% of North American and 82% of South and Central American ports, the 28 participating European ports show a different picture: such impact has occurred for only 39% of them. This variance is notable. However the size of the sample, and the fact that the Barometer results are based on one observation only call for further monitoring the emerging trends on port investments.

For the moment, in spite of lower appetite for investment completion, the observed delays in investments have not at all been detrimental to cargo and vessel traffic movements. In some cases existing delays are happening due to difficulties in obtaining authorization by regional, federal, and/or national administrations. In other cases they are happening due to delays by third party contractors, most likely attributable in part to availability of workers affected by the COVID-19 situation. Some of the existing delays refer mostly to smaller projects (i.e. repairs to cribs on terminals, painting of marine petroleum products pipelines etc.), as major investments (e.g. a new container terminal) have only incurred minor delays and most of them are progressing as planned.

However, in some ports the observed delays seem to be part of longer-term adjustments. Some ports have postponed their projects, to be further assessed once market conditions will allow for a clearer view of the total impact of COVID-19 on social aspects and market demand. Projects already commenced during the pre-COVID-19 period continue as planned, but new investments are on hold; some ports reported that they have already decided to postpone scheduled investments for one year. Plans for investments in infrastructure for the cruise industry are questioned more than others, with several ports being unsure as to when these should come to fruition. In some ports these discussions are on-going, other ports stated that investments in new cruise terminals have been shelved for the time being, with port authorities waiting to know more about the cruise development prospects first before reassessing their potential. All these factors make the case for further monitoring the evolution of the investment plans of ports.

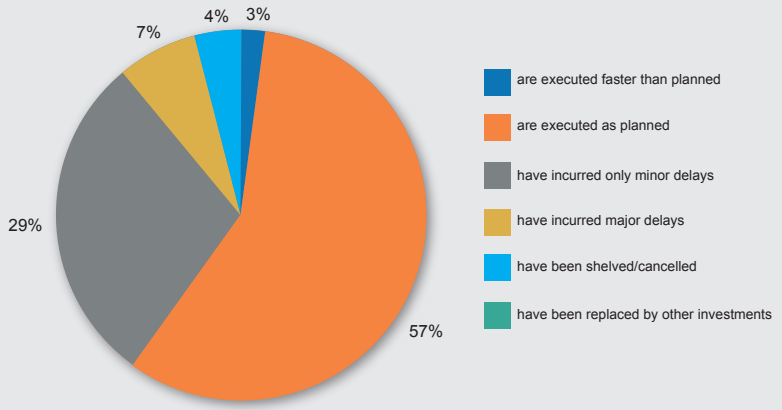


Percentage of port investments (North America)

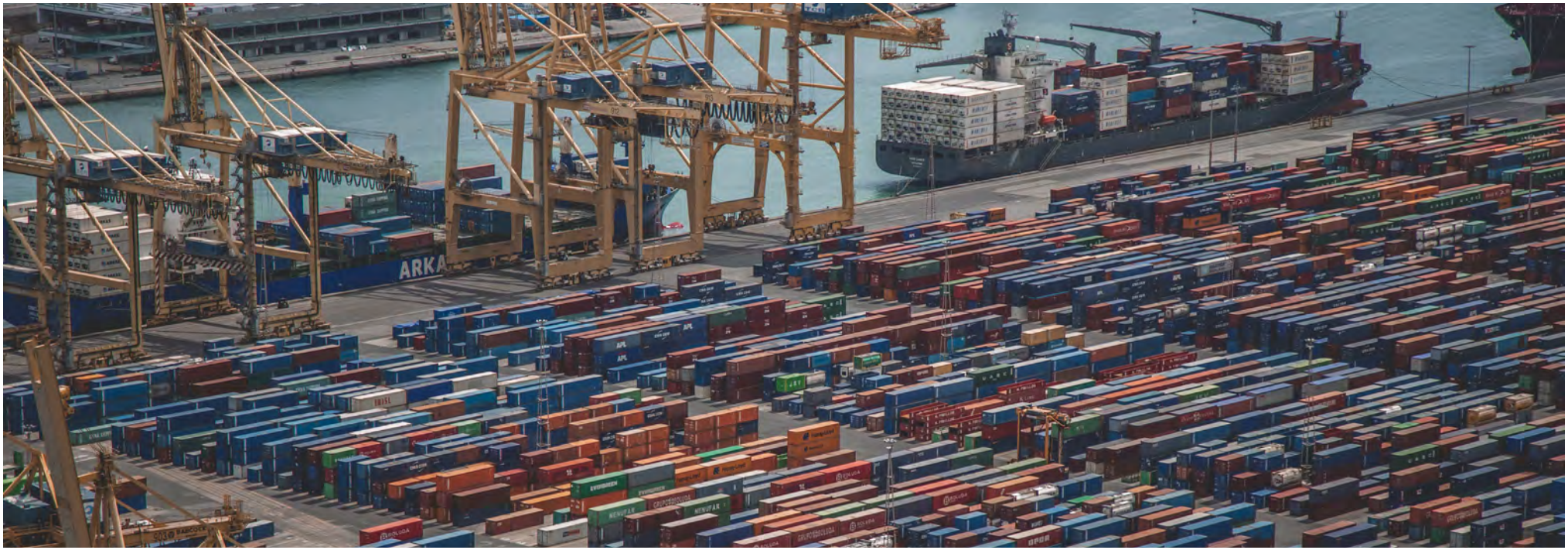


By: Theo Notteboom - Thanos Pallis

Percentage of port investments (Europe)



By: Theo Notteboom - Thanos Pallis



12. Crew changes

For two weeks, i.e. weeks 27 and 29, the Barometer included asking a question on crew changes to the responding ports. On a global scale, almost half of the responding ports indicated that at least one crew change in any type of vessel happened in the port in week 27. This percentage increased to 60% in week 29. European ports show the best picture in terms of the crew change situation. In North America, crew changes were at a low level, with few crew changes taking place in the responding ports from Central and South America. Despite the observed improvements, the figures demonstrated that the crew change situation has been limited in several parts of the world.

The Barometer revealed that the main problem for such operations were due to conditions prevailing beyond the port, despite the efforts and willingness of the port to facilitate them. Even in the case of crew changes allowed by port authorities, health officials and immigration offices, there have been obstacles to such operations. This includes the absence of regular/commercial international flights for completing the operation, the distance of the airport from the port, and the limitations of international crew to travel on domestic flights unless a 14-day isolation period in available accommodation is respected. In some countries, protocols for crew changes were not present even in week 29, 17 weeks since the day that WHO declared COVID-19 a pandemic. In other countries there has been a clear distinction between vessels based on their flag: foreign-flagged vessels have not been allowed to change crews, but nationally registered vessels have been able to change nationals on-board. Since then, several countries and international organizations established new requirements governing crew changes with the aim being to provide a sustainable process whilst ensuring effective protection for local communities during these essential changes.

13 The Way Forward

The COVID-19 pandemic triggered a global health and economic crisis with wide-ranging consequences on world ports. With the regular input of IAPH member ports around the globe, the IAPH-WPSP COVID-19 Economic Impact Barometer surveyed and recorded the way that this crisis affected the number of vessel calls, challenged the provision of hinterland transport facilities and warehousing and distribution activities, led to shortages of port related workers, imposed restrictions on vessels and changes in port call procedures, and altered investment plans.

The Barometer was developed with the aim to inform and assess the pandemic's impacts. With the resurgence of COVID-19 cases in various parts of the world, and given the sustaining interest of ports and the broader maritime community on the impact of COVID-19, the IAPH Task Force on COVID-19 has decided to continue the Barometer exercise on a monthly basis until the end of the year, to be reviewed at that time. In the coming months, the Barometer will continue to monitor short-term impacts on vessel calls, storage and distribution activities, staff availability and hinterland transport. In addition, new survey questions will be considered in view of assessing longer term implications of the COVID-19 pandemic on global ports. The question on port infrastructure investments, which we added in week 36, exemplifies the widening of the survey scope to include also long-term impacts.

The Barometer reports covered a six months monitoring period since the start of the COVID-19 pandemic. They provide relevant inputs to better prepare ports for addressing risks, preparing and planning for disruptive events and building resilience for all types of disruptions, including pandemics but also climate change, security breaches and others. Against the background of a disruptive COVID-19 pandemic, the Barometer highligthed the wide-ranging vulnerabilities and threats. The planning for the many unknowns that can disrupt ports is a complex and multidimensional process that involves making strategic decisions amid a high degree of uncertainty.

The Barometer findings and their analysis underscore the need to adopt a supply chain perspective when aiming to develop port strategies to minimize risks and build resilience to disruption. The impact of COVID-19 was analysed primarily in terms of its impacts on hinterland connections, warehousing and distribution activities, shipping schedules and staff availability. The interdependencies are such that several challenges cannot be resolved by actions addressing a single aspect only. The resilience-building capabilities go well beyond the ship-port interface or within port operations and services and includes landside connections, as well as nautical services. Bottlenecks and buffers disrupting smooth and agile flows might occur at any part of the chain thereby diminishing the capacity of maritime transportation to efficiently serve trade flows.

Accordingly, any global tracking mechanism aiming to monitor trends, mitigate risks, alleviate impacts and build resilience should focus on (a) the maritime side of the port – i.e., the nautical services, the shipping and ship port interface; (b) the in-port conditions - i.e., terminal operations, warehousing, customs etc.; and (c) the landside operations – i.e. hinterland transportation (trucks, rail, barges), logistics and supply chain services, etc.

This approach will address the varied aspects of potential risks as well as consider underlying interdependencies. It will also enable the adoption of adequate response measures at the right time and by the right stakeholders or/and policymakers.

Looking ahead to a way forward, the WPSP-IAPH COVID19 Task Force plans to engage with international partners across the global supply chain spectrum to develop this mechanism with the aim that it serves as an early warning system, generating meaningful intelligence circulated on-time rather than retrospectively.

14. Further information

This report will now be published on the World Ports COVID19 INFORMATION PORTAL under the FAQ section “WHAT IS THE ECONOMIC IMPACT ON THE GLOBAL PORT SECTOR?”

About the International Association of Ports and Harbors

Founded in 1955, the International Association of Ports and Harbors (IAPH) is a non-profit-making global alliance of 170 ports and 140 port-related organisations covering 90 countries. Its member ports handle more than 60 percent of global maritime trade and around 80 percent of world container traffic. IAPH has consultative NGO status with several United Nations agencies. In 2018, IAPH established the World Ports Sustainability Program (WPSP). Guided by the 17 UN Sustainable Development Goals, it aims to unite sustainability efforts of ports worldwide, encouraging international cooperation between all partners involved in the maritime supply chain. WPSP (sustainableworldports.org) covers five main areas of collaboration: energy transition, resilient infrastructure, safety and security, community outreach and governance.

The portal draws on the expertise of WPSP COVID19 Task Force participants, who include specialists from the ports of Açu, Antwerp, Los Angeles, Felixstowe, London, Busan, Guangzhou, Mombasa, and Rotterdam. Additional valuable contributions have come from sixteen other port authorities, several regional port associations, experts from the World Bank, Professors Theo Notteboom and Thanos Pallis as well as Maritime Street, a consultancy specialized in digital trade logistics.

About the authors

Theo Notteboom is Professor in maritime and port economics and management. He is Director of Centre for Eurasian Maritime and Inland Logistics (CEMIL) and Research Professor at China Institute of FTZ Supply Chain of Shanghai Maritime University in China, Chair Professor’ North Sea Port’ at the Maritime Institute of Ghent University, and a part-time Professor at Antwerp Maritime Academy and the Faculty of Business and Economics at the University of Antwerp. He is co-director of Porteconomics.eu and past President of the International Association of Maritime Economists (IAME).
He is member of the WPSP-IAPH Task Force on COVID-19.

Thanos Pallis is Professor in Port Economics & Policy at the University of the Aegean, Greece, and Visiting Professor at School of Management, Universidad de Los Andes Colombia. He is currently active in a UNCTAD project assessing the impact of COVID-19 on the maritime transport systems.
He is co-director of PortEconomics, the Vice-Chair of the Port Performance Research Network (PPRN), and President of the International Association of Maritime Economists (IAME). He is member of the WPSP-IAPH Task Force on COVID-19.

Notteboom T. and Pallis A.A. (2020). IAPH-WPSP Port Economic Impact Barometer: A survey-based analysis of the impact of COVID-19 on world ports in the period April to September 2020, Antwerp.