IAPH-WPSP Port Economic Impact Barometer Authors: Professor Theo Notteboom (Shanghai Maritime University, Ghent University and University of Antwerp) Professor Thanos Pallis (University of the Aegean) 19 February 2021

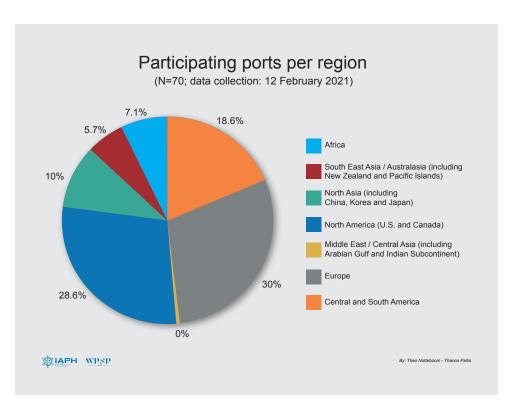


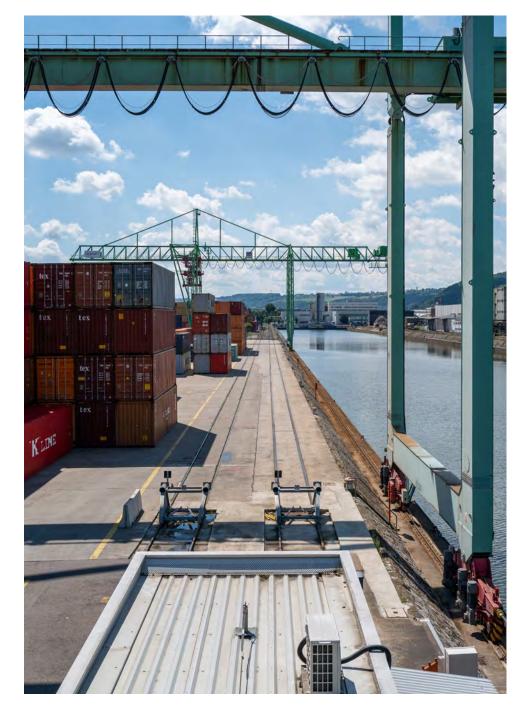


Survey set-up

The IAPH-WPSP survey on the impact of COVID-19 is conducted with the aim of monitoring the current situation in world ports and trends compared to previous weeks. The first survey results were collected in week 15 of 2020 (April 6). The IAPH-WPSP Port Economic Impact Barometer Half Year Report was presented in mid-September, providing a detailed global and regional analysis of the impact of COVID-19 on ports from April to September 2020. Since September, the survey has been sent out on a monthly basis. The report presented here returns to the regular barometer report format and deals with the situation in week 6 of 2021 (February 12, 2021).

A total of 70 valid answers were received, which is a small increase compared to the 65 responses in December 2020. Europe remains the leading region, but its share dropped to 30% of all received answers, the lowest share since the start of the survey in April 2020. The share of North American ports rose to 28.6%, a sharp increase compared to a low 9% in December 2020. With 19% of the answers, Central and South America is the third most represented region. Eleven ports from North Asia, South East Asia, and Australasia are included in this week's results, about the same number as in December 2020. African ports are now reaching five responding ports, while no answers were received from ports of the Middle East or Central Asia.









WPSP-IAPH COVID-19 Dashboard

		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	Week 41 Oct 08	Week 45 Nov 08	Week 50 Dec 07	Week 6 Feb 12, 20
Ports with decline in	Container vessels	41%	41%	53%	39%	45%	43%	53%	45%	48%	40%	40%	28%	35%	36%	34%	24%
	Other cargo vessels	41%	39%	47%	44%	42%	46%	51%	42%	33%	33%	37%	41%	40%	40%	39%	28%
	Passenger vessels	77%	77%	76%	71%	85%	68%	73%	74%	78%	64%	70%	66%	77%	83%	76%	
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%	0%	16%	15%	20%
	Trucks (in/out port)	37%	33%	35%	35%	16%	15%	23%	8%	11%	15%	11%	12%	6%	14%	13%	13%
	Rail services	28%	21%	35%	13%	22%	17%	19%	14%	13%	8%	9%	14%	5%	15%	11%	19%
	Inland barge services	41%	23%	35%	21%	19%	21%	20%	20%	18%	3%	9%	13%	4%	17%	3%	30%
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%	17%	20%	21%	16%
	Consumer products	27%	28%	25%	18%	19%	9%	12%	13%	10%	12%	10%	17%	17%	20%	23%	15%
	Liquid bulk	21%	22%	20%	15%	20%	17%	13%	17%	16%	16%	16%	18%	17%	14%	18%	15%
	Dry bulk	16%	17%	13%	12%	17%	13%	10%	9%	18%	15%	10%	19%	16%	11%	18%	25%
Ports facing shortages in port-related workers (last week, %)	Dock workers	16%	16%	16%	22%	19%	17%	16%	13%	13%	14%	5%	15%	7%	8%	8%	9%
	Technical-nautical services	7%	9%	4%	12%	11%	6%	8%	7%	7%	7%	4%	12%	4%	4%	2%	3%
	Harbor master services	4%	8%	7%	10%	4%	8%	10%	5%	4%	6%	2%	9%	4%	4%	0%	3%
	Port authority	28%	22%	22%	26%	16%	22%	12%	12%	21%	8%	7%	15%	7%	4%	5%	7%
	Truck drivers	no data	no data	21%	16%	12%	9%	11%	10%	3%	7%	5%	13%	7%	10%	11%	6%

Results based on surveys of ports worldwide, fifteen survey weeks to February 12, 2021

This dashboard provides a visual summary of the IAPH-WPSP COVID-19 Port Economic Impact Barometer survey results. The survey initially consisted of six identical questions, sent to port authorities and port operators with responses sent anonymously on a weekly basis. From week 23 until week 29, the survey has been sent out on a bi-weekly basis, and the number of questions has been reduced to four. Since then, the report has been complied on a monthly basis. The most recent surveys contained new questions, such as a question dealing with the status of crew changes in the ports (weeks 27 and 29), a question on port infrastructure investments (week 36), a question on investments in environmental sustainability (week 41), a question on the ports' cargo throughput compared to the same period last year (week 45) and a question on the share of empty containers in total container throughput (week 50 of 2020). This month the additional question deals again with the situation on crew changes in world ports to allow for a comparison with the status in weeks 27 and 29 of 2020).

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 four questions of the survey, subdivided into relevant categories (vessel, modal, cargo, and port worker). The results on the questions dealing with crew changes will be discussed using a separate graph.

You can find comprehensive data and more detailed explanations of responses to the five questions in this report.







1. Impact of crisis on vessel calls

Some 24% of the ports report that the number of container vessel calls fell by more than 5% compared to a normal situation. This figure is much lower than the peak of 53% in week 21 and also below the 40-41% in the first weeks of the survey in early April. In the last three months of 2020, this figure still stood at around 35%. The share of ports facing a significant drop (in excess of 25%) in container vessels calls dropped further to 2%, a figure that is about 10 percentage points below the results of weeks 17, 18, and 20. Some three quarters of ports are reporting that vessel calls are similar or even higher compared to the same period the year before. The evolution continues to evolve in a positive direction given the surge of container volumes on some trade routes (e.g., transpacific) combined with a sharp decrease in idle container vessel capacity since July/ August 2020.

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 was up again to reach 9%. Since September 2020, the figure has been consistently around 4 to 5%. Globally, some 59% of the ports are now reporting that the number of calls by other cargo vessels is rather stable compared to a normal situation, the highest figure so far.

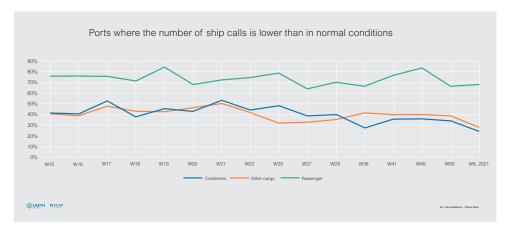
The cruise/passenger market remains the most affected by the COVID-19 contagion. In week 6 of 2021, 57% of respondents indicate that passenger vessel calls are down more than 50%, in many cases even down more than 90%. This is a decline compared to the 69% in November 2020. From week 20 to week 25, this 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. Since late August, 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 near-zero levels.

Containerized cargo and other cargoes are on a par with, if not above, the expected levels for this period of the year. Cargo vessel traffic is now getting back to normal. There has been a recovery in goods related to several industries - such as exporting/importing for the steel industry or the movement of automotive units. Compared to the year before, the percentage of ports reporting a minor decrease in traffic has been low. The cases of ports continuing to face the significant downward trend of their traffic continuing (i.e., at more than 25% compared to pre-COVID-19) are few.

In some parts of the world, the lack of passenger ships arrivals continues; specific ports reported an annual decline approaching 90% of the expected normal. There are still cases where due to the applied restrictions on people movements, the passenger vessels are used mainly for carrying cargo. Many ports report the cruise season as 'canceled for the entire season', with cruise vessels berthing only for lay-up or shipyard.

In the pandemic period, we tend to forget that other events seem to affect ports. For example, in some South American countries, it was reported that port traffic of January 2021 might hold up better than January 2020. Yet, port call levels of early 2020 were

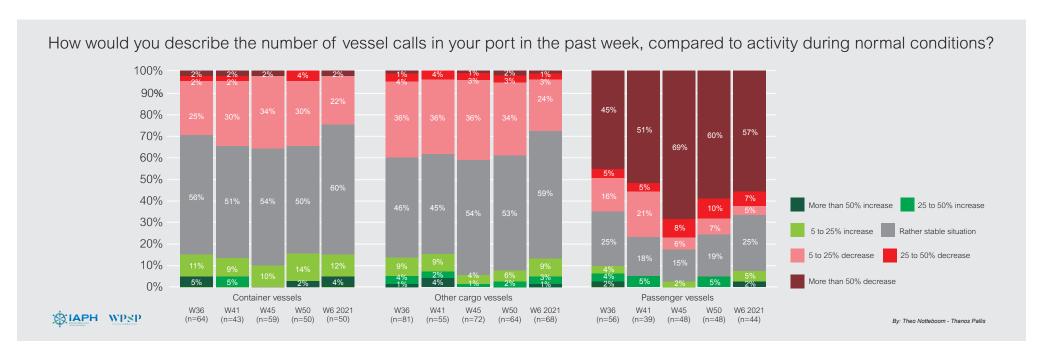
already low, affected by social unrest linked to domestic policy reforms. In this region, the number of port calls in January 2021 appears to return to the pre-crisis levels of 2019.

















2. Impact of crisis on hinterland transport

The situation in hinterland transport slightly deteriorated compared to November and December 2020. November seemed to present a turning point. While in October, none of the ports were reporting delays (6-24 hours) or heavy delays (> 24 hours) in cross-border road transportation, this figure bounced up to 16.3% in November (week 45) and increased further to 20% in February 2021. While this percentage is far below the figures of more than 40% in weeks 15 and 16, it shows that fewer ports are experiencing normal cross-border trucking operations.

The situation for trucks arriving or leaving the port did not change much: the share of ports reporting normal activity went from 86% in November to more than 87% in December 2020 and February 2021. In October, 94% of ports reported normal activity versus 88% in weeks 29 and 36, 78% in week 21, and only 63% in week 15.

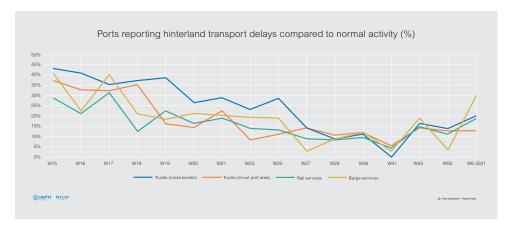
Some 18.6% of ports face disruptions in rail services, up from the record low figure of 4.9% in October (week 41) and 11.1% in December 2020. The situation for barge services has significantly deteriorated, with 30% of ports now reporting delays. In late 2020, the share of ports reporting delays went sharply up from 3.7% in October to 17.1% in November, followed by a drop to 3.4% in week 50, which was the lowest figure since the start of the survey.

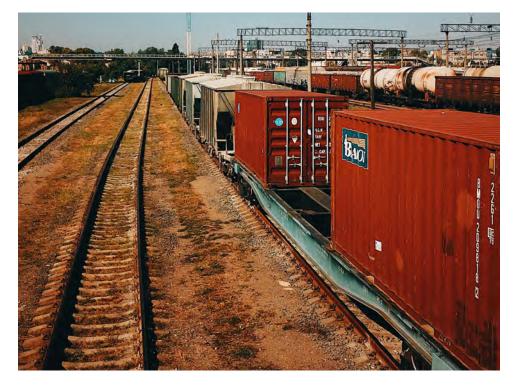
In summary, a limited number of ports have witnessed more disruptions in inland transport operations in recent weeks. In those cases that delays in hinterland transportation have been reported, these delays are an indirect result of COVID19, related to surging cargo volumes. Expressed in percentages, the number of ports experiencing delays in cross-border trucking services, rail services, and barges has increased noticeably, although barge and rail saw a bigger change than trucking. The reopening of markets and a wave of restocking/stockpiling resulted in a surge of containerised flows in recent months, with numerous ports in Europe and North America reporting record traffic volumes on the import side, while many key Asian ports are also seeing a strong recovery of the volumes compared to the first half of the year. This sudden surge in volumes on several big trade routes is testing the capacity limits of ports/terminals and the inland transport systems, leading to disruptions in hinterland transport connectivity in some ports.

For most reporting ports, the situation has not been affected at all compared to normal; the flow of trucks, rails, and barges is 100%. Both times and frequencies in the movement of cargo by truck or rail have been maintained. Compared to the last survey, more ports are concerned with the forthcoming trends and the outcome of measures endorsed to combat the so-called 'second wave' of COVID-19. In particular, they estimate that current further limitations concerning border controls and passenger travel will eventually have a negative impact on the upcoming months or even quarters. A notable concern expressed is that the expected increase of cargo traffic in the forthcoming period might impact logistics bottlenecks, leaving small (or no) space for any additional flow restrictions due to COVID-19.

The survey also revealed that the increase of cargo volumes is not the only parameter generating concerns for ports. In one case, a combination of weather conditions and

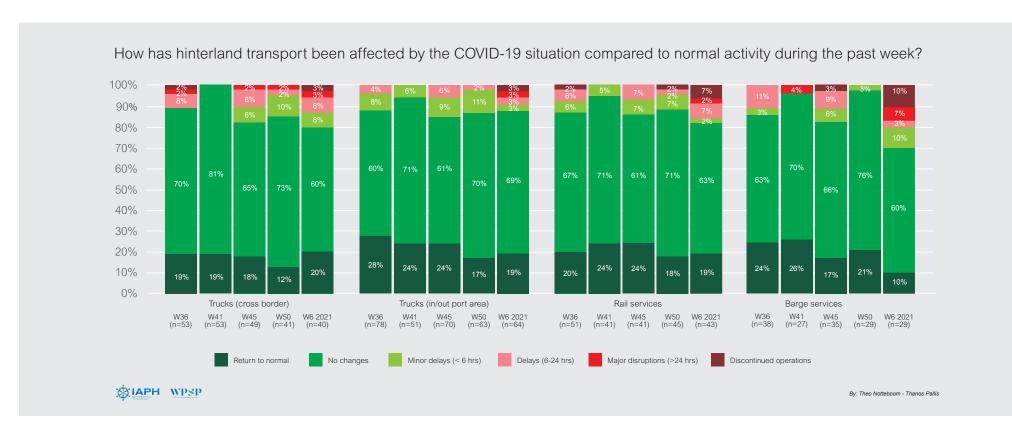
needs to save rail-related snow clearing and maintenance costs impact rail services and landside connections. In another port, the winter ice season stands as a standalone cause to cause restrictions. It is worth noting i that ports unable to report the actual situation felt that it would be worthwhile having the knowledge and tools available to answer inland transport-related questions.

















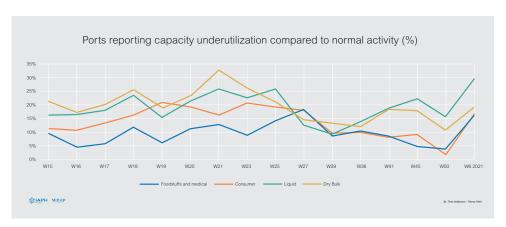
3. Impact on capacity utilization including warehousing and distribution activities

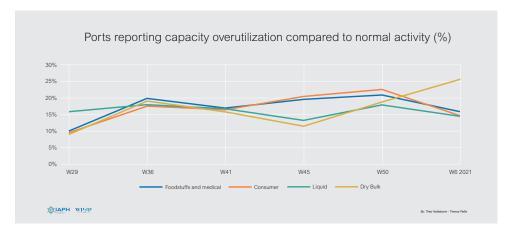
Warehousing and distribution activities in ports have in some cases seen changes due to the fall in demand for consumer products or the closure of factories in countries with partial or full lockdown measures still in place. Utilization levels such as tank storage parks for liquid bulk, and oil products,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

More ports are reporting an underutilisation of warehousing and distribution facilities for foodstuffs and medical supplies, and consumer goods. This figure went up from 3.8% in week 50 of 2020 to 16% in week 6 of 2021 for foodstuffs and medical supplies and from 1.9% to nearly 17% for consumer goods. At the other side of the spectrum, we see a gradual decrease in the share of ports facing an overutilization of storage capacity for foodstuffs and medical supplies: from 21.2% in week 50 to 16% in February of this year for foodstuff and medical supplies, and from 22.6% to 14.8% for consumer goods. These figures seem to suggest that the pressure of the surge in import cargoes on distribution facilities is easing.

Secondly, the utilization degree in the liquid bulk and dry bulk markets is higher than in December 2020, but also more ports are reporting an underutilisation of facilities. In the liquid bulk market, 55% of the respondents have seen no changes in utilization levels. An elevated 30% of ports are reporting underutilization of liquid bulk storage facilities in February 2021, the highest figure since the start of the surveys, and 21 percentage points above the figure of week 29, which was the lowest figure since the beginning of the surveys. Fuel consumption and storage is down due to lower demand.

In the dry bulk sector, 19% of the ports reported an underutilization of facilities in February 2021, which is higher than in December 2020, but in line with the 18% of October and November 2020. The share of ports with increased utilization levels in dry bulk storage increased from 11% in November 2020 to over 25% in February 2021.











What is this week's situation in terms of capacity utilization, including warehousing and distribution activities in your port? 100% Capacity shortages 90% 80% Major increase in utilization 70% Increase in utilization 60% Minor increase in utilization 50% Rather stable 40% Minor under-utilization 30% Under-utilization 20% Severe under-utilization 10% Operations discontinued 0% Foodstuffs and essential medical supplies Consumer goods Liquid bulk Dry bulk W36 W41 W45 W50 W6 2021 (n=66) (n=47) (n=61) (n=52) (n=50) W36 (n=70) W41 W45 (n=48) (n=59) W36 W41 W45 (n=62) (n=58) W36 W41 W45 W50 W6 2021 (n=73) (n=62) (n=55) (n=63) W50 W6 2021 (n=53) (n=54) W50 W6 2021 (n=51) (n=47) MIAPH WPSP By: Theo Notteboom - Thanos Pallis







4. Impact on availability of port-related workers

In the past few months, the COVID-19 crisis has a very limited impact on the availability of port-related workers. Only 8.7% of the ports mention that they face shortages of dockworkers, a figure that is a bit above the record low of 5.4% in week 29 and far below the 12-13% range in weeks 23 to 27. In week 18, 22% of ports still faced dock worker availability issues. Compared to December 2020, this month brought a minimal increase in the ports reporting shortages of only 0.9 percentage points.

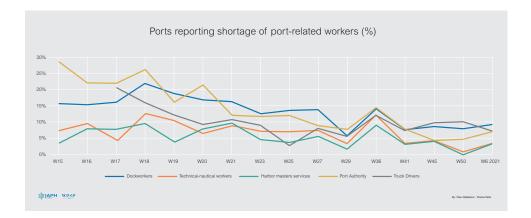
Only 2.9% of the sample face shortages for the delivery of technical-nautical services. The same share of ports indicated they are short of personnel in the harbor master division.

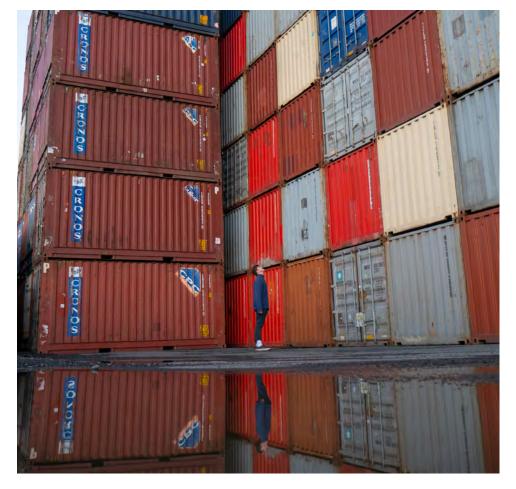
Only 7.2% of the port authorities report a moderate to a more serious decline in staff availability, far below the figures of the first weeks of the barometer (i.e., 26% in week 18, 22% in weeks 16 and 17, and 28% in week 15), but slightly higher than the 4 to 5% in November and December 2020. In several countries, port authority staff remain partly at home, working online. This is not caused by the illness or isolation but due to the formula of organisation endorsed during the pandemic situation (e.g., one person per office room). As a result, more online meetings/webinars instead of physical contacts continue to take place.

The availability of truck drivers sees a remarkable improvement compared to the end of 2020. The share of ports facing truck driver shortages gradually went up from 7.3% in October to 10.9% in December (compared to 21% in week 17) down to 5.8% in February 2021, one of the lowest figures to date. The surge of volumes in quite a few ports does no longer seem to result in further increased truck driver availability problems.

For the vast majority of ports, port staff activity is back to normal. Terminal operations remain completely unaffected, with vessels are arriving, departing, and undergoing loading/discharge operations as usual. Administrative port authority staff are teleworking, with frequancy varying based on conditions in each. On the one hand, in several countries, ports report a moderate return of port authority personnel to physical work. In these ports, all operations and work resumed take into account the necessary health care protocols. On the other hand, there are ports reporting that the increased spread of COVID-19 cases in lockdown has led senior management to recommend port staff to move again to virtual work based from their residences when and where possible. In the latter cases, there are presently reduced numbers of staff reporting daily to the office, and these are only the required personnel for essential port operations.

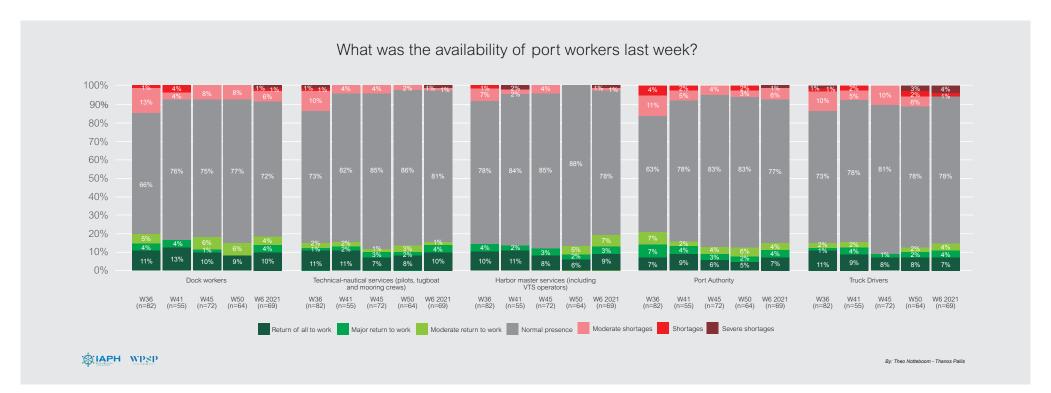
Ports that have experienced many COVID-10 cases in the early days of the pandemic have already taken measures. Despite the increasing number of COVID-19 cases and the associated concerns, ports are confident that they now have endorsed all the recommended measures in their daily procedures that ensure their capability to avoid disruptions due to COVID-19 related personnel shortages.

















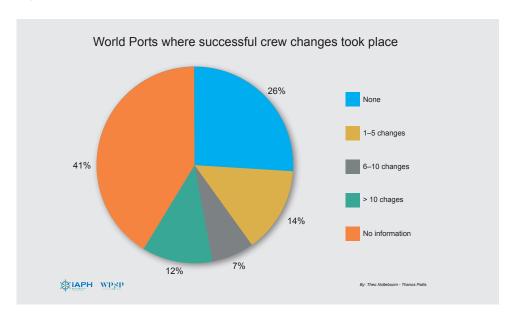
5. Crew changes

This month's IAPH-WPSP survey on the impact of COVID-19 includes a question on the situation in terms of crew changes in the responding ports. The same question was also asked in weeks 27 and 29 of 2020. The figure below shows the results for the world and specific regions. On a global scale, 44% of ports that provided information on crew changes reported no crew changes had taken place in week 6 of 2021, down from 55% in week 27. In a quarter of ports, a very limited number of crew changes have occurred (less than 5) compared to one third in week 27.

When comparing regions, European ports continue to show the best picture in terms of the crew change situation. In North America, crew changes remain at a low level, with 50% of ports indicating there have not been any crew changes in week 6 of 2021. This figure is comparable to the 57% in week 27. Overall, the crew change situation remains more precarious in the Americas compared to Europe.

Crew changes have happened in several of the reporting ports. In some countries, the type of vessel flag continues to be crucial with respect the procedures for the crew change. Nonetheless, as reported, whenever crew changes take place, they are successful in all respects. Domestically-registered vessels continue to perform crew changes, but foreign crew changes have occurred with no concern or delay.

Several responding ports replied that crew changes are possible, but there have not been any vessel calls for crew changes. The feedback to the survey also reemphasized that ports have no say in neither decisions related to crew changes nor in terms of overlooking the implementation process, as these changes depend on other authorities and procedures beyond the port.



6. 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?"

For a detailed analysis of the survey results obtained in week 15 to week 36, we refer to the IAPH-WPSP Port Economic Impact Barometer Half Year Report which is also available on the World Ports COVID19 INFORMATION PORTAL

For further information email: covid19@sustainableworldports.org

