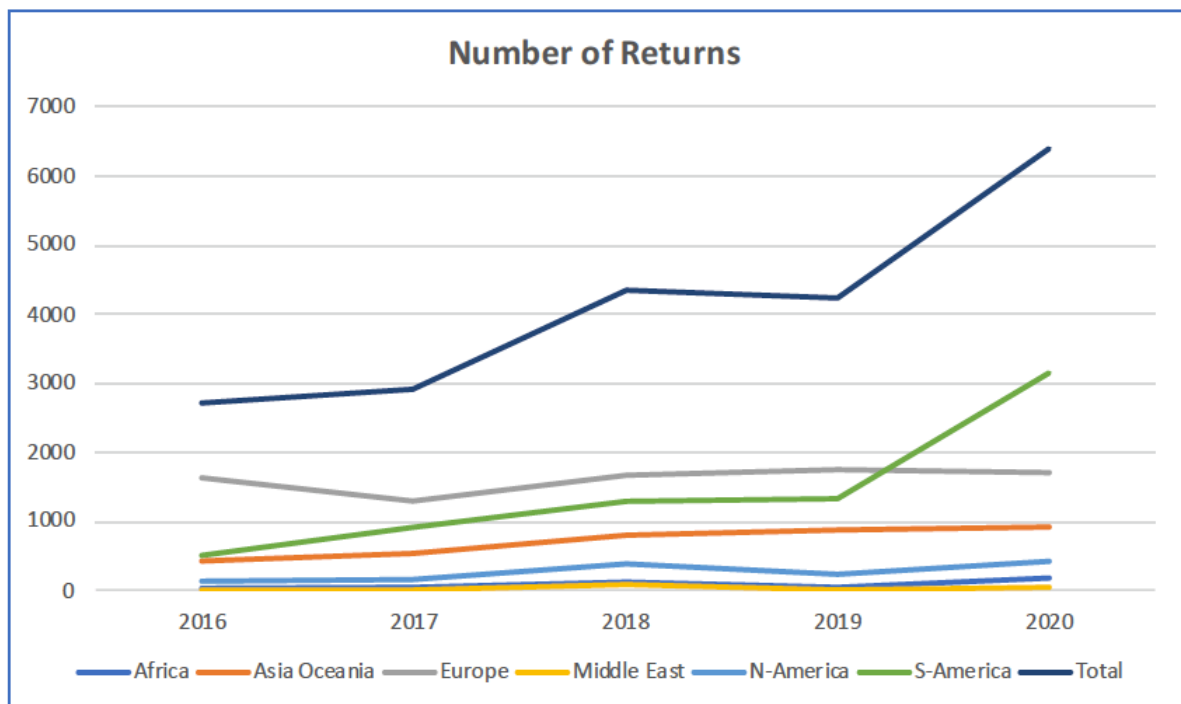


## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

The following analysis has been made using data from the IMPA Safety Campaign on pilot ladders from 2016 until 2020. The data has been retrieved from the IMPA site and is published with permission from IMPA.

### 1. Number of returned observations

Number of Returns					
Region	2016	2017	2018	2019	2020
Africa	25	55	100	43	173
Asia Oceania	420	515	810	886	912
Europe	1636	1288	1679	1743	1718
Middle East	0	0	79	4	31
N-America	127	160	371	209	415
S-America	501	901	1300	1340	3145
<b>Total</b>	<b>2709</b>	<b>2919</b>	<b>4339</b>	<b>4225</b>	<b>6394</b>

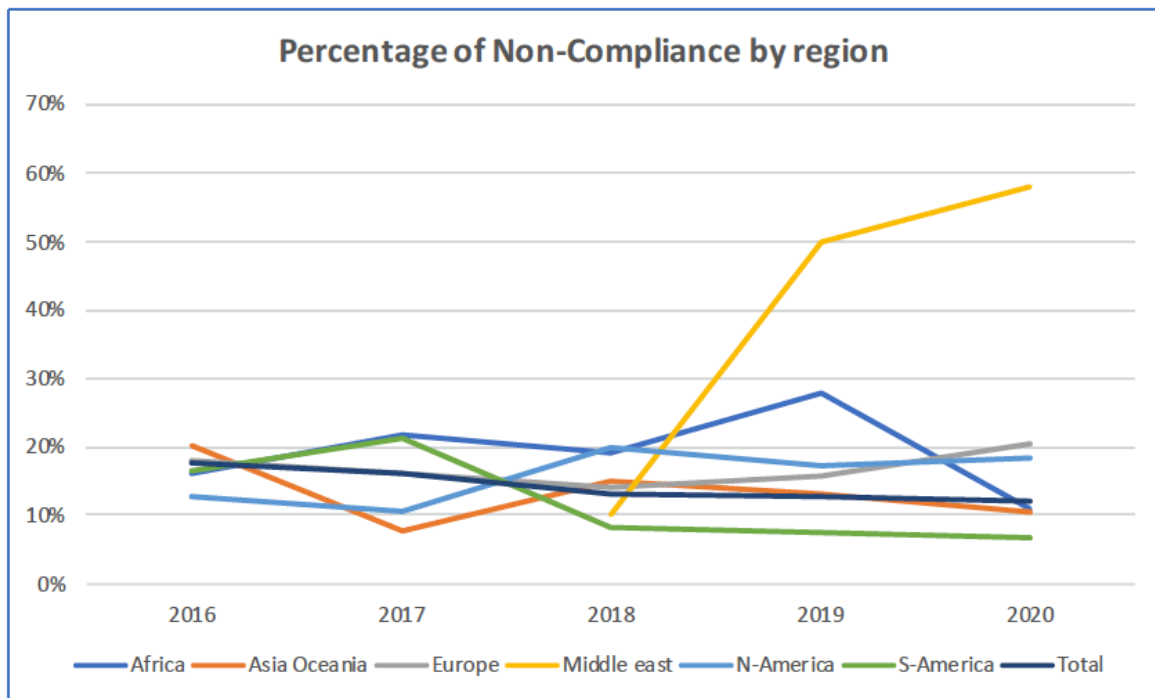


- The 2020 campaign had a record number of observations (6394) which is 236% compared to the number of observations of 2016.
- The increase of observations in 2020 compared to 2019 has mainly been caused by the number of observations from the South American pilots who are now the “leading” contributors to the IMPA safety campaign.

## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

### 2. Non-compliance by region

Percentage of Non-Compliance by region					
Region	2016	2017	2018	2019	2020
Africa	16%	22%	19%	28%	11%
Asia Oceania	20%	8%	15%	13%	10%
Europe	18%	16%	14%	16%	20%
Middle east			10%	50%	58%
N-America	13%	11%	20%	17%	19%
S-America	17%	21%	8%	7%	7%
Total	18%	16%	13%	13%	12%

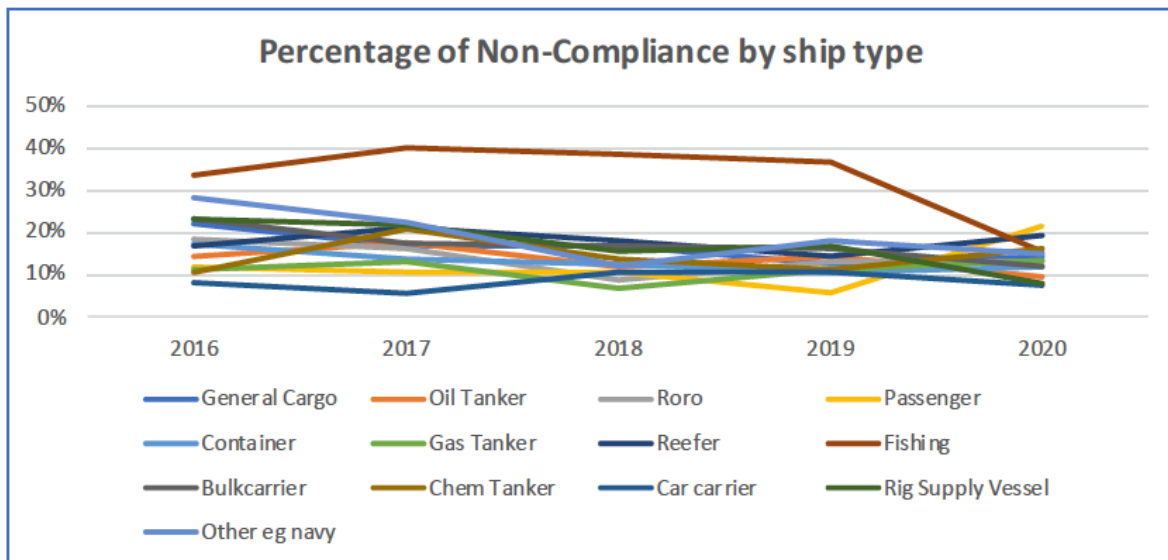


- The percentage of non-compliant ladders in the Middle East and Africa are fluctuating the most in the last two years. The fluctuation in these figures could be influenced by the limited number of observations.
- Given the fact that South America has the highest number of observations, it is noteworthy that the percentage of non-compliant ladders in South America is the lowest of all regions in 2020.
- The good news is that the total percentage of non-compliant ladders has decreased from 18% in 2016 to 12% in 2020, in a clear downward trend.

## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

### 3. Percentage of non-compliant ladders by ship type

Percentage of Non-Compliance by ship type					
Ship Type	2016	2017	2018	2019	2020
General Cargo	22%	17%	16%	12%	14%
Oil Tanker	14%	17%	12%	14%	9%
Roro	18%	16%	9%	13%	13%
Passenger	12%	11%	11%	6%	21%
Container	17%	14%	12%	10%	12%
Gas Tanker	11%	13%	7%	11%	13%
Reefer	17%	21%	18%	14%	19%
Fishing	33%	40%	38%	37%	15%
Bulkcarrier	23%	17%	17%	16%	12%
Chem Tanker	10%	21%	13%	11%	16%
Car carrier	8%	5%	10%	11%	7%
Rig Supply Vessel	23%	22%	16%	17%	8%
Other eg navy	28%	22%	12%	18%	15%

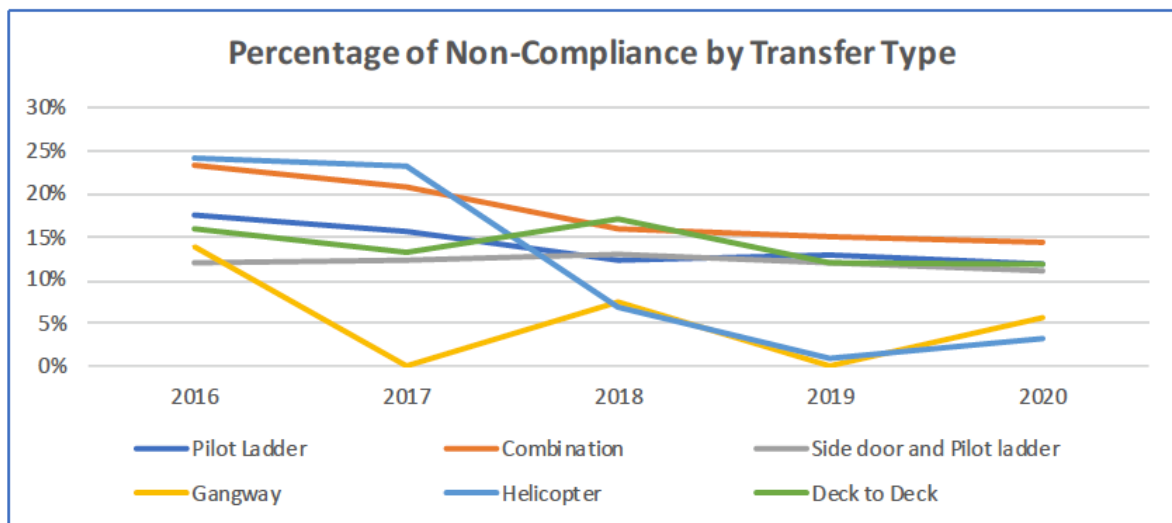


- From the above data, it is clear that the percentage of non-compliant ladders has decreased the most amongst fishing vessels, a decrease from 33% to 15%.
- The overall spread between categories of ships with non-compliant ladders has narrowed from 25% in 2016 to 14% in 2020.
- The category with the highest percentage of non-compliant ladders in 2020 is "passenger ships". (21%)

## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

### 4. Percentage of non-compliance by transfer type

Percentage of Non-Compliance by Transfer Type					
Transfer type	2016	2017	2018	2019	2020
Pilot Ladder	18%	16%	12%	13%	12%
Combination	23%	21%	16%	15%	14%
Side door and Pilot ladder	12%	12%	13%	12%	11%
Gangway	14%	0%	7%	0%	6%
Helicopter	24%	23%	7%	1%	3%
Deck to Deck	16%	13%	17%	12%	12%



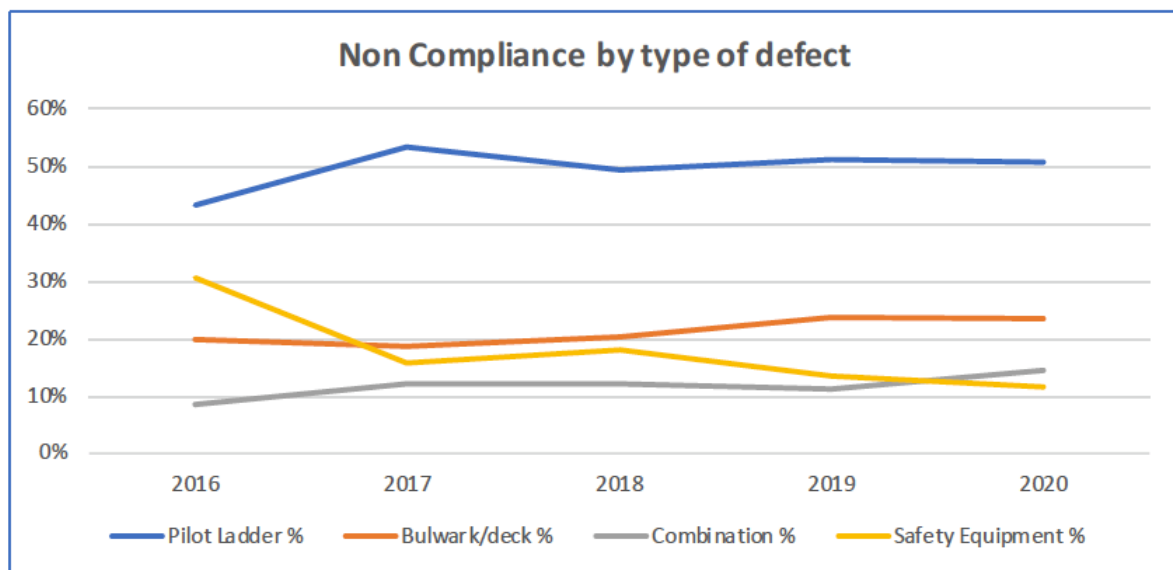
- As is the case with the total percentage of non-compliant ladders, a downward trend of non-compliant ladders can be observed in all transfer types.
- The Combination Ladder as a transfer type still has the highest percentage of observations on non-compliant ladders.
- Side doors, Pilot ladders and Deck-to-Deck systems remain fairly steady over the last few years, when it comes to the percentage of non-compliant observations.

## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

### 5. Percentage of non-compliance by type of defect

The following figures show the non-compliant observations by type of defect, as a percentage of the total number of non-compliant observations.

Non Compliance by type of defect					
Type of Defect	2016	2017	2018	2019	2020
Pilot Ladder %	43%	53%	49%	51%	51%
Bulwark/deck %	20%	19%	20%	24%	23%
Combination %	9%	12%	12%	11%	14%
Safety Equipment %	31%	16%	18%	14%	12%
<b>Total</b>	<b>102%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

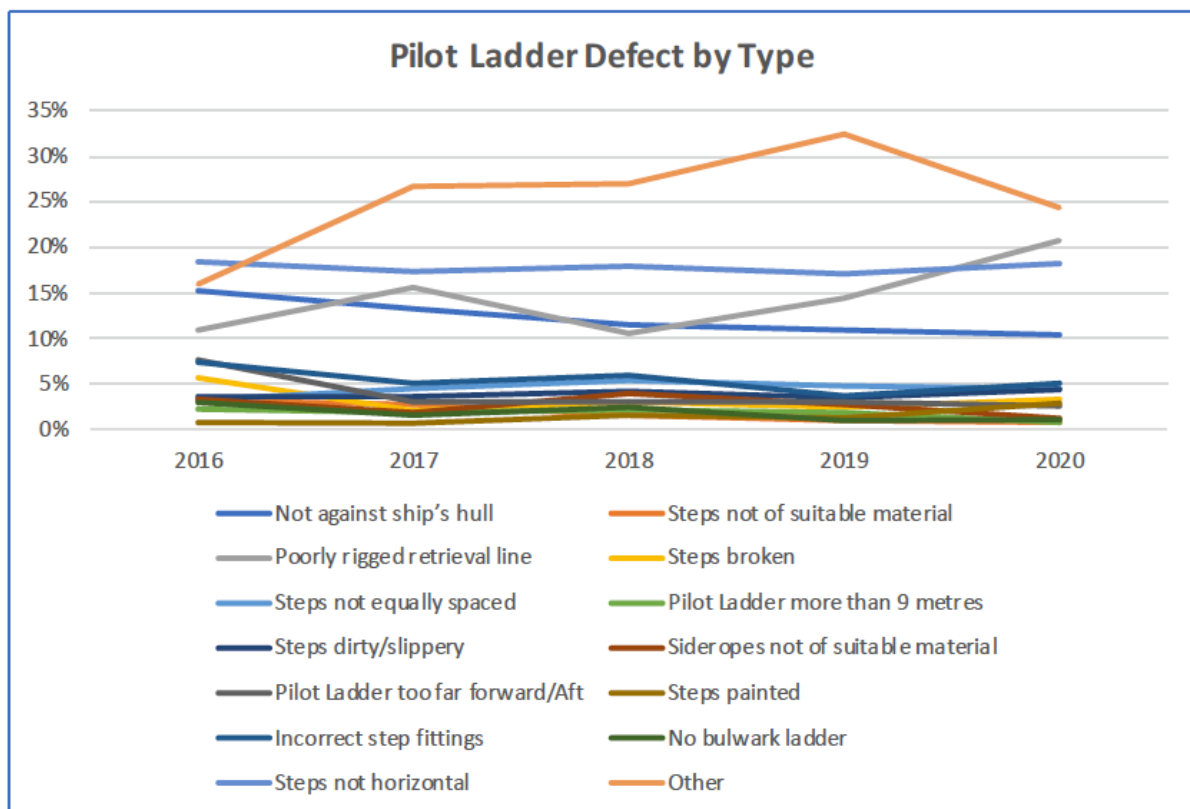


- When looking at the total number of observations, more than half (51%) of them is found in the the category “pilot ladder”, which remains almost constant over the last years.
- The percentage non-compliant observations pertaining to “Safety Equipment” has decreased from 31% in 2016 to 12% in 2020.

## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

### 5a. Pilot ladder defect by type

Pilot Ladder Defect by Type					
Type of Defect	2016	2017	2018	2019	2020
Not against ship's hull	15%	13%	12%	11%	10%
Steps not of suitable material	3%	3%	2%	1%	1%
Poorly rigged retrieval line	11%	16%	11%	14%	21%
Steps broken	6%	2%	3%	2%	3%
Steps not equally spaced	3%	5%	5%	5%	4%
Pilot Ladder more than 9 metres	2%	2%	2%	2%	1%
Steps dirty/slippy	4%	4%	4%	3%	4%
Sideropes not of suitable material	3%	2%	4%	3%	1%
Pilot Ladder too far forward/Aft	8%	3%	3%	3%	3%
Steps painted	1%	1%	2%	1%	3%
Incorrect step fittings	7%	5%	6%	4%	5%
No bulwark ladder	3%	2%	2%	1%	1%
Steps not horizontal	18%	17%	18%	17%	18%
Other	16%	27%	27%	32%	24%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

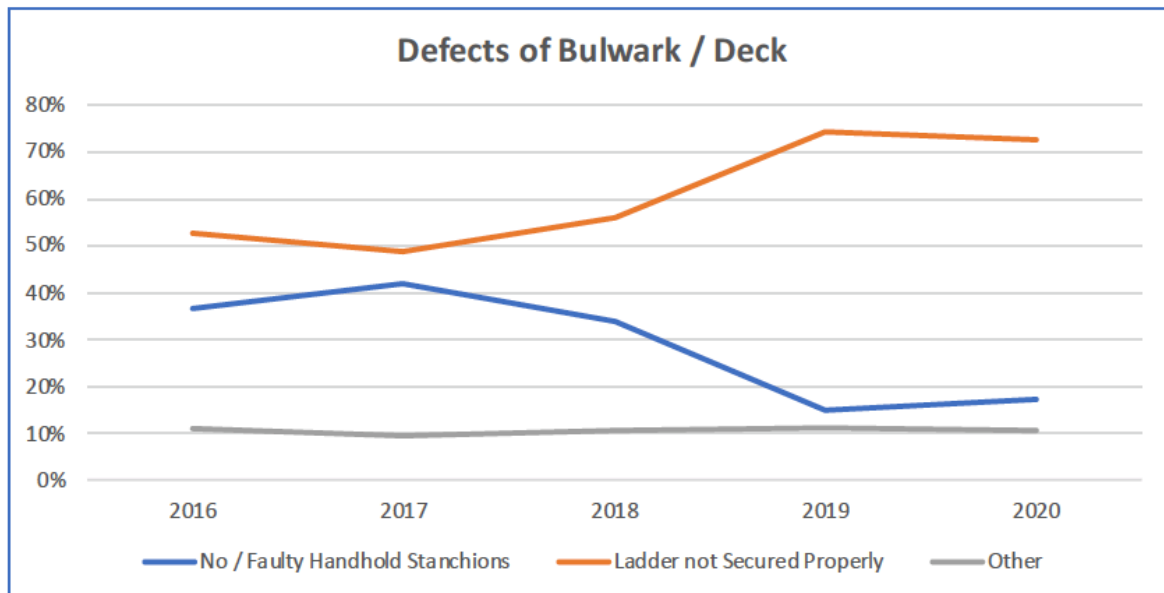


- When looking at the non-compliant observations of pilot ladders only, the percentage of poorly rigged retrieval lines shows the biggest upward trend. This may be caused by the increased knowledge among the profession regarding this item.

## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

### 5b. Defects of bulwark / deck

Defects of Bulwark / Deck					
Type of Defect	2016	2017	2018	2019	2020
No / Faulty Handhold Stanchions	37%	42%	34%	15%	17%
Ladder not Secured Properly	53%	49%	56%	74%	72%
Other	11%	9%	10%	11%	10%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



- When looking at the arrangement of pilot ladders on bulwark or deck, it is very clear that in 72% of the observed non compliances, pilots consider them “not properly secured”
- The sharp upward trend of this figure may be caused by the increased awareness of colleagues in this area.

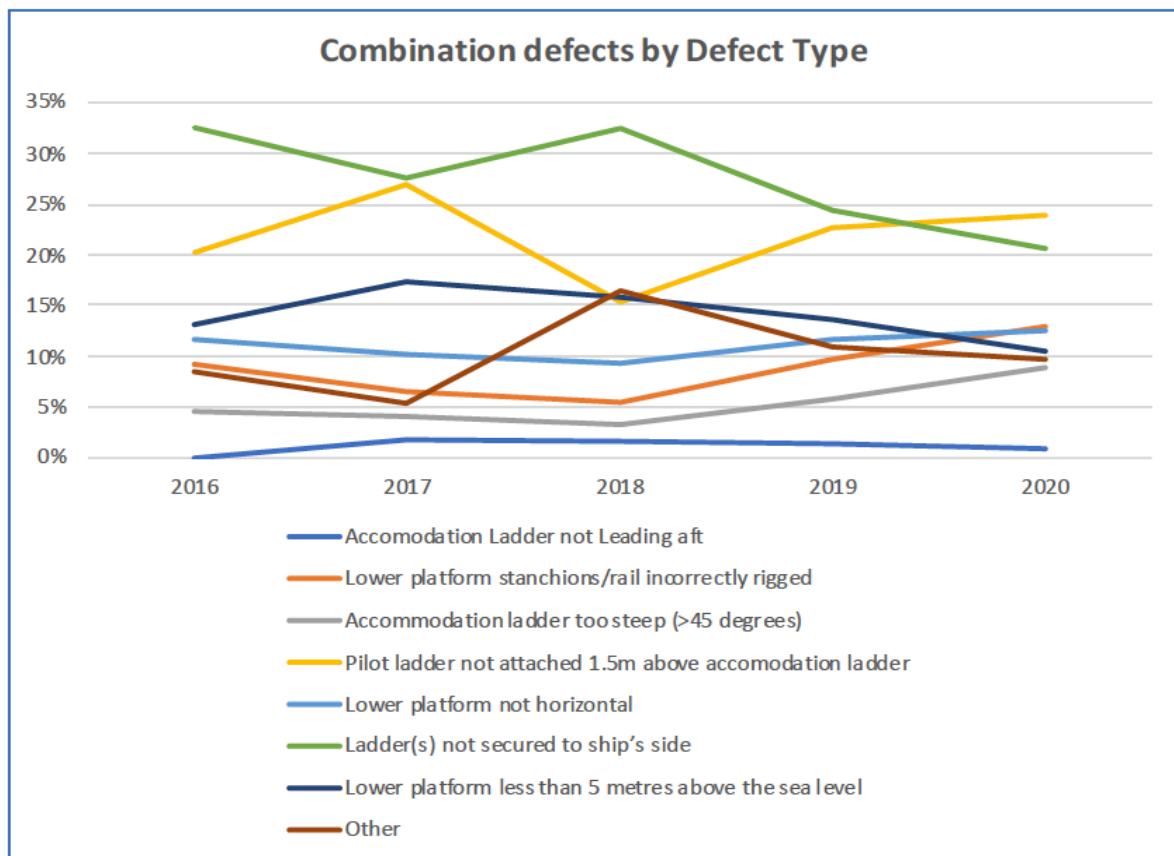
Pilot Ladder not Properly Secured					
Type of Defect	2016	2017	2018	2019	2020
Total observations	2709	2919	4339	4225	6394
Number of observations "pilot ladder not properly secured"	72	57	87	130	183
Percentage of NC observations	2,7%	2,0%	2,0%	3,1%	2,9%

- When we consider the number of observations of not properly secured pilot ladders, it is 2,9% of all observations. The absolute number is rising over the last 5 years, however the percentage compared to the total number of observations remains steady at around 3%.

## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

### 5c. Combination defects by defect type

Combination defects by Defect Type					
Type of Defect	2016	2017	2018	2019	2020
Accomodation Ladder not Leading aft	0%	2%	2%	1%	1%
Lower platform stanchions/rail incorrectly rigged	9%	7%	5%	10%	13%
Accommodation ladder too steep (>45 degrees)	5%	4%	3%	6%	9%
Pilot ladder not attached 1.5m above accomodation ladder	20%	27%	15%	23%	24%
Lower platform not horizontal	12%	10%	9%	12%	13%
Ladder(s) not secured to ship's side	33%	28%	32%	25%	21%
Lower platform less than 5 metres above the sea level	13%	17%	16%	14%	11%
Other	9%	5%	16%	11%	10%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



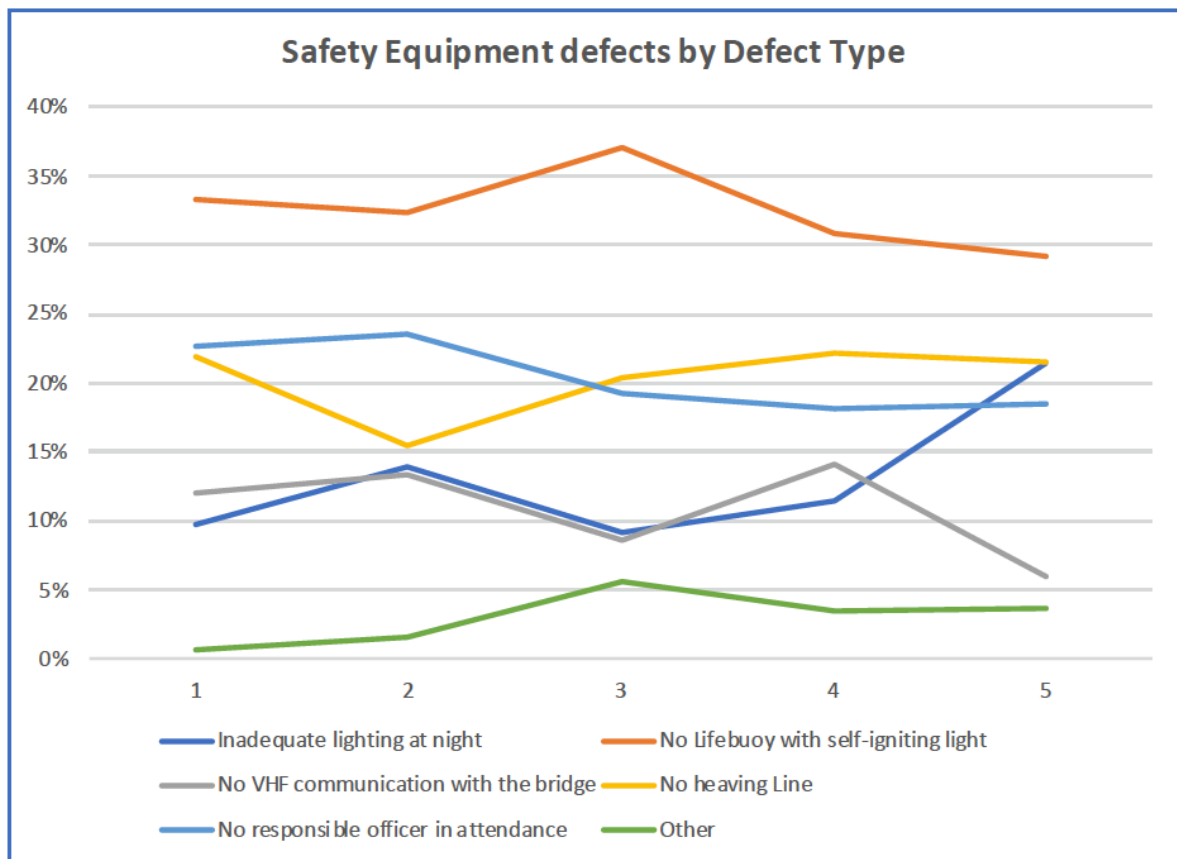
- When looking at non-compliances amongst combination ladders only, the main problems are 1) pilot ladders which are not secured at 1,5 m above the platform (24%) and 2) accommodation ladders which are unsecured to the ship's side (21%).



## IMPA SAFETY CAMPAIGN COMPARISON 2016-2020

### 6. Safety equipment defects by defect type

Safety Equipment defects by Defect Type					
Type of Defect	2016	2017	2018	2019	2020
Inadequate lighting at night	10%	14%	9%	11%	21%
No Lifebuoy with self-igniting light	33%	32%	37%	31%	29%
No VHF communication with the bridge	12%	13%	9%	14%	6%
No heaving Line	22%	15%	20%	22%	21%
No responsible officer in attendance	23%	24%	19%	18%	18%
Other	1%	1%	6%	3%	4%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>



- When looking at the problems with safety equipment, an increasing percentage of non-compliant observations is found with inadequate lighting at night.
- As mentioned earlier, the overall percentage of non-compliances with regards to safety equipment has decreased sharply over the last 5 years.

December 2020,

Herman Broers