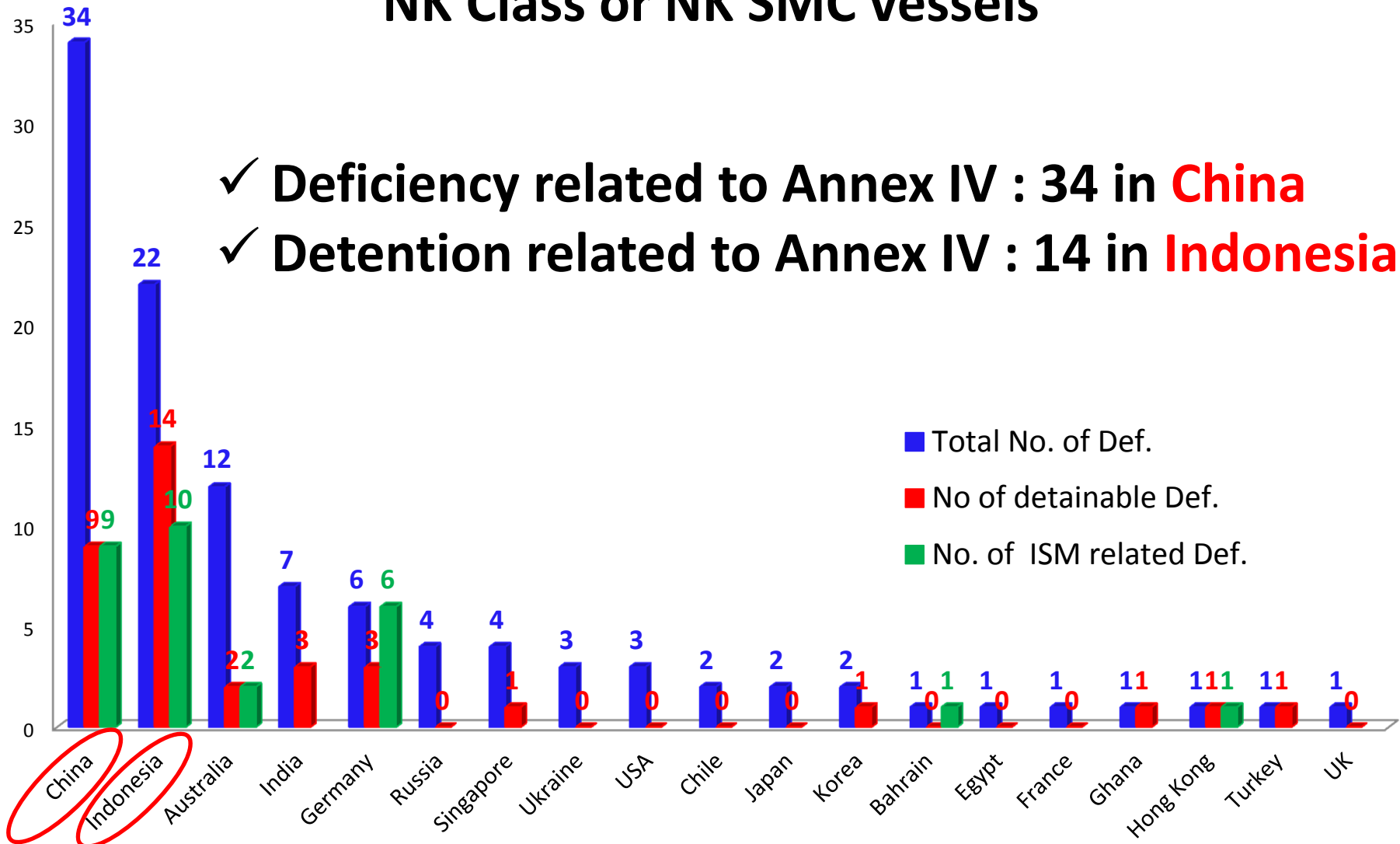


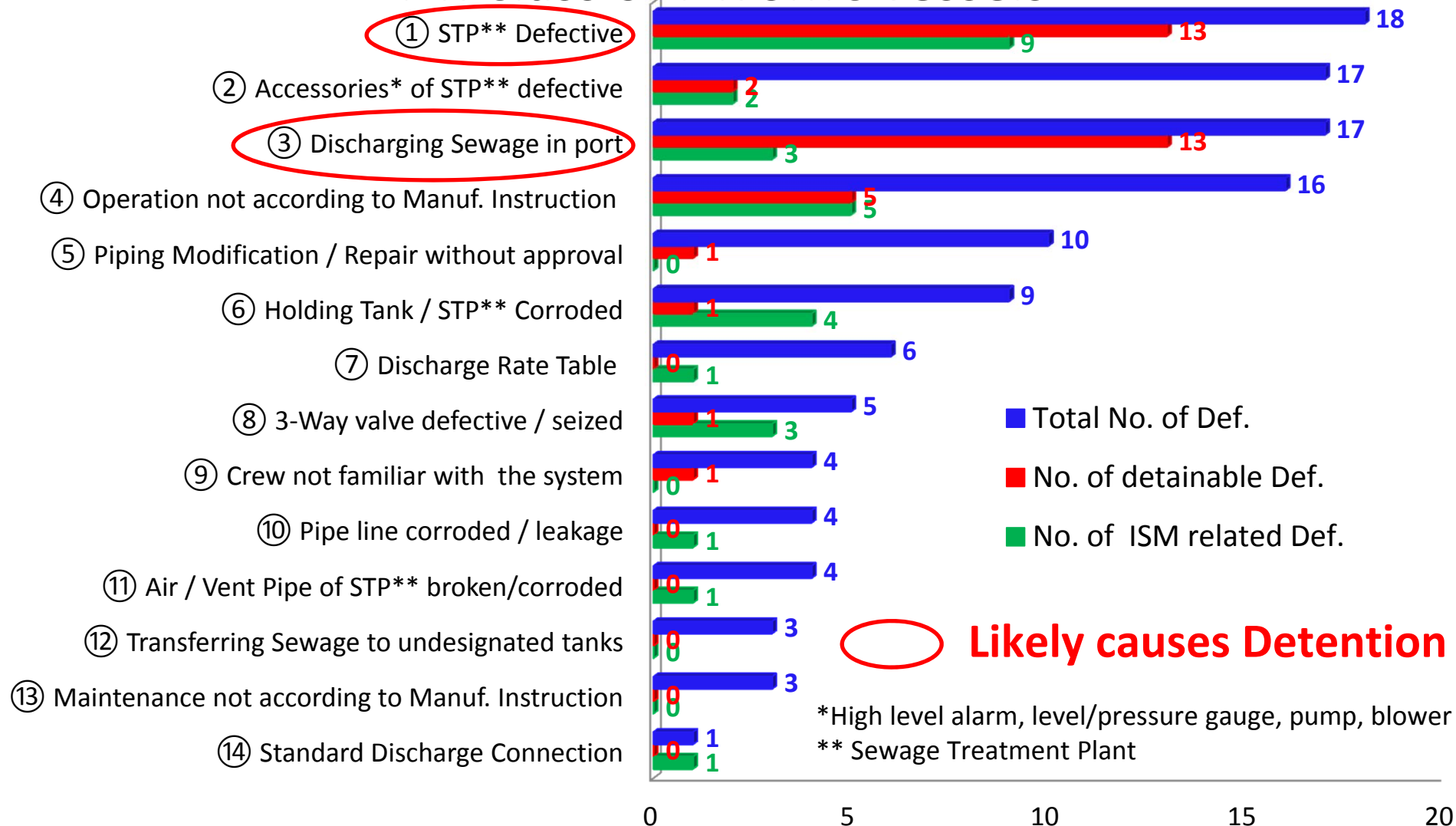
No. of PSC Deficiency relating to MARPOL Annex IV **ClassNK**

Statistics in 2017 based on data NK could obtained
NK Class or NK SMC vessels



Statistics in 2017 based on data NK could obtained

NK Class or NK SMC vessels



Deficiency items relating to Annex IV per Country

Table 1: Number of deficiency relating to MARPOL Annex IV per Country

Deficiency Item	Total No. of Def	China	Indonesia	Australia	India	Germany	Russia	Singapore	Ukraine	USA	other
① STP** Defective	18(13)	4(2)	7(7)	1(1)		3(2)		1			1(1) Ghana, 1 Bahrain
② Accessories* of STP** defective	17(2)	8			5(1)			2(1)			1 Korea, 1 France
③ Discharging Sewage in port	17(13)	6(4)	6(6)	1	1(1)			1			1(1) Hong Kong, 1 Turkey
④ Operation not according to Manuf. Instruction	16(5)	7(3)		4	1(1)	3(1)					1 UK
⑤ Piping Modification / Repair without approval	10(1)		1	2	1		1	1		3	1(1) Korea
⑥ Holding Tank / STP** Corroded	9(1)	4		1		2(1)	2				
⑦ Discharge Rate Table	6	1	1				1				2 Chile, 1 Egypt
⑧ 3-Way valve defective / seized	5(1)	1		4(1)							
⑨ Crew not familiar with the system	4(1)	1	2(1)								1 Japan
⑩ Pipe line corroded / leakage	4		1	1			1				1 Japan
⑪ Air / Vent Pipe of STP** broken/corroded	4	1	1				1				1 Japan
⑫ Transferring Sewage to undesignated tanks	3								3		
⑬ Maintenance not according to Manuf. Instruction	3		3								
⑭ Standard Discharge Connection	1	1									

(X): No. of Detainable Def.
 *High level alarm, level/pressure gauge, pump, blower
 ** Sewage Treatment Plant

- Periodical survey for ANNEX IV by RO is 5 yearly
- Discharging Untreated Sewage in port is prohibited for any reason (except for Reg.3 of ANNEX IV)



- **Maintenance & proper operation by crew
and**
- **Company's supervision
are **VERY IMPORTANT****

1-1. Sewage Treatment Plant (STP)

- STP is in good order
- Foundation / plate of STP is **NOT corroded**
- Relating Pipe line is **NOT corroded**
- NO leakage** from STP / related piping / valves
- High level alarm works properly
- Level Gauge / Sight Glass is in good order
- Pressure Gauge is in good order
- Blower / pump is in good order
- NO temporarily repair**
- NO pipeline modification without approval**

1-2. Operation (for the vessel with STP)

- Crews are familiar with the STP operation
- Crews are familiar with 3-way valve operation
- Maintenance / Operation is done according to Manufacturer's Instruction
 - ✓ blower operation when the vessel not in port
 - ✓ preparation before entering the port
 - ✓ cleaning out residual sewage periodically
 - ✓ appropriate / adequate disinfectant
- No discrepancy between Log-book entry & actual voyage

2-1. Sewage Holding Tank

- Sewage Holding Tank is **NOT corroded**
- Relating Pipe line is **NOT corroded**
- NO leakage** from Sewage Holding Tank / related piping / valve
- NO temporally repair**
- NO pipeline modification** without approval
- Level Gauge /Sight Glass is in good order
- Approved Discharge Rate table is available onboard

2-2. Operation

(for the vessel with Sewage Holding Tank)

- Crews are familiar with 3-way valve operation
- No discrepancy between Log-book entry & actual voyage
- No transferring Sewage to undesignated tank