IMO Guidelines on Remote Surveys

Team "Patet Mare"

The 2022 Mock
IMO Assembly

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01 **Introduction**

1) Definition of a Remote Survey

🔍 Remote Survey 🎤

"A survey that is undertaken, or partially undertaken, without physical attendance on board the ship by a surveyor."

2) Strengths of Remote Surveys

Low Risk
- No need for physical attendance
- Safe from virus transmission
- Dangerous conditions onboard
  are prevented

Saves Time and Money
- Eliminates surveyor's travel time
- Ships do not have to dock at a harbour

Technological Utility
- Easy to access the collected data
- Electronically signed e-certificate
  can be issued when applicable

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3) Eligible Remote Survey Items

No.	Surveys and related items eligible to remote survey	Live streaming required (See Notes)
1	Postponement, issuance, deletion of Condition of Class	X (1)
2	Postponement of Class surveys	X (1)
3	Items of Continuous Survey for Machinery (UR Z18) or Planned Maintenance Scheme (UR Z20, PMS)	X (1)
4	Occasional survey for change of ship's name	X (1)
5	Occasional survey for loss of anchor	X (1)
6	Occasional survey for minor machinery or equipment damage	X (1)
7	Occasional survey for minor hull damage	X (1)
8	Occasional survey for minor deficiencies/defects not subject to a Condition of Class	X (1)
9	In-water bottom survey	X
10	Specified items of a class periodical survey (excluding additional specific items of initial or renewal surveys), including completion of remaining items of a part held class periodical survey	X (1)(2)
11	Non-propelled / un-manned barges/pontoon – annual surveys when no survey of hull compartments is due	X
12	Minor retrofit / installation/upgrade of equipment	X (1)
13	Documentary or data based initial / periodical / renewal / occasional verifications and surveys	

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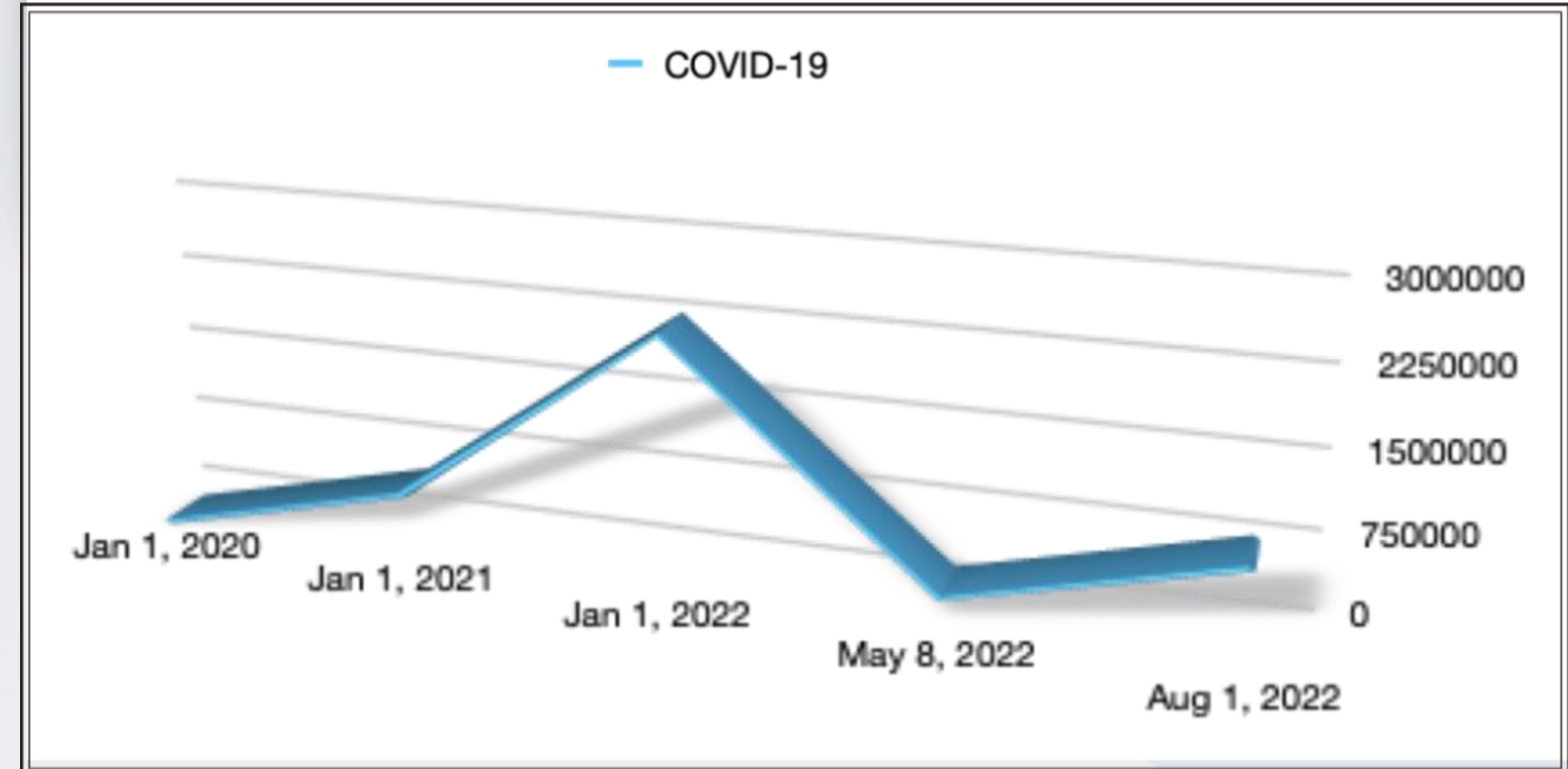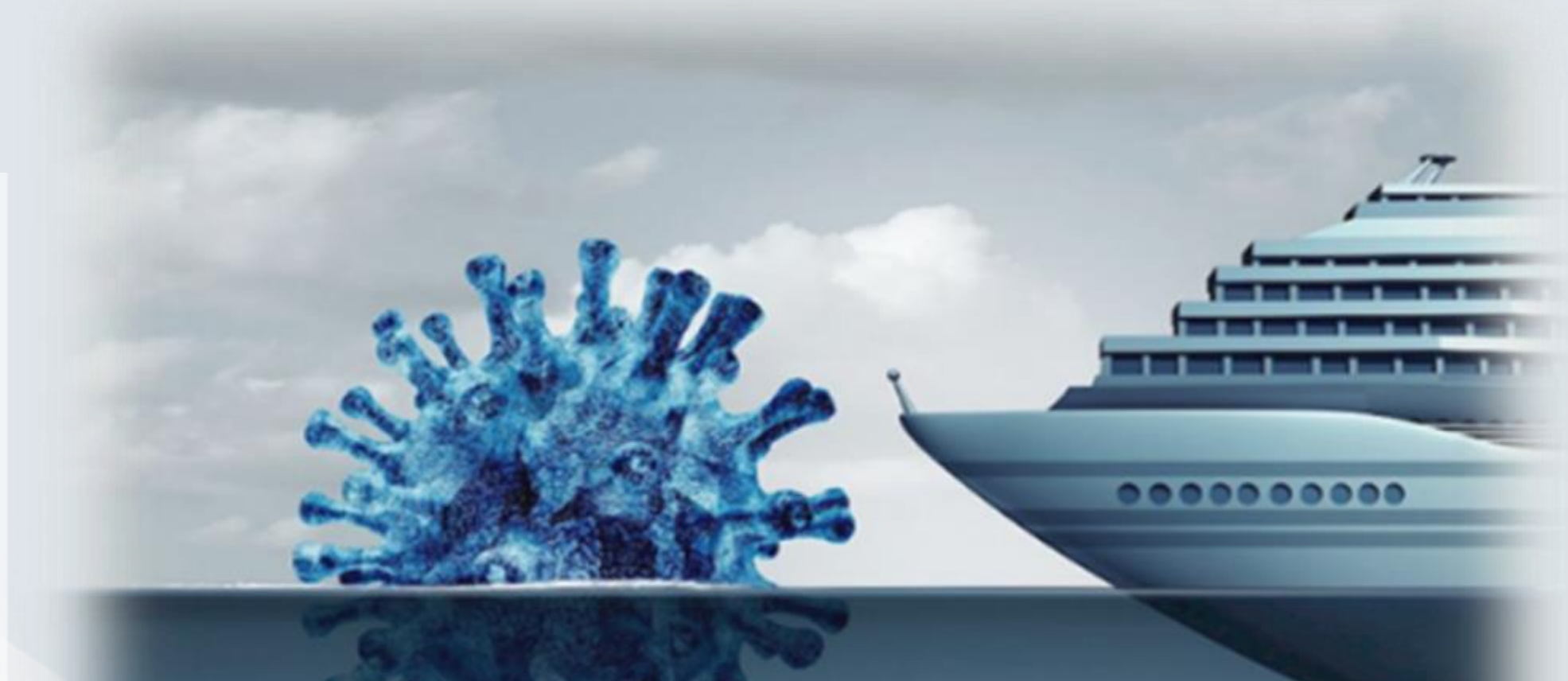
1) The Outbreak of COVID-19

COVID-19 proposed
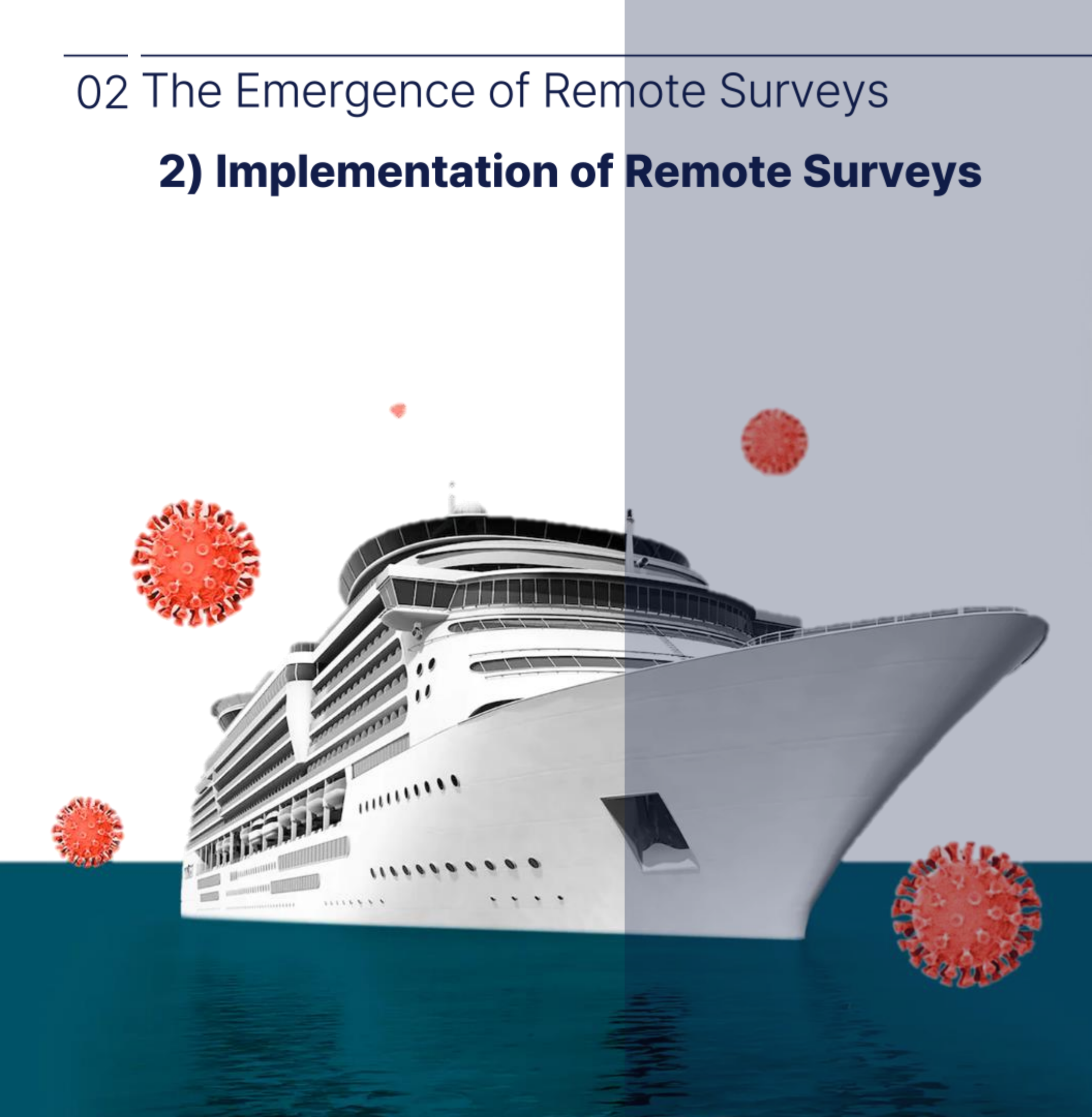an unprecedented challenge

Port Closures made onboard surveys
impossible

Safety at sea was compromised

2) Implementation of Remote Surveys

Remote surveys were hastily implemented due to insuperable circumstances.

However, remote surveys managed to more than pull their weight as an alternative.

1) The First Remote Survey Guidelines

The American Bureau of Shipping released the first remote survey guidelines on 10, April 2019.

Remote Surveys

John Preston | 10 April, 2019
IADC Maintenance Committee

ABS

2) MOF's Remote Survey Guidelines

Ministry of Oceans and Fisheries

Contingency Guidelines for Ships and Seafarers against Coronavirus (COVID-19)
(6 April 2010, Ministry of Oceans and Fisheries, Republic of Korea)

Scope

The guidelines apply to all Korean-flagged ships, fishing vessels and seafarers who bear the certificates issued by the Republic of Korea until further guidance is provided.

In applying the guidelines, IMO Circular Letter No.4204/Add.5 dated 17 March, 2020 and Circular Letter 2020-1('20.3.2), 2020-2('20.3.12) of Port State Control in the Asia-Pacific Region have been referred to by the Ministry of Oceans and Fisheries.

Background

Due to the Coronavirus (COVID-19) pandemic, various restrictions have been placed on the arrival and departure of ships and the transfer of seafarers as well as the movement of surveyors and auditors for surveys/audits between countries and survey on board, making it difficult to comply with the regulations set out in the various international conventions.
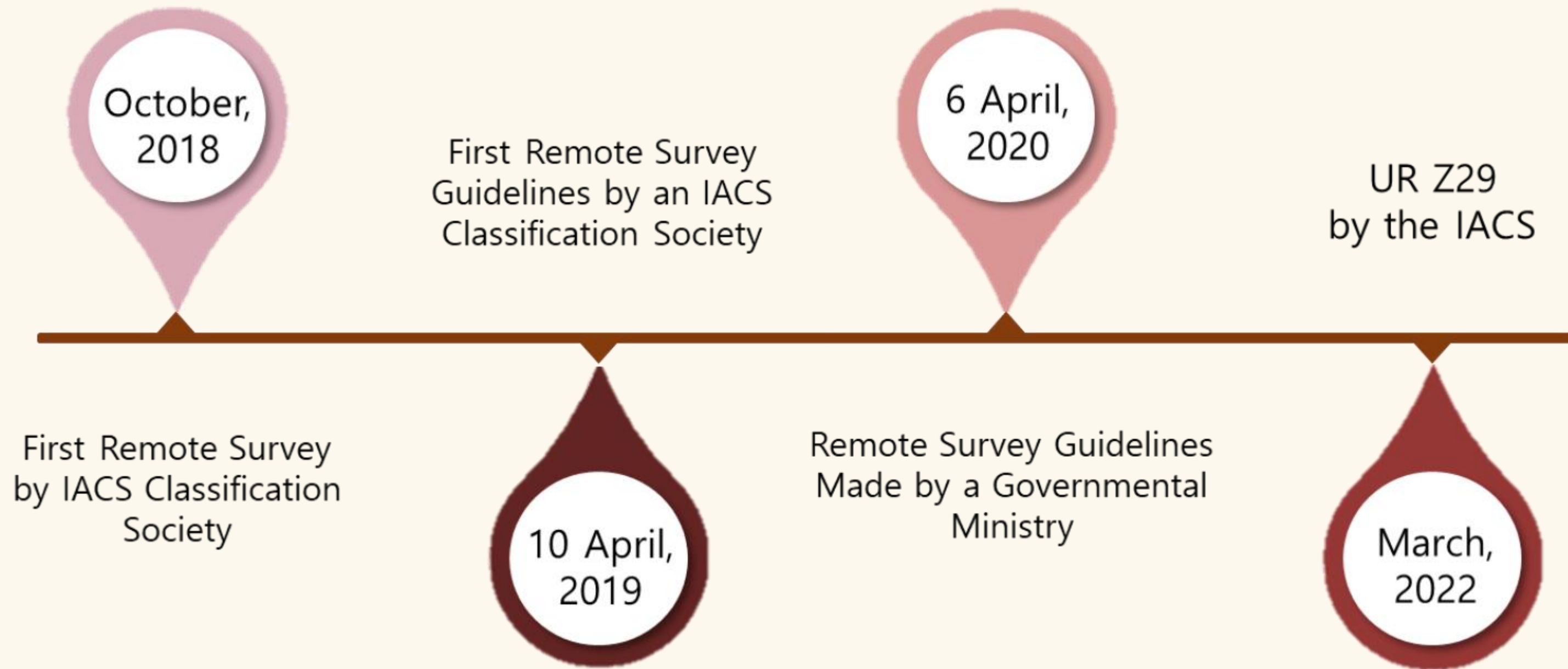
The Ministry of Oceans and Fisheries of the Republic of Korea, in considering the COVID-19 outbreak as a force majeure, has decided to take the following temporary measures for the Korean-flagged ships and seafarers.

A Government Ministry enacted remote survey guidelines starting from 6 April 2020
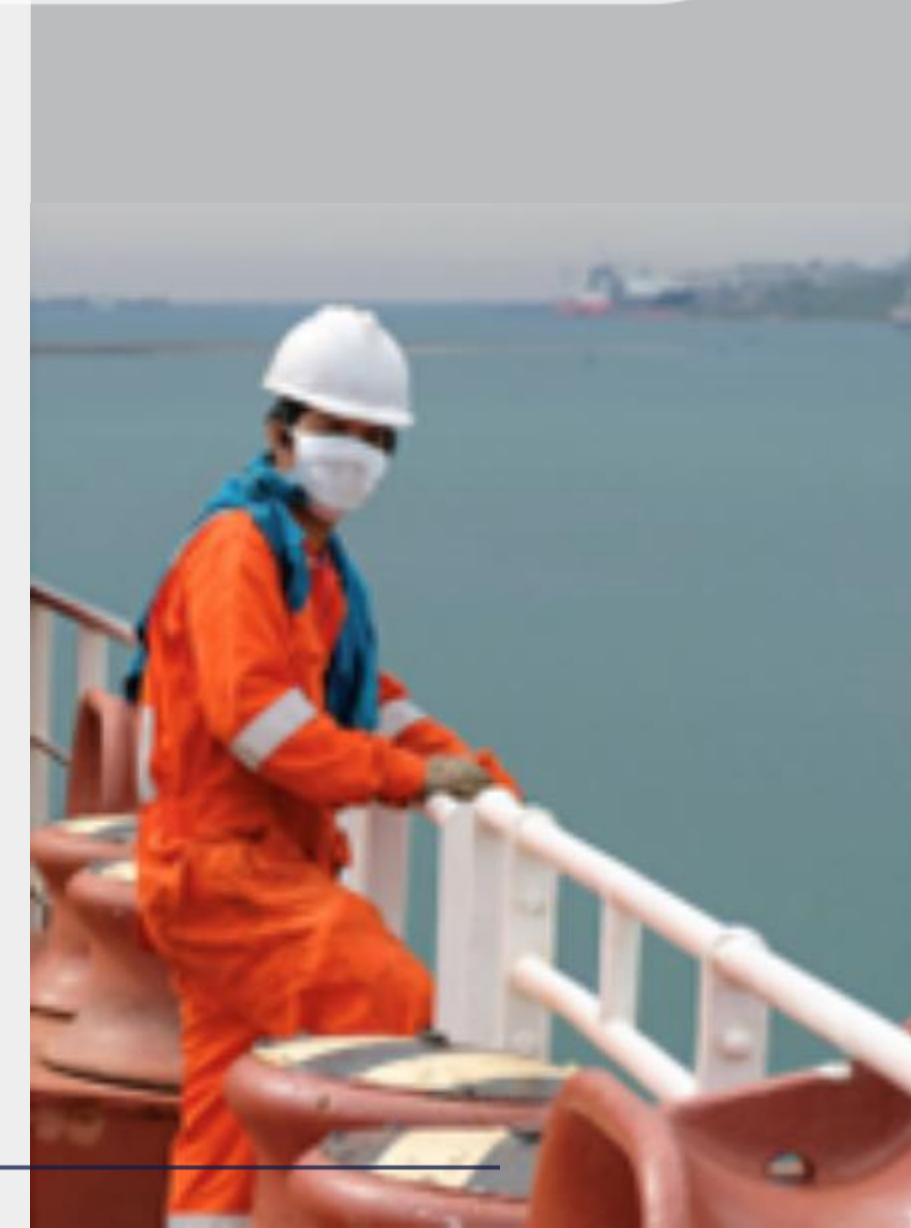
3) The IACS's Most Recent Guidelines

The first remote survey was conducted in October of 2018 by DNV GL—a classification society.

October, 2018

First Remote Survey Guidelines by an IACS Classification Society

6 April, 2020

UR Z29 by the IACS

First Remote Survey by IACS Classification Society

10 April, 2019

Remote Survey Guidelines Made by a Governmental Ministry

March, 2022

The IACS has had 4 years to conduct remote surveys before creating a Unified Requirement.

4) The IACS's UR Z29

International Association of Classification Societes

4 years of conducting remote surveys and the participation of 11 classification societies resulted in UR Z29

IACS UR Z29

Z29
(Mar 2022)

Remote Classification Surveys

1. General

The survey of ships may utilize different methods and concepts. This UR contains principles and minimum requirements for carrying out remote surveys.

Remote survey will only be appropriate provided the level of assurance is not compromised, and the survey is carried out with the same effectiveness as and is equivalent to, a survey carried out with attendance on board by a Surveyor.

1.1 Application

These requirements apply to all vessels, self-propelled or not. These requirements are not mandatory for offshore units.

1.2 Definitions

1.2.1 Remote Survey

A "Remote Survey" is a process of verifying that a ship and its equipment are in compliance with the rules of the Classification Society where the verification is undertaken, or partially undertaken, without attendance on board by a surveyor.

1.2.2 Information and Communication Technology (ICT)

Information and Communication Technology (ICT) are the technologies used in the scope of remote surveys for gathering, storing, retrieving, processing, analysing, and transmitting information which includes both software and hardware.

Notes:

1. 'Attendance on board by a surveyor' means physical attendance on board the ship by a surveyor.

2. Remote classification activities not requiring a survey, such as some administrative tasks, are not to be considered as remote surveys.

3. An administrative task is a task where a survey decision is not being made, for example reissue of a certificate or record following a correction, or an update to the ship's records held by the Classification Society or a document review.

02 **Discussion**

1) The Initial Proposal to Develop Guidance on Remote Surveys

During the MSC 102/22/11,
the Republic of Korea proposed
the develoment of a guidance
on remote surveys

2) The Marine Safety Committee's 104th Session, Agenda 18

IMO INTERNATIONAL MARITIME ORGANIZATION

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MARITIME SAFETY COMMITTEE
104th session
Agenda item 15

MSC 104/15/3
30 June 2021
Original: ENGLISH
Pre-session public release: ☒

WORK PROGRAMME

Proposal for developing guidance on the remote surveys

Submitted by the Republic of Korea

SUMMARY

Executive summary:	This document proposes a new output to develop guidance on the remote surveys, with a view to global and uniform implementation, taking into consideration matters related to cases of force majeure and technical innovation
Strategic direction, if applicable:	1 and 2
Output:	Not applicable
Action to be taken:	Paragraph 25
Related documents:	MSC 102/22/1, MSC 102/22/11, MSC 102/24; MSC 103/20/4; C/ES.32/D; C124/8/2 and Circular Letter No.4204/Add.19/Rev.3

Paragraph 15.5

Proposed that the "Development of guidance on assessments and applications of remote surveys, ISM Code audits and ISPS Code verifications" should become a new output.

15.5 Consequently, the Committee agreed to include a new output on "Development of guidance on assessments and applications of remote surveys, ISM Code audits and ISPS Code verifications", in the biennial agenda of the III Sub-Committee for 2022-2023 and the provisional agenda for III 8, with a target completion year of 2024. Having noted that provisions for remote surveys may also be needed for environment-related instruments, the Committee invited MEPC to consider whether it should be included as parent organ for the output.

3) Implementation of IMO Instruments

IACS International Association of Classification Societes

The IACS developed III 8/INF .19 on the basis of experience gained in performing remote surveys and in developing UR Z29

IMO INTERNATIONAL MARITIME ORGANIZATION   *E*

SUB-COMMITTEE ON IMPLEMENTATION
OF IMO INSTRUMENTS
8th session
Agenda item 12

III 8/INF.19
20 May 2022
ENGLISH ONLY
Pre-session public release: ☒

DEVELOPMENT OF GUIDANCE ON ASSESSMENTS AND APPLICATIONS OF REMOTE SURVEYS, ISM CODE AUDITS AND ISPS CODE VERIFICATIONS

Draft guidance on remote statutory surveys and draft guidance for performance of ISM/ISPS remote audits/verifications

Submitted by IACS

| SUMMARY	
Executive summary:	This document provides the draft guidance on remote statutory surveys and draft guidance for performance of ISM/ISPS remote audits/verifications.
Strategic direction, if applicable:	1
Output:	1.18
Action to be taken:	Paragraph 11
Related documents:	MSC 104/18 (paragraph 15.5) and III 8/12/1

1) Epidemiological Viewpoint

Imagining the future of pandemics and epidemics

A 2022 perspective
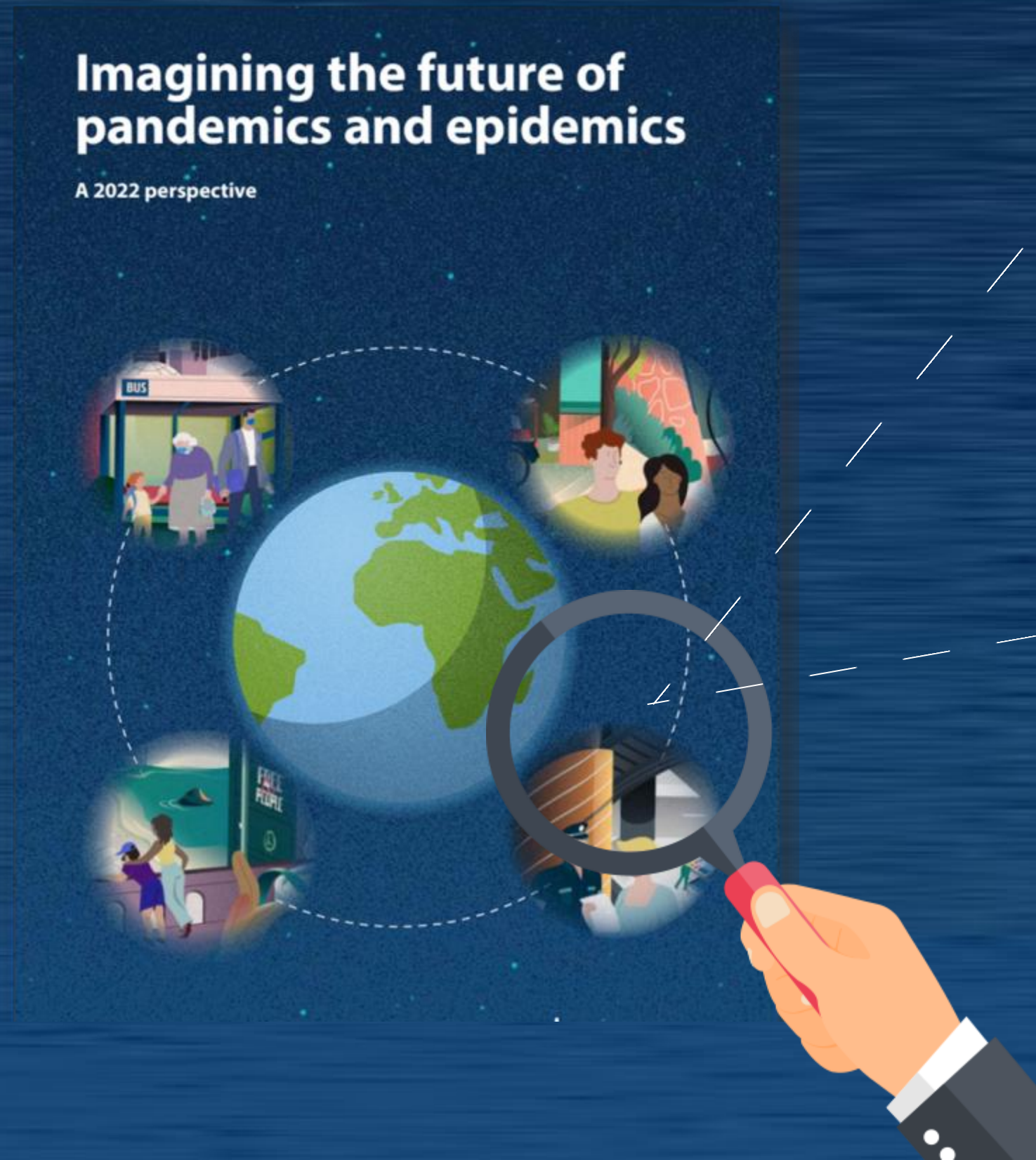
New pandemic risk

A pandemic is a disease that is prevalent across borders, whether regionally or globally. Pandemics are increasingly common, driven by human activity.[79] Factors such as increased population density and urbanization, global trade and connectivity, intensification of agriculture, human expansion into animal habitats and the effects of climate change all increase the risk of new diseases emerging, and new or known diseases turning into pandemics. COVID-19 is at least the sixth global pandemic since the Spanish Flu influenza pandemic of 1918. In the future, it is predicted that pandemics will emerge more often, spread more rapidly, cause more damage to the global economy and lead to greater global morbidity and mortality.[80]

In 2022, an official report from the WHO says, "In the future, it is predicted that pandemics will emerge more often "

World Health Organization

2) Accumulation of Data

Ship surveys are a part of the maritime industry that needs the accumulation of empirical evidence for the guidelines to become well formulated

Much like how the IACS utilized empirical data from conducting remote surveys to create UR Z29, the IMO would massively benefit from quickly creating remote survey guidelines

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1) Cyber Security

III 8/INF.19 only mentions the cyber security of the software used

3   Digital information, quality, and transparency

This section outlines the minimum requirements for the use of ICT that can capture images, record video and/or live stream video or other data from a ship as considered acceptable to the flag State.

3.1   Hardware

For live streaming two-way audio and video or other means, the following devices are normally used on board for effective collaboration between the ship and the surveyor, ensuring the surveyor can coordinate and drive the remote survey:

.1   digital device, which may include digital cameras capable of capturing videos/photos/data;

.2   smart device compatible with the applicable software/technology; or

.3   communication accessories like headphones and microphone for the noisy environment as applicable and as deemed necessary.

Notes: The smart device may be a smartphone, tablet, computer, wearable device, smart glass, digital camera, drone, or any other device which can be connected to the network and capable of transmitting the necessary video/data/images to a remote location.

3.4   Data protection

Remote surveys require the transfer of photos, videos, and other data across global networks. During the preparation of the survey, data security policies should be made available to the flag State as necessary. It is the owner's responsibility to ensure that data security policies are implemented as per the Company's SMS.
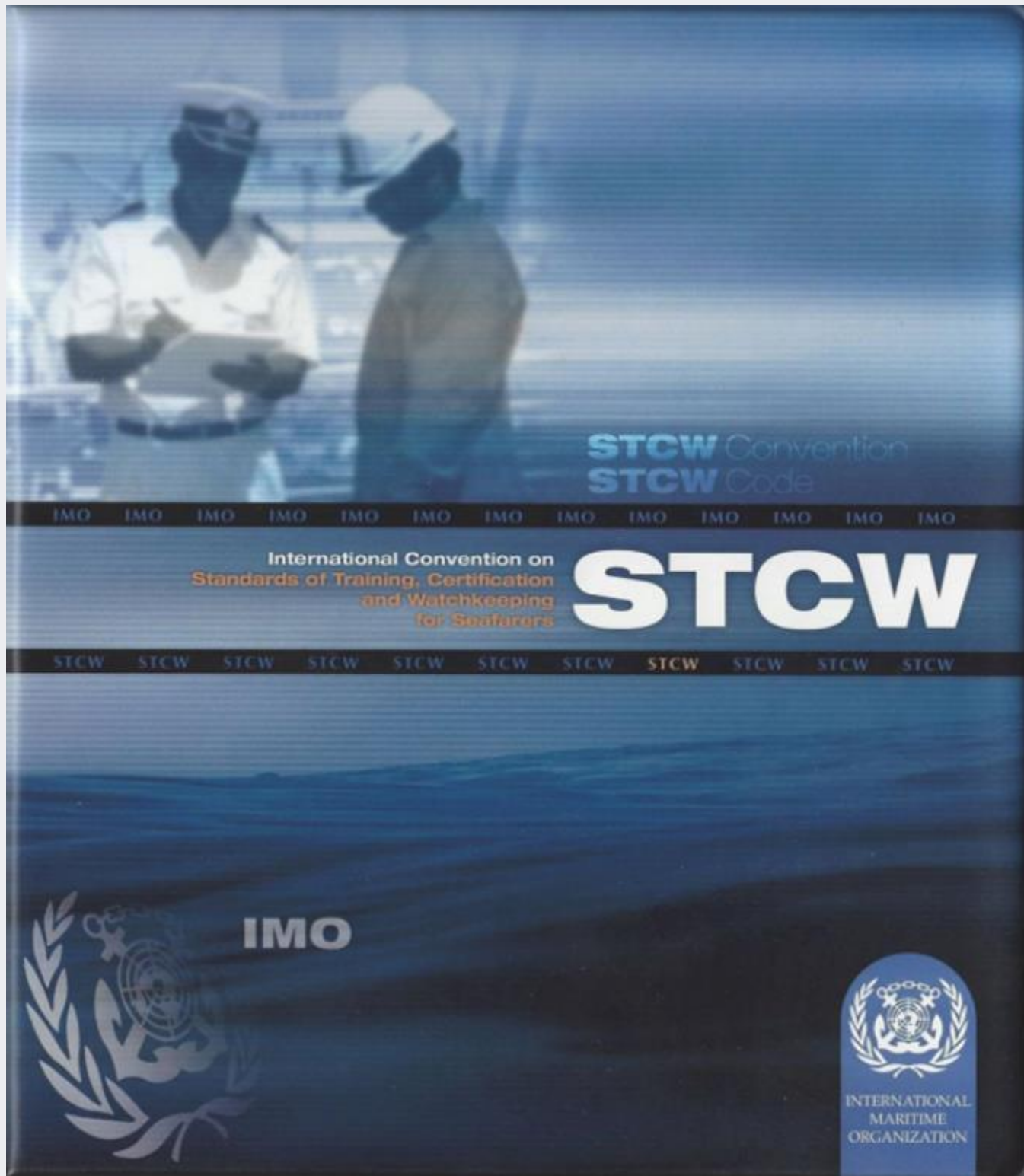
When considering the use of the ICT, data protection should be considered in advance. The software/application used to perform the remote survey should be compatible with the applicable technical requirements; in addition, the software used should be in compliance with the applicable:

.1   cyber security requirements; and

.2   data protection and confidentiality requirements for the transmitted data.

Notes: The flag State may advise ship owner or operator that cyber risk is based on resolution MSC.428(98) on *Maritime cyber risk management in safety management systems* and MSC-FAL.1/Circ.3/Rev.1 on *Guidelines on maritime cyber risk management*.

Lacks guidelines on how the recording device (hardware) could be exploited

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2) Education and Training Requirements

"STCW Convention"

-> International Convention on Standards of Training, Certification and Watchkeeping for Seafares

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STCW.6/Circ.11
12 June 2015

AMENDMENTS TO PART B OF THE SEAFARERS' TRAINING, CERTIFICATION AND WATCHKEEPING (STCW) CODE

2) Education and Training Requirements

Table A-III/2

Specification of minimum standard of competence for chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 KW propulsion power or more

COMPETENCE	KNOWLEDGE, UNDERSTANDING AND PROFICIENCY	METHODS FOR DEMONSTRATING COMPETENCE	CRITERIA FOR EVALUATING COMPETENCE
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea and protection of the marine environment	Knowledge of relevant international maritime law embodied in international agreements and conventions Regard shall be paid especially to the following subjects: .1 certificates and other documents required to be carried on board ships by international conventions, how they may be obtained and the period of their legal validity .2 responsibilities	Examination and assessment of evidence obtained from one or more of the following: .1 approved in-service experience; .2 approved training ship experience; .3 approved simulator training, where appropriate	Procedures for monitoring operations and maintenance comply with legislative requirements Potential non-compliance is promptly and fully identified Requirements for renewal and extension of certificates ensure continued validity of survey items and equipment

Despite crew members needing to periodically perform remote surveys, the STCW Code contains ==no specific clause== on evaluating competence of knowledge on performing remote surveys.

2) Education and Training Requirements

2.   **Eligibility and conditions for equivalency**

2.3   Responsibility and training of ship's crew

Suitable procedures related to the performance of remote surveys should be included in the Company's Safety Management System (SMS), addressing at least the following aspects:

.1   responsibility, impartiality and liability of the Company and crew/personnel involved in remote surveys;

.2   knowledge of the operation of the ICT used for remote surveys, as applicable;

.3   knowledge of the technical and procedural aspects related to remote surveys;

.4   knowledge of the connectivity and data/screen sharing aspects related to remote surveys; and

.5   record of training of crew/personnel involved in remote surveys for the aspects listed in the above items.

Remote surveys require much more preparation time compared to onboard surveys. When a remote survey is rendered ineligible, the time wasted is much more significant. Preventative mesure are sure to make a difference

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1) SD 1: Improve implementation

SD 1: Improve implementation

13 IMO has almost 60 years of experience, developing more than 50 international treaties, together with the related standards, guidelines and other texts. Only through the entry into force of those instruments and the effective, efficient and consistent implementation and enforcement of their provisions can the full benefits from this extensive body of international law be realized. To that end, the current situation demands that IMO place increased focus on implementation of IMO instruments as well as promotion of the entry into force of instruments.

14 The crucial role played by IMO in creating a level playing field for its Members can only be achieved through effective and uniform implementation of IMO instruments, their enforcement by the States parties to them, and full compliance by the States concerned and the shipping industry.

15 IMO will provide States and the industry with the information they need to better identify and understand barriers to implementation, and will consider ways to eliminate those barriers, including through analysis of the findings from the Member State Audit Scheme and/or data from other sources. IMO will promote the exchange of best practices among all stakeholders.

16 To achieve the goal of uniform implementation, IMO will continue to develop and execute projects to provide targeted capacity-building and technical cooperation that fosters, promotes and supports implementation efforts, especially those of developing countries, and will continue to pay particular attention to the needs of small island developing States and least developed countries.

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2) SD2: Integrate new and advancing technologies in th regulatory framework

SD 2: Integrate new and advancing technologies in the regulatory framework

17   As technological development accelerates, new and advancing technologies will significantly affect shipping, creating a more interconnected and efficient industry more closely integrated with the global supply chain. New and advancing technologies have already brought about changes at all levels in the way ships are designed, constructed, equipped and operated, and have had equal impact on personnel, both on board and ashore. Such technologies may also provide access to a large amount of data associated with shipping.

18   Since technological advances present opportunities as well as challenges, their introduction needs to be considered carefully in order for them to be accommodated appropriately into the regulatory framework of the Organization. This involves balancing the benefits derived from new and advancing technologies against safety and security concerns, the impact on the environment and on international trade facilitation, the potential costs to the industry, and finally their impact on personnel, both on board and ashore.

19   The Organization's regulatory framework will be continually adapted to the challenges and global developments facing the shipping industry, with a view to ensuring safety, security and environmental protection. The Organization will strive towards a legal framework that accommodates new and advancing technologies and approaches; it will do so by being technology neutral, developing IMO instruments and performance standards without preference or hindrance of one technology over another.

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03 **Solution**

1) Cyber Security

3.4   Data protection

Remote surveys require the transfer of photos, videos, and other data across global networks. During the preparation of the survey, data security policies should be made available to the flag State as necessary. It is the owner's responsibility to ensure that data security policies are implemented as per the Company's SMS.

When considering the use of the ICT, data protection should be considered in advance. The software/application used to perform the remote survey should be compatible with the applicable technical requirements; in addition, the software used should be in compliance with the applicable:

   .1   cyber security requirements; and

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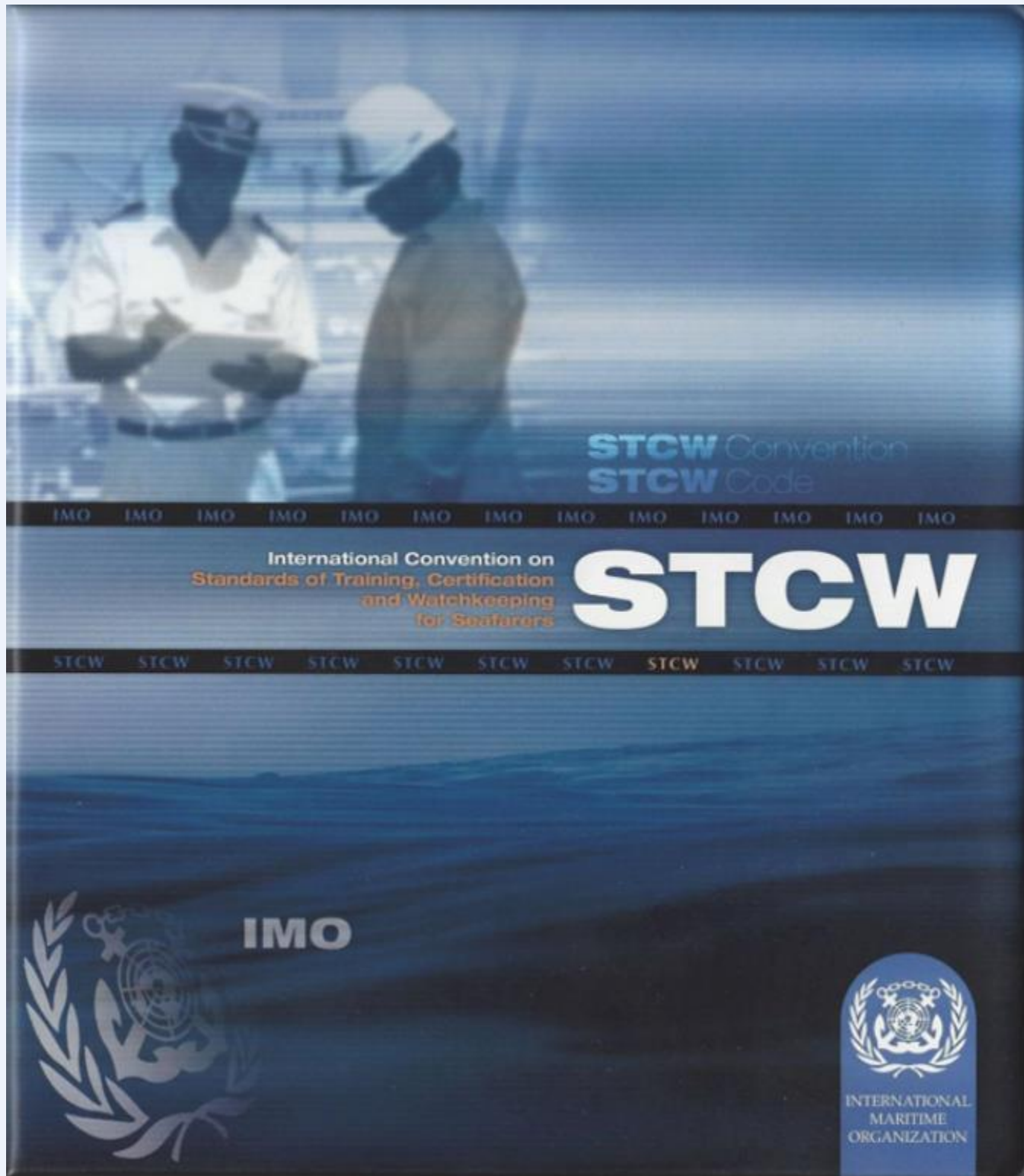
When considering the use of ICT, data protection should be considered in advance. The software/application used to perform the remote survey should be compatible with the applicable technical requirements; in addition, the software used should be in compliance with the applicable:

   .1   cyber security requirements; and

   .2   data protection and confidentiality requirements for the transmitted data.

When crew members utilize devices that can have multiple applications and/or capture photos/videos/audio as a secondary feature (smartphones, tablets), crew members must make sure that the device is in compliance with the applicable:
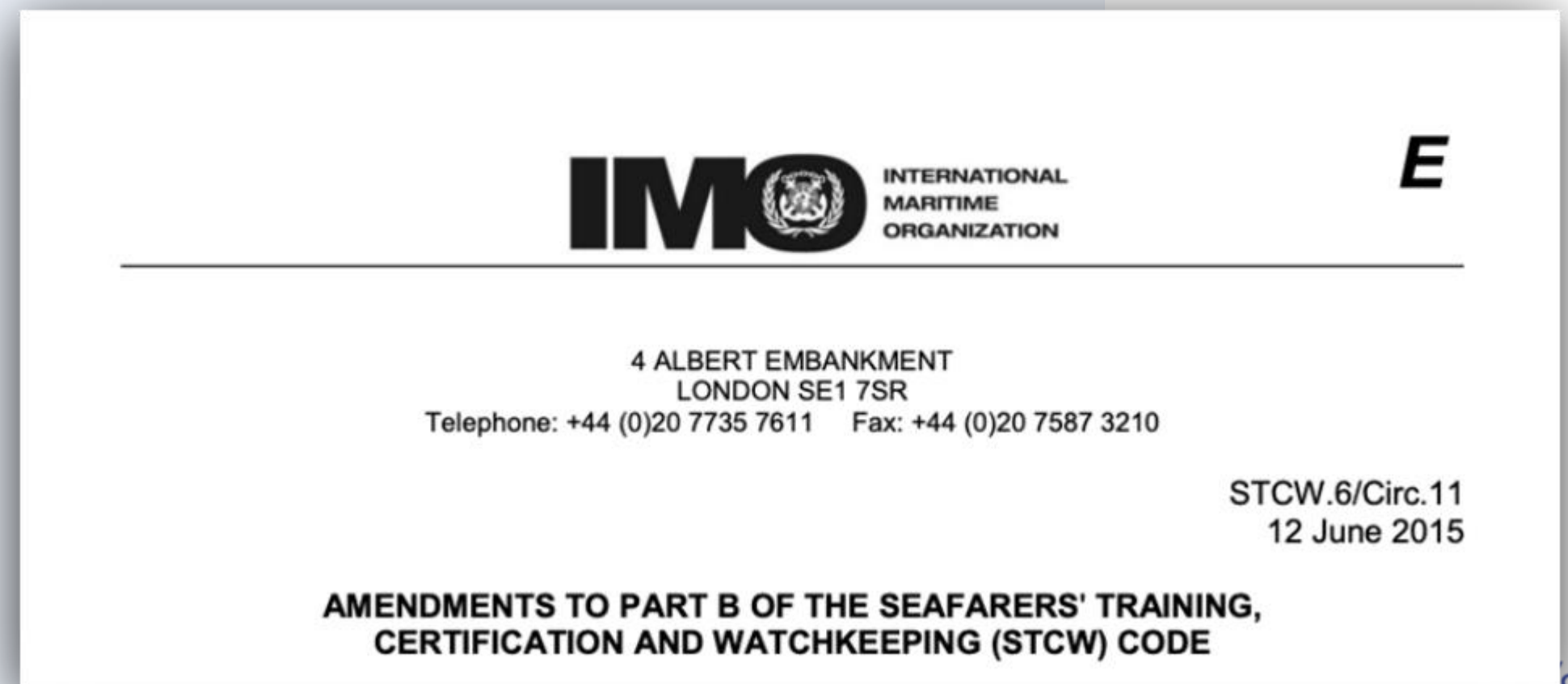
   .1   the device must not have any cyber security vulnerabilities caused by other previously downloaded applications;

   .2   the device must have installed and run a reliable antivirus application; and

   .3   the device must not be wirelessly connected to an unknown network.

2) Education and Training Requirements

"STCW Convention"

-> International Convention on Standards of Training, Certification and Watchkeeping for Seafares

2) Education and Training Requirements

Table A-III/2

Specification of minimum standard of competence for chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 KW propulsion power or more

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Requirements for postponement and extension of certificates ensure continued validity of survey items and equipment

2) Education and Training Requirements

Table A-III/2

Specification of minimum standard of competence for chief engineer officers and second engineer officers on ships powered by main propulsion machinery of 3,000 KW propulsion power or more

When a remote survey is deemed ineligible by a surveyor, the entire survey is annulled. Such a result wastes the time that the crew and the surveyor spent preparing for the survey. Because remote surveys take a significantly longer time to prepare, crew members are required to take the minimum required training as deemed by the IMO. The minimum required training and education covers the following aspects:

.1   knowledge of the consequences that may follow out at sea if remote surveys are done improperly;

.2   knowledge of the critical video/audio information required to ensure an eligible remote survey; and

.3   knowledge of the violations that render a remote survey ineligible.

With preventative measures in place,
the number of ineligible remote surveys are sure to decrease

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04 **Conclusion**

1) No.9: Industry, Innovation and Infrastructure

Conclusion

Our team invites the IMO to consider
hastening the implementation
of remote survey guidelines and consider our
amendments to the III 8/INF.19

Thank you

"Patet Mare"