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ANNEX

COMMON METHODOLOGY FOR INVESTIGATING MARINE CASUALTIES AND INCIDENTS

A. PURPOSE, SCOPE AND APPLICATION

The purpose of safety investigations into marine accidents is to reduce the risk of future casualties and incidents and reduce their serious consequences including loss of life, loss of ships and pollution of the marine environment.

The purpose of this document is to provide a common methodology for investigative bodies of the Member States to conduct marine safety investigations in accordance with Directive 2009/18/EC. It is based on the scope and definitions of Directive 2009/18/EC, taking into account the IMO instruments referred to in the Directive.

The methodology aims to establish common approach in principle applicable in all investigations carried out in accordance with the Directive and it outlines the characteristics of a good safety investigation. It is not a check list. The investigators shall exercise their professional judgment and training to take into account the circumstances of each case.

In this way, through application of this common methodology and an objective and systemic approach to the investigation, the investigative body should best be able to draw lessons from each accident and so enhance maritime safety.

Proper identification of the causes of a marine casualty or incident requires timely and methodical investigation, going beyond the immediate evidence and looking for underlying conditions which may cause other future occurrences. Investigation may therefore be seen as a means of identifying not only immediate causes, but also issues in the total environment from regulation and policy through to implementation.

B. CONTENT

1. Operational readiness

1.1. Each investigative body shall plan in advance in order to ensure that unnecessary delays, after the notification and during the initiation of any investigation, do not occur as a result of a lack of relevant/prerequisite information, preparedness or knowledge. Such preparedness plan shall ensure resources and procedures are, as far as possible, immediately available to meet the requirements, including sufficient suitably qualified investigators and any necessary co-ordination, nationally and internationally, to enable initial actions to be taken promptly, after notification of a casualty or incident is first received.

1.2. Arrangements shall be put in place to ensure prompt receipt of casualty and incident notifications by the accident investigation body on a twenty-four hour basis.

2. Initial assessment and response

2.1. On being notified, the investigative bodies shall assess the situation. The initial assessment is critical for investigative bodies to gather an overview as quickly as possible, minimise the potential loss of evidence, and determine the scope of information required to decide the appropriate action.

2.2. This assessment shall include, as far as possible, an understanding of

- the overall events,
- key timings,

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- the personnel involved, and
- the category of the event.

In addition to the factors listed in Article 5(2) of Directive 2009/18/EC, the following may amongst others also be considered in deciding which non very serious casualties or incidents to investigate:

- the potential safety value that may be gained by conducting an investigation
 - the public profile of the casualty
 - whether the casualty is part of an identifiable trend
 - the potential consequences of the casualty
 - the extent of resources available and projected to be available in the event of conflicting priorities and the extent of any investigation backlog
 - any risks associated with not investigating
 - serious injuries occurring on-board to crew and/or passengers
 - the pollution of environmentally sensitive areas
 - ships subject to significant structural damages
 - casualties which disrupt, or have the potential to disrupt, major port operations
- 2.3. After a decision is taken to investigate a serious casualty or another marine casualty or incident, the investigation shall normally be conducted with the same immediacy as that for a very serious casualty.

Where an investigation is to be carried out, the investigative bodies shall take immediate action as far as practicable to ensure preservation of evidence, coordination with other substantially interested parties and the appointment of a lead investigating state.

3. Strategy and evidence collection

- 3.1. The investigative body of the lead investigating Member State, in close liaison with those of the other substantially interested States, shall expeditiously develop a strategy for the scope, direction and timing of the investigation.
- 3.2. The investigative body shall keep the plan under review during the course of the investigation; by the end of the evidence collection phase the investigative body shall, as far as practicable, have ensured the completeness of evidence from all areas that could have influenced the casualty or incident.
- 3.3. The scope of a safety investigation and the procedure to be followed shall be sufficient as to eliminate uncertainty and ambiguity to the maximum extent possible and so enable robust logical assessments to be made of what led to the marine casualty or incident.
- 3.4. Investigative bodies of substantially interested Member States shall provide support to the lead investigating Member State, in a timely fashion, to the extent practicable.
- 3.5. The lead investigative body shall nominate an investigator to carry out the investigation, deploy appropriate resources and start the collection of evidence as soon as possible, as the quality of evidence, particularly that relying on the accuracy of human recollection, can deteriorate rapidly with time; and also in recognition that any ship involved in a marine casualty or incident should not be delayed more than is absolutely necessary by the need to gather evidence.

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- 3.6. During the initial stage of every investigation, investigators shall collect as much of the relevant evidence as possible which may help understanding the incident and determining its causes, keeping in mind the possible breadth of any investigation.
- 3.7. In addition to that gained during the initial notification stage, investigators shall obtain appropriate background and reference information. This can include evidence or data requested from any monitoring system, from the traffic control system, from the maritime administration, from the rescue services, from the shipping company and the casualty vessel.
- 3.8. Where appropriate, the investigative body shall query databases, including that of European Marine Casualty Information Platform, and other sources of information to help identify potential safety issues that may be relevant to the marine casualty or incident under investigation.
- 3.9. In principle, investigators shall, if feasible visit the casualty and/or occurrence site in order to obtain undisturbed evidence and to gain an initial appreciation of the incident. Where it has not been possible to preserve the site, arrangements shall, where possible, be made to obtain appropriate documentation of the scene for example by photographs, audio-visual recordings, sketches or any other means available with the object of gathering important evidence and possibly recreating the circumstances at a later stage.
- 3.10. Where a VDR is fitted, the investigators shall make every effort in order to obtain and preserve the information recorded on it. In particular they shall take early action to ensure that the VDR is "saved" to prevent it being overwritten. They also shall make every effort to obtain any relevant information from electronic sources, both on the ship and ashore. They shall review, in the order they find appropriate, any available, relevant documents, procedures and records.
- 3.11. Interviews shall be conducted with all available witnesses considered by the lead investigative body to be relevant. Investigators shall identify which witnesses they wish to interview initially and develop an interview plan. This plan shall, among other things, take into account fatigue (of both the witness and the investigator), the fragility of human evidence and the intended movements of the prospective witnesses.

Potential witnesses may include, among others:

- persons directly involved in the marine casualty or incident and its consequences
- eyewitnesses to the marine casualty or incident
- emergency response personnel
- company personnel, port officials, designers, repair personnel technical experts

If it is not possible to speak directly with some witnesses, the lead investigative body shall take steps to gain the evidence by other means.

Evidence may be obtained from them through telephone interviews or by asking other trained safety investigators to conduct the interview on behalf of the lead investigative State. In the latter case, the person conducting the interview will need to be carefully briefed by the investigator carrying out the investigation. Many key witnesses may need to be re-interviewed perhaps more than once.

- 3.12. Information shall be verified whenever possible. Statements made by different witnesses may conflict and further supporting evidence may be needed. To ensure that all of the relevant facts are uncovered, the broad questions of "who", "what", "when", "how" and "why" shall be asked.

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- 3.13. Human factors form an integral part of most investigations, and safety investigators must be trained appropriately. The success of the investigation of human factors depends largely on the type and quality of the information collected. As no two occurrences are the same, the investigative body shall determine the type and quality of data to be collected and reviewed. As a rule, the investigator shall be over-inclusive in gathering information initially and set aside superfluous data as the investigation unfolds.
- 3.14. If need be, the investigative body will have to secure some physical evidence in particular in order to obtain a scientific examination, inspection or testing ashore. In these cases, the investigators shall keep in mind that the passage of time could pollute the available evidence and therefore proceed with their removal as soon as appropriate. Prior to removal, such evidence shall be if possible photographed *in situ*. Their removal and their preservation shall be made with all the appropriate precautions in order to avoid affecting their examination.
- 3.15. If they appear to be relevant to the occurrence as part of their investigation, the investigative bodies may have to conduct or to order specialist examination, in particular technical examination of the vessel and of the different systems and equipment on board, if necessary by appropriate experts.
- 3.16. While gathering evidence, the investigative bodies shall try to identify any evidence that may be missing.

4. **Analysis**

- 4.1. Having collected evidence and related additional data, the investigative body of the lead investigating Member State, in cooperation with other substantially interested States as appropriate, shall analyse it with a view to identifying causal and contributing factors.

In that respect, the investigators shall take into account the variable value of the evidences they have collected and shall consider how best to resolve any ambiguities or conflicts of evidence.

- 4.2. Proper identification of causal factors requires timely and methodical investigation, going beyond the immediate evidence and looking for underlying conditions, which may be remote from the site of the marine casualty or incident, and which may cause other future marine casualties and marine incidents. Marine safety investigations should therefore in principle serve as a means of identifying not only immediate causal factors but also conditions that may be present in the whole operational process. To achieve this, the analysis of the evidence collected shall be thorough and iterative.
- 4.3. If a gap of information cannot be resolved and is filled in by logical extrapolation and reasonable assumptions, such extrapolation and assumptions shall be made clear in the wording of the report. A useful tool in this process can be the identification of all options and their analytical reduction to reach the most likely hypotheses.

5. **Safety recommendations**

- 5.1. Any safety recommendations shall be based on the analysis. They shall be addressed to those organisations or individuals best placed to take remedial action.
- 5.2. They may be based on safety investigations, or on research and abstract data analysis. Their formulation may be achieved in cooperation and consultation with the relevant stakeholders since these are often well-placed to identify and implement

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appropriate safety actions. The final decision on the content and addressees of safety recommendations shall, however, rest with the lead investigative body.

- 5.3. Where a causal or contributing factor is considered so serious that it should be addressed urgently, appropriate follow-up action shall be taken such as, for instance, issuing an interim safety recommendation.
- 5.4. To facilitate as much as possible acceptance and implementation by the recipients, any recommendation shall be:
- Necessary
 - Likely to be effective
 - Practicable
 - Relevant
 - Targeted
 - Stated in a clear, concise and direct manner
 - Stated so that it can be the basis for corrective action plans, highlighting the safety gap that needs to be addressed.

6. Reports

- 6.1. The investigative body of the lead investigating Member State shall produce a draft report in liaison with other substantially interested States. It shall clearly present, in a consistent and concise style, the facts and analysis which are used to support the conclusions and recommendations.
- 6.2. Where practicable, the draft report, or appropriate parts thereof, shall be circulated in confidence for consultation to any person or organisation that could be affected by it. The investigative body shall publish the final report, amended as appropriate.

7. Follow-up

The investigative bodies shall endeavour to ascertain details of action taken in response to safety recommendations.

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Changes and effects yet to be applied to :

- Regulation revoked by [2023 c. 28 Sch. 1 Pt. 2](#) (This amendment not applied to legislation.gov.uk. The revocation is disapplied immediately before the end of 2023 by S.I. 2023/1143, regs. 2(2), 3(2), 4, Sch. 1 Pt. 2)

Changes and effects yet to be applied to the whole legislation item and associated provisions

- Annex Pt. A words omitted by [S.I. 2018/1400 reg. 26\(5\)\(a\)\(i\)](#)
- Annex Pt. A words omitted by [S.I. 2018/1400 reg. 26\(5\)\(a\)\(ii\)](#)
- Annex Pt. A words omitted by [S.I. 2018/1400 reg. 26\(5\)\(b\)](#)
- Annex Pt. B para. 3.4 omitted by [S.I. 2018/1400 reg. 26\(6\)\(c\)](#)
- Annex Pt. B para. 3.8 words omitted by [S.I. 2018/1400 reg. 26\(6\)\(d\)](#)
- Annex Pt. B para. 2.2 words substituted by [S.I. 2018/1400 reg. 26\(6\)\(a\)](#)
- Annex Pt. B para. 3.1 words substituted by [S.I. 2018/1400 reg. 26\(6\)\(b\)](#)
- Annex Pt. B para. 4.1 words substituted by [S.I. 2018/1400 reg. 26\(6\)\(e\)](#)
- Annex Pt. B para. 6.1 words substituted by [S.I. 2018/1400 reg. 26\(6\)\(f\)](#)