

Training on Accident Investigation

Accident Investigation: purpose and key principles (on line session)

Aim of the presentation



- Outline the international background to marine accident investigation
- Identify relevant marine accident legislation, regulations - IMO and EU legislation
- Understand the key principles of AI.

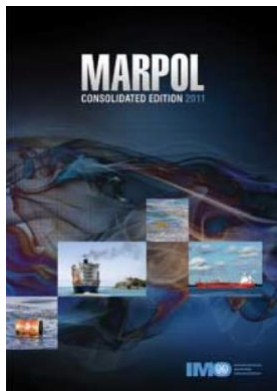
Why investigating marine casualties?



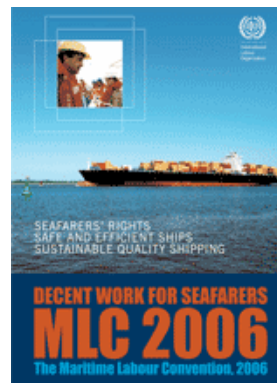
Background: International obligations to investigate



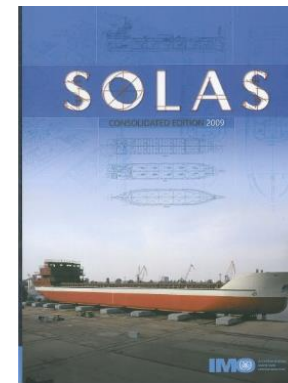
UNCLOS



MARPOL



MLC

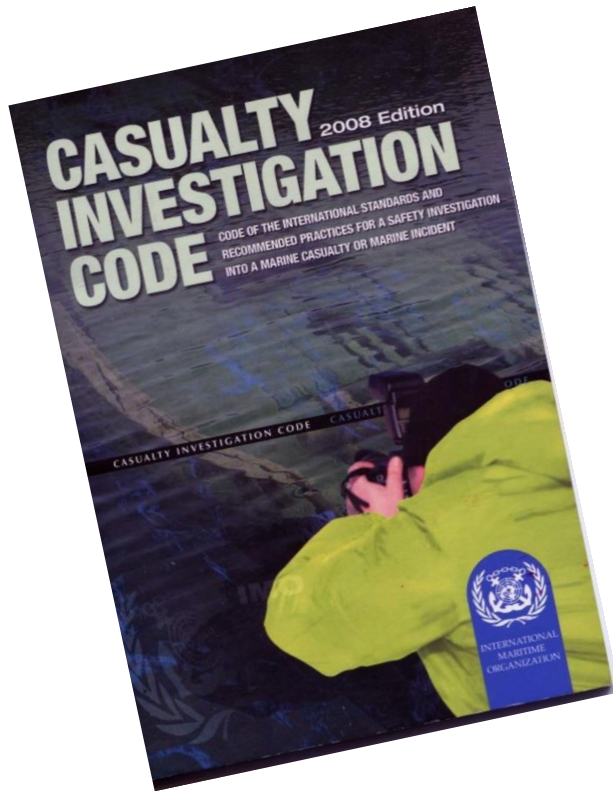


SOLAS

Amendments 2008:

reference of investigations based on a
common Code: MSC 255(84)

(Ch. XI-1, Reg.6)



- Into force 1 January 2010 under SOLAS Reg. XI-1/6
- Common approach for ALL States
- Applicable worldwide by IMO CG
- Structure:
 - Part I - General
 - Part II - Mandatory Standards
 - Part III - Recommended practices.

Safety investigation key characteristics

Goal:

- To improve maritime safety and prevention of pollution
- Investigations do not seek to apportion blame or determine liability

How safety can be improved?

- identifying safety issues that led to the casualty
- Proposing remedial actions/lessons learned.



Investigating marine accidents means to ...



Notif.

- Assess the situation & **severity**
- Decide whether to investigate

Gather evidence

- Understand sequence of events

Analyse evidence

- Identify CF(s)

Draw concl.

- Identify missing/ breached barriers

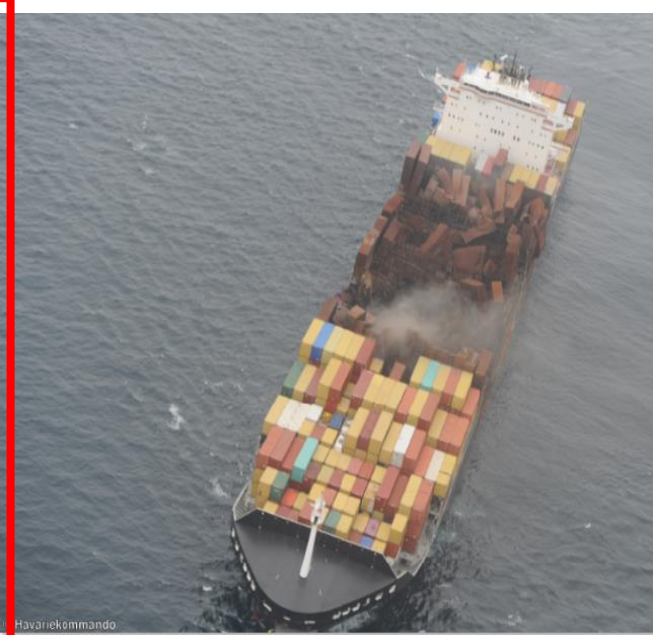
Issue SR

- (Re)set barriers

Report

- To **spread** safety message
- To provide data.

EMSA



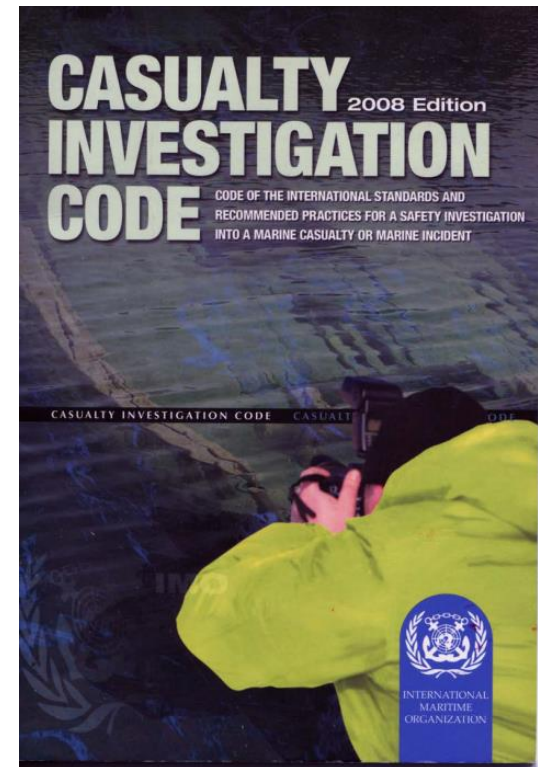
Havarekommando



Part I – General provisions

Part II – Mandatory Standards

Part III – Recommended Practices





Ch.2.9: A **marine casualty** means an event, or a sequence of events, that has resulted in any of the following which has occurred **directly in connection** with the operations of a ship:

- .1 the death of, or serious injury to, a person;
- .2 the loss of a person from a ship;
- .3 the loss, presumed loss or abandonment of a ship;
- .4 material damage to a ship;
- .5 the stranding or disabling of a ship, or the involvement of a ship in a collision;
- .6 material damage to marine infrastructure external to a ship, that could seriously endanger the safety of the ship, another ship or an individual; or
- .7 severe damage to the environment, or the potential for severe damage to the environment, brought about by the damage of a ship or ships.

Ch.2.10: A **marine incident** means an event, or sequence of events, other than a marine casualty, which has occurred **directly in connection with the operations of a ship** that endangered, or, if not corrected, would endanger the safety of the ship, its occupants or any other person or the environment.

IMO CIC – Obligations



- Objective of the Code → a common approach
- Contracting government should:
 - Investigate **VS** MC (Flag State)
 - Apply consistently the **common** methodology
 - Provide **reports** to IMO (GISIS).



Marine safety investigation :

- X DO NOT SEEK to apportion blame**
- X DO NOT SEEK to determine liability**
- X DO NOT SEEK for responsibilities**
- ✓ conducted with the sole objective of preventing marine casualties and marine incidents.**



- Marine safety investigation should be:
 - SEPARATE from, and
 - INDEPENDENT of, any other form of investigation
 - **not to preclude** other investigations (e.g. civil, criminal or administrative)
 - **not refrain from fully reporting CF** because blame or liability may be inferred from findings.





IMO CIC recognizes:

- the **duty** of each Flag State to conduct an investigation into a casualty occurring to any of its ships
- the **right** of Coastal States to investigate in the cause of marine casualties or incidents that occurs within their territorial waters
- the **right** of a State to investigate in the cause of marine casualties or incidents which they are substantially interested for.

IMO CIC – Part II (Mandatory standards)



- Substantially interested States to be **notified**
- National law shall ensure that investigators have the **power** to carry out a marine safety investigation
- Investigations to be **impartial** and **objective**
- A substantially interested State may conduct a **parallel investigation**
- **Cooperation** to the extent practical
- Substantially Interested States are to be **consulted** on draft report (unless maintaining confidentiality is not guaranteed)
- Investigation reports made **public**.



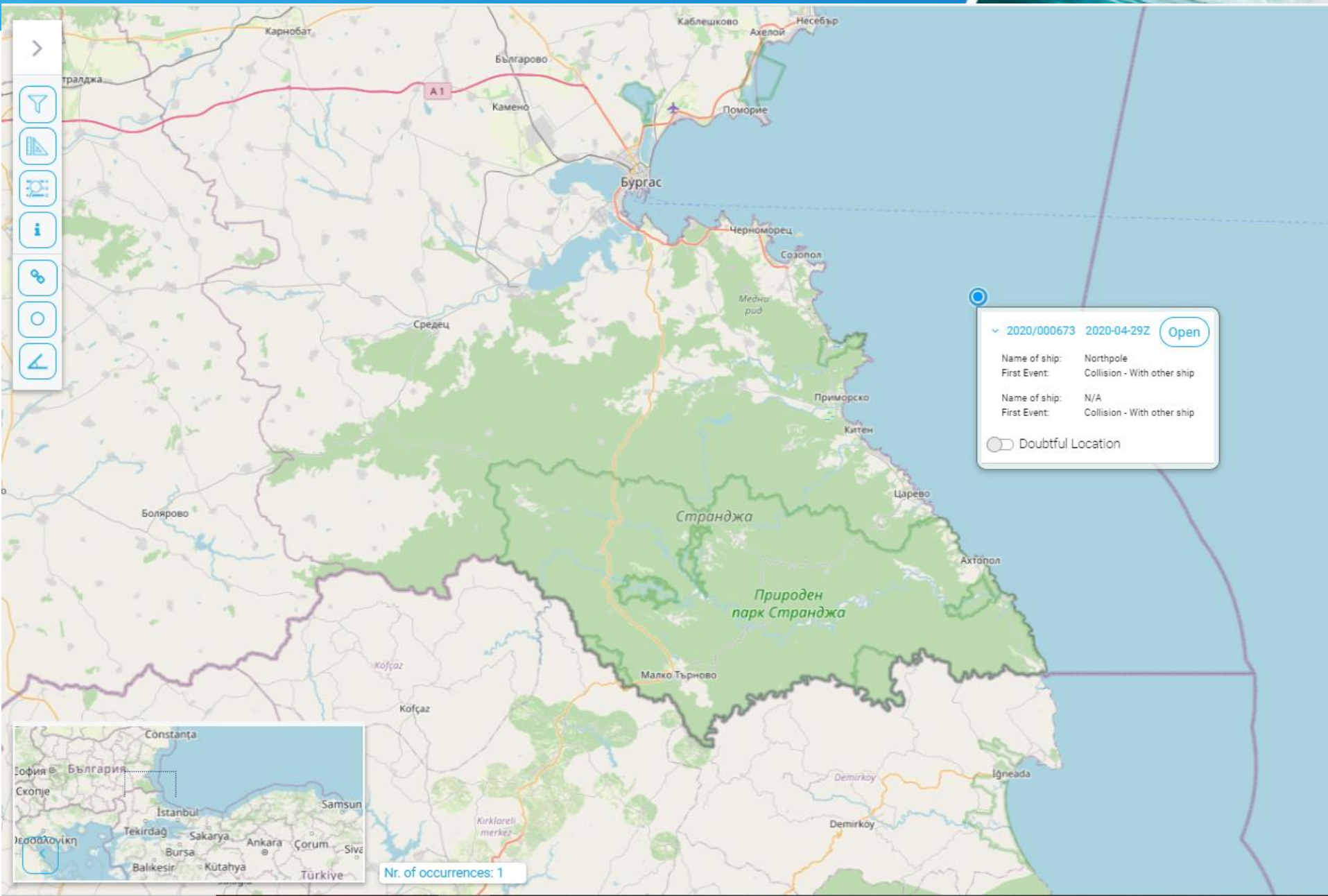
- Flag State investigation body should be **independent**
- Investigating State should **allow participation** to the extent practicable
- Evidence should, so far as national laws allow, be prevented from admission in **civil/criminal proceedings**
- Prior to report publication, there should be 30 days (or mutually agreed period) of **consultation** to allow **interested parties** to comment.

Groups



GROUP "A"	GROUP "B"	GROUP "C"
Natalia G.P.	Margaret S.	Christine S.H.
Robert S.	Cecilia D.A.	Anders J.
Marta R.P.	Igor T.	Jorge V.G.

Use case (20')



The 'Accident Investigation Directive'

Applicable

European Union

By who

Mandatory and enforceable by
all EU Member States

L 131/114

EN

Official Journal of the European Union

28.5.2009

Directive 2009/18/EC

of 23 April 2009

establishing the fundamental principles governing the investigation of accidents in the maritime transport sector and amending Council Directive 1999/15/EC and Directive 2002/59/EC of the European Parliament and of the Council

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

prevent the recurrence of such casualties resulting in loss of life, loss of ships and pollution of the marine environment.

Having regard to the Treaty establishing the European Community, and in particular Article 80(2) thereof,

(7) The European Parliament, in its resolution of 21 April 2000 on improving safety at sea⁽¹⁾, has urged the Commission to draft a directive on investigation of maritime accidents.

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Economic and Social Committee⁽²⁾,

(8) The United Nations Convention on the Law of the Sea of 10 December 1982 (hereinafter referred to as UNCLOS) establishes the right of coastal States to investigate the cause of any marine casualty occurring within their territorial seas which might pose a risk to life or to the environment, involve the coastal State's search and rescue authorities, or otherwise affect the coastal State.

Having regard to the opinion of the Committee of the Regions⁽³⁾,

Acting in accordance with Article 251 of the Treaty, in the light of the joint text approved by the Conciliation Committee on 3 February 2009⁽⁴⁾,

(9) The Directive establishes that flag States are to ensure that investigations are held, by or before a suitably qualified person or persons, into certain casualties or incidents of navigation on the high seas.

Whereas:

(10) The International Convention for the Safety of Life at Sea of 1 November 1974 (hereinafter referred to as SOLAS 74), the International Convention of Load Lines of 5 April 1966 and the International Convention for the Prevention of Pollution from Ships of 2 November 1973 lay down the responsibilities of flag States to conduct casualty investigations and to supply the International Maritime Organization (IMO) with relevant findings.

(1) A high general level of safety should be maintained in maritime transport in Europe and every effort should be made to reduce the number of marine casualties and incidents;

(2) The expeditious holding of technical investigations into marine casualties improves maritime safety, as it helps to

(11) The Code for the Implementation of Mandatory IMO Instruments annexed to Resolution A.996(25) of the IMO Assembly of 29 November 2007 recalls the obligation of flag States to ensure that marine safety investigations are conducted by suitably qualified investigators. The Code further requires flag States to be prepared to provide qualified investigators for that purpose, irrespective of the location of the casualty or incident.

(1) OJ C 318, 23.12.2004, p. 185.
(2) OJ C 229, 22.9.2004, p. 38.
(3) Opinion of the European Parliament of 15 July 2008 (OJ C 184 E, 22.7.2008, p. 23). Position of the European Parliament of 24 September 2008 (not yet published in the Official Journal). Council Decision of 26 February 2009 and legislative Resolutions of the European Parliament of 11 March 2009 (not yet published in the Official Journal).

TO BE
transposed by
17 June 2011

IMO Casualty Investigation Code

Key points vs *EU Directive*

IMO Code

+ *EU Directive*

General provisions:

- to report at least very serious casualty data to IMO (GISIS) **+ EMCIP**
+ Serious, less serious and marine incidents

Mandatory Standards:

- Investigations to be impartial and objective =
- Investigations shall be conducted into very serious marine casualties (Flag State)
+ serious, following assessment
+ Coastal State + Substantial interested States
- Substantially interested States to be notified =



Mandatory Standards (cont.):

- A substantially interested State may conduct a parallel investigation **Parallel investigation should be avoided**
- Cooperation to the extent practical =
- Substantially Interested States are to be consulted (unless maintaining confidentiality is not guaranteed) =
- Investigation reports made public =

IMO Casualty Investigation Code

Key points vs *EU Directive*



Recommended practices:

shall

- Investigation body ~~should~~ be independent
+ impartial and permanent

shall

- Investigating State ~~should~~ allow participation to the extent practicable

shall

- Evidence ~~should~~, so far as national laws allow, be prevented from admission in civil/criminal proceedings

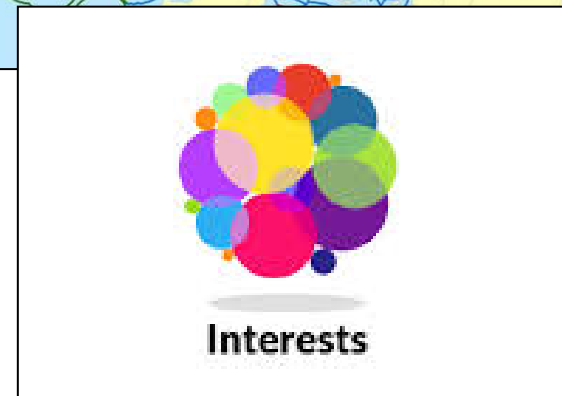
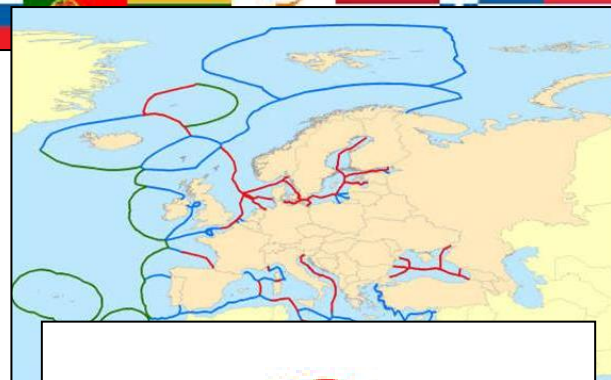
- Prior to report publication, there should be ~~30 days~~, or mutually agreed period of consultation to allow interested parties to comment.

AID scope

- **All marine** casualties **and** incidents **that:**

- involved ships flying a **MS flag**
- occurred within MS's **territorial sea and internal waters** as defined by UNCLOS (12 nm)
- affected any **other substantial interests** of that MS

- **All vessels** (with few exceptions).



What to investigate?

ALL

Very Serious Casualty

Serious Casualty:

- do not qualify as very serious casualties
- involve a fire, explosion, collision, grounding, contact, heavy weather damage, ice damage, hull cracking, or suspected hull defect, **etc.**, **resulting in:**
 - immobilization of main engines, extensive accommodation damage, severe structural damage, such as penetration of the hull under water, **etc.**, **rendering the ship unfit to proceed**, or
 - **pollution** (regardless of quantity); and/or
 - a breakdown **necessitating**

Less serious and marine casualties

- do not qualify as serious or very serious casualties
- include **near-misses**.

“In a condition corresponding to the application of the provisions of the Convention”

“A sequence of events and/or conditions that could have resulted in loss”

CIRC\MSC-MEPC\7\7

on board or an unreasonable threat of harm to marine environment”

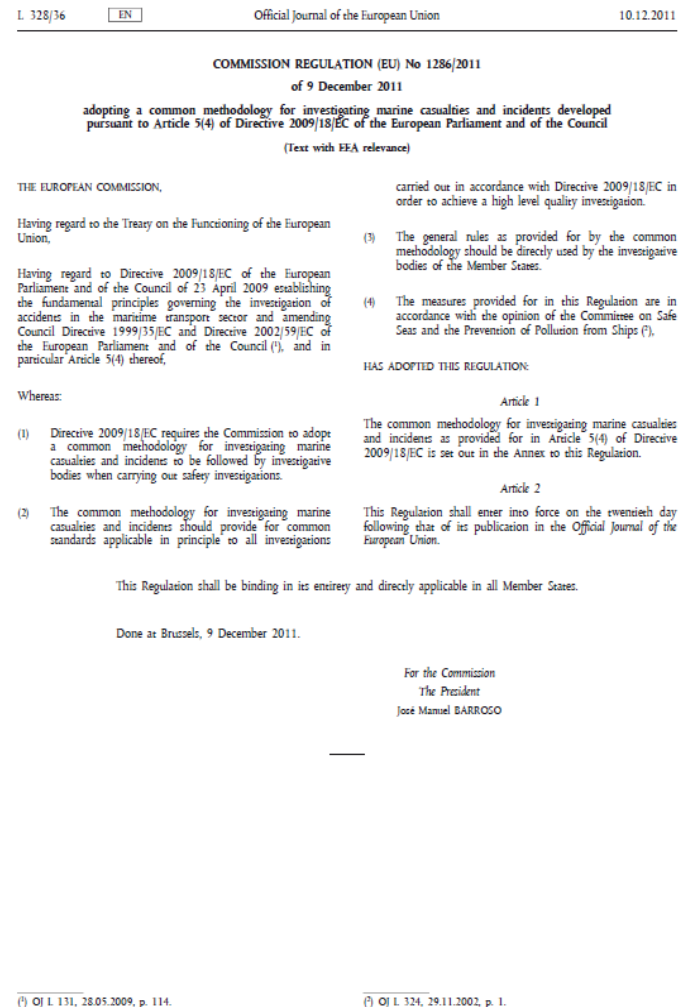
MSC-MEPC.3-Circ.3

Preliminary Assessment

Freedom to decide

Moreover, the AI directive requires ...

- **To follow Common methodology** (Reg.1286/2011)
 - Operational readiness
 - Initial assessment and response
 - Strategy and evidence collection
 - Analysis
 - Safety recommendations
 - Reports
 - Follow-up of SR
- **Effective cooperation by PCF** (art.10 & Reg.651/2011).



Thank you for your attention!



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 **EMSA**
European Maritime Safety Agency



Guidelines to assist investigators in the implementation of the casualty investigation code

- Adopted 4 Dec 2013
- Superseded:
 - Resolution 849(20)
 - Resolution 884(21)

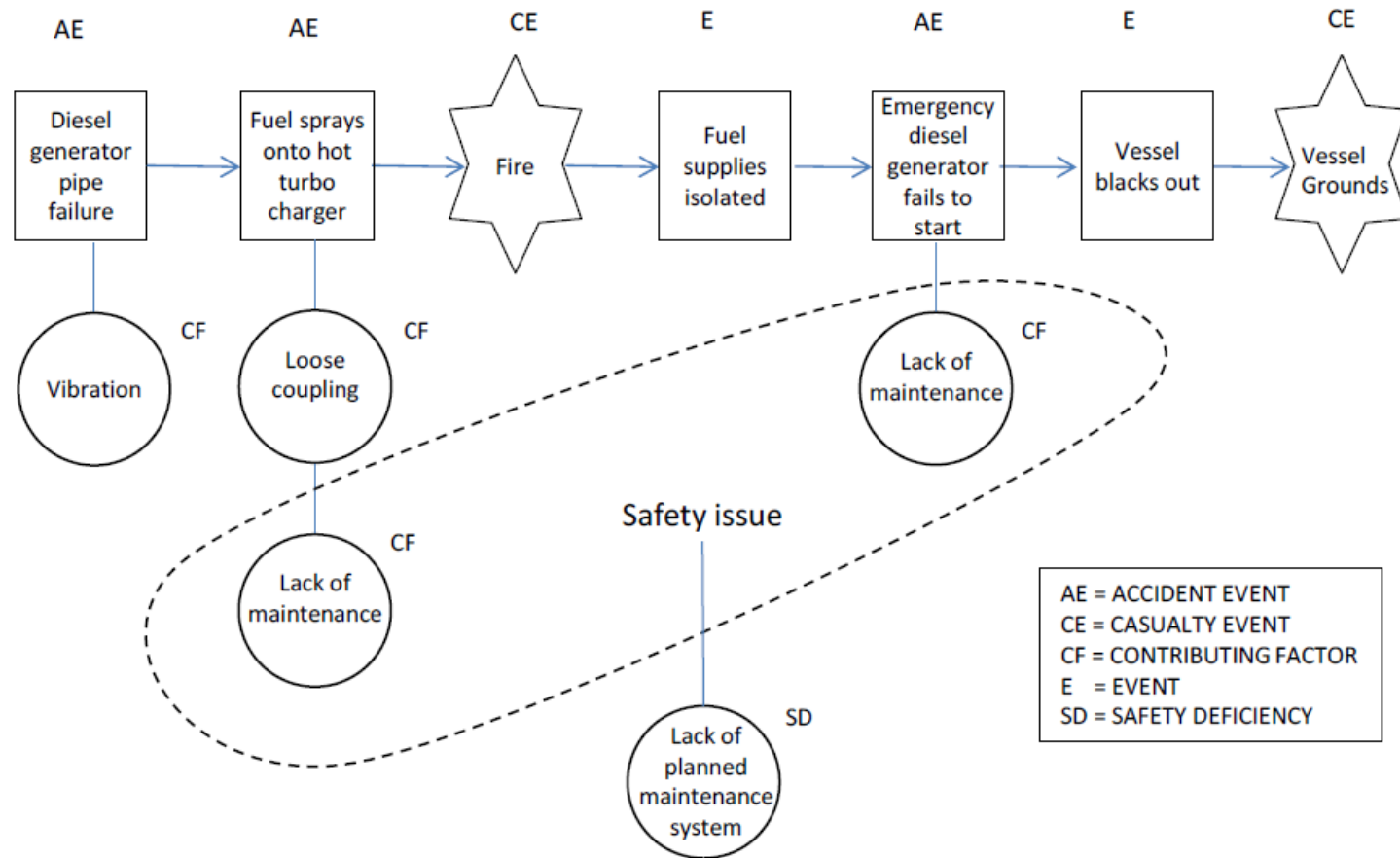
“The purpose of these Guidelines is to provide practical advice for the systematic investigation of marine casualties and incidents and to allow the development of effective analysis and preventive action”

Res.A.1075(28) - Definitions



Event	An action, omission or other happening.
Casualty event	The marine casualty or marine incident, or one of a number of connected marine casualties and/or marine incidents forming the overall occurrence. (e.g. a fire leading to a loss of propulsion leading to a grounding).
Accident event	An event that is assessed to be inappropriate and significant in the sequence of events that led to the marine casualty or marine incident. (e.g. human erroneous action, equipment failure, etc.).
Contributing factor	A condition that may have contributed to an accident event or worsened its consequence. (e.g. man/machine interaction, inadequate illumination, etc.).
Safety issue	An issue that encompasses one or more contributing factors and/or other unsafe conditions.
Safety deficiency	A safety issue with risks for which existing defences aimed at preventing an accident event, and/or those aimed at eliminating or reducing its consequences, are assessed to be either inadequate or missing.

Res.A.1075(28) - Sequence of events



Res.A.1075(28) + 1070(28) - Qualifications and training of investigators



- Marine Safety Investigation Authority should develop a **FORMAL TRAINING PROGRAMME**
- The appointed investigators need to have expertise in:
 - navigation and the Collision Regulations;
 - flag State regulations on certificates of competency;
 - causes of marine pollution;
 - interviewing techniques;
 - evidence gathering; and
 - evaluation of the effects of the human element.



ADOPTION OF GUIDELINES ON THE FAIR TREATMENT OF SEAFARERS:

- Guidelines for the Coastal State
- Guidelines for the Flag State
- Guidelines for the Seafarer State
- Guidelines for shipowners
- Guidelines for seafarers.



Marine Accident Investigators' International Forum:

- Investigation Manual
 - Guidelines on all parts of investigation
- Investigators' Job Aid
 - Detailed on the field guidelines for AI
- Draft Fire Manual
 - Guidelines on marine fire investigations
- VDR resources.



ART.2 - 4

- **Safety investigation** (an enquiry conducted with the objective of preventing marine casualties and marine incidents in the future):
 - **NO** responsibility
 - **NO** blame
 - **NOT** about the “**WHO**”, **but** about the “**WHAT**” and “**WHY**”
 - **Independent** on criminal investigation
 - Not unduly **precluded** or **delayed**
 - **Carried out** as effectively and rapidly as possible
 - To be started **no later than 2 months**.

ART.5

- Investigation obligation
 - All VSMC
 - Preliminary assessment for SMC

ART.8

- Investigations to be conducted by AIBs:
 - impartial
 - permanent
 - independent in their organisation
 - Endowed with necessary powers
 - Staffed with investigators holding working knowledge and practical experience
 - Enabled to respond immediately.



ART.7

- Investigation involving 2+ MS (FS, CS, OIS)
 - Only 1 investigation
 - Cooperate to agree on lead MS
 - Scope to be agreed
 - Equal rights

ART.6

- AIB to be notified **without delay** of **ALL** MC and MI

ART.14

- Investigation report **published** within 12 months

ART.17

- Accident data to be reported in **EMCIP**

ART.15

- MS to **follow-up** SR.

Opportunities from AID



- **Effective** instrument designed to prevent future accidents
- Established an EU Accident Investigation Community
 - **Harmonised** practices
 - Efficient **cooperation**
 - High **quality** investigations standard
- High number of **investigations**
- Proper **safety recommendations**, including follow-up
- Comprehensive **data collection** framework
 - EMCIP DB
 - Well aware reporting community
- Supporting **analysis** of investigation reports / accident data.