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MARITIME SAFETY COMMITTEE
84th session
Agenda item 16

MSC 84/16
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FORMAL SAFETY ASSESSMENT

Outcome of MSC 83 on matters related to review of FSA studies

Note by the Secretariat

SUMMARY

<i>Executive summary:</i>	This document provides the outcome of MSC 83 on matters related to review of FSA studies and relevant provisions of the Guidance on the use of HEAP and FSA, relating to establishment of an FSA Experts Group
<i>Strategic direction:</i>	12.1
<i>High-level action:</i>	12.1.1
<i>Planned output:</i>	12.1.1.1
<i>Action to be taken:</i>	Paragraph 6
<i>Related document:</i>	MSC 83/28, section 21

Outcome of MSC 83

1 The Maritime Safety Committee, at its eighty-third session, having considered documents MSC 83/21/1, MSC 83/21/2, MSC 83/INF.3 and MSC 83/INF.8 (Denmark), which reported on the FSA study on Liquefied Natural Gas (LNG) carriers and containerships carried out within the research project SAFEDOR, discussed how best to further proceed with the item in general and, in particular, how to deal with the reports on the FSA study so far submitted to the Organization.

2 Having recognized the importance of the outcome of FSA studies and the need to review those studies, the Committee recalled the procedure for the review of the reports of FSA studies, specified in the amendments to the Guidance on the use of the human element analysing process (HEAP) and formal safety assessment (FSA) in the rule-making process of IMO (MSC-MEPC.2/Circ.6), and agreed, in general, that a group of experts needed to be established and to consider the matter further at a future session. In this regards, MSC 83 noted the possibility of holding an FSA Experts Group at MSC 86 as a working group.

3 In the course of the discussion, MSC 83 also noted that concrete proposals included in documents MSC 83/21/1 and MSC 83/21/2 may be within the scope of responsibility of the Sub-Committees concerned and, therefore, noted that interested Member Governments may submit documents to relevant sub-committees or formal proposals to the Committee for new work programme items in accordance with the Committee's Guidelines on the organization and method of work, as appropriate.

4 The Committee, recognizing that there would be an outcome of MEPC 57 regarding environmental risk acceptance criteria and other submissions to MSC 84, agreed to retain the item in the provisional agenda for MSC 84, and invited Member Governments and international organizations to submit, to MSC 84, proposals and comments on the further improvements of the FSA Guidelines and the Guidance on the use of HEAP and FSA.

Matters related to review of FSA studies, including establishment of an FSA Experts Group

5 In the context of the paragraph 2 above, with regard to review of FSA studies and establishment of an FSA Experts Group, the Secretariat has included relevant parts of the above-mentioned Guidance on the use of HEAP and FSA (MSC-MEPC.2/Circ.6), for ease of reference, as reproduced in annex 1. Furthermore, a list of FSA studies submitted to IMO is attached in annex 2, for reference of the Committee.

Action requested of the Committee

6 The Committee is invited to note the above information and take action as appropriate.

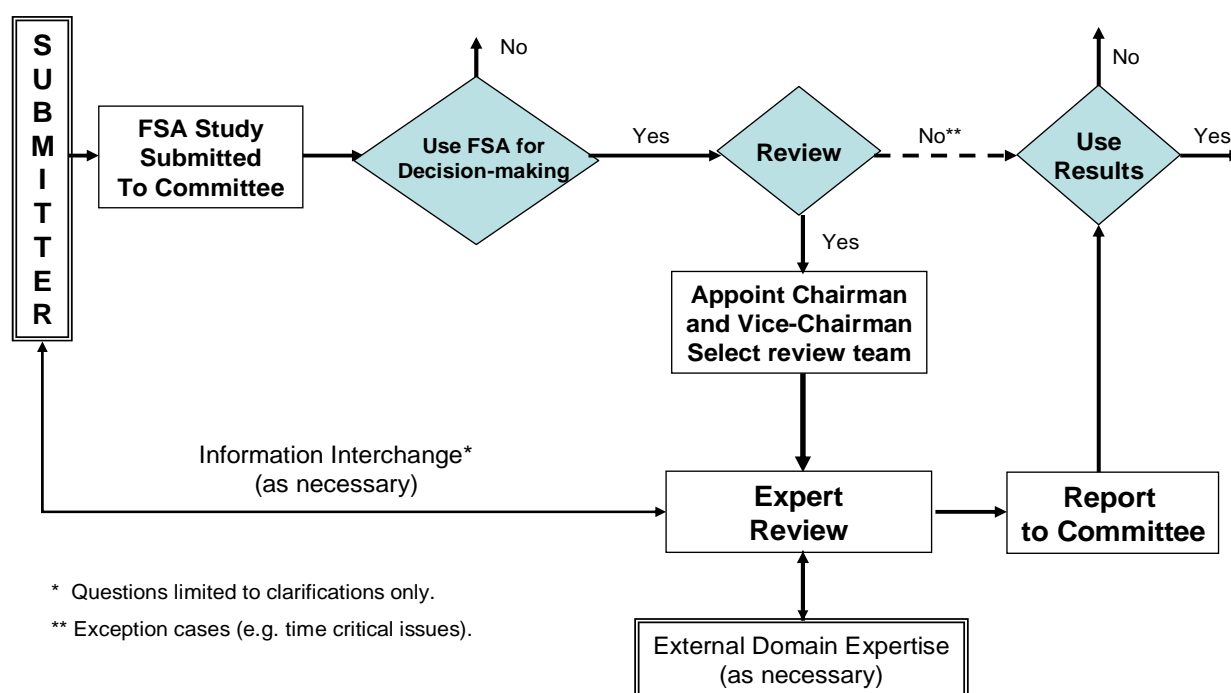
ANNEX 1

**EXTRACTS FROM AMENDMENTS TO THE GUIDANCE ON THE USE OF THE
HUMAN ELEMENT ANALYSING PROCESS (HEAP) AND FORMAL SAFETY
ASSESSMENT (FSA) IN THE RULE-MAKING PROCESS OF IMO
(MSC-MEPC.2/CIRC.6)**

Review of an FSA study

26 The Committee or an instructed subsidiary body should consider the submission of an FSA study and decide, on a case by case basis, the most appropriate course of action. When the subject is sufficiently clear, the Committee can form an opinion about the FSA study and its relevant proposals, and decide accordingly. In other circumstances, the Committee may decide that a review is necessary to validate the FSA study and its findings.

27 The review process should be carried out within the Organization, by a group of experts established by the Committee for that purpose following the flow chart shown in figure 2 below.



**Figure 2
Flow chart for FSA review process**

28 The terms of reference of such a review should be established by the Committee, based on the matter under consideration. The terms of reference should provide instructions to:

- .1 consider whether the methodology was applied in accordance with the FSA Guidelines;
- .2 check the reasonableness of the assumptions and whether the scenarios adequately addressed the issues involved;

- .3 check the validity of the input data and its transparency (e.g., historical data, comprehensiveness, availability of data, etc.);
- .4 check whether risk control options and their interdependence were properly evaluated and supported by the assessment;
- .5 check whether uncertainty and sensitivity issues have been properly addressed in the FSA study;
- .6 check whether the scope of the assessment was met in the FSA study;
- .7 check whether expertise of participants in the FSA study was sufficient for the range of subjects under consideration; and
- .8 provide a report on the above issues, which should include a discussion on any strengths and weaknesses, the lessons learned regarding the FSA Guidelines and their application and the evidence used to support the conclusions.

29 When the Committee decides to establish a group of experts for a specific project, it should determine the number of meetings necessary to meet the target completion date.

30 The Members, having carried out the FSA study, should provide timely and open access to relevant supporting documents, and any reasonable opportunity to take into consideration the comments received.

31 The results of the review by the group of experts should be presented to the Committee or instructed subsidiary body, as appropriate. The group of experts should, as a goal, try to reach consensus on its conclusions for the review of the FSA study, but where there are strong conflicting views, these should be indicated in the report.

Structure of the group of experts

32 Participation in a group of experts will be voluntary and is open to all Member Governments and non-governmental organizations.

33 A Chairman and a Vice-Chairman should be selected by the Committee when it decides an FSA study should be reviewed by a group of experts.

Selection of the experts

34 Members participating in a group of experts should, as a minimum, have knowledge/training in the application of the FSA Guidelines, and should have, at least, one of the following qualifications:

- .1 risk assessment experience;
- .2 a maritime background; or
- .3 relevant knowledge or any unique concerns related to the FSA (e.g., human element).

- 35 When selecting the experts, the following should be ensured that:
- .1 Governments nominate experts who have suitable qualifications in the field of formal safety assessment;
 - .2 experts are scientifically independent (i.e., acting in an individual capacity); and
 - .3 experts have not been involved in the FSA study to be reviewed.

ANNEX 2

LIST OF FSA STUDIES SUBMITTED TO IMO

(the list is not necessarily exhaustive)

Document	Title	Submitter	Remark
MSC 83/21/1 MSC 83/INF.3	FSA – Liquefied Natural Gas (LNG) carriers	Denmark	being considered by MSC
MSC 83/21/2 MSC 83/INF.8	FSA – container vessels	Denmark	being considered by MSC
MSC 81/24/5 MSC 81/INF.9	FSA Study on ECDIS/ENCs: Details on risk assessments and cost benefit assessments	Denmark Norway	being considered by NAV
NAV 51/10 NAV 49/INF.2	FSA – Large passenger ships – navigational safety	Norway	considered by NAV
NAV 52/6/2	Evaluation of cost-effectiveness of ECDIS in routes of cargo ships considering ENC coverage	Japan	considered by NAV
MSC 78/5/1 MSC 78/INF.6	Comparative study of single and double side skin bulk carriers	Greece	considered by MSC
MSC 76/5/5	BULK CARRIER SAFETY: International collaborative FSA study – final report	United Kingdom	considered by MSC
MSC 75/5/2	Report on FSA Study on bulk carrier safety	Japan	considered by MSC
MSC 74/5/4	BULK CARRIER SAFETY: Formal Safety Assessment: Fore-end watertight integrity	IACS	considered by MSC
MSC 70/14	Report of the intersessional correspondence group on helicopter landing areas (HLAs)	United Kingdom	considered by MSC
COMSAR 3/9/13	SOLAS regulation III/28.2: Helicopter landing area (HLA) on non-ro-ro passenger ships	Norway ICCL	considered by MSC
MSC 69/14/7	Formal safety assessment study on the effects of introducing helicopter landing areas (HLA) on cruise ships	Italy	considered by MSC