



GESAMP

Joint Group of Experts on the
Scientific Aspects of Marine
Environmental Protection

GESAMP 49/4
29 July 2022
ENGLISH ONLY

49th session
Agenda item 4

**PLANNING OF GESAMP ACTIVITIES:
EVALUATION OF THE HAZARDS OF HARMFUL SUBSTANCES
CARRIED BY SHIPS**

Report of the Chair of Working Group 1

1 Since the last meeting of GESAMP, Working Group 1 has met once. The 59th session (EHS 59) was conducted via a combination of correspondence and virtual plenary sessions from 16 March to 13 May 2022, and was chaired by Mr. Richard Luit. The full report has been published as EHS 59/9 and circulated as IMO circular PPR.1/Circ.12.

Main use of GESAMP/EHS outputs

2 As outlined in the previous reports to GESAMP, the GESAMP Hazard Profiles (GHP) developed by Working Group 1:

- .1 contain a unique fingerprint for each substance, providing information on fourteen separate human health, environmental and physico-chemical hazards and consist of an alphanumeric notation designed to communicate the hazards;
- .2 are published by IMO annually as the GESAMP Composite List (circulated together with the meeting report as a PPR.1 circular), which are placed on the IMO website for the use of maritime Administrations, the shipping industry and chemical manufacturers; and
- .3 provide the basis for the pollution categorization of over 900 substances. MARPOL Annex II and the International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) utilize these profiles to determine the pollution category, ship type and carriage requirements for each chemical, for the purposes of bulk carriage in ships.

3 The latest draft version of chapter 21 of the International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk (IBC Code) makes direct reference to GHP ratings for all carriage requirements including environmental protection, ship safety, and occupational health. The GESAMP Composite List is the only global list of hazard classifications/ratings used for regulating hazardous chemicals on a global scale based on guidance given by the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Evaluation of substances

4 The main work carried out at the last session concerned the evaluation of substances, as per the usual practice. Data on ten new substances were evaluated and full GESAMP Hazard Profiles (GHPs) were assigned to all substances. The Group also considered requests for the re-assessment of three substances for which new ratings were assigned or the existing rating was confirmed.

Classification issues

Estimation of acute dermal toxicity

5 The Group noted that information on acute toxicity resulting from dermal exposure is sometimes lacking, a function, in part, of restriction in animal testing of corrosive substances for

ethical reasons. As was the practice during EHS 58, at EHS 59, dermal toxicity ratings, in the absence of data, were assigned based on direct extrapolation from oral toxicity in line with the current content of GESAMP Reports and Studies No.102 where it is indicated (Section 4.3.3.) that "Chemicals that are non-toxic by the oral route are generally also non-toxic by the dermal route, based on acquired experience. Similarly, orally toxic chemicals are also potentially toxic by dermal application. Data of this nature enable experts to estimate the toxic potential in the case of route-specific missing data".

6 As noted during EHS 58, the Group again noted that, according to the GHS and the methodology described in GESAMP Reports and Studies No. 102, corrosive or irritating properties are not reflected in the acute dermal toxicity rating in the GESAMP Hazard Profile.

7 The Group recalled the discussions during EHS 58 regarding the appropriateness of estimating acute dermal toxicity ratings solely on acute oral toxicity information in the absence of acute dermal toxicity test data and when the skin irritation/corrosion and/or eye irritation ratings were greater than zero. The Group agreed that in such cases a note would be included in the report to flag that the acute dermal toxicity rating does not take into account the potential for irritation or corrosion.

8 Different viewpoints were expressed on potential future options that the Group could pursue in this context. Potential options that were mentioned during the discussions at this session included:

- .1 continuing with the practice of estimating the acute dermal toxicity rating based solely on acute oral toxicity information in the absence of dermal toxicity test data; and for substances where the skin irritation/corrosion and/or eye irritation ratings were greater than zero, noting in the report that the acute dermal toxicity rating was based on oral acute toxicity and did not take into account the potential for irritation or corrosion; or
- .2 developing an extrapolation method for acute dermal toxicity in a similar fashion to the GESAMP acute inhalation toxicity extrapolation method; or
- .3 assigning "NI" for acute dermal toxicity in the absence of acute dermal toxicity test data and providing advice to the ESPH Technical Group on how the "NI" rating should be interpreted in combination with the acute oral toxicity, skin irritation/corrosion and eye irritation ratings.

9 In this connection, the Group requested the Secretariat to compile background information on the development of PPR.1/Circ.7 (Decisions with regard to the categorization and classification of products) and the history of the acute inhalation toxicity extrapolation method as captured in previous EHS reports and reports of the BLG Sub-Committee and MEPC, in order to facilitate discussions at EHS 60.

10 The Group agreed to consider these matters further at its next and subsequent sessions. In this regard, the Group noted that if any future work on estimation of dermal toxicity significantly altered the current methodology of the Group and/or impacted the ratings of existing entries, it would keep the relevant IMO bodies (i.e. ESPH Technical Group, the PPR Sub-Committee, and MEPC) informed and seek their advice, as appropriate.

Vegetable oils used as feedstock for biofuel production

11 Having recalled that it had evaluated two substances which were used mainly as feedstock for biofuel production, the Group briefly considered whether it would be appropriate to develop generic entries covering groups of similar vegetable oil products, should there be an increase in the requests to evaluate vegetable oil products as a result of the expected growth in demand for biofuels and the associated shipment of feedstock oils for the production of biofuels.

12 In this context the Group recalled that in 2003, the Chair of GESAMP/EHS at the time had informed ESPH 9 that GESAMP would, in future, only evaluate additional vegetable oils on the basis of data provided (MEPC 71/11, paragraph 7.1.4). Therefore, to avoid considering options that could be inconsistent with previous decisions of the Group or IMO, the Group:

- .1 agreed to defer further discussions regarding whether grouping vegetable oils in the Composite List was appropriate or not until its next session; and
- .2 requested the Secretariat to compile excerpts from past reports of the GESAMP/EHS Group, MEPC, the BLG Sub-Committee and the ESPH Group, that reported on developments and decisions relating to vegetable oils, in time for EHS 60.

13 In this connection, the Group agreed that, should it consider it necessary to initiate work in future that could potentially change the names and/or groupings of vegetable oils in the Composite List, it would inform and seek the advice of the relevant IMO bodies (i.e. ESPH Technical Group, the PPR Sub-Committee, and MEPC), as appropriate, at an early stage.

Assessment of formulated mixtures (preparations)

14 The Group recalled that at EHS 58 it made observations and recommendations on how the assessment of formulated mixtures (preparations) could be facilitated (GESAMP 48/4, paragraph 13, and PPR.1/Circ.11, paragraphs 5.7 to 5.11, and annex 5).

15 As in EHS 58, the Group noted that, on a general basis, manufacturers of formulated mixtures containing unassessed components, would be advised by the Secretariat to make separate submissions for each unassessed component to GESAMP/EHS, if sufficient and appropriate data are not available for the mixture as a whole, in order for the Group to assign GESAMP Hazard Profile to each unassessed component. With all components in a mixture having a separate GESAMP Hazard Profile, a submission could be made to the ESPH Technical Group that would subsequently assess the mixture for inclusion in list 3 (trade-named mixtures) of the MEPC.2/Circular. The Group also noted that this was in line with the guidance in paragraphs 7.5 and 7.10 of MEPC.1/Circ.512/Rev.1.

List of decisions and recurring/ongoing classification issues

16 The Group agreed to keep an internal list of decisions and a record of recurring or ongoing classification issues that required consideration over several sessions, with the aim of ensuring consistency and facilitating future revisions of Reports and Studies No. 102.

17 The Group compiled an initial record and agreed to keep it updated. The Secretariat was requested to circulate the list to the members of the Group prior to each EHS meeting.

Action requested of GESAMP

18 GESAMP is invited to consider the information provided and to take action as appropriate.
