



GESAMP

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

GESAMP 43/7
11 November 2016
ENGLISH ONLY

43rd session
Agenda item 7

SCOPING ACTIVITIES

Progress on the possible establishment of a working group on the impacts of wastes and other matter in the marine environment from mining operations, including deep-sea mining

Submitted by IMO

Introduction and background

1 In 2015, GESAMP 42 was informed of the progress made by the GESAMP correspondence group in developing a scoping paper on the impacts of mine tailings in the marine environment, including the outcomes of the GESAMP International Workshop held in Lima, Peru, in June 2015, on this topic. GESAMP 42 noted a proposal to establish a working group on the issue, however, given that the outcomes of the GESAMP Workshop were expected to be further discussed at the meeting of the governing bodies of the London Convention and Protocol in late 2015, GESAMP decided to further develop the draft terms of reference and work plan in the intersessional period with a view to establishing a working group as soon as practicable.

2 The Chairman of the correspondence group has not progressed this activity since the last session, however, developments under the London Convention and Protocol and the International Seabed Authority indicate a desire that work should continue along a scientific track with a view to providing advice on what impacts could arise from the marine disposal of mine tailings around the world, in the context of the London Convention and Protocol and in relation to deep seabed mining. Recent developments are set out in the following paragraphs.

Progress in the finalization of the report of the international workshop on mine tailings

3 As a reminder, following the offer by the Government of Peru, an international workshop on the impacts of mine tailings in the marine environment, was held on 10 and 11 June 2015 at the Melia Hotel in Lima, Peru. The workshop was hosted by the Maritime Authority of Peru and organized as a joint IMO-GESAMP activity. The workshop was supported by the International Network for Scientific Investigations of Deep-Sea Ecosystems (INDEEP)¹, the Deep Ocean Stewardship Initiative (DOSI)², the Research Council of Norway (Norges Forskningsråd, NFR), the Chilean and Peruvian mining industry associations and the Peruvian Coast Guard. The workshop was attended by more than 90 participants, including relevant researchers, policy makers, coastal and marine managers and industry.

¹ <http://www.indeep-project.org/>

² <http://www.indeep-project.org/deep-ocean-stewardship-initiative>

4 A draft report was prepared in late 2015 and reviewed by Mr. Craig Vogt (Craig Vogt Inc., consultant to GESAMP), Ms. Eva Ramirez-Llodra (NIVA, Norway), Professor David Johnson (Seascope Consultants Ltd, United Kingdom and ACOPS) and Dr. Patricio Bernal (Pontificia Universidad Catolica De Chile). A peer review was conducted by GESAMP Members in the spring of 2016. The final pre-publication version is available as document GESAMP 43/INF.2, for information. It is envisaged that the final publication will be available before the end of 2016.

Further intersessional activities

5 In September 2016, the Meetings of the governing bodies of the London Convention and Protocol, having reviewed progress of the LC/LP correspondence group on this topic and the revised draft terms of reference:

- .1 endorsed the LC/LP Scientific Groups' recommendation, through IMO, to invite GESAMP to commence work addressing the first part of the revised draft terms of reference and to proceed to a full assessment when sufficient funds were available (refer to annex 1);
- .2 invited delegations to provide the Secretariat with possible names of experts in relevant fields who, in their own capacity, could be members of a GESAMP working group; and
- .3 encouraged delegations to donate funds or sponsor experts to support the work of the GESAMP working group.

6 The Meetings were informed of an IUCN resolution adopted recently at the World Conservation Congress in Hawaii (1 to 10 September 2016) which called, inter alia, "on all states to ban marine disposal of mine tailings for new mines as soon as possible" and which asked "UNEP-GPA and IMO to recommend regulation of submarine tailings disposal from land-based activities in the same manner as in the open sea, applying the general principles of the IMO, and the London Convention and Protocol".

7 The Meetings also noted that the LC/LP Scientific Groups had reviewed the environmental management of deep seabed mining (DSM) and had discussed the methods of extraction, sediment plumes and the rehabilitation of areas' post-mining activities. The Meetings agreed that it was evident that there were many uncertainties about the environmental risks and potential impacts of deep seabed mining and that the body of knowledge and experience that exists within the LC/LP can provide an important contribution to the regulation of deep seabed mining activities.

Options for continued involvement by GESAMP: establishment of a working group

8 Building on the initial scoping paper (GESAMP 42/7/1), the outcomes of the workshop, and the recent developments under the LC/LP and ISA, GESAMP will need to decide whether it wishes to commence this study along the revised draft terms of reference at annex 1.

9 Given the previous initial interest of the Sponsoring Organizations, and the cross-cutting nature of the issue, there seems to be a good potential for the establishment of a working group. Recall that in 2013-2015, several Sponsoring Organizations expressed an interest, including IMO, UNIDO, IAEA, UNEP and UNDP.

Action requested of the GESAMP

10 GESAMP is invited to note the information provided and decide if the establishment of a working group, in 2017, would be desirable.

ANNEX 1

Revised draft terms of reference and work plan for a GESAMP working group on the environmental impacts effects of wastes from mining operations disposed at sea

Terms of reference

1 The working group on the impacts on tailings from mining operations on the marine environment is requested to undertake a literature review on the following aspects:

- .1 Identify and provide a better understanding of potential environmental impacts of marine disposal of tailings and associated wastes from land-based mining operations (hereinafter referred to as “mine tailings”), taking into account potential linkages between deep water ecosystems at the disposal site and other (e.g., ecological, biological) resources in the water column. The impacts could include, but are not limited to, those identified in the report of the workshop on mine tailings provided to GESAMP at its last meeting (GESAMP 42/7/1);
- .2 Review the extent and suitability of baseline assessments (prior to any construction or discharge) conducted to date and identify the key elements for comprehensive surveys of baseline conditions from which abiotic and biotic impacts can be assessed, taking into account the latest detection technologies of marine pollution and its impact to the organisms;
- .3 Review and identify the best practices in modeling the physical and chemical behavior of discharged mine tailings (e.g. slurries), including the shearing and upwelling of both the solids and soluble fractions, as well as the significance of tidal dispersion and potential for long-range transport of fine materials, and determine whether existing models are adequate or further development is needed;
- .4 Review and evaluate the processes of exposure and effect and the pathways for mine tailings disposal operations, including those related to the physical presence of the wastes, exposure to associated contaminants, their accumulation, and the potential effects at community level;
- .5 Implications arising from the fact that marine organisms normally used for toxicity testing are from upper layers of marine water, not the deep sea;
- .6 Review and identify physical and ecological models to estimate the recovery processes of deep sea ecosystems around the possible impacted area; and
- .7 Produce a report on the above work under a time frame and any other reporting requirements to be agreed between LC/LP and the GESAMP.

The expertise required by the Working Group includes:

2 Marine scientists and engineers with expertise in marine ecology (in particular plankton ecology, macroalgae and benthos), fisheries, marine chemistry/geochemistry, biogeochemistry, and physical oceanography (including modelling);

Work plan and provisional timeline:

3 The working methods of the working group will be a mix of meetings and intersessional work/correspondence, including video/telephone conferencing where appropriate.

4 Provisional timeline for phase 1 (phase 2 to be agreed subject to availability of funding):

- .1 Meeting in first half 2017;
- .2 Deliver interim report by end of 2017;
- .3 Deliver final report by end third quarter 2018;
- .4 Peer review of the draft report by fourth quarter 2018; and
- .5 Publication, dissemination and outreach, as appropriate.

Administrative arrangements

5 The following administrative arrangements are proposed:

Sponsors: IMO, UNEP, UNDP, UNIDO, [ISA] (to be discussed at GESAMP 43).

Budget and funding: Appr. USD 80,000 needed; USD 40,000 secured for the first phase (Government of Canada and IMO). Additional funding will be sought following results of interim report from Sponsoring Organizations and industry.

WG Chairperson(s) and members: Chairman tbd. Other members to be discussed at GESAMP 43.

Technical Secretary: IMO (Mr. Fredrik Haag)
