



GESAMP

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

GESAMP 42/4/4
13 August 2015
ENGLISH ONLY

42nd session
Agenda item 4

**PLANNING OF GESAMP ACTIVITIES:
ESTABLISHMENT OF TRENDS IN GLOBAL POLLUTION
IN COASTAL ENVIRONMENTS**

Report of the Chairperson of Working Group 39

1 The purpose of WG 39 is to contribute to the reduction of stress in the coastal ecosystem by providing stakeholders, scientists and society with an objective and global assessment of pollution trends during the last century in sensitive coastal ecosystems. At the request of IAEA, WG 39 looks at the establishment of trends in global pollution in coastal environments.

2 The current membership of WG 39 is: Ms. Ana Carolina Ruiz-Fernandez (Chairperson; Mexico), Ms. Roberta Delfanti (Italy), Mr. José Marcus Godoy (Brazil), Mr. Elvis Nyarko (Ghana), Mr. Joan-Albert Sanchez-Cabeza (Mexico), Mr. José L. Sericano (United States), Ms. Elvira Sombrito (Philippines), Mr. Norbert Theobald (Germany).

3 The Working Group (WG) met for the first time back-to-back with the International Symposium on Isotopes in Hydrology, Marine Ecosystems, and Climate Change Studies in Monaco at the beginning of April 2011. Terms of Reference (ToR) were provided and members agreed on the working methodology and distribution of tasks among them. The main activity agreed was to conduct literature surveys on temporal trends of pollution of coastal ecosystems following a list of priority substances, and to classify the information according to the geographical definitions of the Large Marine Ecosystems (LMEs).

4 A bibliographic database was designed in MSExcel to organize the information extracted from the documents collected. The database and the document collection management was made through the file-sharing website DropBox. The compilation should be periodically reviewed, backed up, and be made available by Ms. Ruiz Fernandez.

5 A report of the WG 39 inception meeting was submitted to the 38th session of GESAMP, held in May 2011. The WG members engaged in intersessional work on the compilation of documents and population of the database but it was noted that additional financial support was needed to continue working with the tasks included in the ToRs.

6 During the 40th session of GESAMP it was reported that WG39 had compiled 304 scientific papers and the bibliographic records had been introduced in the WG 39 database (DropBox). Information from 27 of the 64 LMEs was gathered. Some of the LMEs may have no records because no studies have yet been performed in that region. In addition, a pilot web platform was presented, developed by UNINMAR at the Institute of Marine Sciences and Limnology, National Autonomous University of Mexico (ICMyL-UNAM), with the aim to host and manage the information contained in the WG 39 database. It was stated that financial support was needed for further development of the web platform, and for the preparation of

the data for the pollution trend analysis (specially, the digitalization of core profile figures from the papers in the database).

7 The second meeting of the WG 39 was held at the Environment Laboratories of the International Atomic Energy Agency (IAEA) in Monaco in May, 2014. An improved version of the web-based analysis tool was presented which has the capability to assess the pollution trends in the temporal series obtained from the literature. The analysis routine was carefully explained step by step so WG3 9 members were able to perform trend analysis in their assigned LMEs.

8 As a pilot study, the relevant figures of LME 03 California Current were digitized by UNAM at no cost to the leading organizations. All WG 39 members worked in the quantification of temporal trends from selected papers, pollutants were grouped, statistical tests were performed, a preliminary LME dataset was integrated, pollutant concentrations were compared to the NOAA-SQUIRT benchmarks to evaluate potential risk of harmful effects to the coastal resources, and a preliminary report on LME 03 California Current was produced. The WG 39 working methodology was revised according to the experience gained by all WG 39 members during i) the literature search and review (Task 1) and ii) the pilot pollution trend analysis performed in Session 2 of this meeting.

9 During the meeting WG 39 members delineated and agreed on future work and task assignment. After the examination of the pilot study members agreed that the methodology designed, the existing tools and available data will warrant a high quality and high impact product. The WG 39 members stressed that support was needed to continue with the WG 39 tasks.

10 At the end of the meeting, the main results were presented to IAEA-EL Director Mr. D. Osborn and IAEA-EL staff Ms. I. Osvath. Mr. Osborn recognized the quality and relevance of the work done and further emphasized the IAEA interest and commitment to the objectives of WG39. He mentioned that IAEA would look for funding in order to continue the work of WG39, notably the digitation of all data and gathering of information for the final report.

11 A report of the 2nd meeting of WG 39 was submitted to the 42nd session of GESAMP. It was explained that all information obtained from the data analysis will be carefully described and interpreted in the detailed report for each LME and submitted for review by the GESAMP members before publication.

12 GESAMP agreed that appropriate funding was required to support the implementation of the pending WG 39 activities (e.g. digitation of paper graphs, maps production, 3rd meeting of the WG 39 to review the report) during the intersession period. The timeline for completion of the work would depend on the availability of funds.

13 During the first quarter of 2015 IAEA and IMO have agreed to provide the needed funds to support the pending work of GESAMP WG39. UNINMAR-UNAM has committed to provide the final report within one year upon reception of the resources. The first allocation (from IAEA) has been recently transferred and UNINMAR-UNAM is currently in the process of hiring the students that will contribute to the WG 39 tasks.

Leading Agency: IAEA

Mr. Michael Angelidis, IAEA Environment Laboratories

Co-sponsoring Agency: UNIDO

Mr. Ludovic A. Bernaudat, Environmental Management Branch