



IMO



FAO



UNESCO



IOC



WMO



UNIDO



IAEA



UN



UN environment



UNDP



ISA

# GESAMP and SCOR

*SCOR annual meeting, Santa Marta Colombia*

*October 31 2025*

Wendy Watson-Wright, PhD  
GESAMP Chair



Photo credit: Alick Tsui, CBC news

# GESAMP



# GESAMP

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



# What is GESAMP?

- UN Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection
- Interagency body - advisory to UN since 1969
- Currently 10 sponsoring UN Organizations
- Secretariat - IMO, London, UK



IMO



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**UN**  
environment



UNDP



ISA



# What is GESAMP?

Purpose: ‘to provide authoritative, independent, interdisciplinary scientific advice to organizations and governments to support the protection and sustainable use of the marine environment.’



# What is GESAMP?

CONSISTS OF

15-20

EXPERTS

FROM 1969 PRODUCED

52

IN-DEPTH STUDIES

MORE THAN

500

SCIENTISTS

FROM AT LEAST

50

COUNTRIES

*\* Membership (as of October 2025): Australia (e), Canada, Fiji, India, Netherlands, New Caledonia, Nigeria (e), South Africa, UK, USA*



# GESAMPs accomplishments

- Scientific
  - Reviews - Health of the ocean; harmful substances
  - Ballast water management
  - Plastics (incl. micro/nano) in marine environment
  - Air-sea exchange of chemicals
  - Marine geoengineering statements\*
- Policy/operational advice





# GESAMPs accomplishments



ELSEVIER

Contents lists available at [ScienceDirect](#)

## Marine Pollution Bulletin

journal homepage: [www.elsevier.com/locate/marpolbul](http://www.elsevier.com/locate/marpolbul)



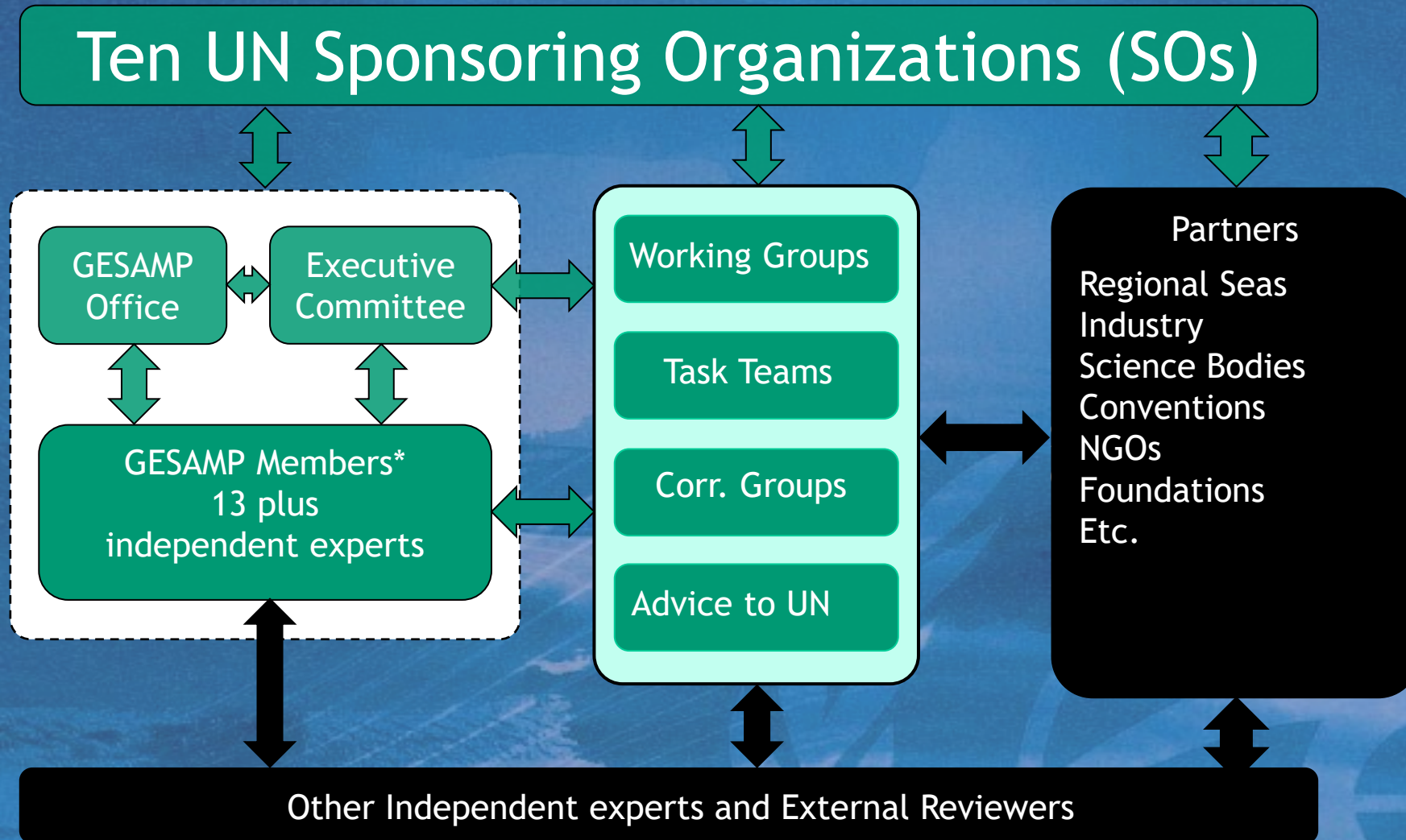
The UN Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection (GESAMP) — An ocean science-policy interface standing the test of time

Wendy M. Watson-Wright<sup>a,\*</sup>, Peter G. Wells<sup>b</sup>, Robert A. Duce<sup>c</sup>, Kirsten V. Gilardi<sup>d</sup>, Alexander S. T. Girvan<sup>e</sup>, Michael E. Huber<sup>f</sup>, Peter J. Kershaw<sup>g</sup>, Jan B.H.J. Linders<sup>h</sup>, Richard J. Luit<sup>i</sup>, Chris M.G. Vivian<sup>j</sup>, David H. Vousden<sup>k</sup>

# How GESAMP functions

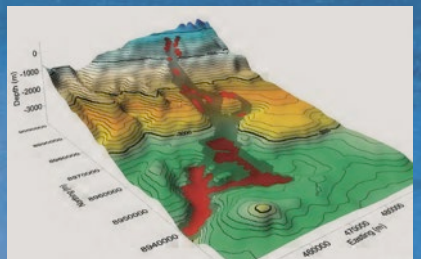
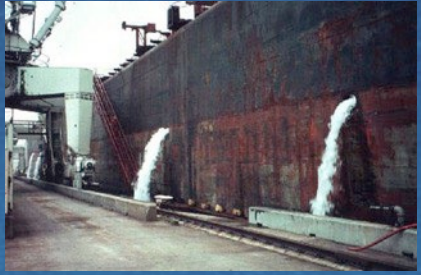


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# GESAMP Working Groups



- Assessments requested and supported by SOs
- Chaired by GESAMP member with leading global experts
- Formal Terms of Reference and membership as agreed with SOs
- Reports normally published in GESAMP R&S series
  - Peer reviewed
  - Approval by GESAMP
  - Summary for Policy Makers



# Current GESAMP Working Groups

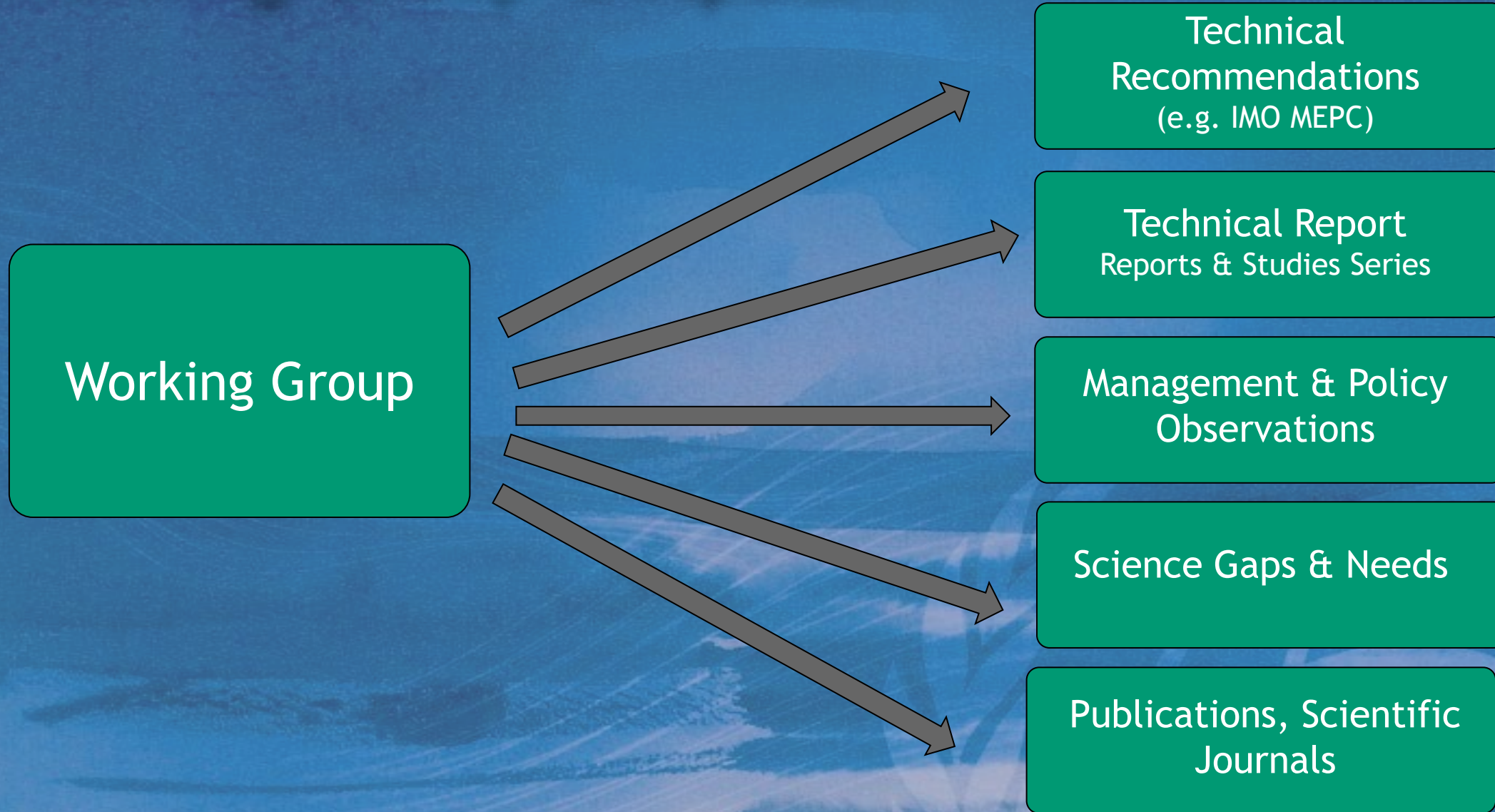
- WG 1 - Evaluation of hazards from harmful substances carried by ships (IMO)
- WG 34 - Ballast water management systems (IMO)
- WG 38 - Atmospheric inputs of chemicals (WMO)
- WG 40 - Sources, fates & effects of plastics/microplastics (IOC, UNEP)
- WG 41 - Ocean interventions for climate change mitigation (WMO, IOC-UNESCO, UNEP)
- WG 42 - Impacts of wastes, etc., from mining (IMO, UNEP, ISA)
- WG 43 - Sea based sources of marine litter (FAO, IMO, UNEP)
- WG 44 - Biofouling management (IOC, IMO, UNDP)
- WG 45 - Climate change and GHG related impacts on contaminants (IAEA, IOC, WMO, IMO)
- WG 46 - Life cycle GHG intensity of Marine fuels (IMO)



# Working Group Outputs



**GESAMP**  
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# GESAMP Reports and Studies



**GESAMP**  
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Scientific Aspects of Marine  
Environmental Protection


**109**

**REPORTS AND STUDIES**

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


**THE CHANGING ACIDITY OF THE  
GLOBAL ATMOSPHERE AND  
OCEAN AND ITS IMPACT ON  
AIR/SEA CHEMICAL EXCHANGE**

GESAMP WORKING GROUP 38




**114**

**REPORTS AND STUDIES**

 **GESAMP**  
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Environmental Protection


**MARINE BIOFOULING:  
NON-INDIGENOUS SPECIES AND  
MANAGEMENT ACROSS SECTORS**

GESAMP WORKING GROUP 44



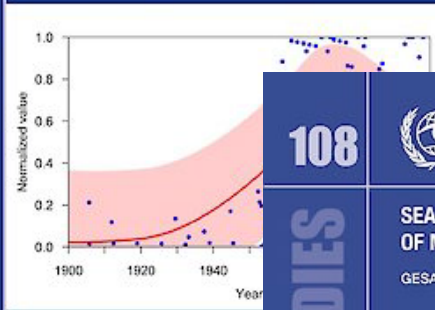
**106**

**REPORTS AND STUDIES**


 **GESAMP**  
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Environmental Protection

**GLOBAL POLLUTION TRENDS:  
COASTAL ECOSYSTEM ASSESSMENT  
FOR THE PAST CENTURY**

GESAMP WORKING GROUP 39




Year	Normalized value
1900	0.0
1920	0.1
1940	0.4




**108**


**REPORTS AND STUDIES**

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**SEA-BASED SOURCES  
OF MARINE LITTER**

GESAMP WORKING GROUP 43



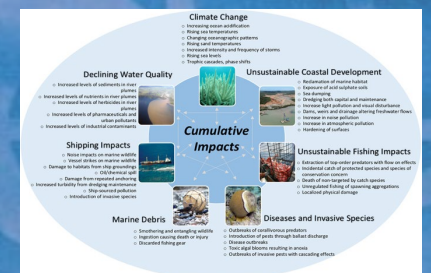


# GESAMP Correspondence Groups



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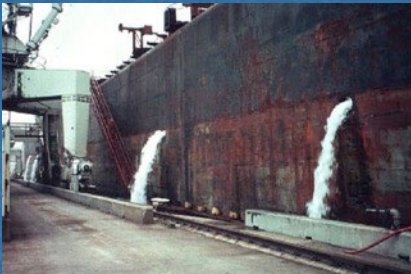
- Review concern and advise ExCom
- Recent examples
  - Sargassum in Caribbean and West Africa
  - Sand and gravel mining in marine environment
  - Ocean and Human/Animal Health
  - Cumulative impacts in marine ecosystems with a special focus on areas beyond national jurisdiction (**NB Cfp for lit review (Cfp\_OSER005) published on ISA website closing 2 November**)



# GESAMP Task Teams



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- Established at request of SO(s) or by GESAMP chair
  - Tasks not needing long-term WG, or
  - Significant event requiring prompt attention of GESAMP
- TT may investigate issue, prepare draft GESAMP statement
- Recent examples:
  - Climate change
  - Strategic Review of GESAMP
  - Exhaust Gas Cleaning Systems (EGCS)



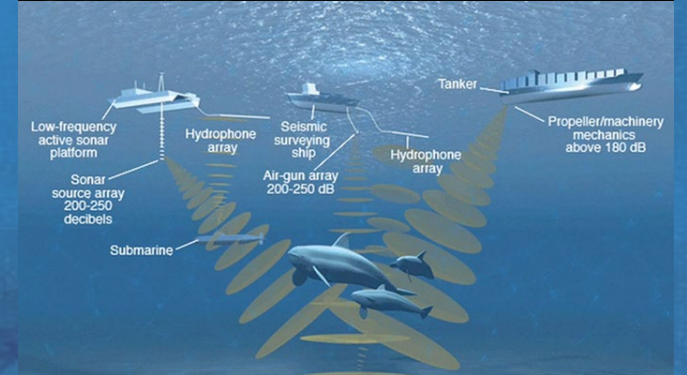
**2021** United Nations Decade  
of Ocean Science  
**2030** for Sustainable Development



# Scoping Activities

- Issues of growing concern considered and brought to attention of SOs
- Recent examples:
  - Artificial Light at Night (ALAN)
  - Sand and gravel mining in the marine environment
  - Cumulative impacts in marine ecosystems
  - Darkening of the pelagic photic zone
  - Contaminants and other substances in anti-fouling paints and marine coatings

*\*NB all issues have socioeconomic and marine law implications*





# SCOR interactions

## Personal

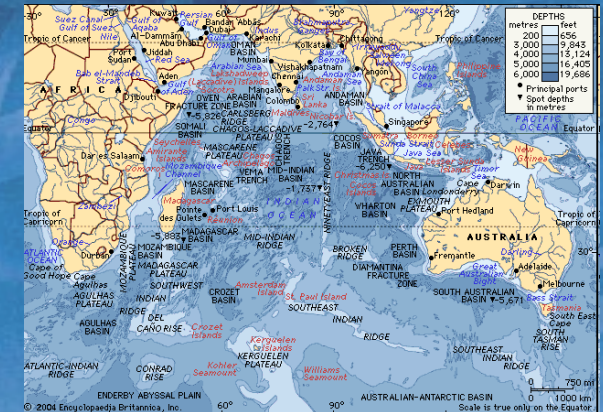
- Canadian context

- CNC-SCOR
- WOCE, GLOBEC, JGOFS, SOLAS, GEOTRACES, etc.
- SCOR leadership - Sundby, Sinclair, Mysak, Longhurst, Parsons, Myers, etc.

- 2010 SCOR meeting Toulouse

- SCOR a precursor to IOC-UNESCO

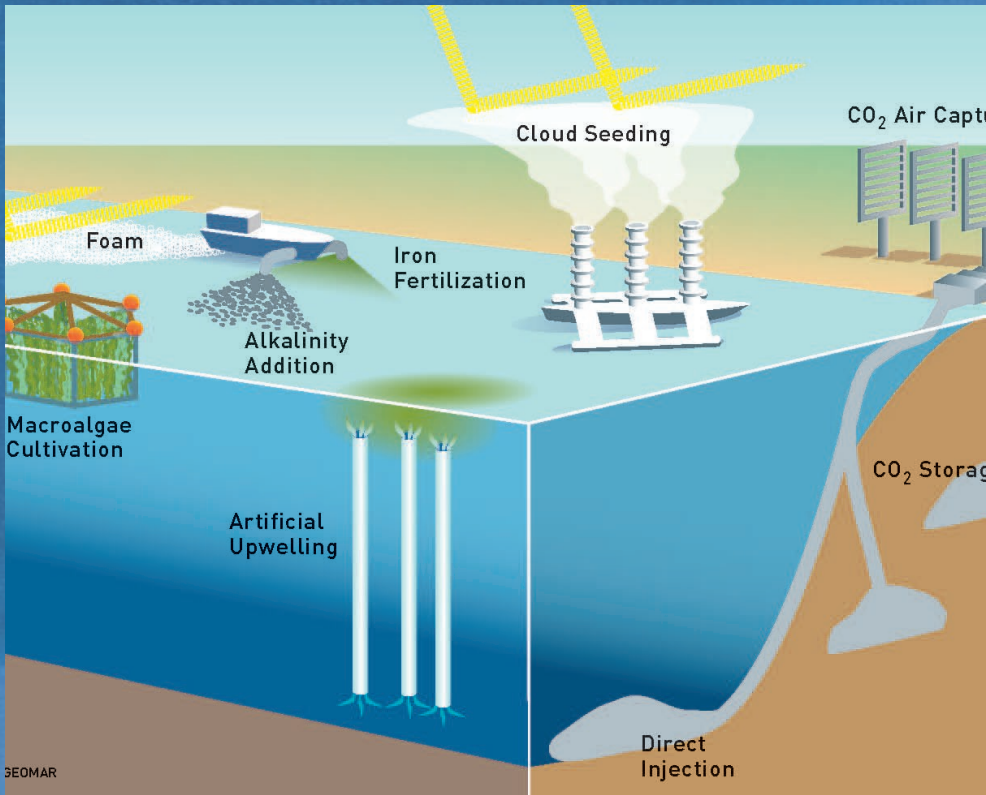
- Co-sponsors of IIOE-2





# GESAMP-SCOR interactions

## WG 38 - Atmospheric inputs to the ocean



- WG chair former president and exec com member
- Significant LT interactions with WG
  - SOLAS a direct positive result
- Workshops not possible without SCOR support
- 2008 joint SCOR-GESAMP statement on deliberate nutrient additions to the ocean



# GESAMP-SCOR interactions

WGs 40: Plastics and microplastics in the ocean

WG 43: Sea based sources of marine litter

- SCOR attendance - WG 40 workshop 2022 (S. Alianof)
- WG 43 chair (Gilardi) IMDOS SC member





# GESAMP-SCOR interactions

## WG 41 - Ocean interventions for climate change mitigation

- OAE postdocs funded by IconiQ contributing to SOLAS and WG 41

## WG 45 - GHG impacts on contaminants in the ocean

- Chair (Sarin) - INSA chair; nominated member of SCOR (India)
- Member (Allain) - involved in CLIOTOP (IMBeR)

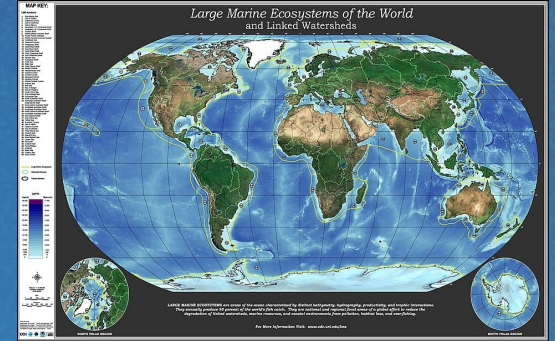




# GESAMP-SCOR interactions - future possibilities...

## SCOR interest in new GESAMP initiatives?

- Large Marine Ecosystems WG
- Marine Pollution WG in support of Decade initiative, “A Global Ocean Free from the Harmful Impacts of Pollution by 2050”
- Scoping paper on Cumulative Impacts in Marine Ecosystems
- Other?





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*One Planet, One Ocean*



Questions?