

Annual SCOR Working Group Reports to SCOR

Summary:

We finalized, submitted and published a manuscript focusing on the plankton measurements that have been and could be done on moorings such as those of OceanSITES and the data infrastructure that is needed to exploit them to the fullest. The manuscript includes, beyond a detailed account of available commercial sensors, a description of two polar mooring systems that have pioneered the use of such observations.

A workshop for early career scientists funded by NSF and including international participation focused on how to install, maintain and analyze data from flowthrough systems instrumented with optical sensors (one of the focuses of our P-OBS report regarding GO-SHIP) will take place the first week of August 2022.

The WG has completed its terms of reference and deliverables and may be disbanded.

1. Name of group

SCOR Working Group 154
Integration of Plankton-Observing Sensor Systems to Existing Global Sampling Programs (P-OBS)

2. Activities since previous report to SCOR (e.g., virtual or in-person meetings, email discussions, special sessions). Limit 1000 words

This is our 5th and last SCOR report.
Since our last report we have finalized and published Ocean-SITES report (in press in Frontiers, <https://www.frontiersin.org/articles/10.3389/fmars.2022.929436/abstract>).

3. Documents published since previous report to SCOR (e.g., peer-reviewed journal articles, reports, Web pages) and should be limited to publications that resulted directly from WG activities and which acknowledge SCOR support

See: <https://www.frontiersin.org/articles/10.3389/fmars.2022.929436/abstract>

4. Progress toward achieving group's terms of reference. List each term of reference separately and describe progress on each one. Limit 1000 words

Identify current technologies (sensors as well as water sample analyses) that can be integrated into existing observing infrastructure to provide input and guide studies of plankton for marine ecosystem and biogeochemistry studies -- *Finished*
Provide the necessary details associated with every technology/measurement proposed (e.g., power, cost, and human effort). -- *Finished*

Document potential applications, including science case studies and lists of publications, and document measurement protocols. Develop adequate protocols when these are not available. –

Finished

Identify synergies with specific measurements done from other observing programs (e.g., BGC-Argo, space-based measurements, Continuous Plankton Recorder surveys) to provide cross-calibration and a better representation of the 4-D distribution of the parameter measured. – *Finalized (in Lombard et al., 2019)*

Identify technological limitations and/or gaps, and identify areas of priority investments to develop and implement the required observation technologies and tools for specific needs. – *Finalized (in Lombard et al., 2019)*

Outreach activity – We see our involvement in the creation of a proposal to US GO-SHIP as a major outreach accomplishment. The first cruise by the group to place in 2022. We (Boss) will be teaching a workshop on optical measurements in flowthrough system in August, 2022 with international participation including two students from developing countries.

5. WG activities planned for the coming year. Limit 500 words

None. We have achieved our goals.

6. Is the group having difficulties expected in achieving terms of reference or meeting original time schedule? If so, why, and what is being done to address the difficulties Limit 200 words

We have managed to overcome our difficulties and have made it to the finish line.

7. Any special comments or requests to SCOR. Limit 100 words.

None

Additional information can be submitted and will be included in the background book for the SCOR meeting at the discretion of the SCOR Executive Committee Reporter for the WG and the SCOR Secretariat.