

Ocean Best Practices Task Team 2022-01: Coastal Observations in Under-Resourced Countries

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Broad Objective:

The purpose of the Task Team is to identify methods or practices that can be broadly used for observations of physical and chemical parameters of the coastal ocean.

Activities Overview:

To date the task team has made significant progress in establishing a global community and collating resources for writing best practices. Since the team leads and objectives are very similar, this task team has combined efforts with COLaB. Together the two teams have made significant progress in identifying cost effective instrument packages for use in low income communities and identifying pilot and training sites for the sustained rollout of COLaB packages.

Progress with best practice documents:

To date, the task team has yet to publish a best practice document; however a comprehensive library of resources has been compiled for the various aspects required for coastal observations. Members of the task team are actively working on best practices for the various instruments that will be used within the COLaB package as well as best practices for measuring a specific parameter/variable (see table below). These variables have been identified through the GOOS essential Ocean Variables.

Variable/Instrument	Status	Envisaged completion
Open CTD	Calibration and data management sections completed. Currently working on operation and overarching BP	Q2 2024
Open source spectrophotometer	Finalising prototype	Q2 2024
Data management	ERDDAP servers will be used as part of COLaB, BPs	Q4 2024

	will be developed based on COLaB requirements	
Phytoplankton	Overarching sample collection and analysis using open source hardware and software BP in progress	Q1 2024
Temperature & Salinity	Overarching measurement BP in progress	Q2 2024
Biogeochemistry	Comprehensive bibliography collated	Q4 2024
Ocean currents	Potential low cost instrument identified	Q4 2024
Tide gauge	Potential low cost instrument identified	Q4 2024

COLaB

Notable achievements in 2023:

- [Received POGO](#) endorsement and funding to plan and rollout a pilot site and training camp in Ghana
 - This is also partly funded through crowdfunding through the [experiment foundation](#)
- COLaB sites are an integral part of the [GlobalCoast program](#), thus far 3 sites have been identified namely, Ghana, Indonesia & Mozambique
 - The rollout of these pilot sites will be linked with a regional training camp
- COLaB has been identified as an integral project under the [International Indian Ocean Expedition](#)

Brest Workshop: Cost effective technology for coastal the ocean

The workshop presentations and session minutes can be found [here](#)

OBPS task-team 22:01 actively took part in the organisation of a 3-day workshop in Brest from November 13 to 15 2023 . Two days of the event were co-sponsored by the European project JERICO-S3 on low-cost technologies and the inclusion of wider communities, notably participatory sciences.

This mainly in-person meeting was conceived as a chance for the task-team to meet face-to-face a second time before the end of their mission (first time being the OBPS Workshop VI in October 2022), in order to compile their work on best practices, and to actively prepare for the training workshop to be held in Ghana in 2024, (for the restricted part – 1 day), but it was also a great opportunity to review the state of the art of developments on a global scale, and to pass on his recommendations and philosophy to the European team in charge of Low-Cost Science and Citizen Science in the European LandSeaLot project starting in 2024 (for the joint-session – 2 days)

This combined workshop initiative received a great response from the community: 54 participants, including 44 in person from Canada, New Zealand, South Africa and the United States, as well as video contributions from India, Mozambique and Ghana. While the event had been designed to be small enough to maximise collective work sessions - with the possibility of financial support for participants from developing countries -, the communication relay from our partners, including Coast Predict, worked beyond our expectations and we had to turn away over a hundred participants. These contacts will be kept for a detailed communication of the workshop proceedings.

Workshop sessions provided:

An update on new initiatives, including the growing emergence of "all-in-one kits" for coastal ocean observation (COLAB), eutrophication monitoring (GEM in A Box) or ocean acidification (GOA-ON Kit).

An overview of inspiring collaborations through concrete case studies in under-resourced countries,

The emergence of concrete solutions for data management via EMODNET and sensor enhancement thanks to the presence of small businesses, university fablab managers and technology developers.

The solution-oriented event provided an opportunity for rich exchanges and new global connections.

Follow-up initiatives include :

- The preparation of training workshops Ghana and Mozambique (with support from POGO and the Commonwealth Blue Chapter programmes)
- The kick-off of the UN decade project "community science" at the UN conference in Barcelona, in 2024
- A conference at Oceanology International in London to challenge sensor manufacturers to adopt more virtuous business models, as part of the EOOS tech forum and in collaboration with American partners grouped around the SYNCRO initiative.
- The European Horizon Europe LandSealot project