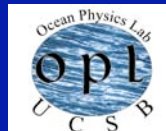


Comprehensive Global Biogeochemical Sampling via COOP/OOPC Collaborations

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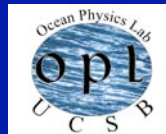


Issues Concerning Implementation of Global Biogeochemical Measurement Program

1. Selection of key variables for problems of interest: **Done**
2. Sensor/system technologies: available vs. needed: **Evolving**
3. Platforms - *in situ* and remote: available vs. needed: **Evolving**
4. Time and space scales to sample: coastal to open ocean: **TBD**
5. Sampling strategies/Data integration /telemetry/assimilation:
e.g., Use of data and models; **GODAE plus**

Focus: Joint needs and linkages of coastal & open ocean sampling programs:

Motivations for COOP-OOPC Collaborations



Issues Concerning Implementation of Global Biogeochemical Sampling Plans for GOOS

- 1. Measurements: calibration, validation, accuracy, resolution, biofouling, real-time data telemetry, cost**
- 2. Optimal sampling strategies: How many platforms and where? Groundtruthing satellites, Scales from data, Models using Optimal Sampling Simulation Experiments (OSSEs)**
- 3. Linkages of coastal & open ocean sampling programs**

Potential COOP-OOPC Collaborations/Benefits

1. Sensor selection, development, testing
2. Data & model sharing
3. Enhanced spatial coverage
4. Boundary/initial conditions for models
5. Joint measurement/model testbed programs
6. Others???

Summary

Discussions indicated that COOP views the biogeochemical variables as “shared” variables with OOPC.

There was support for joint work between a subset of COOP and OOPC committee members (external members may be selected to participate as well).

Our impression is that there are no disagreements between OOPC and COOP in terms of the direction of biogeochemical and bio-optical observational programs and that cooperation is seen to be beneficial to both.

Since COOP is presently finalizing its science planning document and beginning to outline the elements and organization of its implementation plan, timing is appropriate for initial discussions of plans for both OOPC and COOP interdisciplinary sampling activities.

The IOC-SCOR Carbon Plan (Hood, Doney, et al.) was discussed (to be reviewed in later report).

Action Items

It was agreed that OOPC and COOP would cooperate and collaborate in the development of biogeochemical and bio-optical observations (John Cullen, Julie Hall, Tony Knap with Tommy and other OOPC members and affiliates).

No formal committee was deemed necessary at this point, particularly since COOP implementation is in the nascent stage.

Tommy volunteered to work with COOP committee members, with John Cullen as Chair, in the development of sampling plans, particularly, in defining scales of variability that need to be resolved for in situ and remotely sensed variables. Progress is being made

Ed's and Tommy's (expanded) COOP IV PowerPoint Presentations are available along with Tommy's presentation and a bibliography.