C-GRASS: Coordinated Global Research Assessment of Seagrass Systems
SCOR Working Group 158

2024

1. Brief summary with the main highlights (200-300 words)

Over the past year the C-GRASS working group focused on completing the MS laying out specifications for the Global Ocean Observing System's Essential Ocean Variable 'Seagrass Cover and Composition' (TOR objective 2) and an associated data schema (TOR objective 3). This involved a continuing conversation with GOOS panel members, a GOOS public webinar presenting the approach, and a meeting of the C-GRASS working group, and other seagrass researchers, at the joint meeting of the International Seagrass Biology Workshop 15 (ISBW) and World seagrass Association in Naples, Italy, in June 2024. That meeting at ISBW15 included 9 working group members from 7 countries, along with several other seagrass researchers. The EOV MS has gone through several drafts with substantial input from an international group of co-authors and we are confident we will submit it for publication in a peer-reviewed journal by the end of 2024. Working group members also co-led or participated in several workshops at ISBW, including one exploring plans for global seagrass mapping co-led by Duffy.

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

- Hosted working group meeting and dinner at International Seagrass Biology Workshop 15 (ISBW, Aug 2024) in Naples, Italy, with 9 participants from 7 countries, focused on completing the group's charge and transitioning activities and some management responsibilities to the World Seagrass Association beyond the end of the SCOR project.
- Worked collaboratively through new drafts of the MS specifying the GOOS seagrass cover and composition Essential Ocean Variable, and associated data schema.
- Completed curation of the SeagrassNet legacy data set (2000 – 2016), to be uploaded to OBIS.

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

None yet

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

- **Objective 1**: Produce a scientific synthesis of status and trends in global seagrasses and the systems they support, via a comprehensive review of peer-reviewed and gray literature, and unpublished data, on seagrass occurrence, ecosystem characteristics, and benefits to human well- being.

    - Draft MS comparing remotely sensed vs in situ trends in seagrass dynamics, led by project Postdoc Johannes Krause, in revision.
    - Curation and QAQC of SeagrassNet legacy dataset completed, ready for submission to OBIS.
- **Objective 2**: Produce a handbook of standard protocols and best practices for collecting, curating, and sharing data on seagrass ecosystems among scientists and stakeholder groups, building on existing experience of scientists and end-users in management and conservation, and contributed to the Ocean Data Standards and Best Practices Project of IODE.
    - MS operationalizing the GOOS seagrass EOV passed through additional rounds of review and now preparing for submission by end of 2024.
- **Objective 3**: Promote development of standardized vocabularies for variables and data schemas specific to seagrass ecosystems, and integration of existing and new data into the Ocean Biodiversity Information System (OBIS) using the EVENT-DATA schema (17).
    - Seagrass EOV data schema, following Darwin Core standard and with input from OBIS, essentially completed, to be included as supplement in the seagrass EOV MS.
- **Objective 4**: Organize an interdisciplinary community of practice to synthesize data on status, trends, and drivers of global change in seagrass ecosystems, building on and integrating existing resources.
    - Interactions and workshops and at ISBW 15, Naples
    - Member service on Global Ocean Observing System Biology and Ecosystems Panel.
    - International collaboration on the seagrass EOV MS, which will have co-authors from at least 6 countries.
    - Continuing discussions with World Seagrass Association re managing long-term extension of C-GRASS goals.
    - GOOS Bio Eco panelist Lina Nordlund awarded Horizon Europe project on biological EOVs, which will help further develop and socialize seagrass EOV.

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

- Publish Seagrass EOV MS (Lead: Duffy)
- Publish MS comparing time series of *in situ* and remotely sensed seagrass trajectories (Lead: Krause)

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

Beyond the delay due to two years of covid isolation and inability to travel, no further difficulties.

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

Additional information can be submitted and may be posted at the SCOR Annual Meeting webpage at the discretion of the SCOR Executive Committee Reporter for the WG and the SCOR Secretariat.