Endorsed

Title

Recommendations for plankton measurements on the GO-SHIP program with relevance to other sea-going expeditions.

Subtitle

SCOR Working Group 154 GO-SHIP Report.

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Essential Ocean, Climate, Biodiversity Variable(s): EOV: Particulate Matter, Phytoplankton biomass and diversity, Zooplankton biomass and diversity. ECV: Plankton. EBV: Genetic composition, Ecosystem phenology, Ecosystem distribution, Community abundance, Species distributions, Species abundances.

Supporting or other variables:

Network(s): GO-SHIP

Sensors: spectral absorption and attenuation, angular scattering, beam attenuation, Chlorophyll fluorometer, Optical backscattering, radiometers (including PAR), Acoustic backscattering (ADCP), quantitative echosounders, Automated imaging of particles and zooplankton (UVP), Automated imaging flow cytometery (IFCB), Automated flow cytometery (Cytosense).

Endorsed by (GOOS PANEL, eg OCG, BIOECO): OCG

Endorsement date: 20/12/2022

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Brief description of community review process:

Document was open to review by community for 3 months prior to submission and that was advertised through OCB.

Links to previous versions or full manuals if this is a summary paper:

This manual has been endorsed by the GOOS Observation Coordination Group – GO-SHIP panel of Experts as a globally accepted best practice for plankton measurements on GO-SHIP cruises.

The GOOS best practice endorsement process has been developed by the GOOS and the Observation Coordination Group (OCG) in conjunction with the Ocean Best Practices System (OBPS).

The aim is for global networks (eg the International Argo programme through GOOS OCG) or groups of experts (eg. the GOOS Biogeochemical Panel) to endorse and share methods which have reproduced superior results for confidence in and uptake by the broader ocean community.

The endorsed methods can range from standard operating procedures to field manuals and have been adopted by community review as 'globally' accepted methods. Following best practices improves the reproducibility of science research, and interoperability across disciplines and datasets by standardizing methods and data collection. It allows for research to be more efficient, leads to quality datasets, and supports future proofing data.

Endorsed GOOS best practices have been through a strong identifying process. They have been adopted and used by established ocean observers and therefore represent a strong basis for the ocean science community. The document will be updated and re-endorsed as appropriate.