**Appendix: List of acronyms used in the text**

ABNJ Areas Beyond National Jurisdictions

ATN Animal Tracking Network

BATS Bermuda-Atlantic Time-Series

CBD Convention on Biological Diversity

CMS Convention on Migratory Species

CoML Census of Marine Life

CPR Continuous Plankton Recorder

DBCP Data Buoy Cooperation Panel

DFO Fisheries and Oceans Canada

DOOS Deep Ocean Observing Strategy

DOSI Deep Ocean Stewardship Initiative

DPSIR Driver-Pressure-State-Impact-Response

EBV Essential Biodiversity Variable

eDNA environmental DNA

EOV Essential Ocean Variable

FAO Food and Agriculture Organization

FOO Framework for Ocean Observing

GACs Global Alliance of Continuous Plankton Recorders

GBIF Global Biodiversity Information Facility

GCRMN Global Coral Reef Monitoring Network

GEO Group on Earth Observations

GEO BON Group on Earth Observations Biodiversity Observation Network

GEOSS Global Earth Observation System of Systems

GLOSS Global Sea Level Observing System

GO-SHIP Global Ocean Ship-based Hydrographic Investigations Program

GOA-ON Global Ocean Acidification - Observation Network

GOOS Global Ocean Observing System

HOT Hawaii Ocean Time-Series

ICRI International Coral Reef Conference

IMOS Integrated Marine Observing System

INDEEP International Network for Scientific Investigation of Deep-Sea Ecosystems

IOC Intergovernmental Oceanographic Commission

IODE International Oceanographic Data and Information

IOOS U.S. Integrated Ocean Observing System

IPBES Intergovernmental Platform on Biodiversity and Ecosystem Services

QA/QC Quality Assurance and Quality Control

KEEN Kelp Ecosystems Ecology Network

MARS Monterey Accelerated Research System

MBON Marine Biodiversity Observation Network

MiCO Migratory Connectivity in the Oceans

Neptune North-East Pacific Time-Series Underwater Networked Experiment

NOAA National Oceanic and Atmospheric Administration (USA)

OBIS Ocean Biogeographic Information System

ODINs Ocean Data and Information Networks

OE Ocean Exploration

OTN Ocean Tracking Network

OTU Operational taxonomic unit

POGO Partnership for Observation of the Global Oceans

RLS Reef Life Survey

SAHFOS Sir Alister Hardy Foundation for Ocean Science

SDG Sustainable Development Goals

TOPP Tagging of Pacific Pelagics

UNGA United Nations General Assembly

WoRMS World Register of Marine Species