

O BON

OCEAN BIOMOLECULAR
OBSERVING NETWORK

Dr. Sophie Seeyave

CEO, Partnership for Observation of the Global Ocean (POGO)

Programme endorsed by:



2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

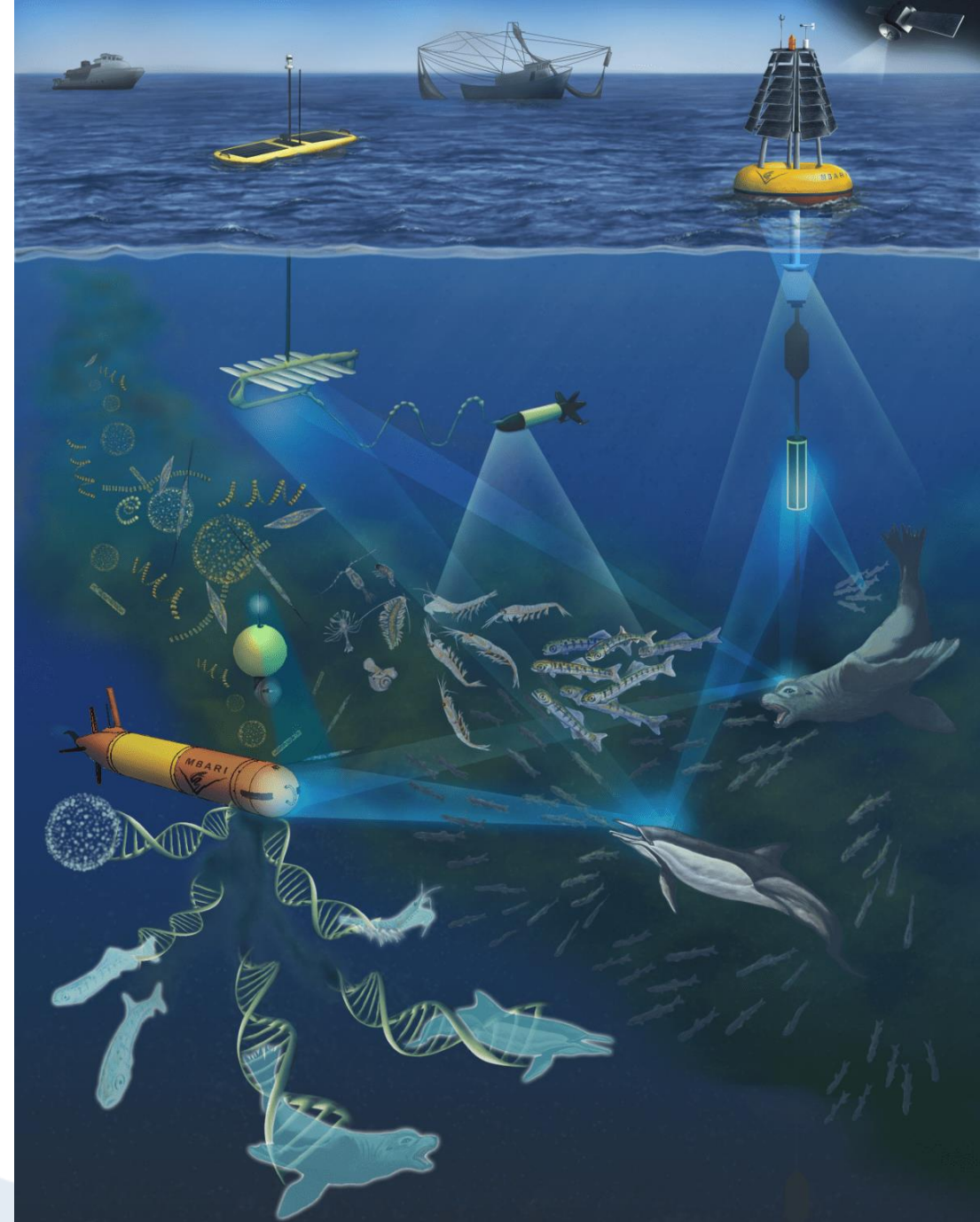
Programme led by:



Partnership for
Observation of the Global Ocean

OBON

- **VISION:** To *accelerate* informed decision-making to restore the health of our ocean using the universal signatures of life on Earth: biomolecules.
- **MISSION:** To *create a hub* for biomolecular measurement of marine life

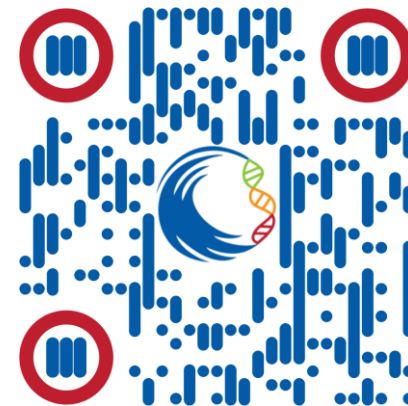


OBON STRATEGIC PLAN



A global biomolecular
observatory supporting a
sustainable ocean

<https://www.obon-ocean.org>



OBON STRATEGY



24 Active UNOD Projects

- **WCO-BON:** WCO Biomolecular Observing Network
- **NEREA:** Naples Ecological REsearch Augmented observatory
- **HI-BON:** Hakai Institute Biomolecular Observing Network
- **PECO:** Pacific eDNA Coastal Observatory
- **SEO:** Scripps Ecological Observatory
- **EMOBON:** European Marine Omics Biodiversity Observation Net
- **A-biome:** Observing and Promoting Atlantic Microbiomes
- **DNA-based approaches for Fisheries monitoring**
- **NBDL:** National Biodiversity DNA Library
- **OceanOmics:** Monitoring & Protecting Ocean Life
- **GOTeDNA:** Guidance on Optimal Timing for eDNA
- **Making eDNA FAIR**
- **Marine Biodiversity Library and MPA eDNA Monitoring**
- **WC-OBON:** West Coast Ocean Biomolecular Observing Network
- **ATLASEa:** Atlas of Marine Genomes
- **AMT-omics:** Atlantic Meridional Transect 'omics Network
- **ANEMONE Global:** Advancing eDNA-Based Biodiversity Monitoring
- **PASTIME:** Present and past climate change impacts on Norwegian fjord ecosystems
- **Blowomics:** Novel perspectives on non-invasive cetacean research using MicroRNA biomarkers in the exhaled breath
- **Marma-Detox:** Whales and Polar Bears in a Petri Dish
- **Australian Microbiome**
- **eDNA Expeditions II**
- **HERPOPS** (Assessing spatiotemporal dynamics in herring population structure under climate change)
- **TechOmics** (Autonomous samplers and sensors for marine 'omics)

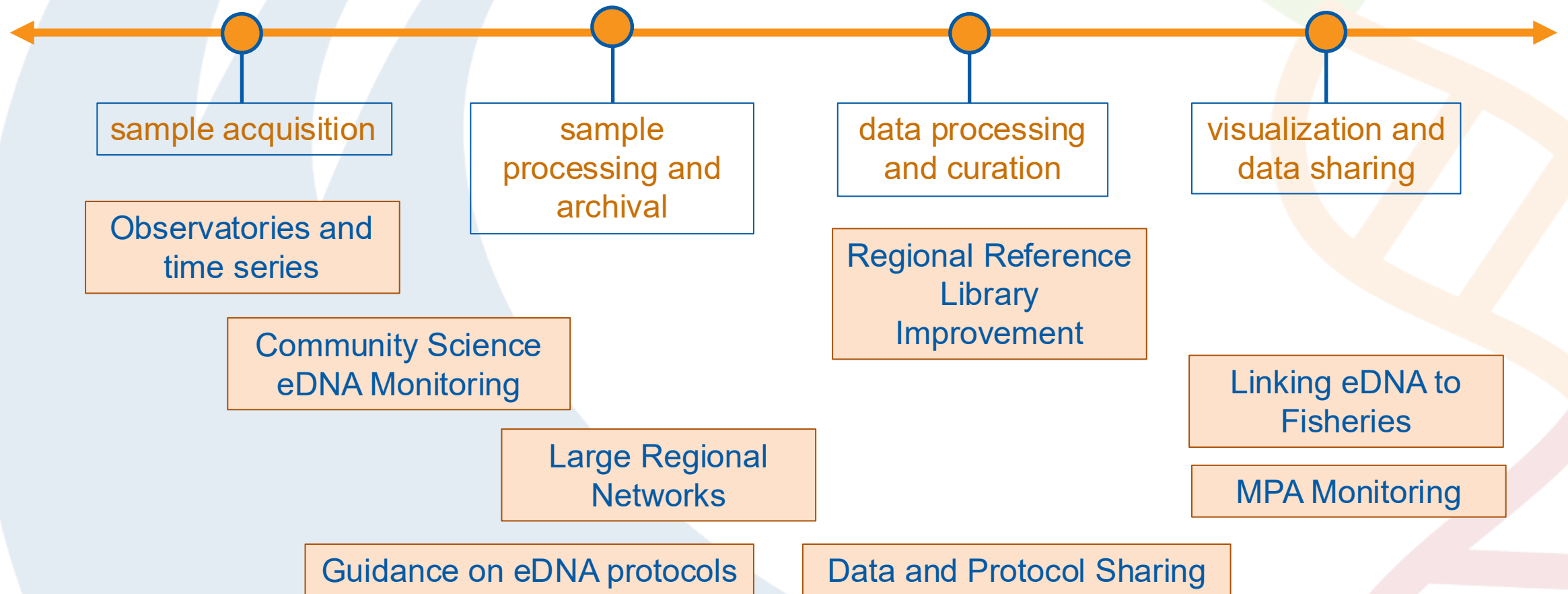
4 Completed/Emeritus projects:

- Better Biomolecular Ocean Practices (BeBOP)
- **eDNA Expeditions** in Marine World Heritage Sites: Phase I
- **Mission Ocean Microbiomes** (Tara Microbiomes)
- Pacific Islands Marine Bioinvasion Alert Network (**PacMAN**)

Images from iStock.com

OBON Project Themes

eDNA sampling pipeline



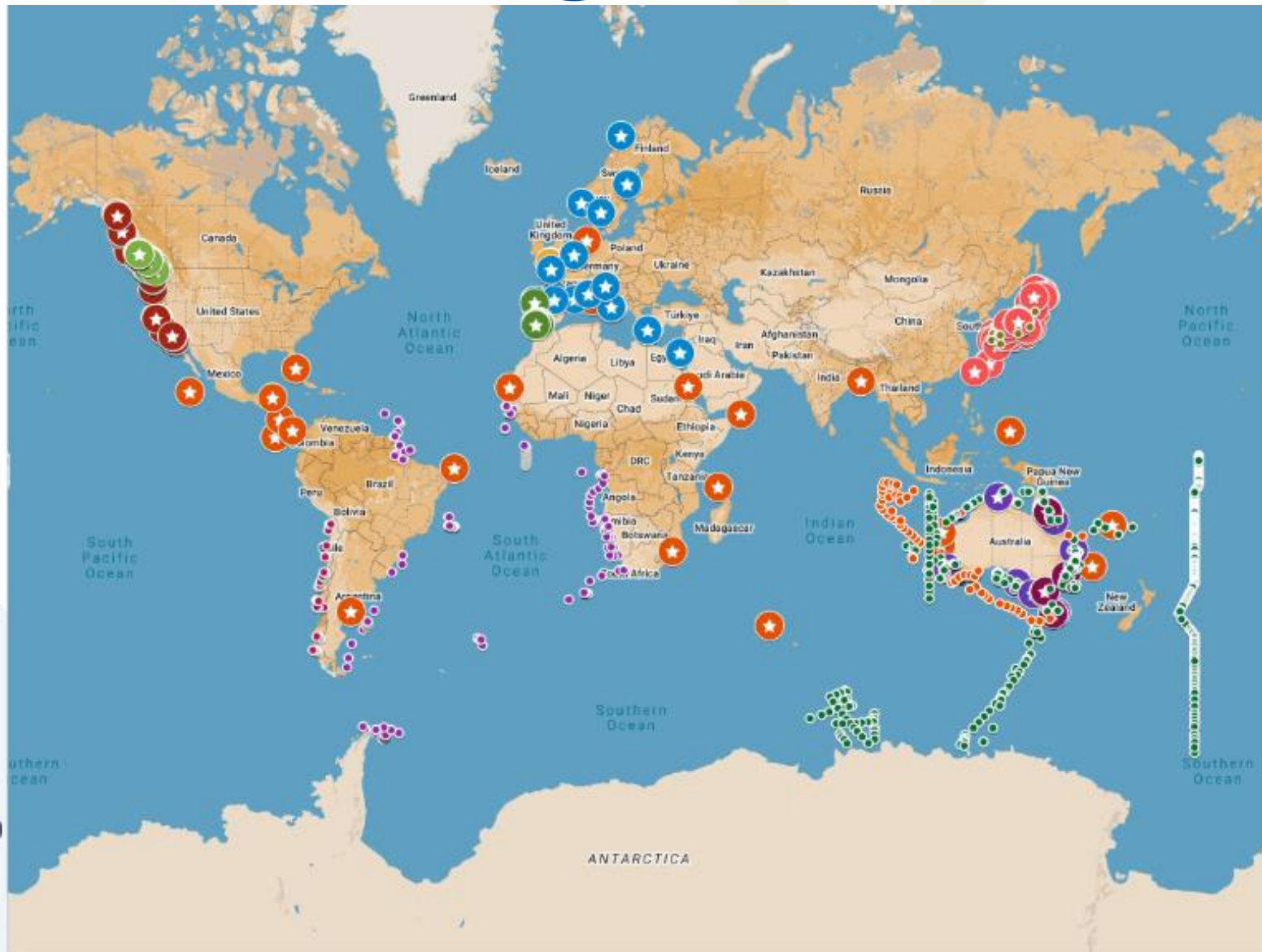
OBOBON Sampling Locations

Long-term monitoring locations by project

-  Pacific eDNA Coastal Observatory
-  Hakai Institute Biomolecular Observing Network
-  EMOBON
-  UNESCO eDNA Expeditions
-  UMinho-Portugal / A-FISH-DNA-SCAN
-  Naples Ecological RESEARCH Augmented observatory
-  WCO BON
-  ANEMONE Global
-  Scripps Ecological Observatory
-  Australian Microbiome (IMOS NRS)
-  Australian Microbiome

One-off/occasional sample sites by project

-  OceanOmics
-  Mission Microbiomes CEODOS (2021)
-  Mission Microbiomes AtlantECO (2021-2022)
-  Australian Microbiome
-  ANEMONE Global



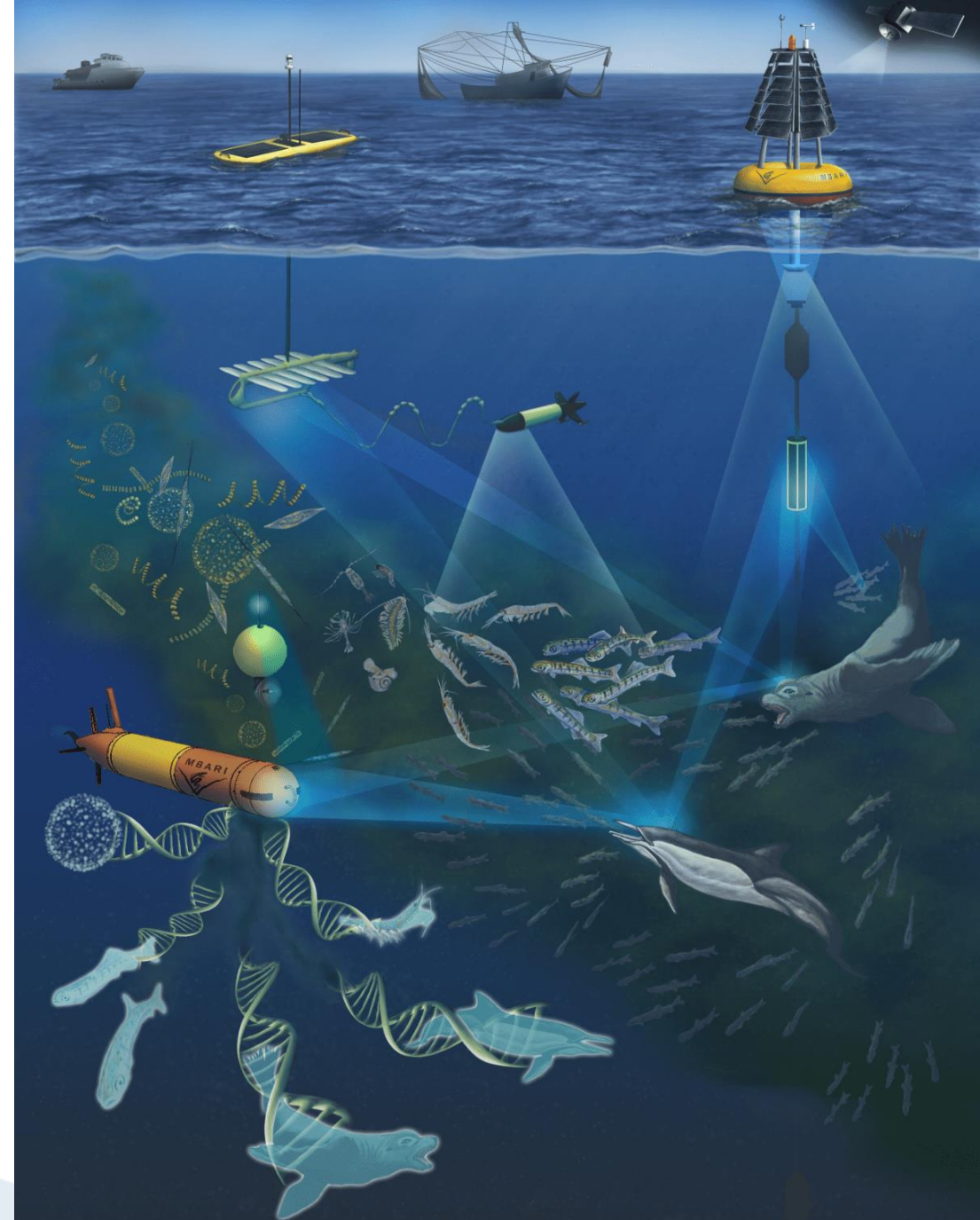
OBON ORGANISATION

- Programme Coordination Office (hosted by POGO)
- Scientific Advisory Committee and Exec Committee (chaired by Margaret Leinen)
- User Advisory Committee (coming this year)
- Working groups on
 - Technology Development
 - Capacity Development
 - Protocols & Methodology
 - Reference Libraries
 - Data synthesis
 - Policy



Scaling Autonomous Integrated Global eDNA Observations (SAIGe)

- 2-year project funded by the Minderoo Foundation
- Vision: To achieve integrated autonomous global eDNA observations that will address key scientific challenges to restore the health of our ocean
- Focus on capacity development in the Western Pacific region
- Opportunity to support OBON-endorsed projects and Working Groups.



CONTACT US:

OBON Chair, Margaret Leinen

mleinen@ucsd.edu

OBON Programme Manager, Luz Rodriguez-Vargas

lro@pml.ac.uk

CEO of POGO (OBON Lead Organisation), Sophie Seeyave

ssve@pml.ac.uk



observing@obon-ocean.org



[/company/obon](https://www.linkedin.com/company/obon)



[obon-ocean.bsky.social](https://bsky.app/profile/obon-ocean.bsky.social)



[@OBON_ocean](https://twitter.com/OBON_ocean)



[@pogo_ocean](https://www.instagram.com/pogo_ocean)



www.obon-ocean.org

