FixO3 Service Activities:
Access to data products and knowledge
WP10 (SA-coordination in WP4)

Antje Boetius, Felix Janssen, Ingo Schewe (AWI)

WP10 partners / SA providers

Service Activitiy providers (1)

Blue Lobster IT Limited | BLIT
SME, Lowestoft (UK)

Centre National de la Recherche Scientifique | CNRS
La Seyne / Mer (France)

Consiglio Nazionale delle Ricerche | CNR
Genoa (Italy)

Hellenic Centre for Marine Research | HCMR
Athens, Greece

Institut français de recherche pour l'exploitation de la mer | Ifremer | Brest (France)

Instituto Español de Ocenografía | IEO
Santander (Spain)

Instituto Nacional de Desenvolvimento das Pescas | INDP
Mindelo (Cape Verde)

Service Activitiy providers (2)

Istituto Nazionale di Geofisica e Vulcanologia | INGV
Rome (Italy)

Istituto Nazionale di Oceanografia e di Geofisica Sperimentale | OGS | Trieste (Italy)

Natural Environment Research Council | NERC-NOC
Southampton (UK)

Oceanic Platform of the Canary Islands | PLOCAN
Telde, Canary Islands (Spain)

Universitetet I Bergen | UiB
Bergen (Norway)

Agencia Estatal Consejo Superior de Investigaciones Científicas CSIC | Madrid (Spain) | Third Party associated with PLOCAN

Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research | AWI | Bremerhaven (Germany)

WP10 objectives

Service Activity characteristics

- Unrestricted provision of access to selected observatory data & products through the FixO3 portal
- Provision for a defined period, updates as new data become available
- Comprehensible 'FixO3 added value' of data and products, e.g.,
  - access to restricted data
  - provision of derived variables
    (e.g., productivity estimates, mixed layer depth, saturation state)
  - data visualizations and derived variables

SA management objectives (WP4 task 4.5)

- Ensure excellent SA quality and maximize public awareness and use
- Harmonization and standardization of data streams
- Publicize SAs via the FixO3 web portal and direct contacts with Stakeholder and user groups (in cooperation with WPs 6, 7, and 8)
- Identify means to monitor data use (web statistics, data label)
- Interact with independent SA Panel and monitor implementation of their recommendations

Service activity overview

FixO3 SA facts

- 17 SAs from 12 observatories
- 1 trans-observatory SA (EMECO tool for data integration & visualization)
- 4 categories / disciplines

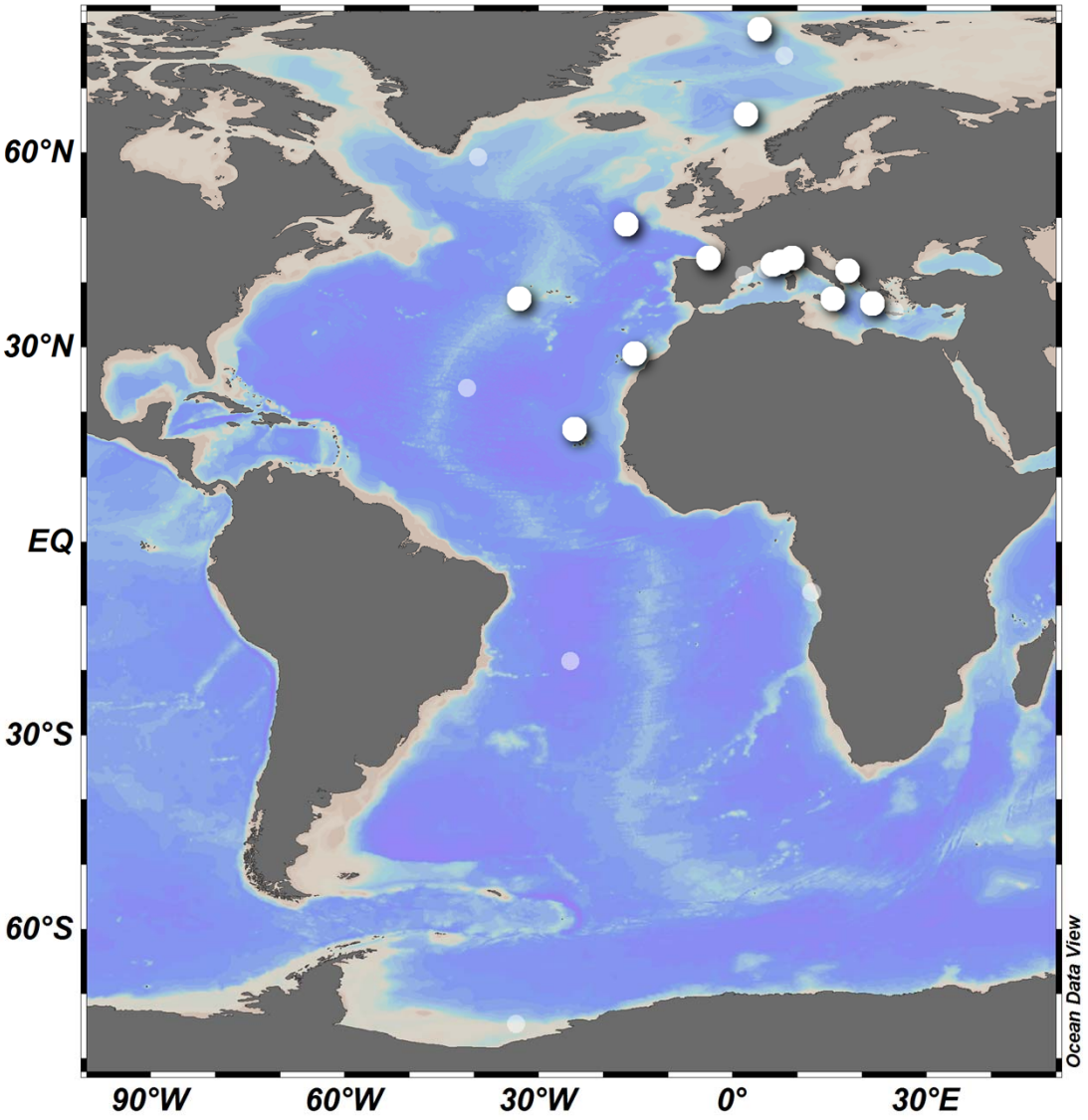
OCEAN PHYSICS AND CLIMATE CHANGE
6 SAs

CARBON CYCLE AND OCEAN ACIDIFICATION
4 SAs

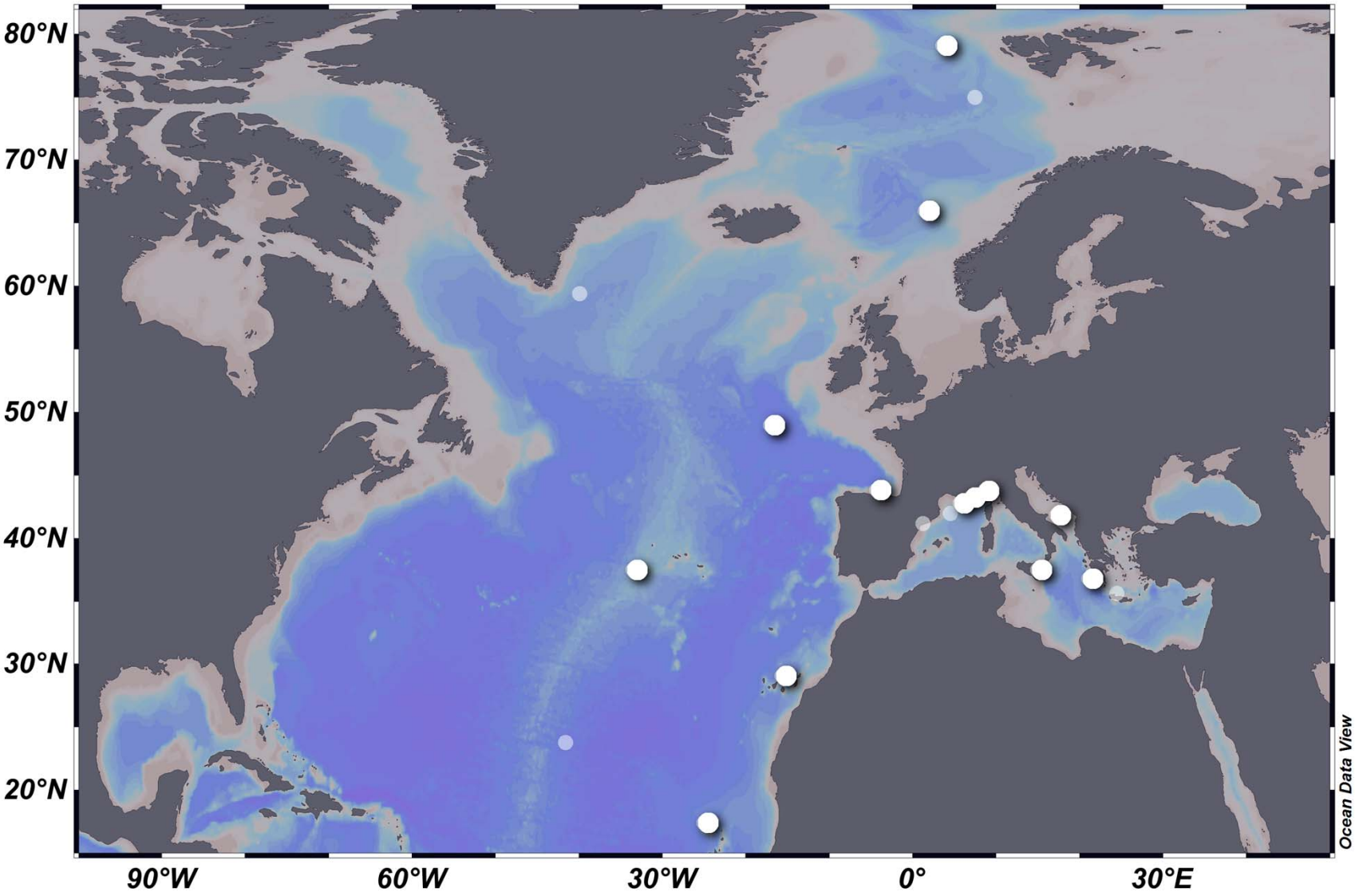
BIODIVERSITY AND ECOSYSTEM ASSESSMENT
4 SAs (incl. EMECO)

GEOPHYSICS AND GEODYNAMICS
4 SAs

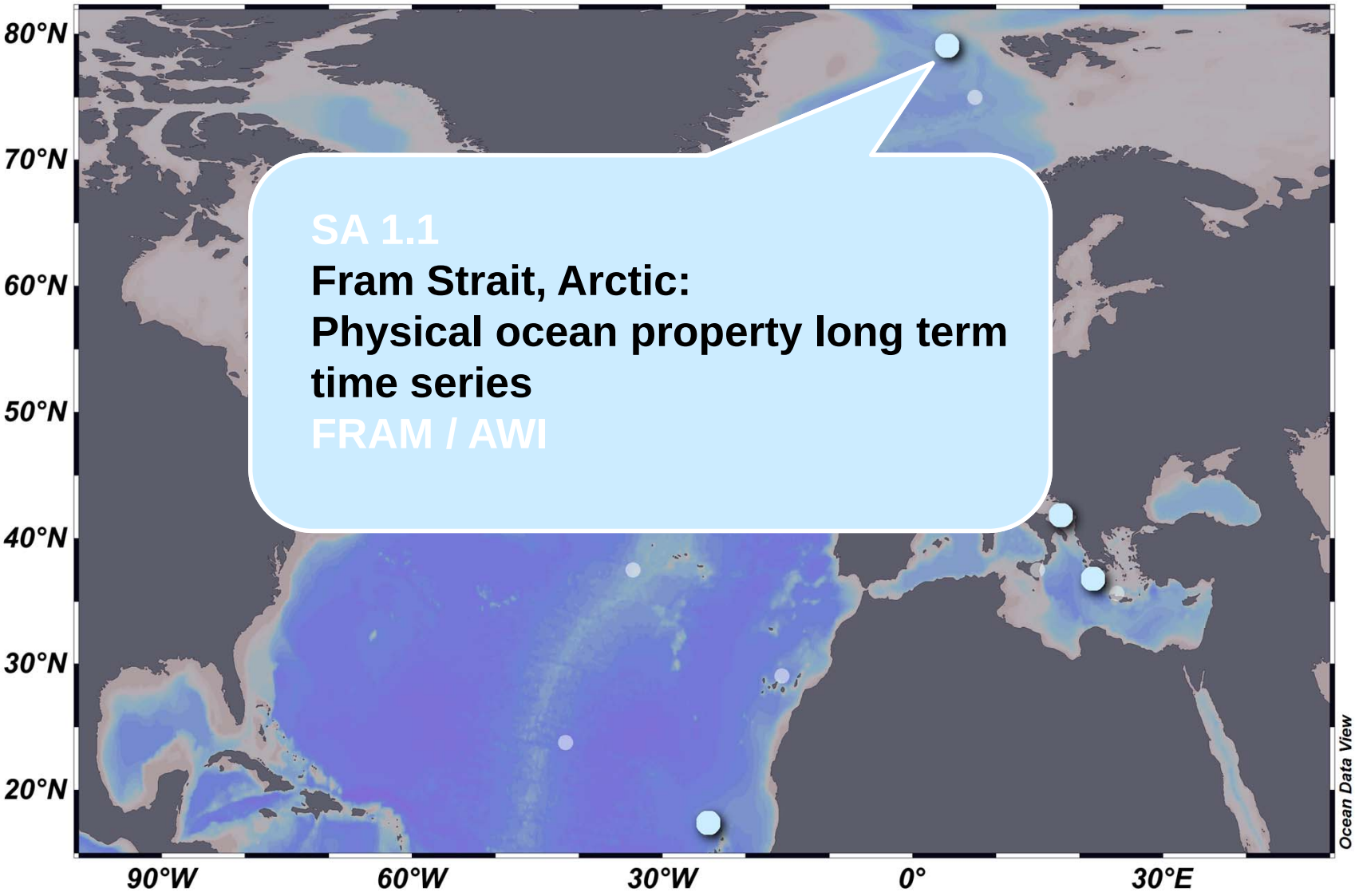
Service Activity observatories and focuses



Service Activity observatories and focuses



Ocean physics and climate change

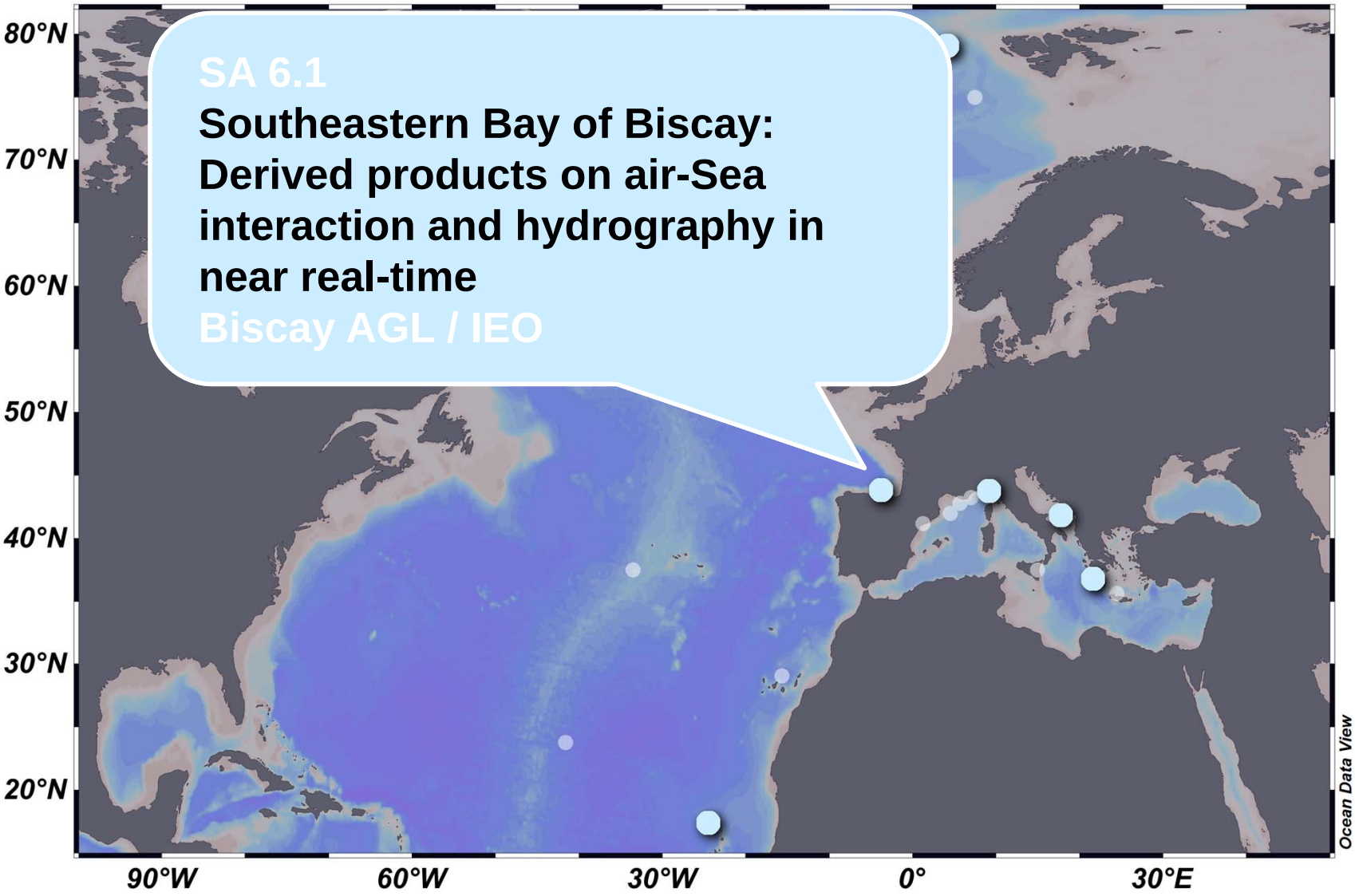


SA 1.1

Fram Strait, Arctic:
Physical ocean property long term time series

FRAM / AWI

Ocean physics and climate change

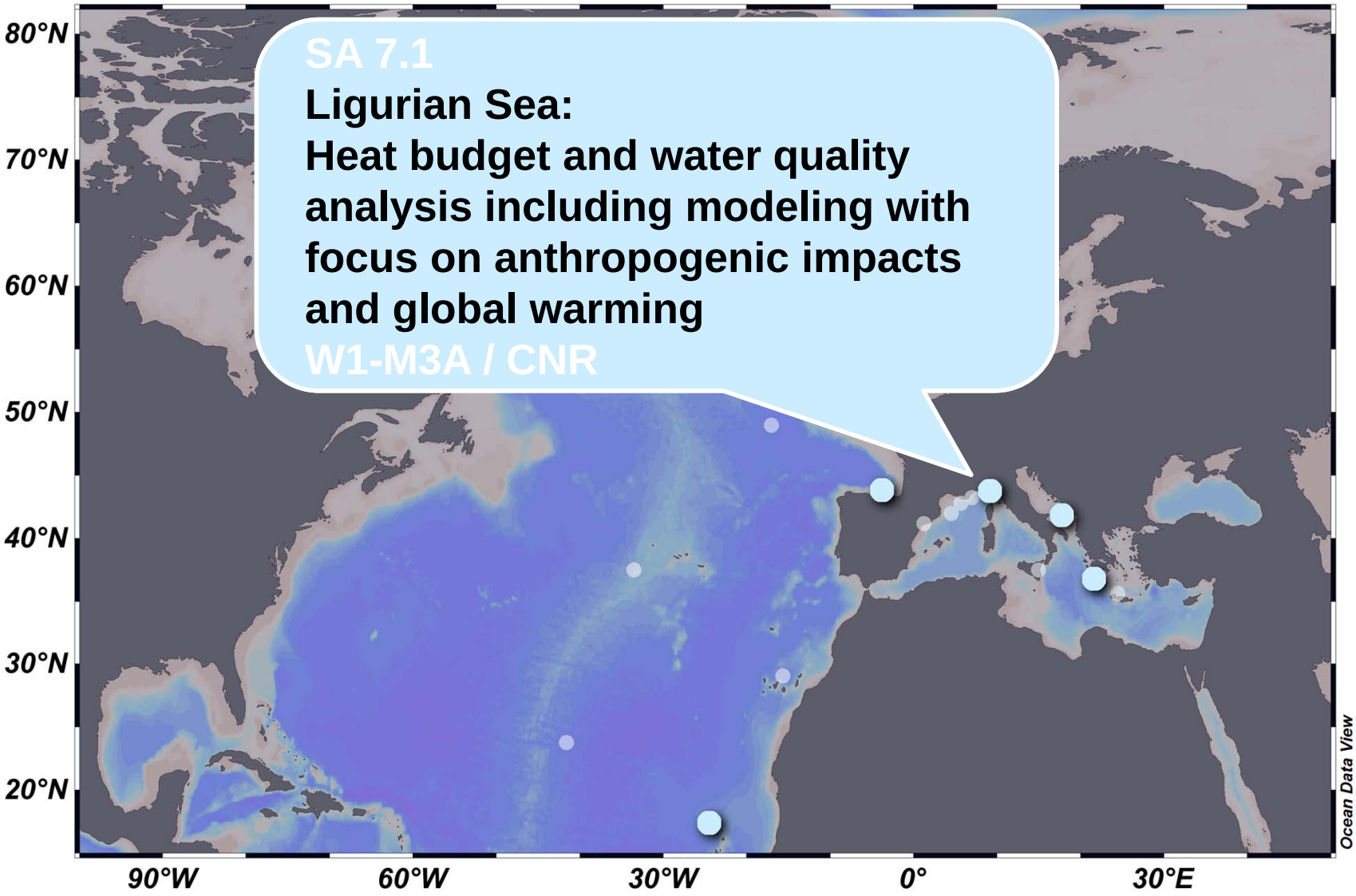


SA 6.1

Southeastern Bay of Biscay: Derived products on air-Sea interaction and hydrography in near real-time

Biscay AGL / IEO

Ocean physics and climate change

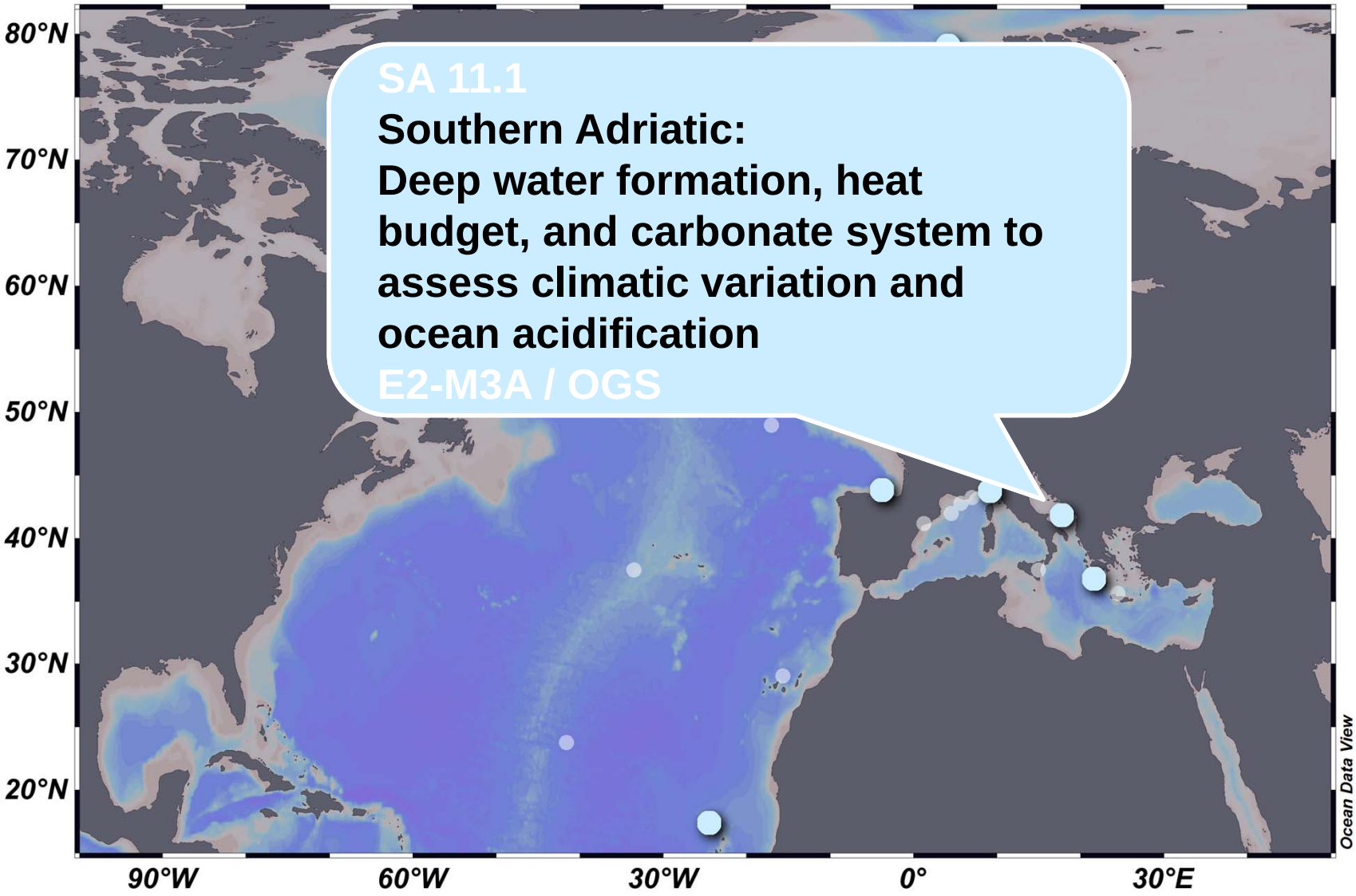


SA 7.1

Ligurian Sea:
Heat budget and water quality analysis including modeling with focus on anthropogenic impacts and global warming

W1-M3A / CNR

Ocean physics and climate change

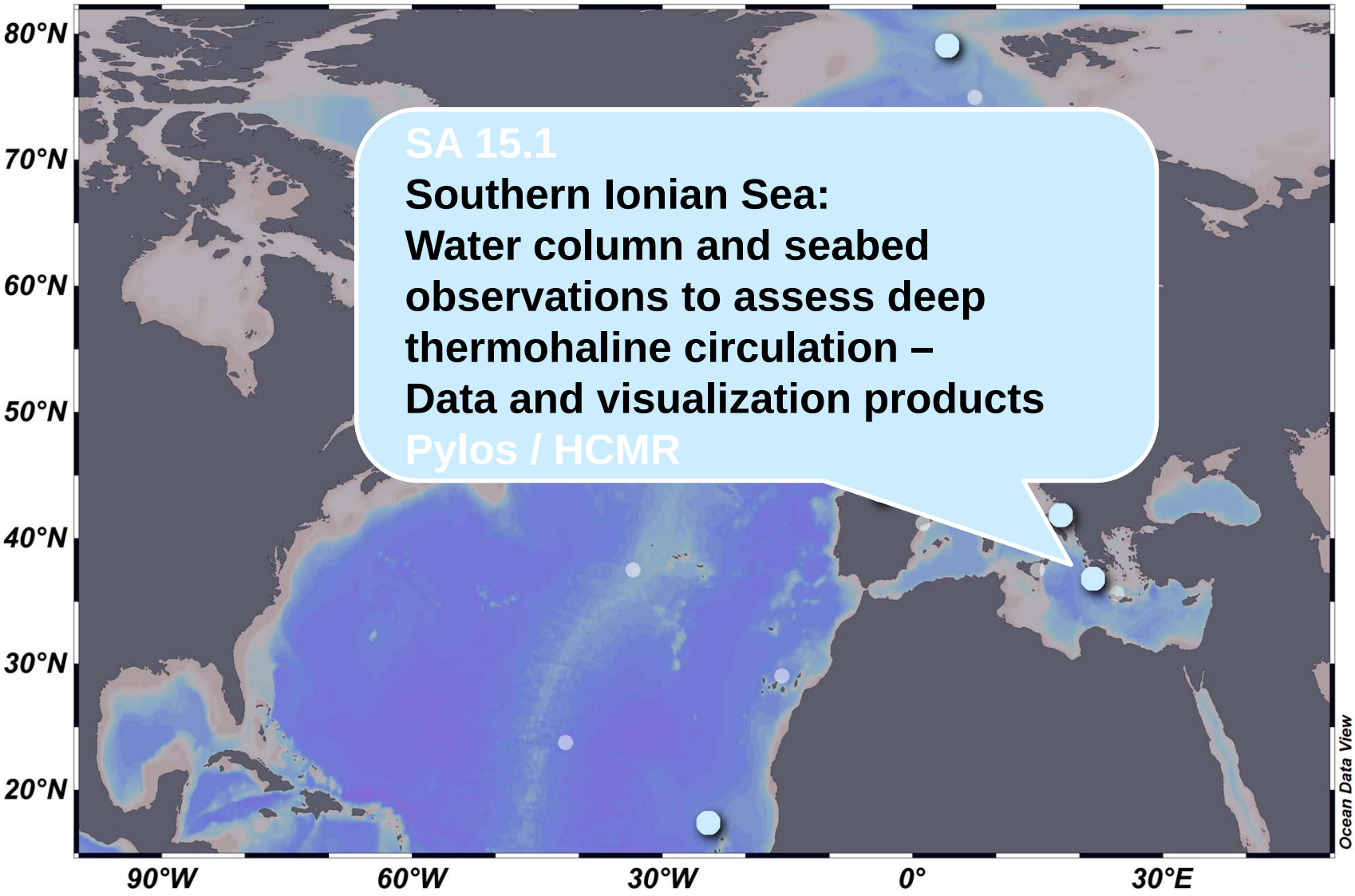


SA 11.1

Southern Adriatic:
Deep water formation, heat budget, and carbonate system to assess climatic variation and ocean acidification

E2-M3A / OGS

Ocean physics and climate change

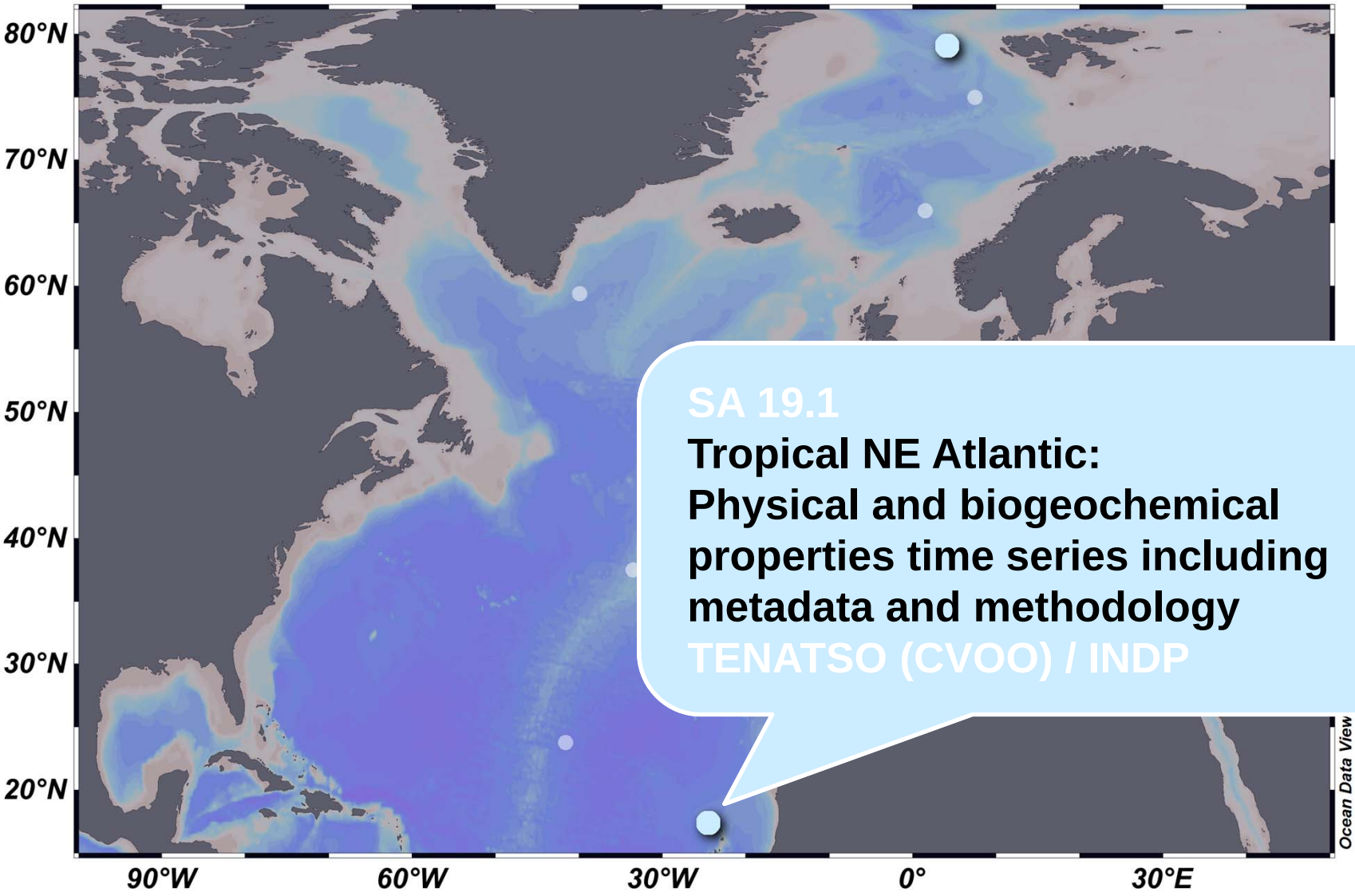


SA 15.1

Southern Ionian Sea: Water column and seabed observations to assess deep thermohaline circulation – Data and visualization products

Pylos / HCMR

Ocean physics and climate change

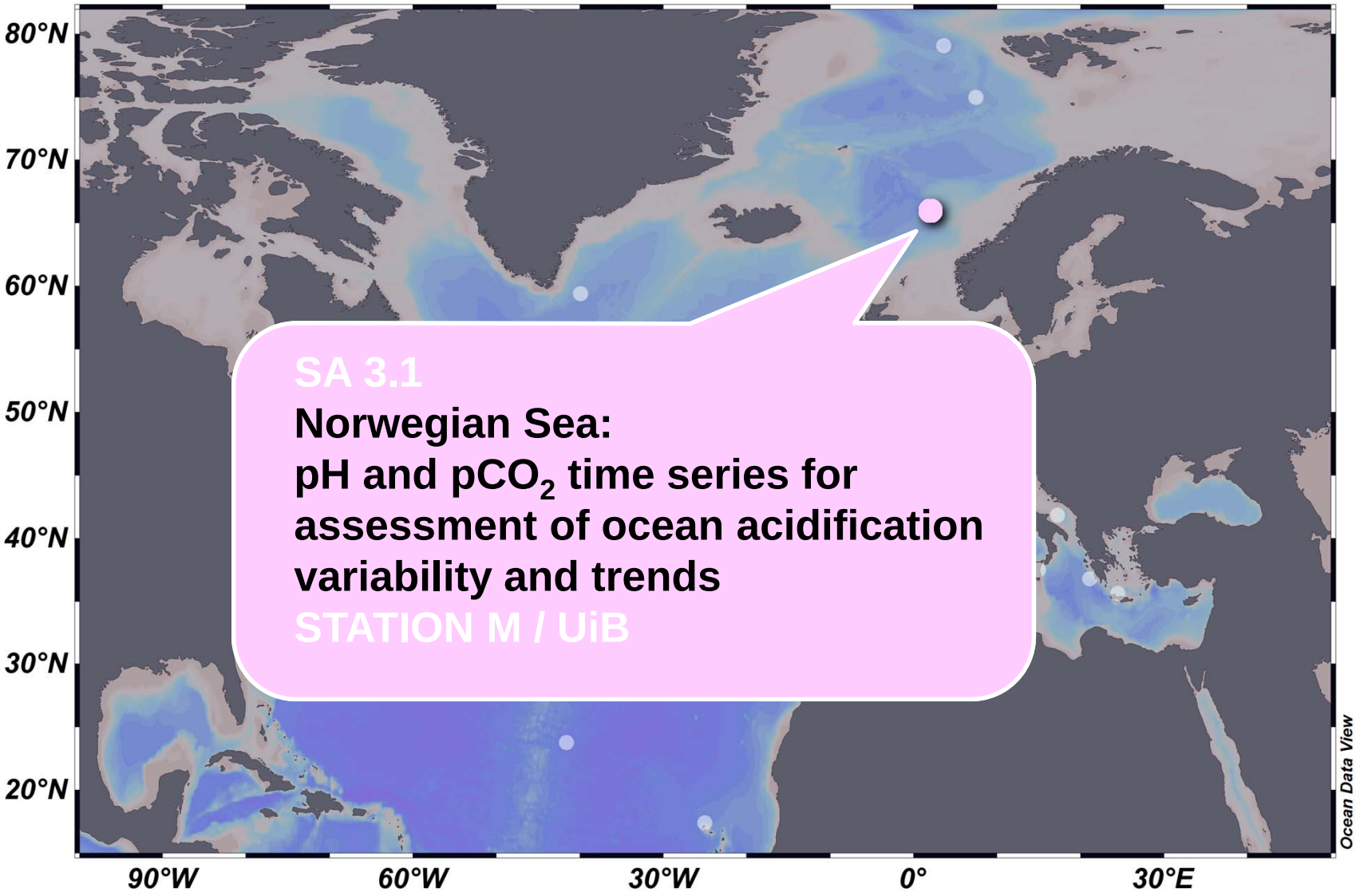


SA 19.1

Tropical NE Atlantic: Physical and biogeochemical properties time series including metadata and methodology

TENATSO (CVOO) / INDP

Carbon cycle and ocean acidification

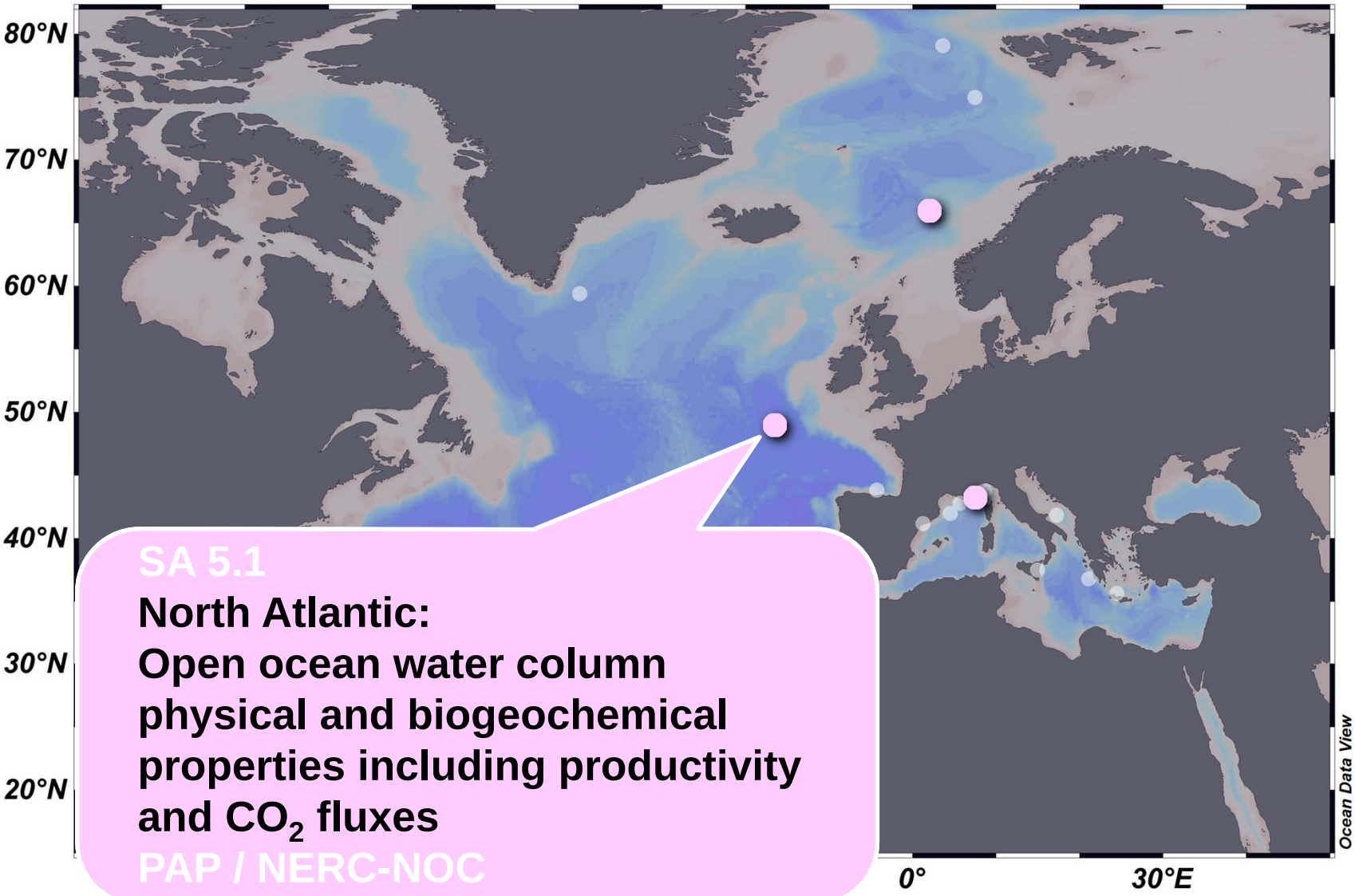


SA 3.1

Norwegian Sea:
pH and pCO_2 time series for assessment of ocean acidification variability and trends

STATION M / UiB

Carbon cycle and ocean acidification

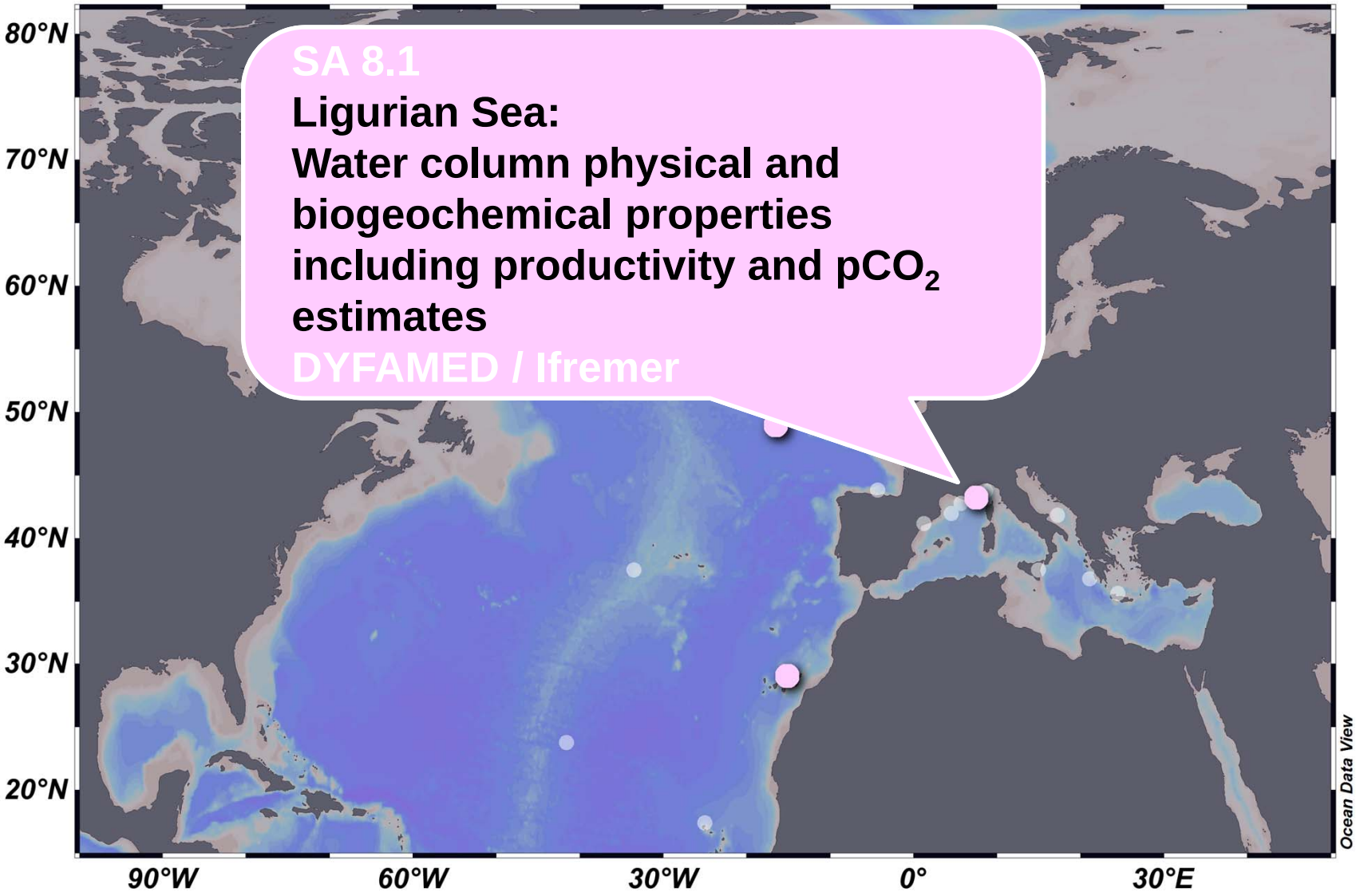


SA 5.1

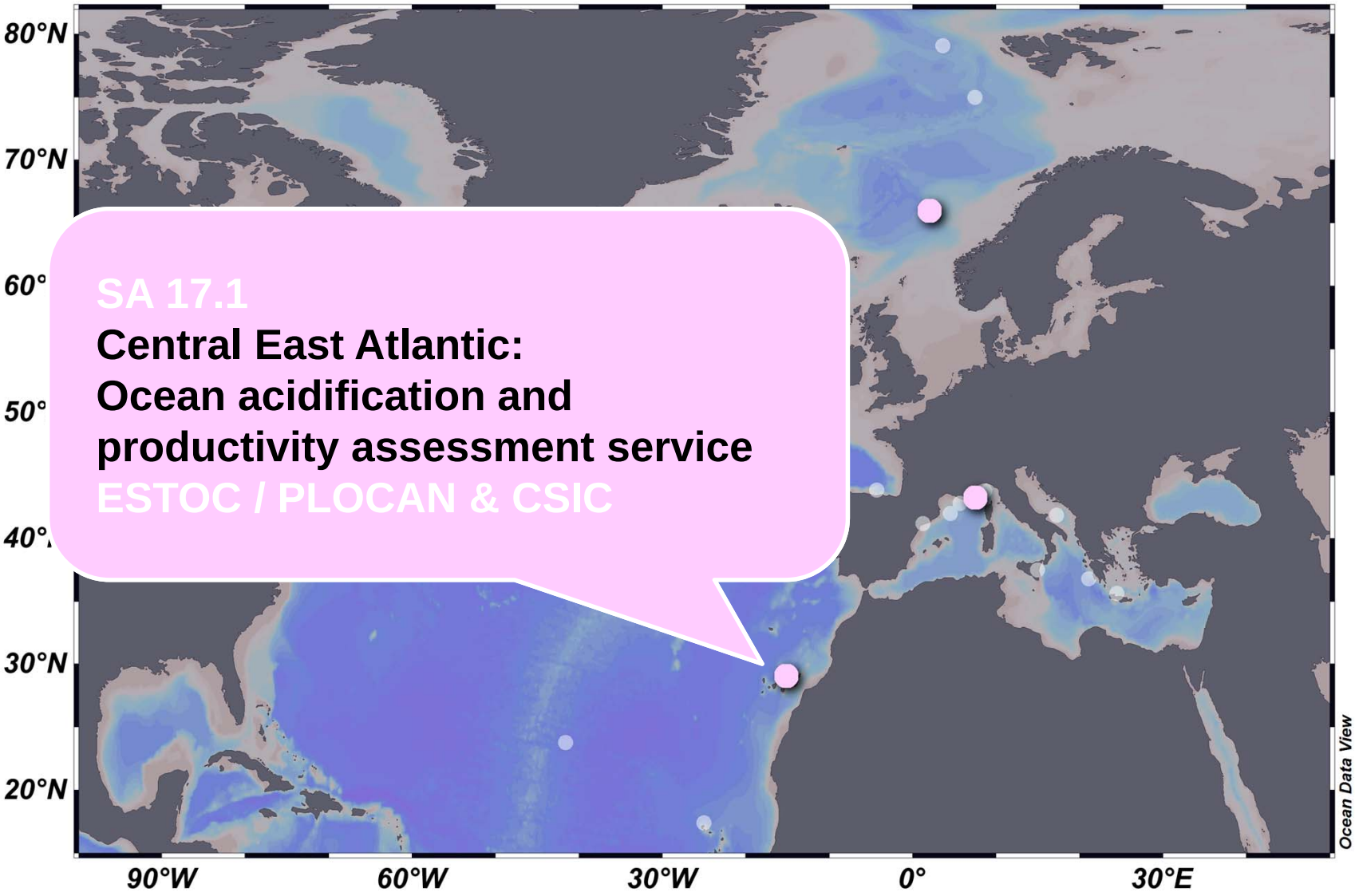
North Atlantic:
Open ocean water column physical and biogeochemical properties including productivity and CO_2 fluxes

PAP / NERC-NOC

Carbon cycle and ocean acidification



Carbon cycle and ocean acidification

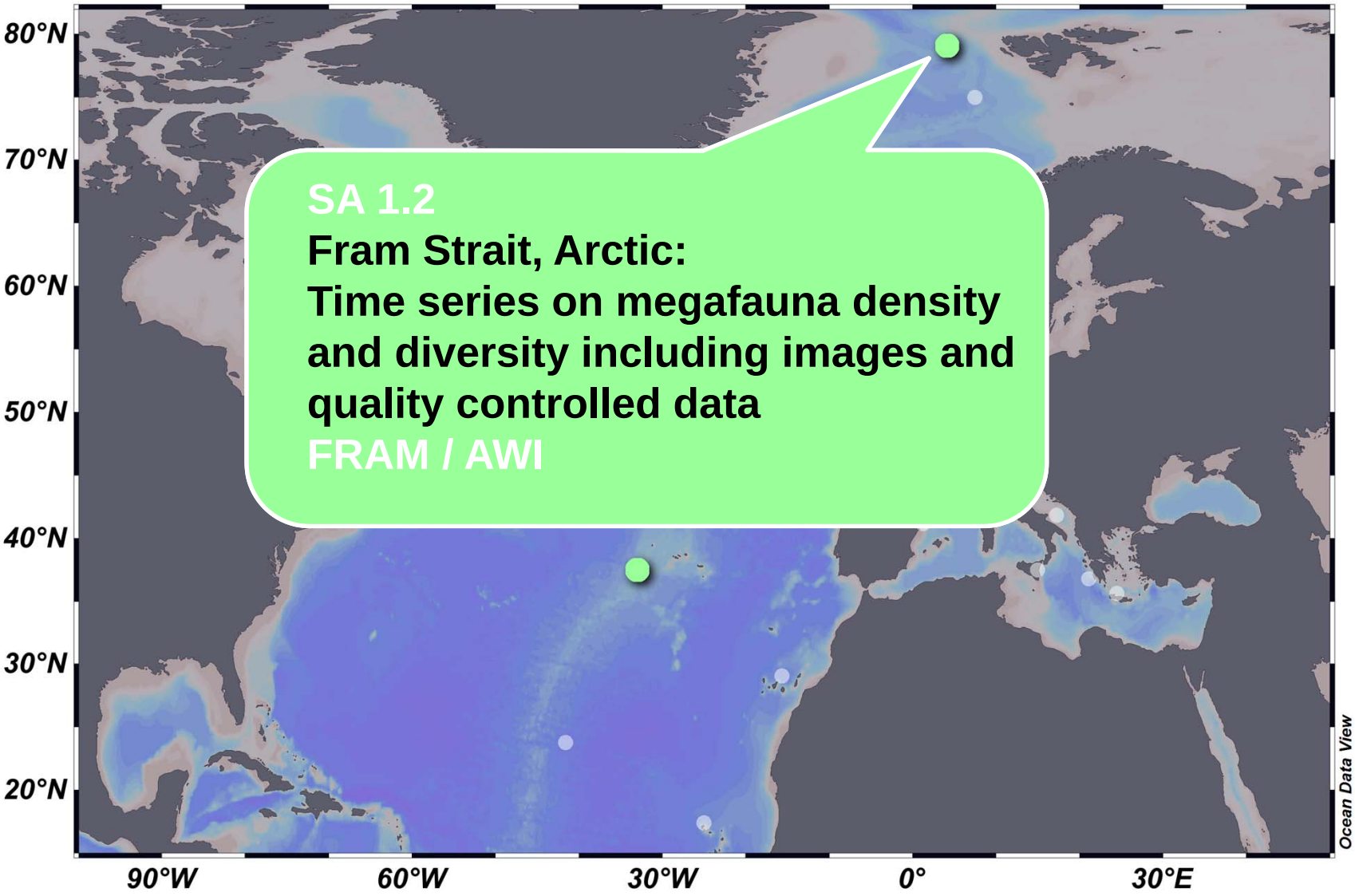


SA 17.1

Central East Atlantic:
Ocean acidification and productivity assessment service

ESTOC / PLOCAN & CSIC

Biodiversity and ecosystem assessment

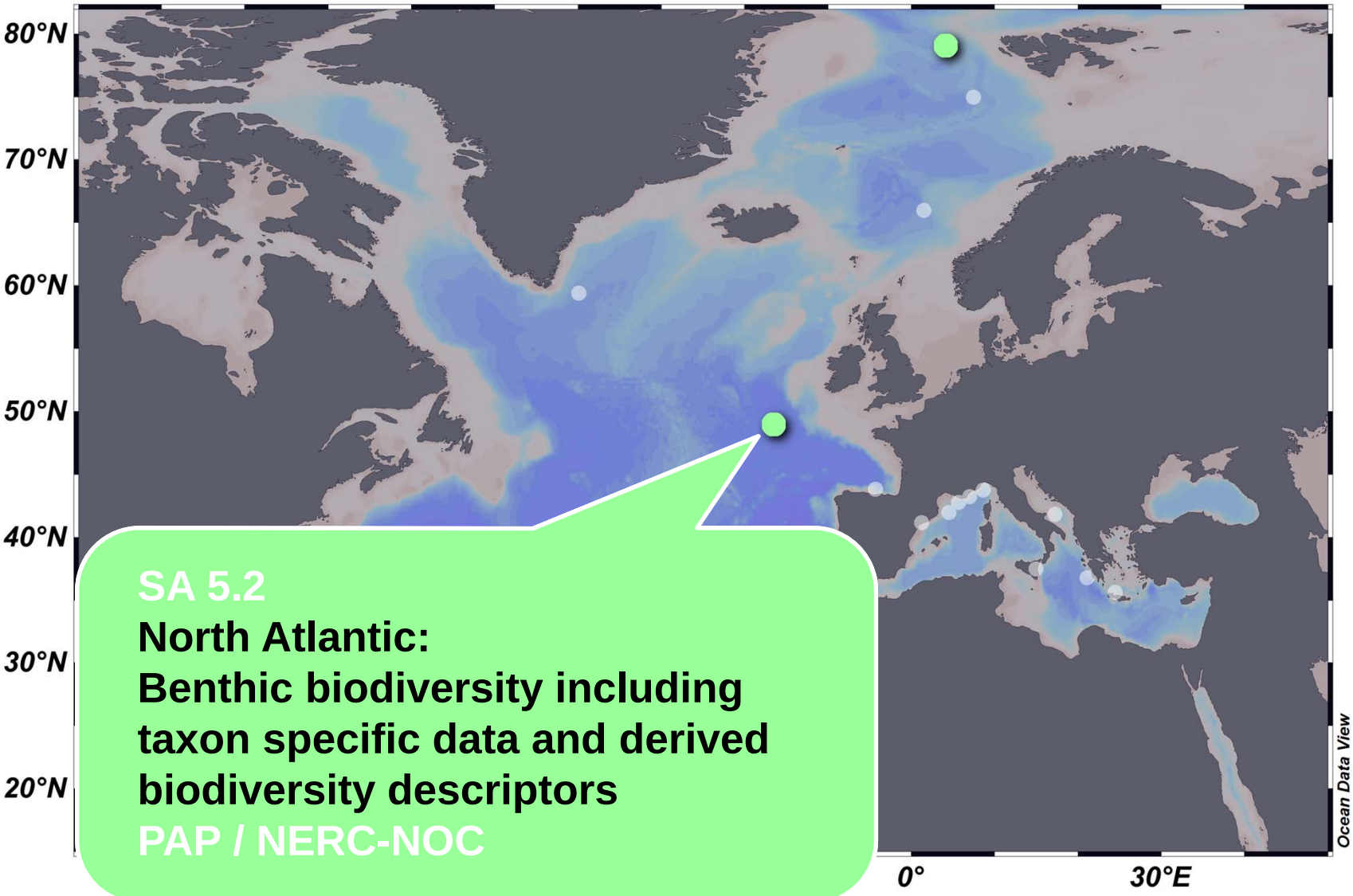


SA 1.2

Fram Strait, Arctic:
Time series on megafauna density and diversity including images and quality controlled data

FRAM / AWI

Biodiversity and ecosystem assessment

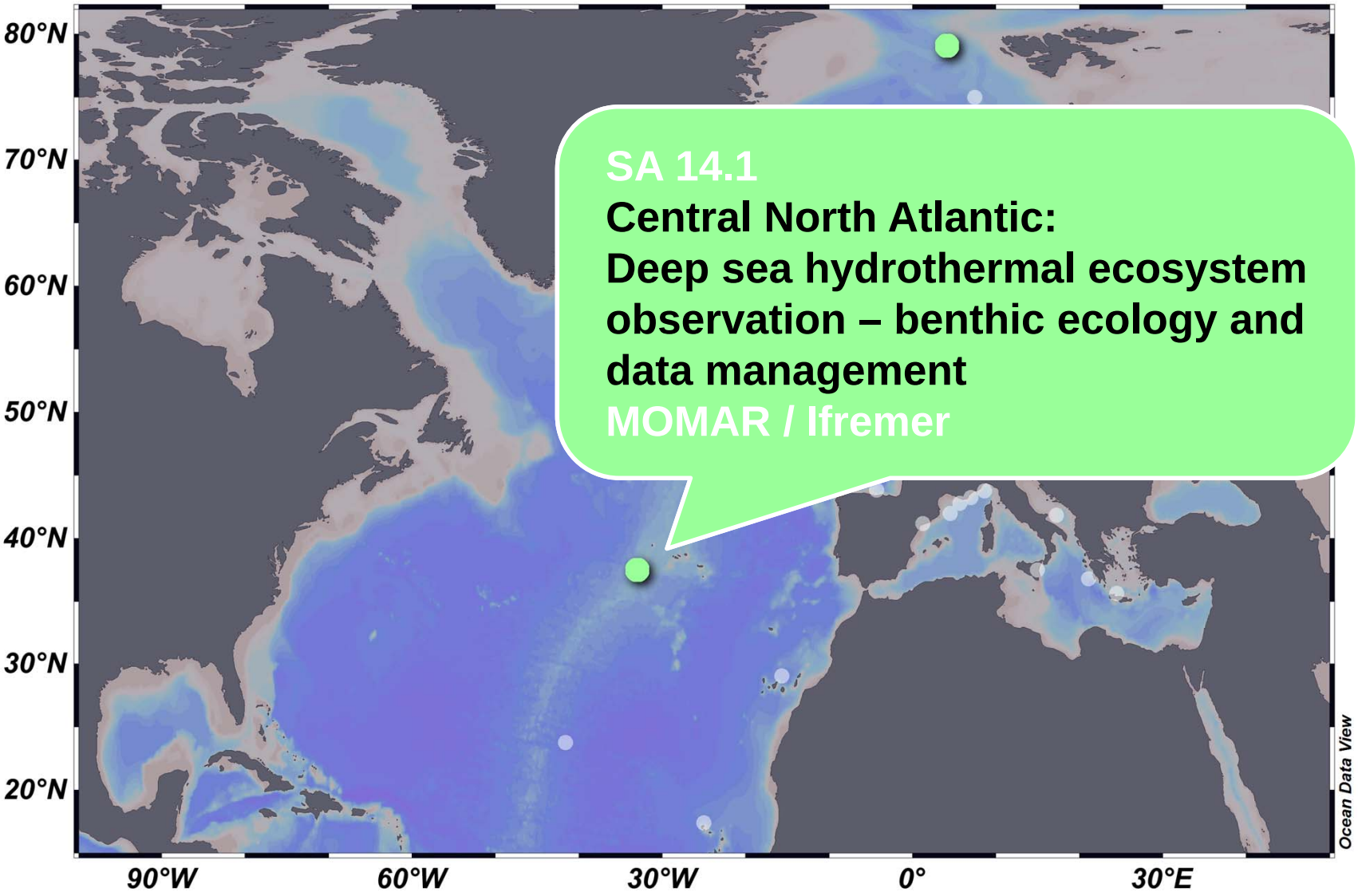


SA 5.2

North Atlantic:
Benthic biodiversity including taxon specific data and derived biodiversity descriptors

PAP / NERC-NOC

Biodiversity and ecosystem assessment

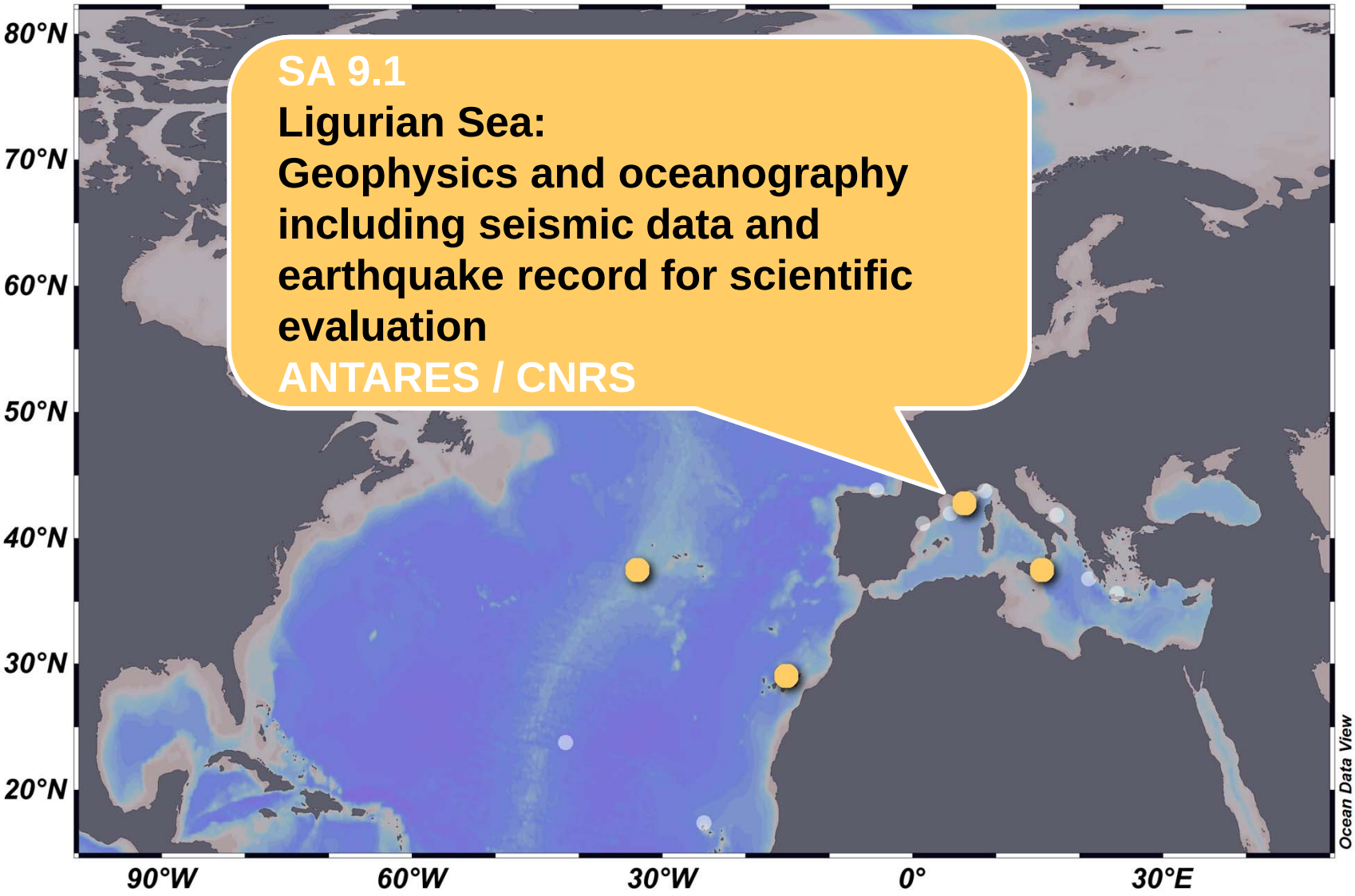


SA 14.1

Central North Atlantic:
Deep sea hydrothermal ecosystem observation – benthic ecology and data management

MOMAR / Ifremer

Geophysics and geodynamics

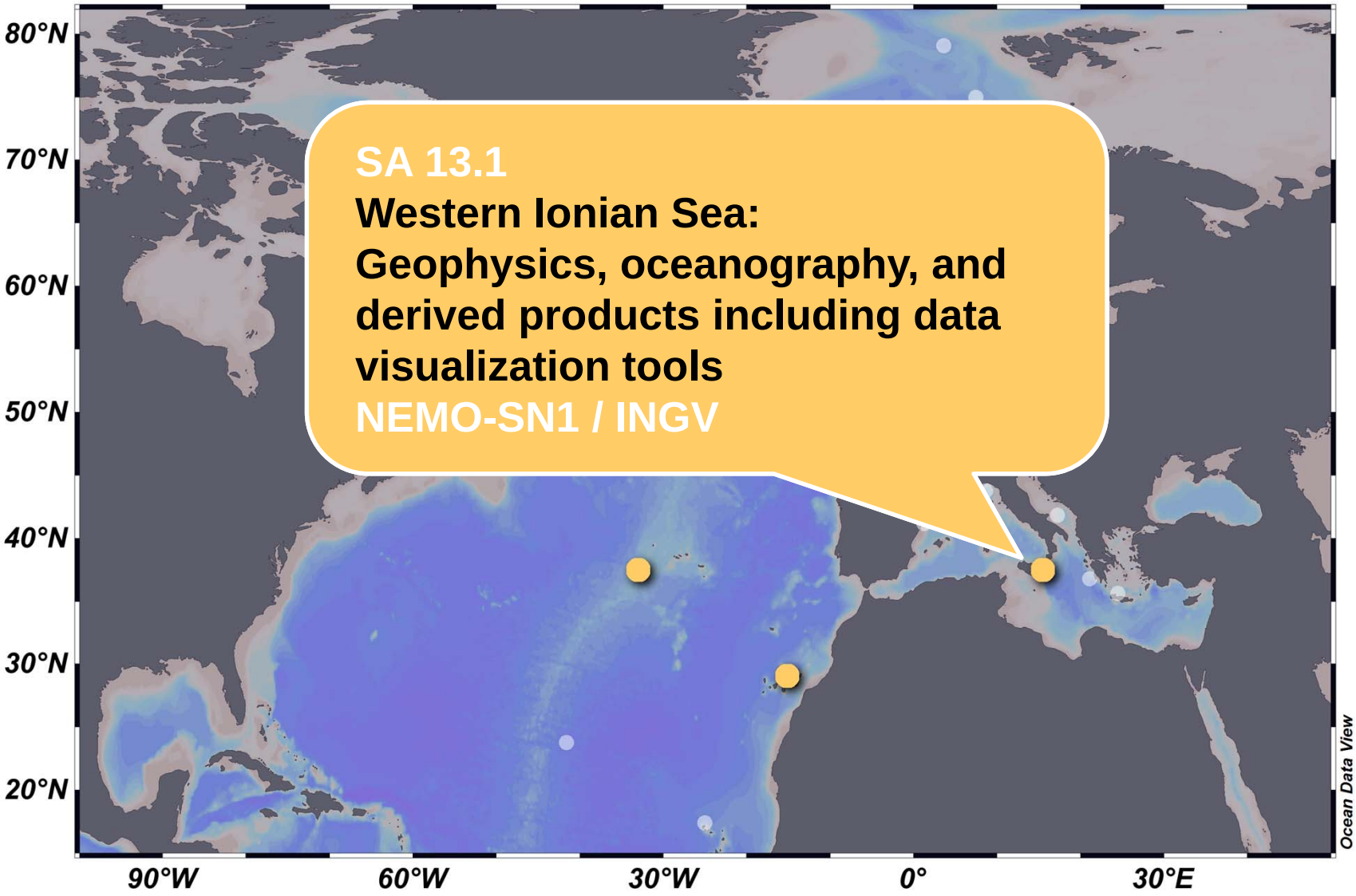


SA 9.1

Ligurian Sea:
Geophysics and oceanography including seismic data and earthquake record for scientific evaluation

ANTARES / CNRS

Geophysics and geodynamics

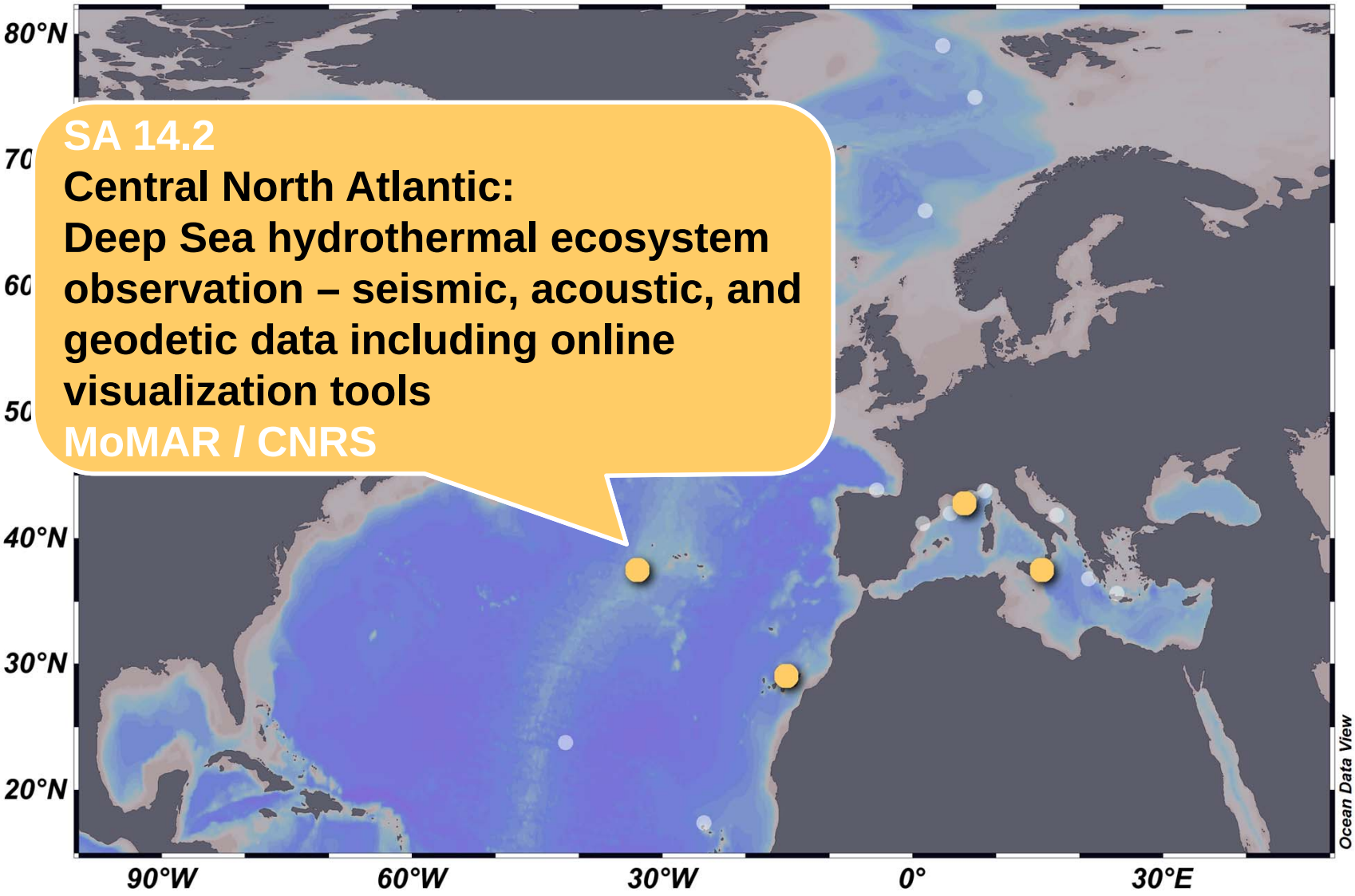


SA 13.1

Western Ionian Sea: Geophysics, oceanography, and derived products including data visualization tools

NEMO-SN1 / INGV

Geophysics and geodynamics

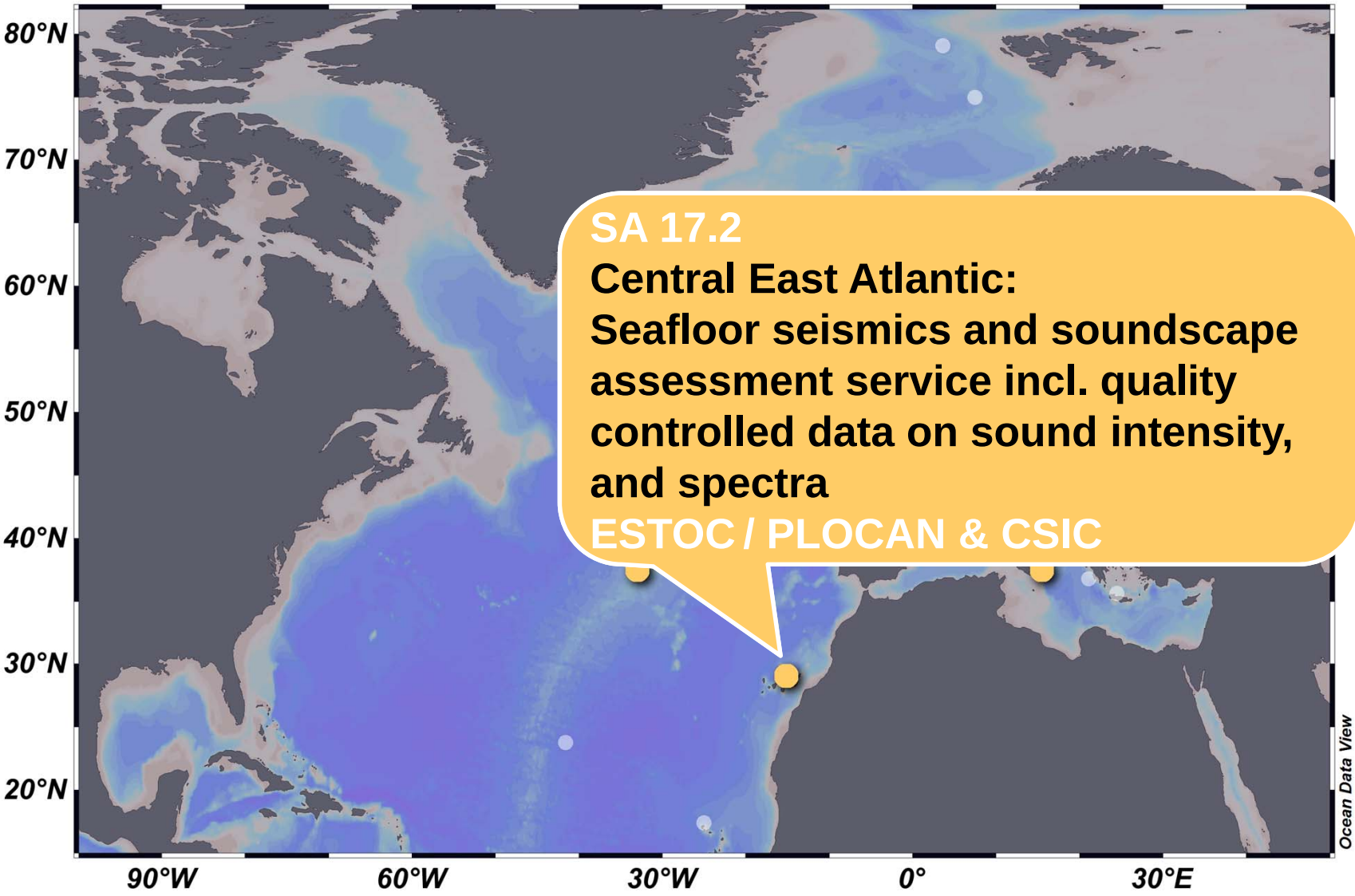


SA 14.2

Central North Atlantic:
Deep Sea hydrothermal ecosystem observation – seismic, acoustic, and geodetic data including online visualization tools

MoMAR / CNRS

Geophysics and geodynamics



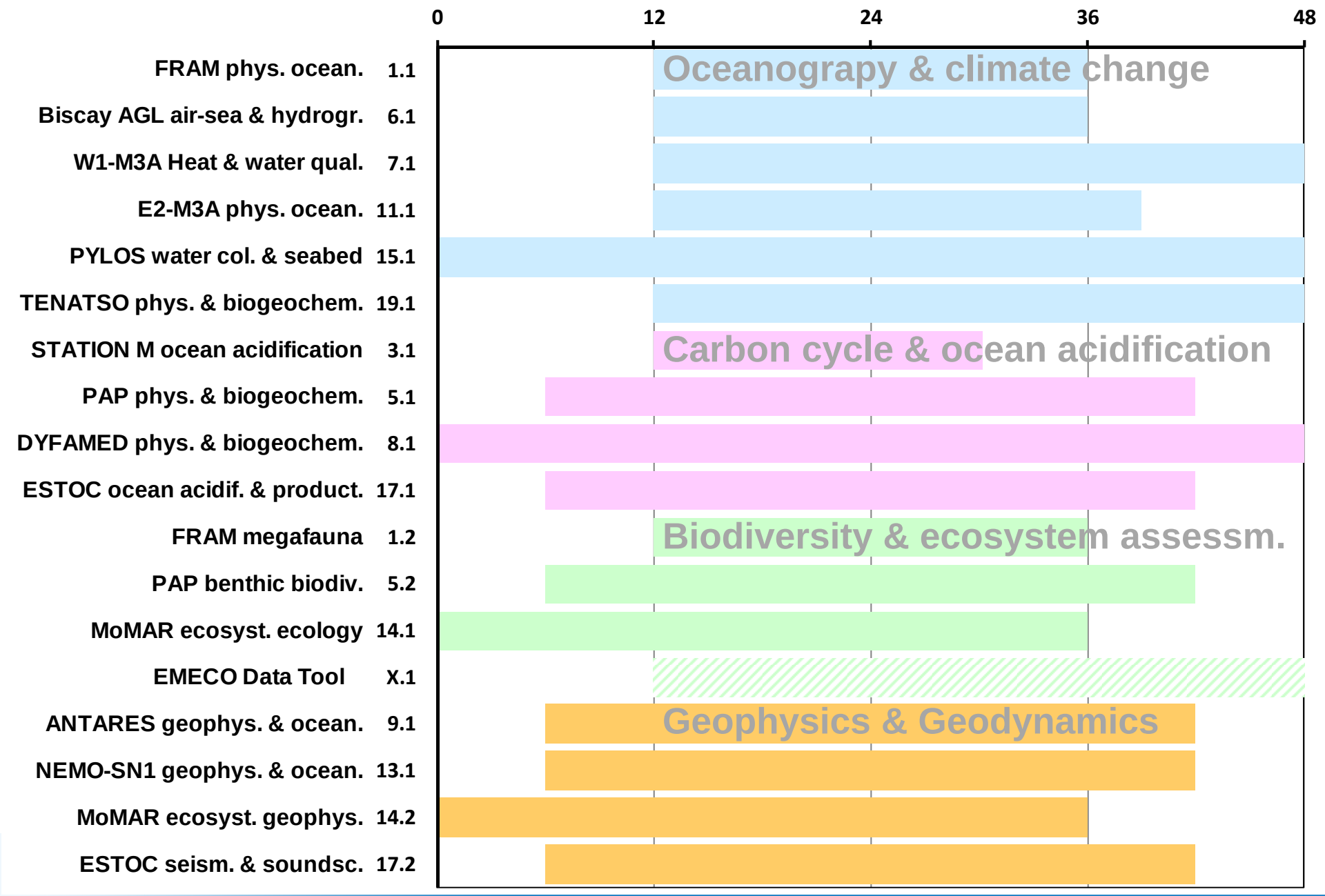
SA 17.2

Central East Atlantic:
Seafloor seismics and soundscape assessment service incl. quality controlled data on sound intensity, and spectra

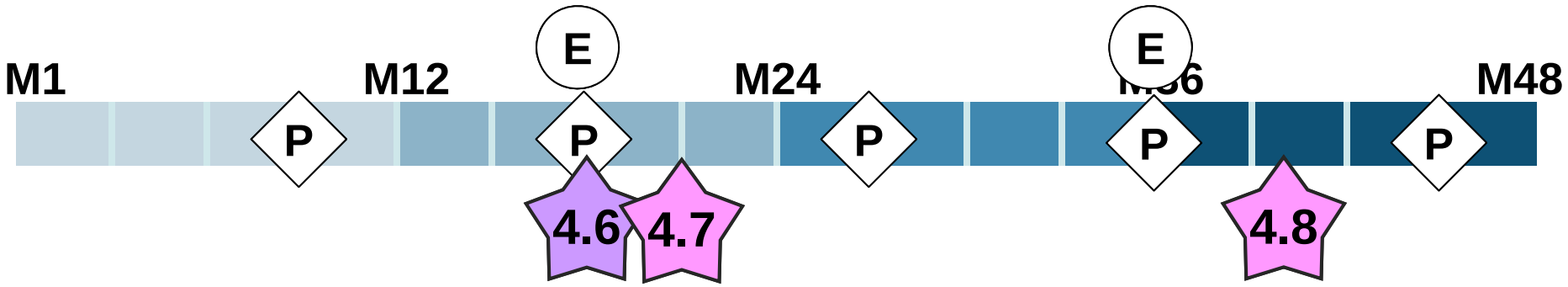
ESTOC / PLOCAN & CSIC

SA, WP10 & WP4 tasks, timeline, and evaluation

WP10: Service Activities timeline



SA reporting and evaluation in WP4 and 10



P — **Internal progress updates on SA status and dissemination and implementation of SA panel recommendations (M9, 18, 27, 36, 45)**

E — **Evaluation of SA quality and outreach by SA Panel of international a panel of international experts incl. recommendations (M18, 36)**

4.6 — **Monitoring of SA implementation and dissemination (Deliverable, M18)**

4.7 — **Reports on SA's procedures, development, dissemination, and use (Deliverables, M20, 40)**

Starting actions and next steps (1)

Collection of information on planned SAs by WP10 coordinator

- Collecting basic information on SA content and status, incl. information on data archiving and access, added value, open issues and need for support

Service Activity workshop (19. Nov., 17:45)

- SA providers, people involved in data managing & harmonization (WP4) and networking & outreach (WPs 6, 7, 8)
- Starting the process towards harmonisation and optimisation of the services and dissemination means
- Identifying problems, risks, and support needed tor a timely SA provision
- Selection of SAs for dissemination / visualization via EMECO data tool
- Exchange on stakeholder groups and initiatives to be informed and appointment of SA categorie representatives to promote the SAs

Formation of the Service Activity Panel

- Independent international reviewing board (experts, users, stakeholders)
- Currently discussed with FixO3 coordinator and SC

Starting actions and next steps (2)

Connect first SAs to the FixO3 portal

- Setup SA area of the FixO3 portal and implement SA provision
- Focus on early SAs (M1)
  - PYLOS pyhs. oceanography
  - DYFAMED carbon cycle
  - MoMAR ecology
  - MoMAR geophysics
- Solve issues concerning data harmonization, data access, authentication, and monitoring of usage