The Global Ocean Observing System

GOOS Regional Alliance Council Meeting

16 April 2025, online

IOCARIBE-GOOS

Doug WIlson IOCARIBE / University of the Virgin Islands
with Edgard Cabrera, Cesar Toro, Lorna Inniss, Devin Burri

IOCARIBE-GOOS

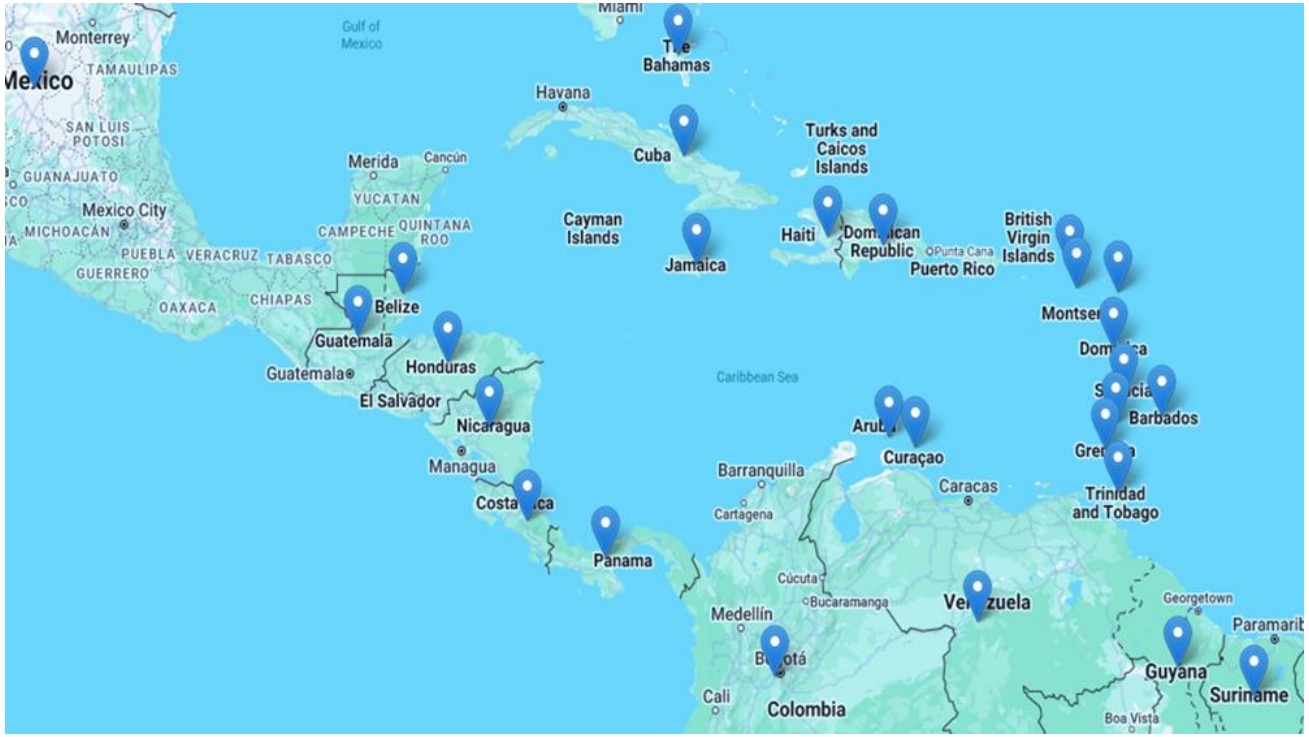
Progress and Achievement in 2024/2025

- IOCARIBE-GOOS Session/Workshop at IOCARIBE XVII
  April 2024

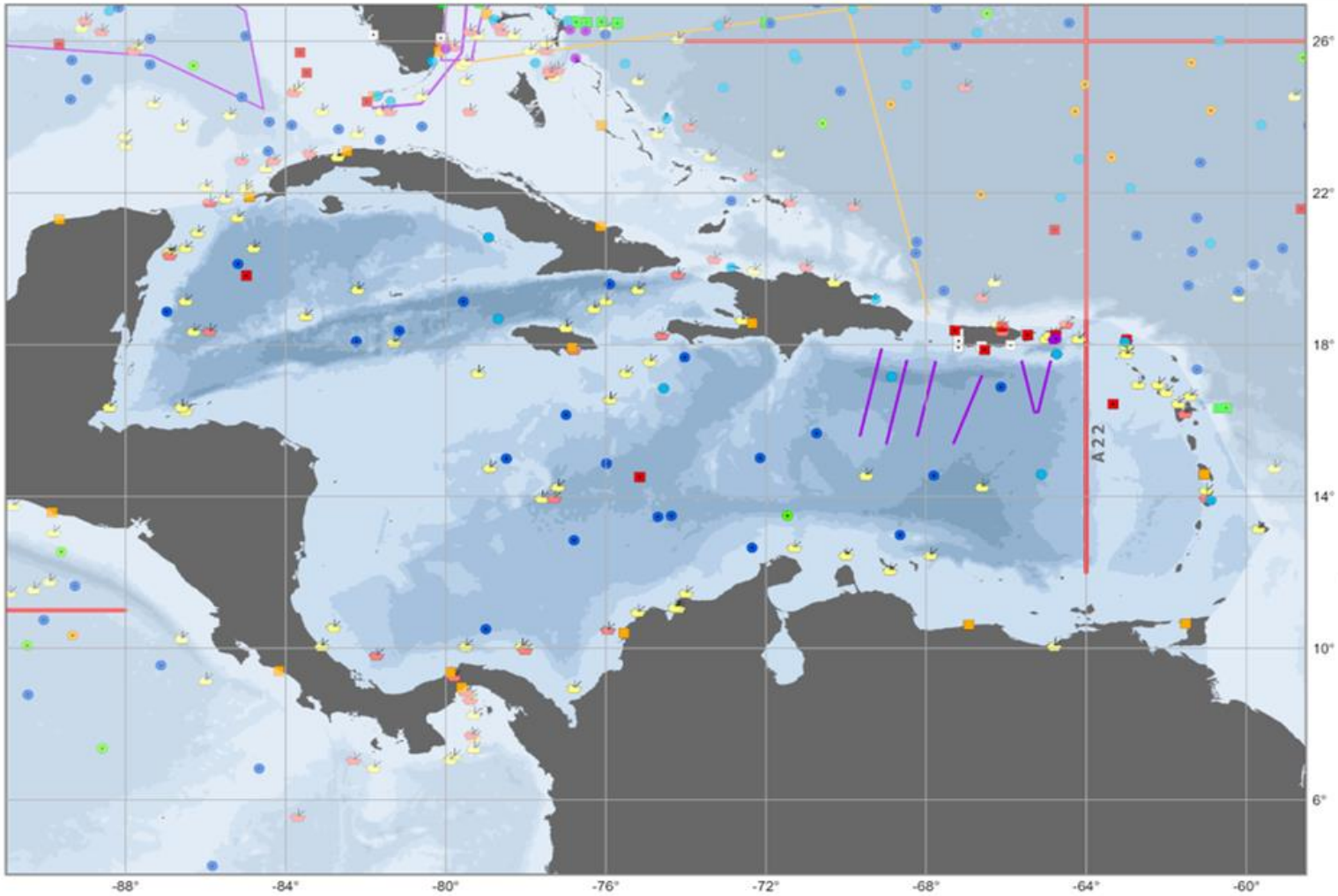
- Additional Progress at IOCARIBE XVII -
  Recommendations and expressions of support

- IOCARIBE-GOOS is aligned with multiple UN Decade
  Programmes and Activities
  - CoastPredict - Adaptation fund proposal
  - GOOS Co-Design Tropical Cyclone Exemplar
  - Safe Ocean - iCHEWS (Integrating Coastal Hazards Early Warning Systems in the Tropical Americas and Caribbean)
  - TAC-OOFS (Tropical Americas and Caribbean Ocean Observing and Forecasting System

- Coordination with GOOS OCG 16



An Ocean Observing and Forecasting System for the Tropical Americas and Caribbean Region



Caribbean Sea Observing System

In situ operational platforms monitored by OceanOPS

Only platforms in the Caribbean Sea are counted in the legend

Mobile systems
- Core floats - Argo (21)
- Deep floats - Argo (0)
- Biogeochemistry floats - Argo (1)
- Underwater gliders - OceanGliders (2)
- Drifting buoys - DBCP (8)

Fixed systems
- Moored buoys - DBCP (9)
- Ocean reference stations - OceanSITES (0)
- Sea level gauges - GLOSS (9)
- High Frequency radars (5)

Ship based measurements
- Automated weather stations - SOT/VOS (16)
- Manned weather stations - SOT/VOS (58)

Reference lines and areas
- Repeat hydrography - GO-SHIP (1)
- eXpendable BathyThermographs - SOT/SOOP (0)
- Sampled sites - OceanGliders (5)

March 2025

Generated by ocean-ops.org, 2025-03-28
Projection: World Plate Carree (-150,0000)

OCG 16 Outcomes

- Presentations and interactive workshop
- Successful idea sharing
- New partnerships (FVON)
- Potential funding sources discussed

- Connected with reps from French territories to invite to IOCARIBE-GOOS W

Challenges & Opportunities

Opportunities

Global collaboration Decade Programmes, activities & other IOC programs

- Ie. CoastPredict, GOOS co-design, IODE, Tsunami

IOCARIBE regional program collaborations

- Capacity Development Working Group, EW4ALL, Ocean Literacy
- Strong existing National and Sub-regional observing systems in the IOCARIBE region

Developing MOU for regional OCG observations across National Jurisdictions

- Proposing initial framework, and suggesting a Task Team formation at the IGM

Challenges

Funding availability

Large number of member states (need to build strength at sub regional level)

Observations in EEZs approval process takes a long time

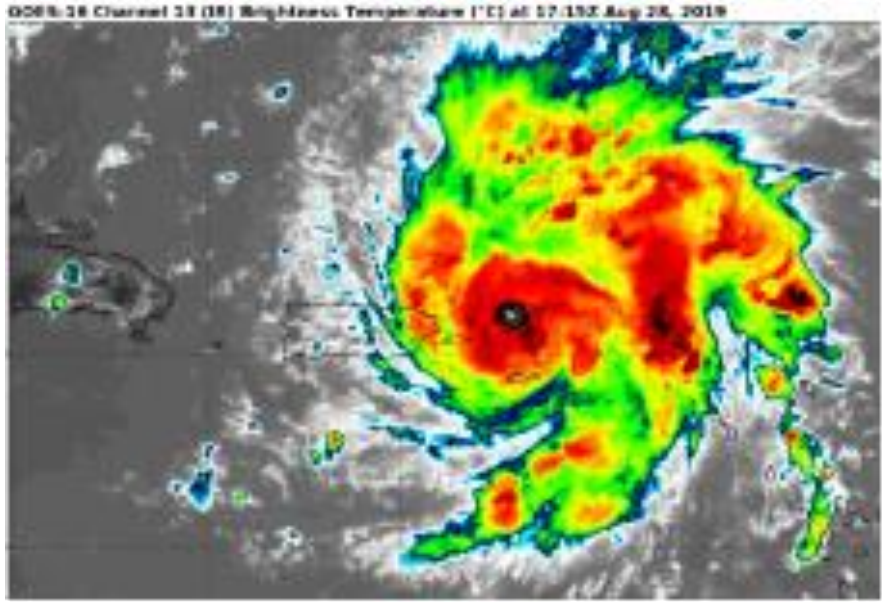
- Need to improve message to focus on safety and security,
- Results based message for shared goals to improve forecasting

Work Plan 2025 and Onward

1. Capacity/Stakeholder Needs Survey
   - Inventory of existing observing networks
   - Understand member state/user priorities
   - Gauge stakeholder capacities (technical/staff) & gaps

1. Develop and maintain partnerships

   - Identify shared goals/priorities
   - Adaptation Fund Pilot program - CoastPredict



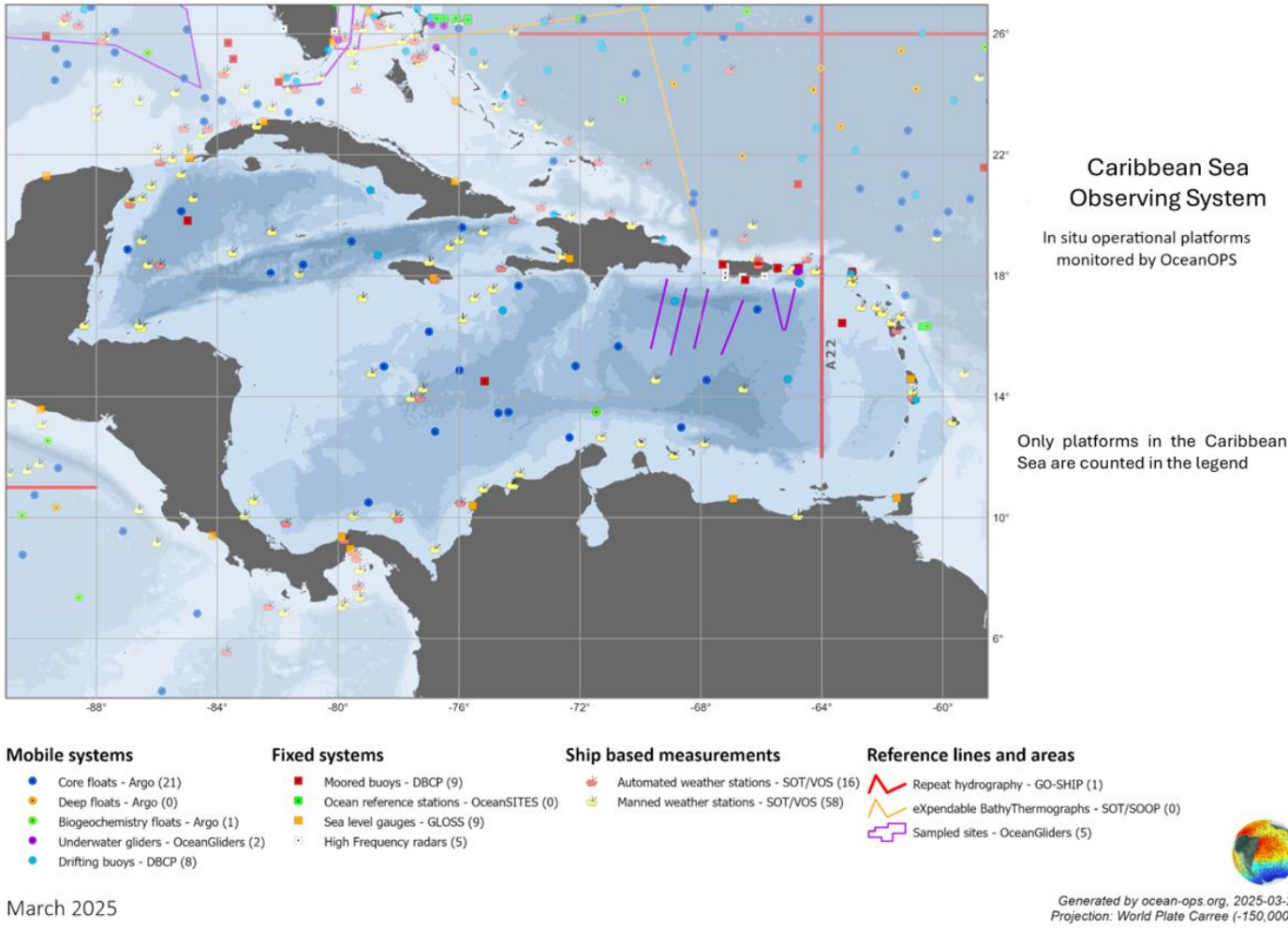
Dorian forms over St. Thomas, USVI, August 2019

1. Write the new **Work Plan 2025-2027** document
   - Utilizing survey results, Strategy Document, and GOOS 2030 Roadmap to develop IOCARIBE-GOOS two year plan
   - Plan 2025 virtual and in-person WG meetings - possible technical workshop as funding allows

1. Development of the Initial Observing and Forecasting System (Led by TAC-OOFS, Task Teams)

Support needed from GOOS

- Technical support for development of initial Observations / products Framework system
- Shared governance best practices across GRAs
- Global GOOS-facilitated regional Workshops or trainings
- Cross-representation among GRAs - have a Working Group rep attend neighboring GOOS meetings (Brazil, Argentina, US IOOS, etc)
- Facilitating collaborative guidance across GRAs for common issues: (ie. navigating EEZs, legal support



The Global Ocean Observing System

Thank you

unesco
Intergovernmental Oceanographic Commission

WORLD METEOROLOGICAL ORGANIZATION

UN environment programme

International Science Council

The Global Ocean Observing System

Highlighting Successes 2024-2025

GOOS Co-Design Programme's Tropical Cyclone Exemplar

- ***Co-Designing Ocean Observing Systems for Improving the Understandin and Forecasting of Tropical Cyclones***

TAC PROJECTS

Knowledge and Solutions

- TAC Pollutants Observatory
- TAC Gain knowledge to respond to multiple stressors

Essential Infrastructure

- TAC Ocean Observing and Forecasting System
- Coastal Hazards Early Warning System and Services for the TAC Region
- MACHC-IOCARIBE Seabed 2030 Project

Foundational

- Ocean best practices in the TAC Region
- Ocean Literacy in the TAC Region
- Enhancing capacity development in the TAC Region

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Intergovernmental Oceanographic Commission

2021 2030 United Nations Decade of Ocean Science for Sustainable Development

Norad
With the Support of Norway

TROPICAL AMERICAS AND CARIBBEAN REGION

REGIÓN TROPICAL DE LAS AMÉRICAS Y EL CARIBE

RÉGION DE L'AMÉRIQUE TROPICALE ET DES CARAÏBES

IOCARIBE Collaboration with IODE: Access to Data, Information, and Technology

AREAS OF COLLABORATION:

OTGA (OceanTeacher Global Academy): Training and capacity development.
OBIS (Ocean Biodiversity Information System): Management of marine biodiversity data.
ODIS (Ocean InfoHUB LAC): Data interoperability and access.

KEY PARTNERS:

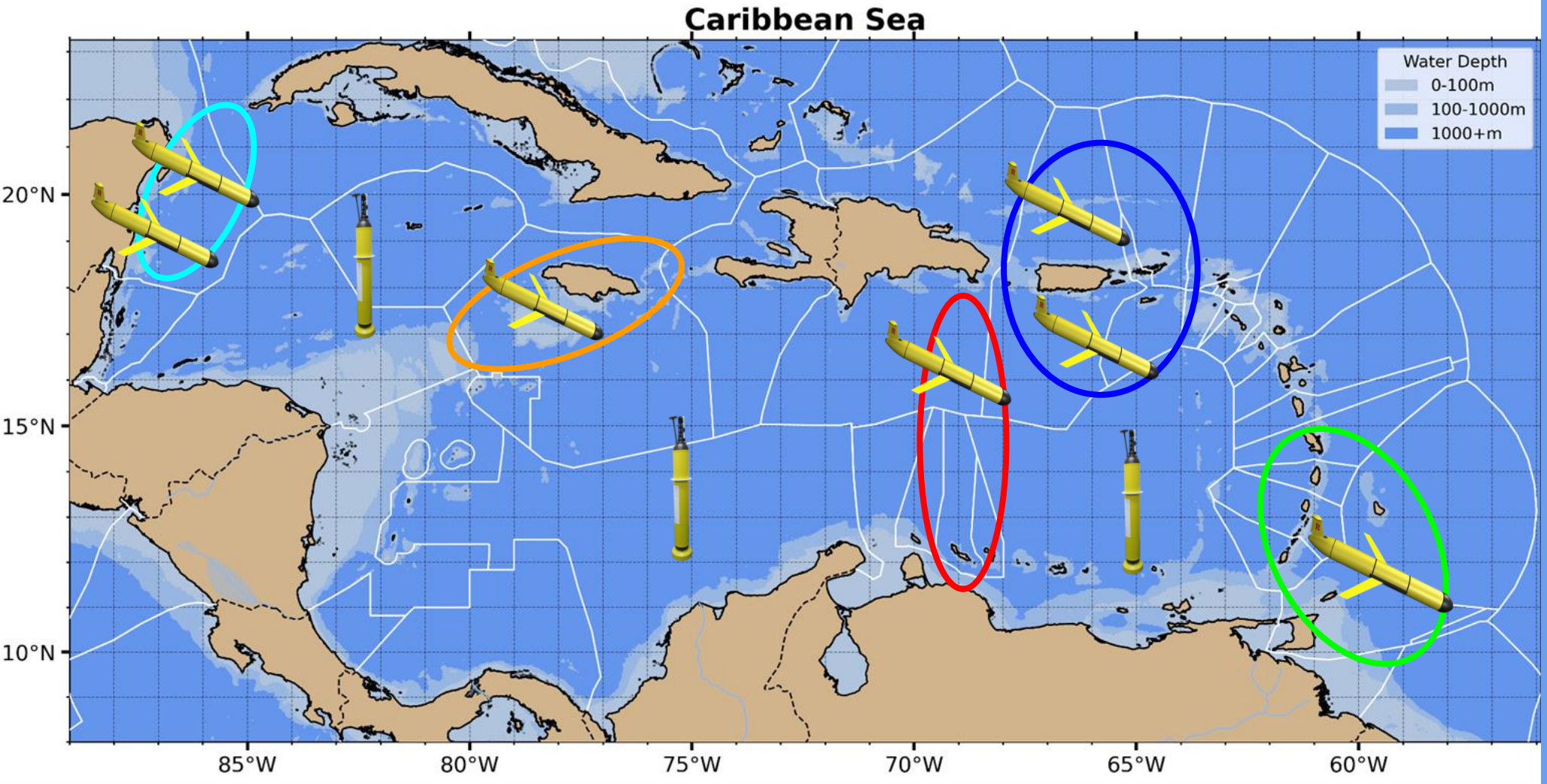
INVEMAR (Institute of Marine and Coastal Research): Collaboration on data management and technology.
Other regional partners: Support in project implementation and information access.

ACHIEVEMENTS:

Access to data and information: Facilitating the use of oceanographic data for decision-making.
Knowledge transfer: Training and capacity building in advanced technologies.
Technology: Implementation of tools for data management and visualization.

2025 Planned Caribbean Glider Missions

Combined with Argo floats deployed across the Caribbean provide real-time profile data for assimilation by hurricane forecast models



North Atlantic Inflow - PR-USVI-BVI (US Hurricane Gliders)

Throughflow - DR to Curacao (2024 Vetlesen to US NSF)

Throughflow - Nicaraguan Bank (US NSF)

Yucatan Outflow - Mexico (US NAS/ Mexico)

South Atlantic Inflow - Barbados to Guyana (2025 Vetlesen)

Supports needed from GOOS

–Archive of TOR documentation

-Global GOOS-facilitated regional meetings (working/ground level)

-A Working Group Representative attend neighboring GOOS meetings (Brazil, Argentina, etc)

-Available guidance on International LoS, EEZ-related topics for GRAs

-Synthesizing IOC-determined EEZ policy for GRAs member states, and stakeholders

Next: Updating Inventories

Country	CARIBE EWS	CLME+	HAB-ANCA	IOCARIBE GOOS	Total
Aruba			1		1
Barbados			1	4	5
Belize			1	1	2
Bermuda				1	1
Brazil			1	4	5
Canada				3	3
Cayman Islands				1	1
Chile				3	3
Colombia			1	2	3
Colombia			1		1
Costa Rica				2	2
Cuba	1			2	3
Curaçao (Nethe	1				1
Ecuador		1		5	6
El Salvador		1			1
France			1	2	3
Jamaica	1	1	1		3
Martinique	1				1
Mexico		1	3	6	10
Mexico			6		6
Nicaragua		1			1
Peru				2	2
Portugal				2	2
Puerto Rico (US		2		4	6
Saint Lucia				1	1
Spain			1		1
Trinidad and To			1	1	2
United Kingdon				1	1
United Kingdon				1	1
United States	1	4		5	8	18
United States o					8	8
Venezuela					3	3
Virgin Islands, U					1	1
Grand Total	2	10	6	27	63	108

- 108 Institutions in the IOCARIBE Region
- Plan to update and connect with national and regional partners

Challenges & Opportunities

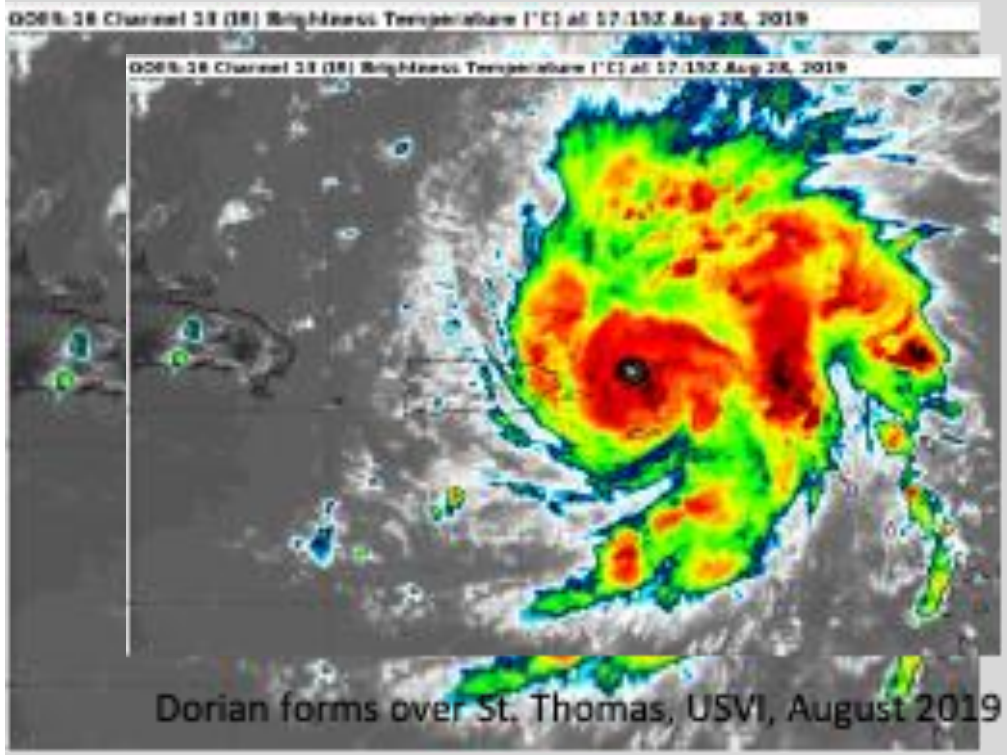
Opportunities

- Working with Decade Programmes and activities
  (CoastPredict, GOOS co-design, etc.)

- Availability of strong existing National and sub-regional
  observing systems in the IOCARIBE region

Challenges

- Funding availability
- Large number of member states (need to build strength at sub-regional level



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Lessons to Implement

- Observations, forecasts, and products address essential ocean variables based on regional needs- Foster stakeholders are invested in the success of the project
- Emphasize the Importance of open access to data to Member States
- Widely available marine products tailored to stakeholder needs
- Achievable steps that have measurable outcomes
- Standardization of best practices- Using IODE Data policy standardization
- Multidisciplinary partnerships- inclusion of wide network of institutions and inviting partners to the Working Group meetings for transparency and engagement