SIDS, Satellites and Sovereignty: Transforming Ocean Resource Stewardship from Space

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Relevant Organizations I’m Affiliated With

FUGRO

Jamaica FlyingLabs

UN-GGIM
PRIVATE SECTOR NETWORK

ECS
Organisation of Eastern Caribbean States

CARIGEO
Caribbean Geospatial Development Initiative
GEO-EMPOWERING THE CARIBBEAN

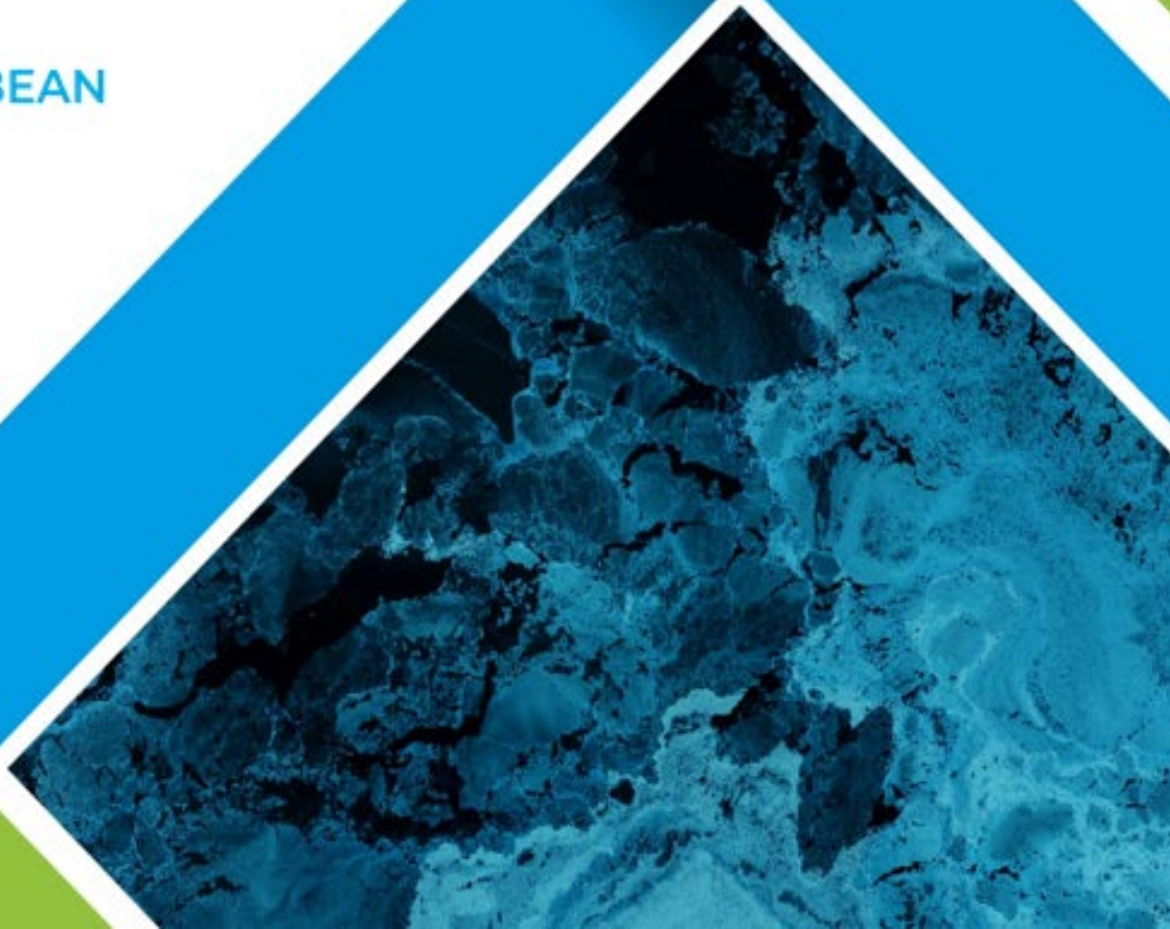
GeoTechVision
DELIVERING VALUE THROUGH INNOVATIVE SOLUTIONS

CARIGEO

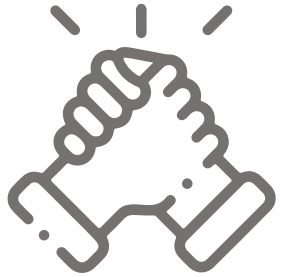
Caribbean Geospatial Development Initiative

GEO-EMPOWERING THE CARIBBEAN

an initiative implemented by the Americas Regional Committee of United Nations Committee of Experts on Global Geospatial Information Management (UN-GGIM: Americas)



Caribbean Geospatial Institute



Vision

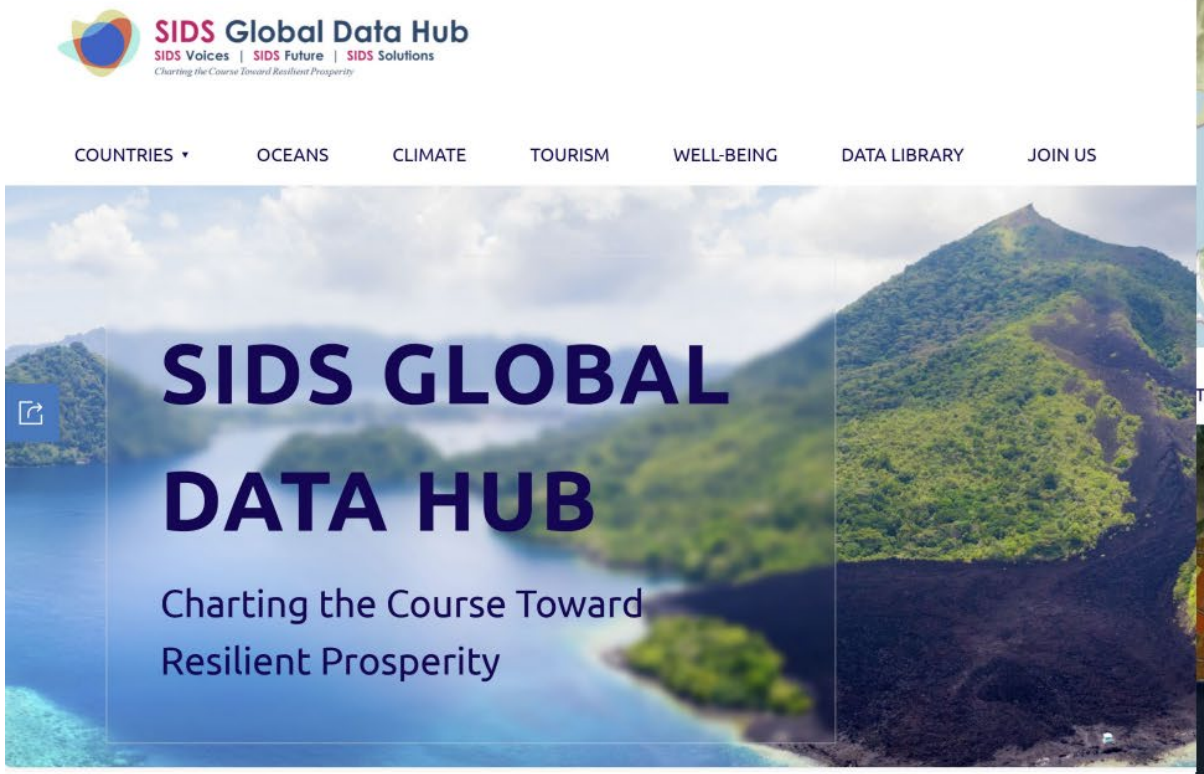
To establish the Caribbean as a global leader in geospatial innovation, enhancing data-driven decision-making for sustainable development, climate resilience, and regional economic growth.

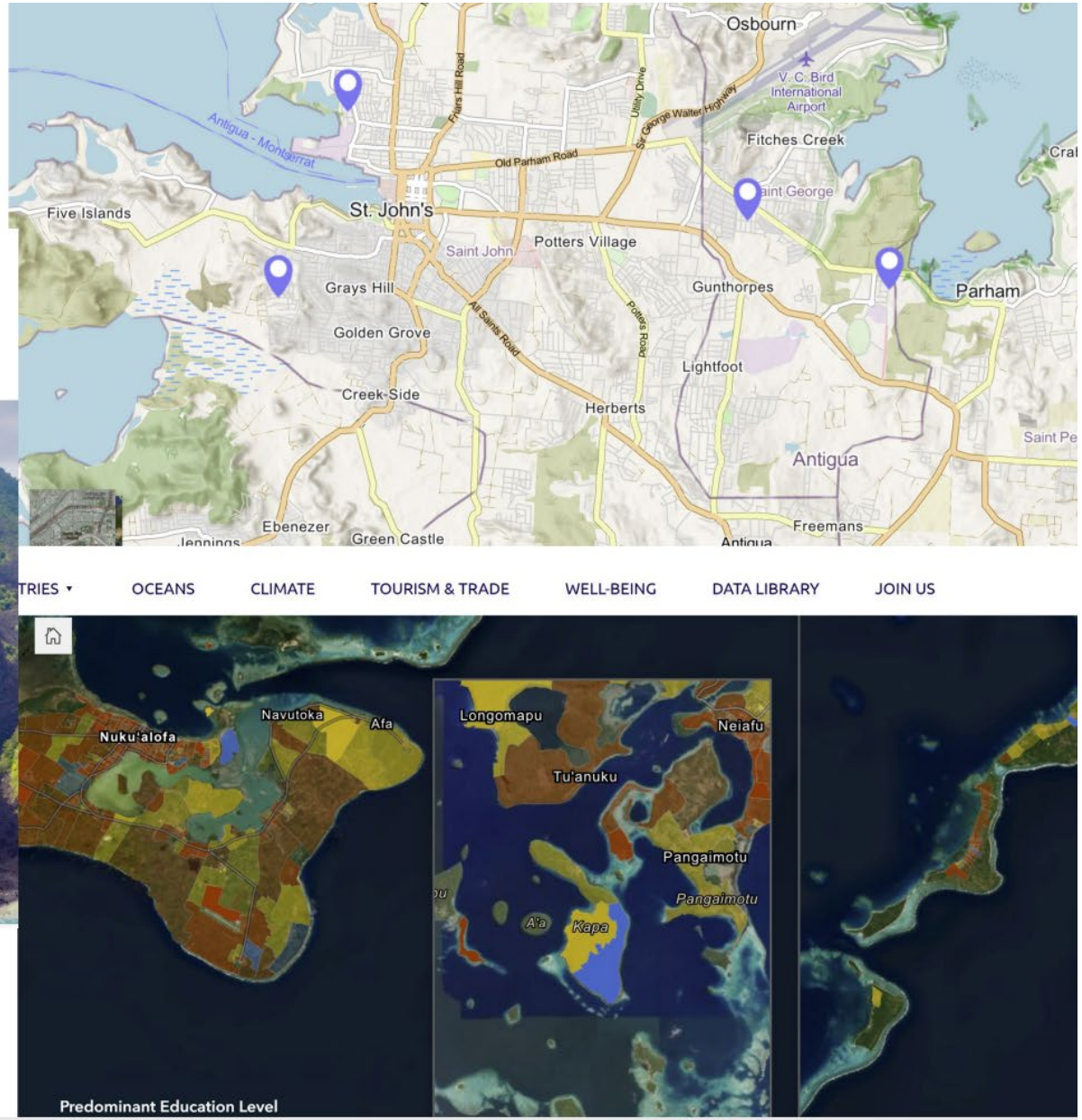
Mission

To leverage geospatial science and technology to enhance regional collaboration, policy coherence, data governance, and workforce capacity, ultimately driving sustainable development in the Caribbean.

A Live Platform

SIDS Global Data Hub





SDG DATA ALLIANCE

PVBLIC FOUNDATION

SIDS.SDG.ORG

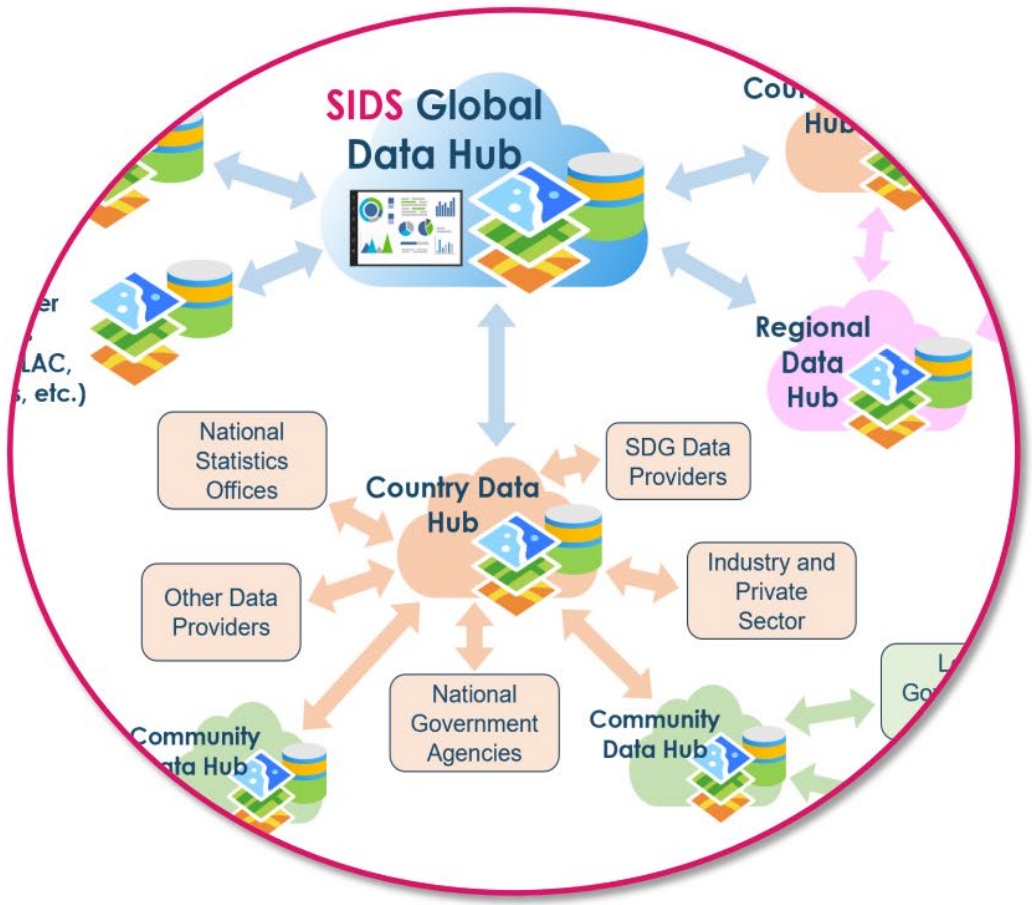
2025 Program of Work

Deploying SDG & SIDS Data Hubs

The development and live deployment of the **SIDS Global Data Hub** at **SIDS4** clearly demonstrated that the many data challenges for developing countries can be overcome with the right data and technology approach.

As guided by partners and existing funding commitments, the **SDG Data Alliance** will expand its activities to support the initial technical development of the **SIDS Global Data Hub** and, **as funds and resources become available**, to establish Regional, Country and Community Data Hubs for SIDS.

A key element will be working closely with Alliance partners to **accelerate Data Hub creation** and SIDS engagement by developing and standing up **6** country **SDG Data Hubs** and **10 SIDS Data Hubs** with data and technology capabilities, geographically distributed in existing and new partner countries.



Session 2: Blue Finance Revolution

23 September 2025

Caribbean Marine Ecosystem Snapshot

Biodiversity

- Over 12,000 Marine Species
- 45% of Fish and 25% of coral species are endemic
- Approximately 10% of global coral reefs (50,000 Km^2)

Ecosystems/ Economic Value

- Coral Reefs
- Mangroves
- Seagrass Beds
- $3.1 -4.6 Billion/year via tourism & fisheries
- Coastal Protection – 97 % wave Energy reduction

Challenges

- 75% of coral reefs degraded/threatened
- 38 million tons of Sargassum (May 2025)
- Coral bleaching ,Overfishing & disease

Challenges

1 Local Champions

"Without a dedicated champion, progress has been slow."

"Leaders with technical expertise and influence are crucial for navigating organizational and technical barriers."

2 Funding

Limited dedicated Budgets

3 White Ribbon Problem

Not enough happening at the land sea interface

4 National Innovation Systems

There is a lack of strong innovation ecosystems – impacts of national and regional capacities

Creating an understanding of ecosystem services from a single coastal or marine information model to support science-based policy making and the development of investment scenarios to unlock blue finance

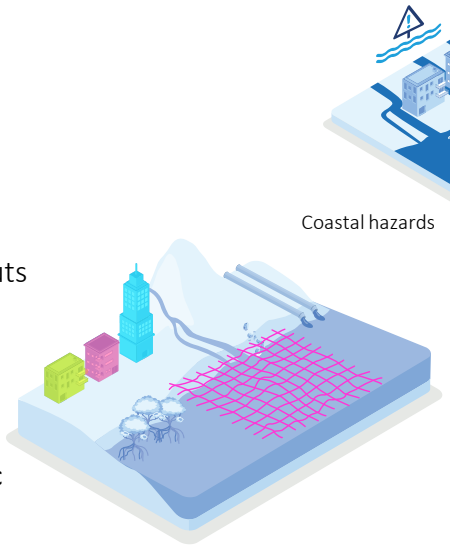
A single ecosystem information model – elements of this can be edited based on desired outcomes such as in the development of MPAs or assessments of EEZs

Geo Data inputs

Biophysical

Socioeconomic

Statistical Data inputs

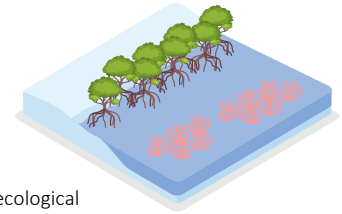


Onecoast information Model (OCIM)

Coastal hazards

land use and infrastructure

socio-economic statistics



Habitat, blue carbon and ecological

Measuring key ecosystem services (additional indicators can be added)

Avoided Damages from Coastal Protection: **Calculates the economic benefits of reduced flood and erosion risks thanks to natural coastal defences.**

Anthropogenic impact : **Quantify habitat loss due to urbanization, agricultural expansion, deforestation, and coastal development.**

Tourism and Recreation Revenue: **Quantifies the economic contribution of healthy ecosystems to the tourism sector.**

Social Value: **mapping cultural, spiritual, and aesthetic value to communities, preserving heritage and identity and protecting or enhancing livelihoods.**

Fisheries Economic Value: **Estimates the market value of fish stocks supported by healthy ecosystems.**

Biodiversity Value: **Measures species richness and ecosystem health, highlighting areas for conservation.**

Carbon Sequestered: **Quantifies how much carbon is stored and additional sequestration in coastal ecosystems, supporting climate mitigation efforts.**

Quantifying the total ROI from nature-based investment

Net Ecosystem Value (NEV) : aggregates the total socio-economic impact of key ecosystem services, guiding investment and policy decisions for sustainable coastal management.

Caribbean SIDS* lack an integrated, on-demand geospatial intelligence platform to access and interpret complex coastal and marine data.

There are plenty of data platforms, but users don't know which data gives them insights for their specific problem, when it's relevant, or how to access it quickly.

Big Ocean Insights solves this by delivering timely, relevant insights through conversational AI that guides users to the right information. It even recommends and enables ordering the exact data they need for disaster risk reduction and climate-resilient planning.

* Problem not limited to the Caribbean SIDS