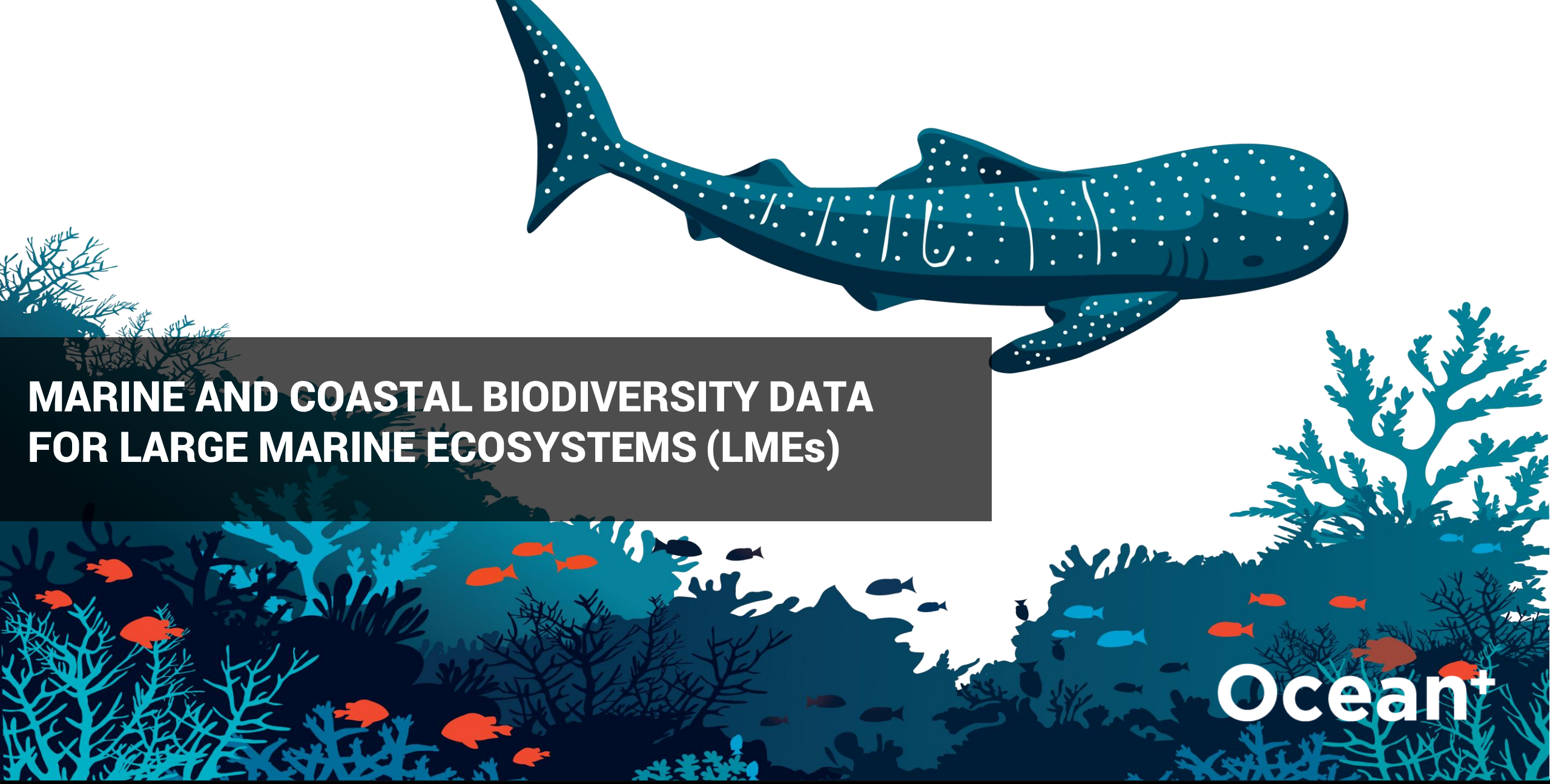


MARINE AND COASTAL BIODIVERSITY DATA FOR LARGE MARINE ECOSYSTEMS (LMEs)

Ocean+

UN environment WCMC 40 years

www.oceanplus.org

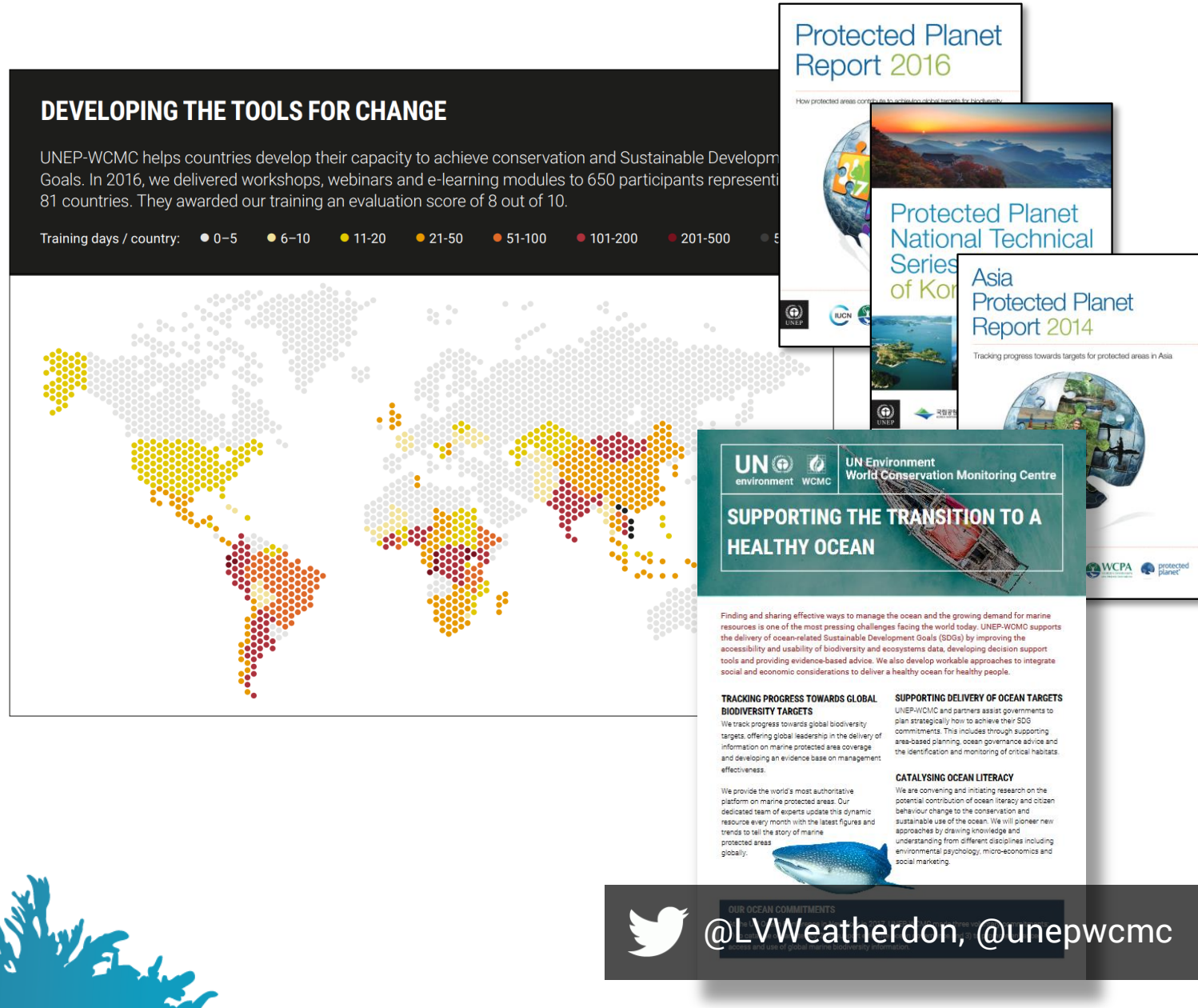
@oceanplus_ @unepwcmc

proteus

Who are we?

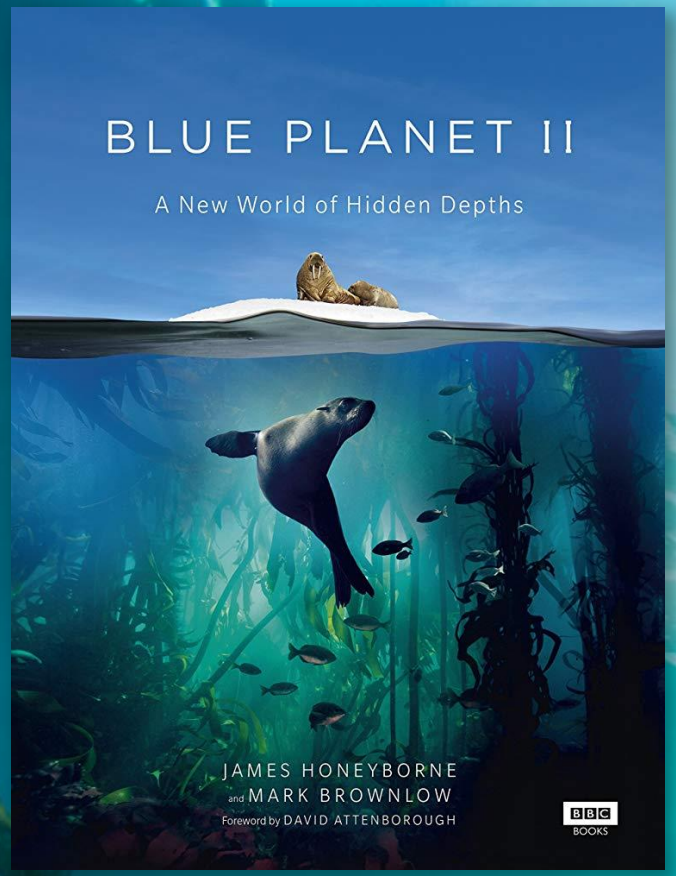
UN Environment World Conservation Monitoring Centre

- Supporting the transition to a **healthy ocean**;
- Mainstreaming biodiversity into **sustainable development;**
- Planning for places: supporting **area-based planning** and decision-making
- Strengthening natural capital for **private sector** decision-making;
- Securing a **sustainable** future for **wildlife**;
- Supporting **intergovernmental agreements** on biodiversity and ecosystem services



PART 1

INTRODUCTION



clean seas

turn the tide on plastic

© Cesar Harada, Flicker

@LVWeatherdon, @unepwcmc

© Rick Stuart-Smith, *Reef Life Survey*

UN environment WCMC 40 years

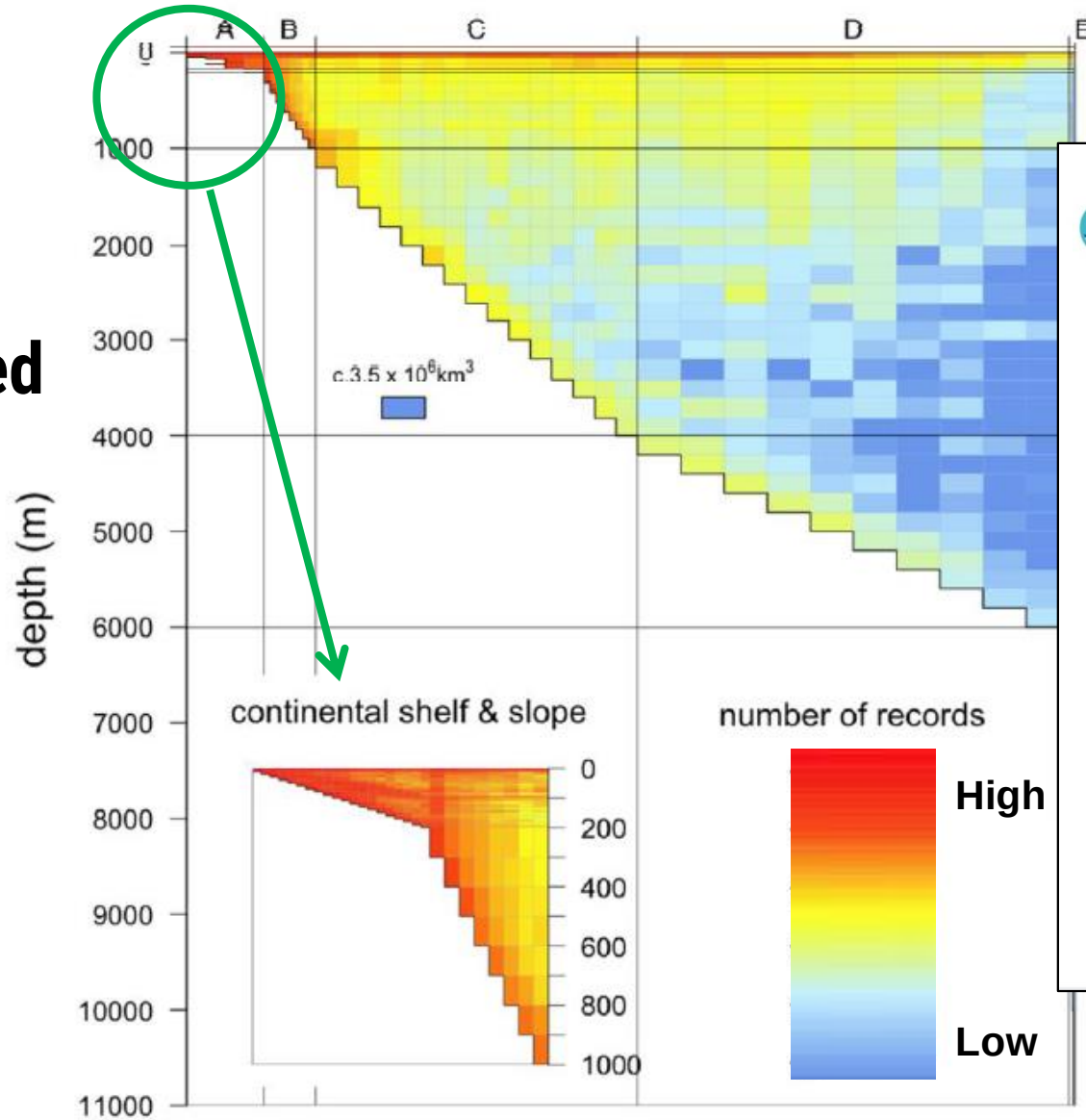
www.oceanplus.org

@oceanplus_ @unepwcmc

proteus

Marine biodiversity knowledge remains limited

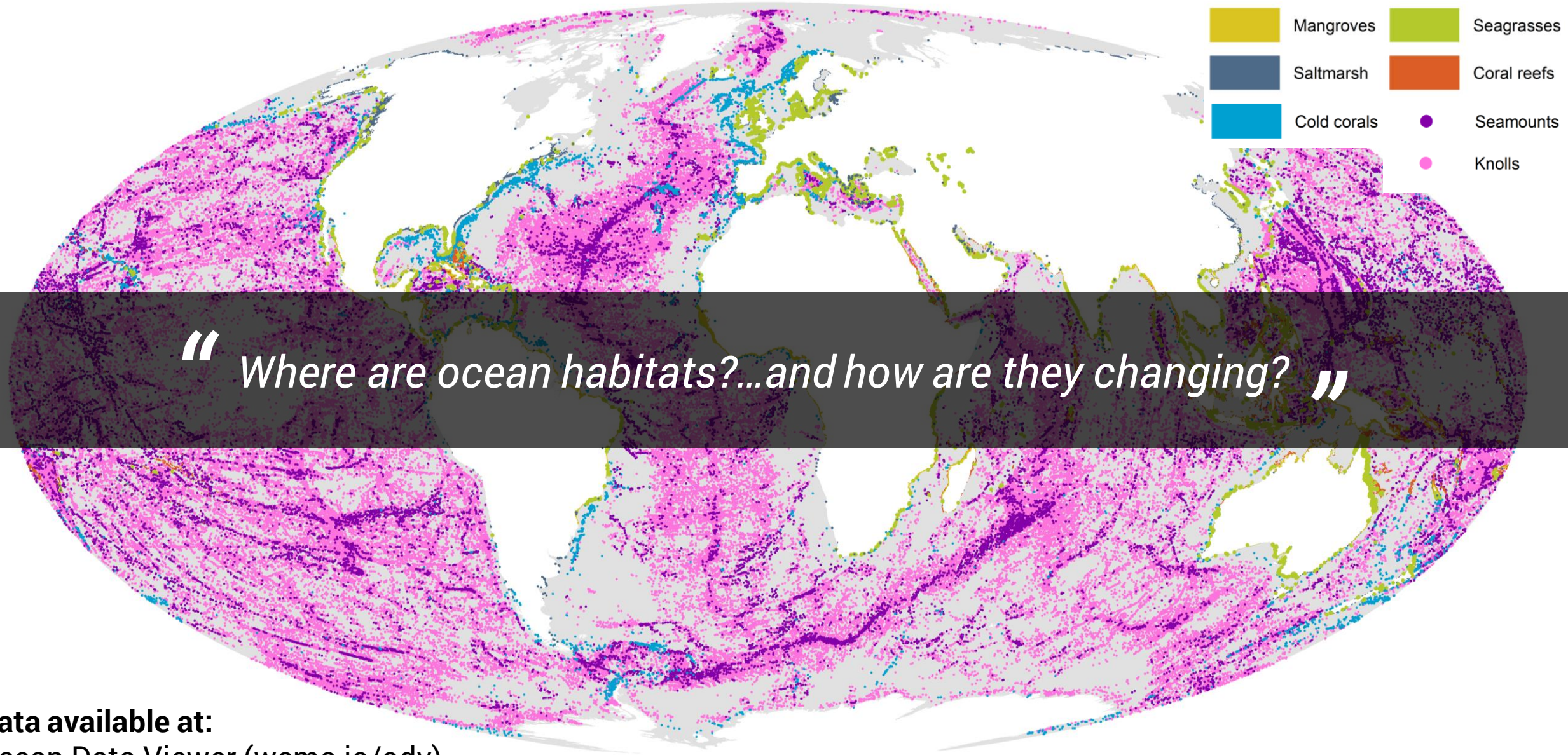
Shallow coastal waters are better sampled than deep offshore waters



Reference: Webb et al. (2010), *PLOS ONE*

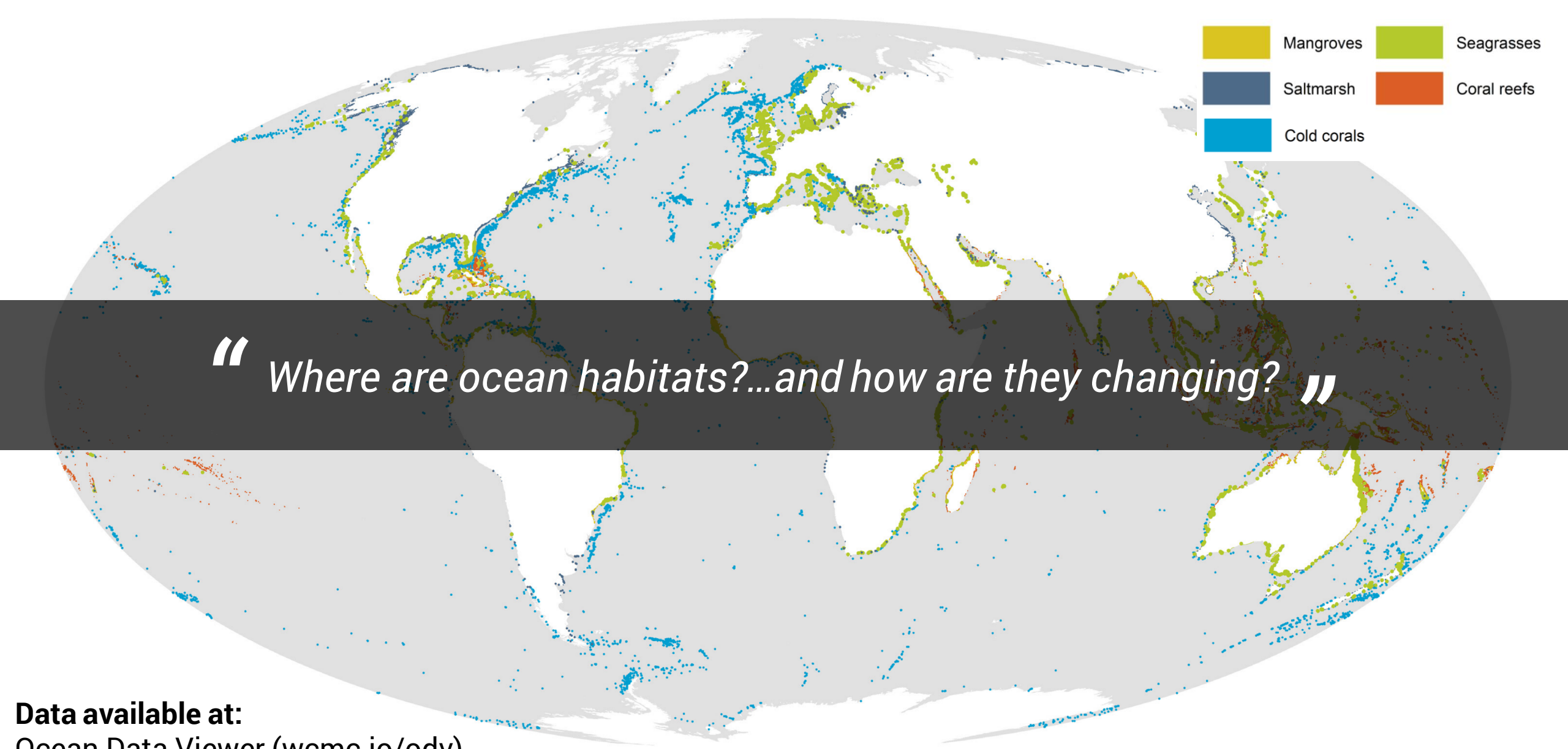
OBIS OCEAN BIOGEOGRAPHIC INFORMATION SYSTEM

CENSUS OF MARINE LIFE



“ Where are ocean habitats?...and how are they changing? ”

Data available at:
Ocean Data Viewer (wcmc.io/odv)

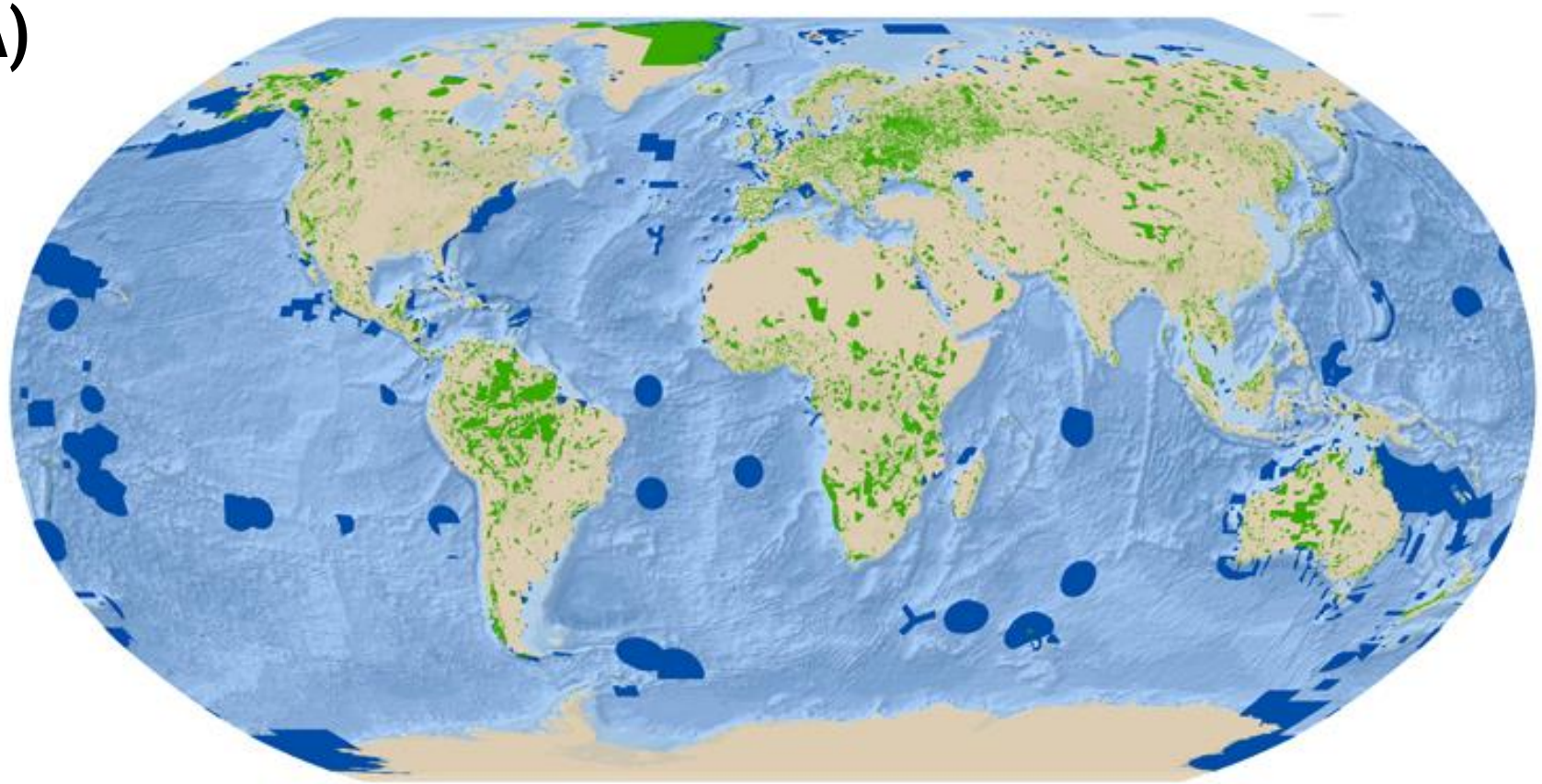


“ Where are ocean habitats?...and how are they changing? ”

Data available at:
Ocean Data Viewer (wcmc.io/odv)

The World Database on Protected Areas (WDPA) today…

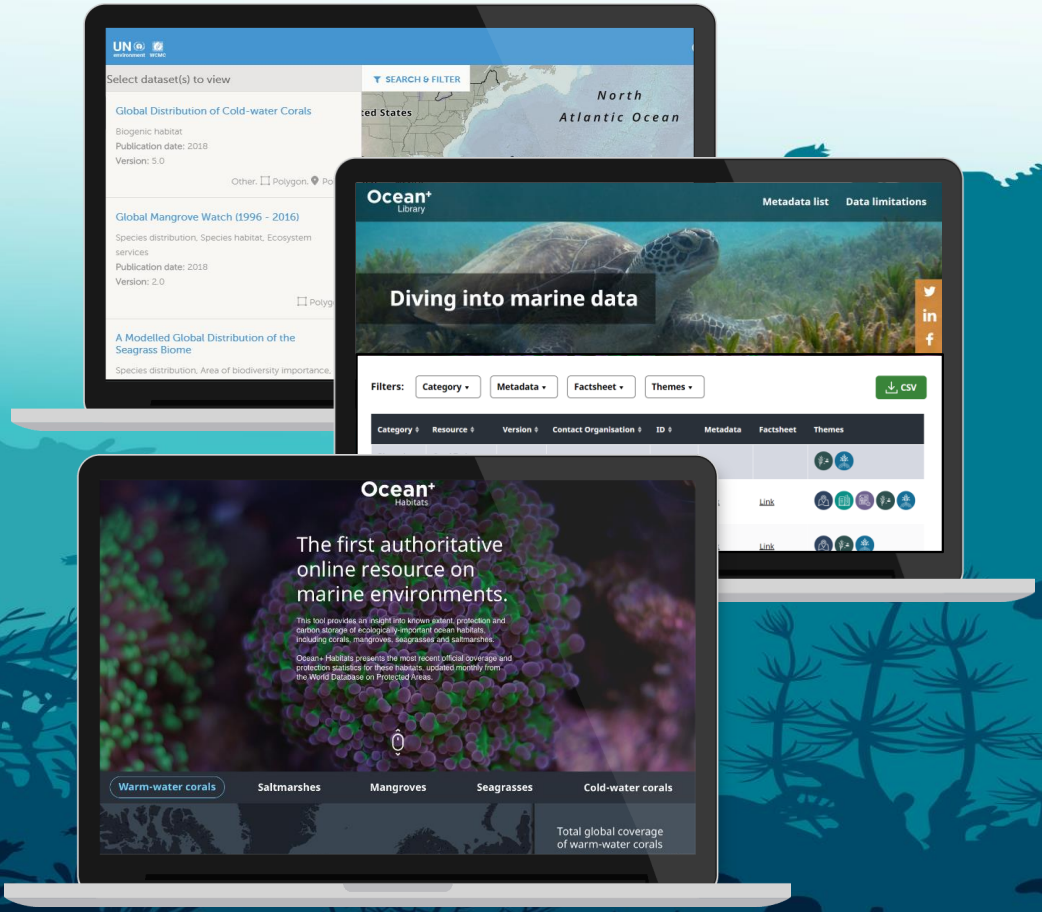
More than **234,000 protected area records,** from 245 countries and territories.

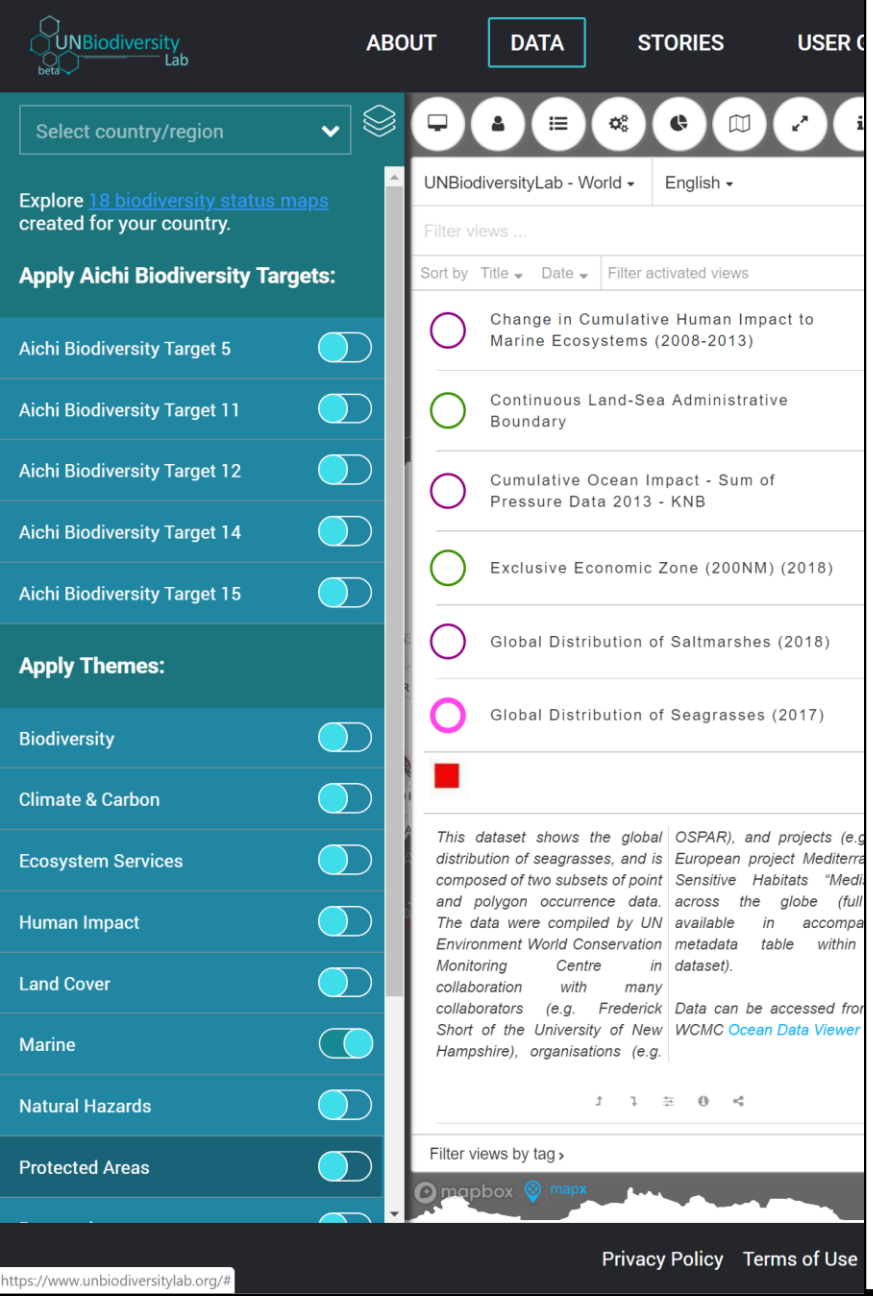


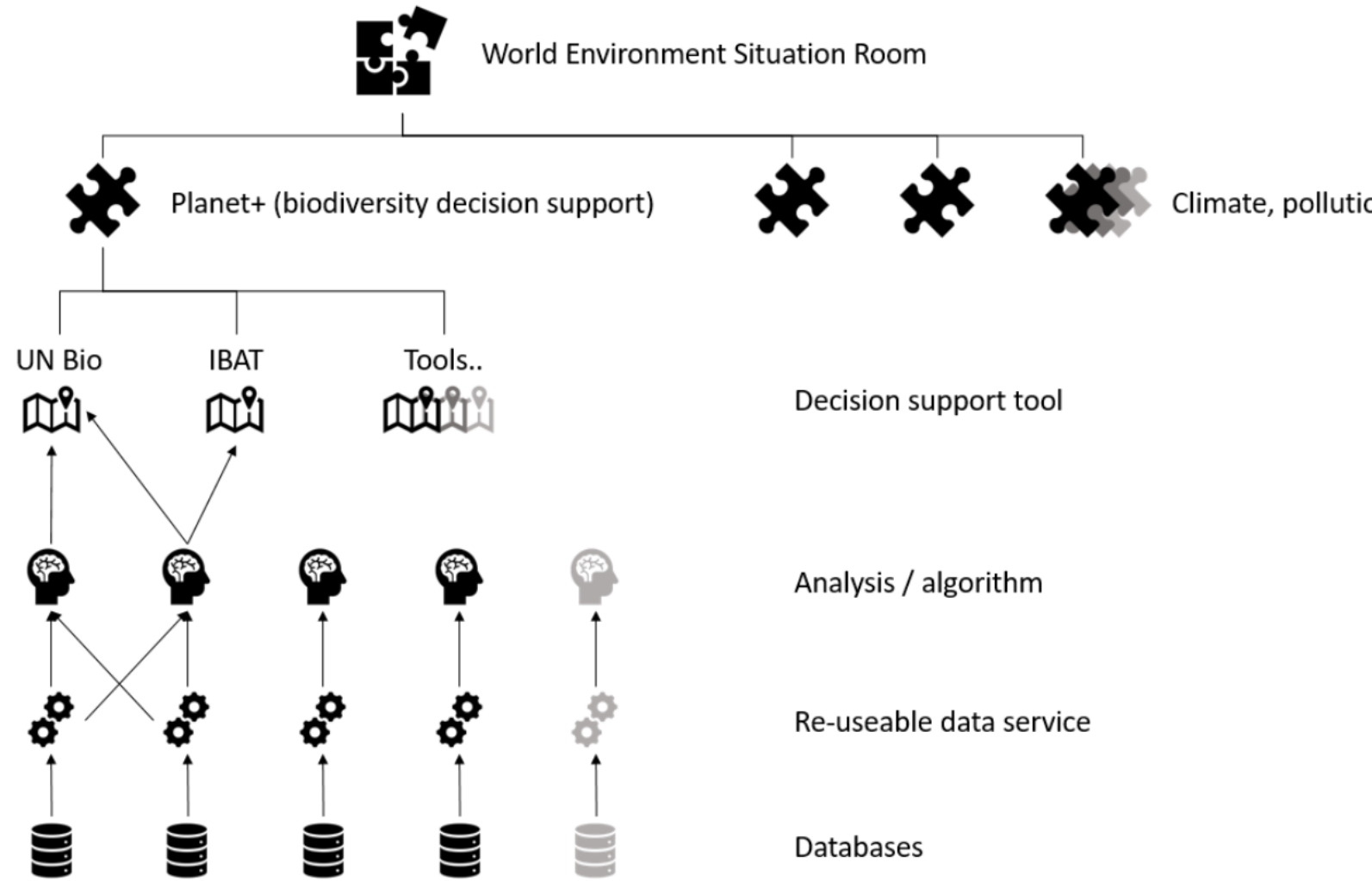
protected planet

Ocean+

"...to facilitate the availability and inter-operability of the **best available marine and coastal biodiversity datasets across global, regional and national scales**" (COP Decision X/29, 2012)




UNBiodiversity Lab beta
ABOUT
DATA
STORIES
USER
Select country/region
Explore 18 biodiversity status maps created for your country.
Apply Aichi Biodiversity Targets:
Aichi Biodiversity Target 5
Aichi Biodiversity Target 11
Aichi Biodiversity Target 12
Aichi Biodiversity Target 14
Aichi Biodiversity Target 15
Apply Themes:
Biodiversity
Climate & Carbon
Ecosystem Services
Human Impact
Land Cover
Marine
Natural Hazards
Protected Areas
UNBiodiversityLab - World
English
Filter views ...
Sort by Title Date Filter activated views
Change in Cumulative Human Impact to Marine Ecosystems (2008-2013)
Continuous Land-Sea Administrative Boundary
Cumulative Ocean Impact - Sum of Pressure Data 2013 - KNB
Exclusive Economic Zone (200NM) (2018)
Global Distribution of Saltmarshes (2018)
Global Distribution of Seagrasses (2017)
This dataset shows the global distribution of seagrasses, and is composed of two subsets of point and polygon occurrence data. The data were compiled by UN Environment World Conservation Monitoring Centre in collaboration with many collaborators (e.g. Frederick Short of the University of New Hampshire), organisations (e.g. OSPAR), and projects (e.g. European project Mediterra Sensitive Habitats "Medi across the globe (full available in accompa metadata table within dataset).
Data can be accessed fro WCMC Ocean Data Viewer
Filter views by tag
mapbox mapx
Privacy Policy Terms of Use
https://www.unbiodiversitylab.org/#


World Environment Situation Room
Planet+ (biodiversity decision support)
Climate, pollutio
UN Bio
IBAT
Tools..
Decision support tool
Analysis / algorithm
Re-useable data service
Databases

CATALYSING PARTNERSHIPS

European multi-lateral initiatives

Global, regional and national biodiversity monitoring networks; NGOs; researchers

Regional Seas, LMEs and National Governments

International multi-lateral environmental agreements

Companies and consultancies

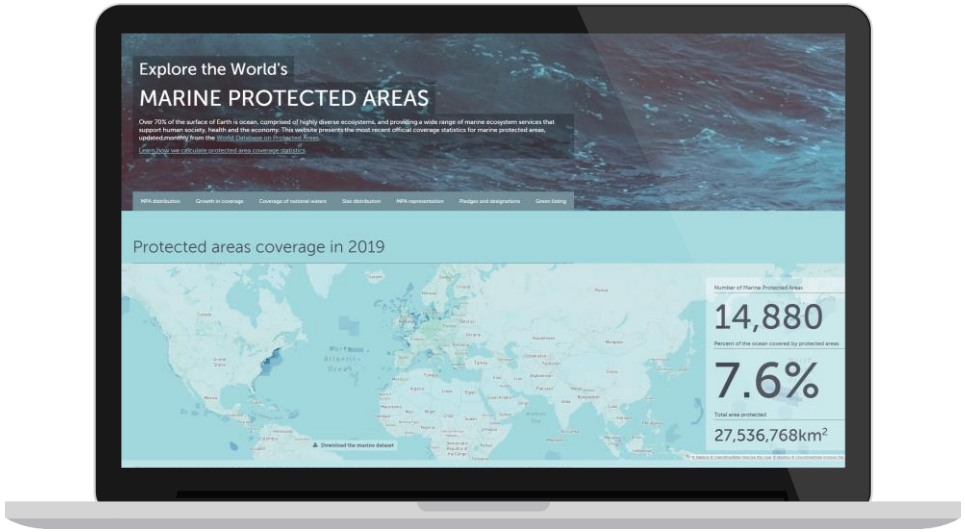
UN agencies

PART 2

TAILORING BIODIVERSITY DATA AND INFORMATION

LME Indicator 33

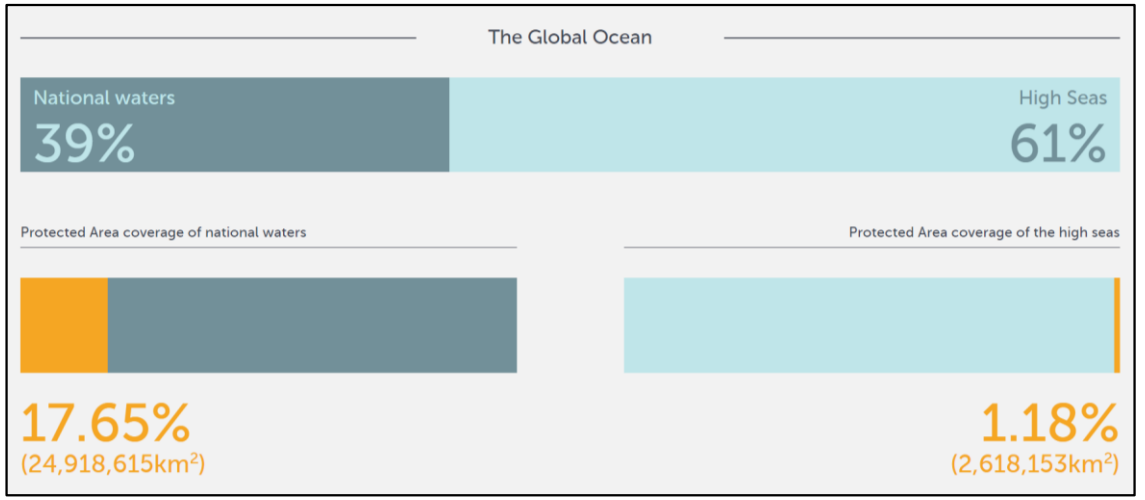
protected planet



www.protectedplanet.net
wcmc.io/mpas

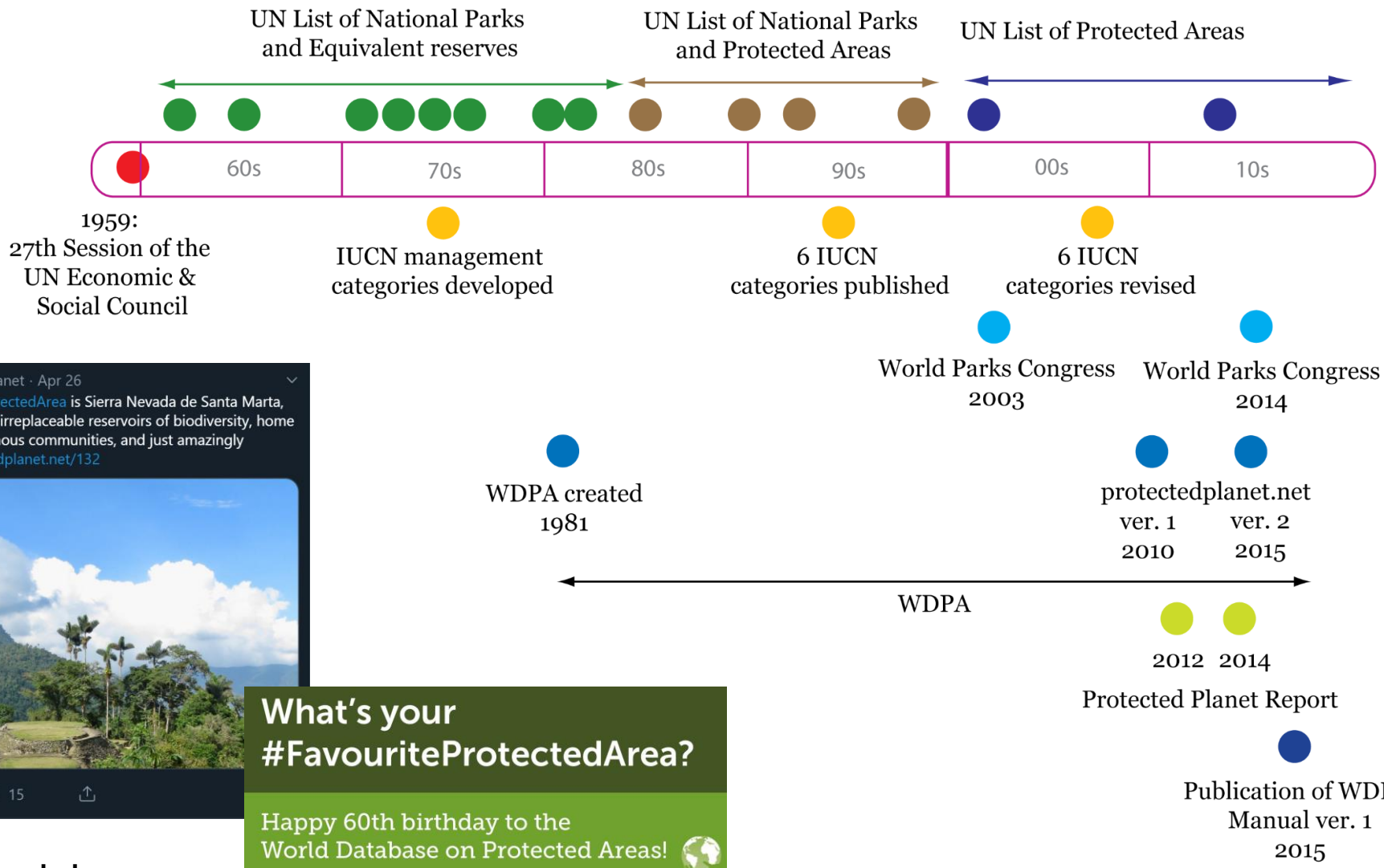
The authoritative database on protected areas, with more than 234,000 records from 245 countries and territories.

Updated monthly, and used to track progress toward Aichi Target 11 and Sustainable Development Goal Targets 14.2 and 15.1.



UN environment WCMC 40 years
IUCN

LME Indicator 33



www.protectedplanet.net
wcmc.io/mpas

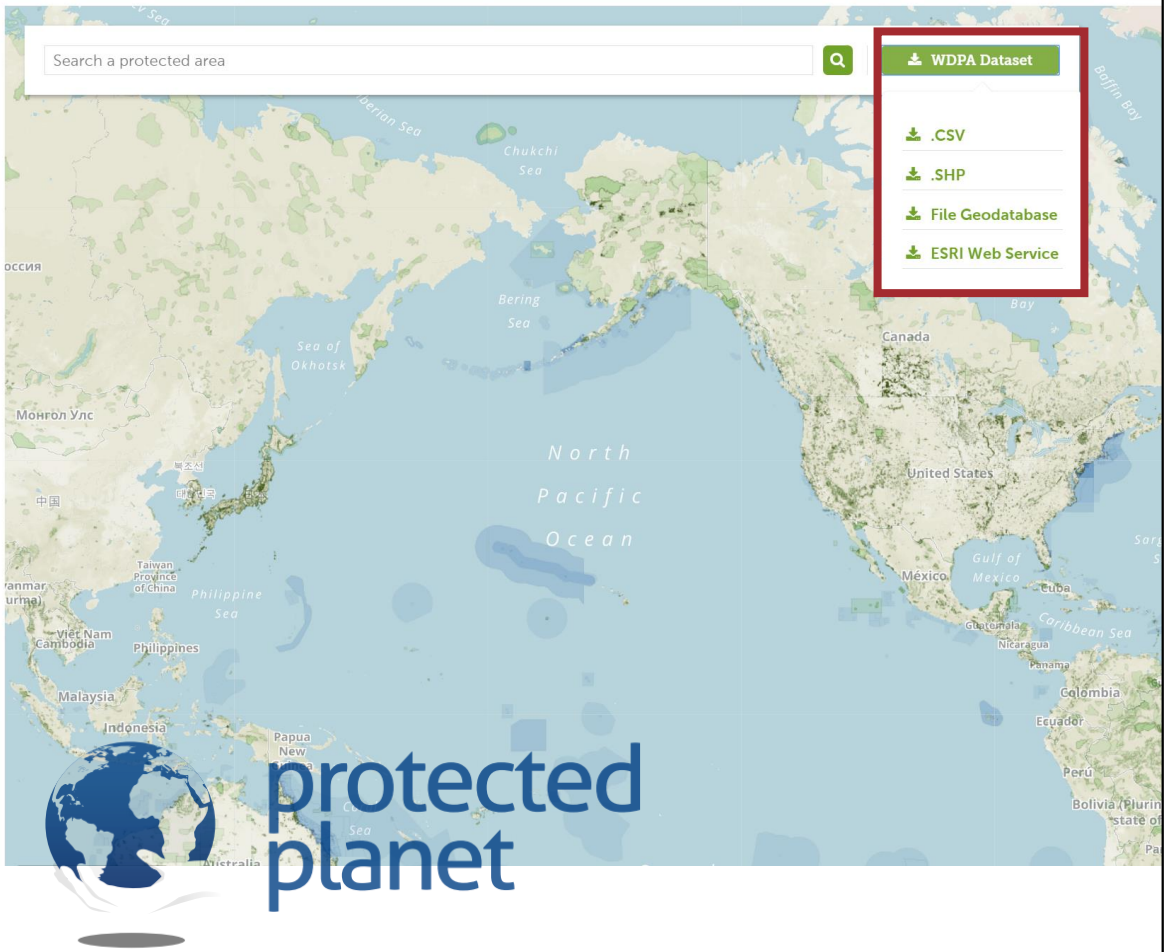
protected planet

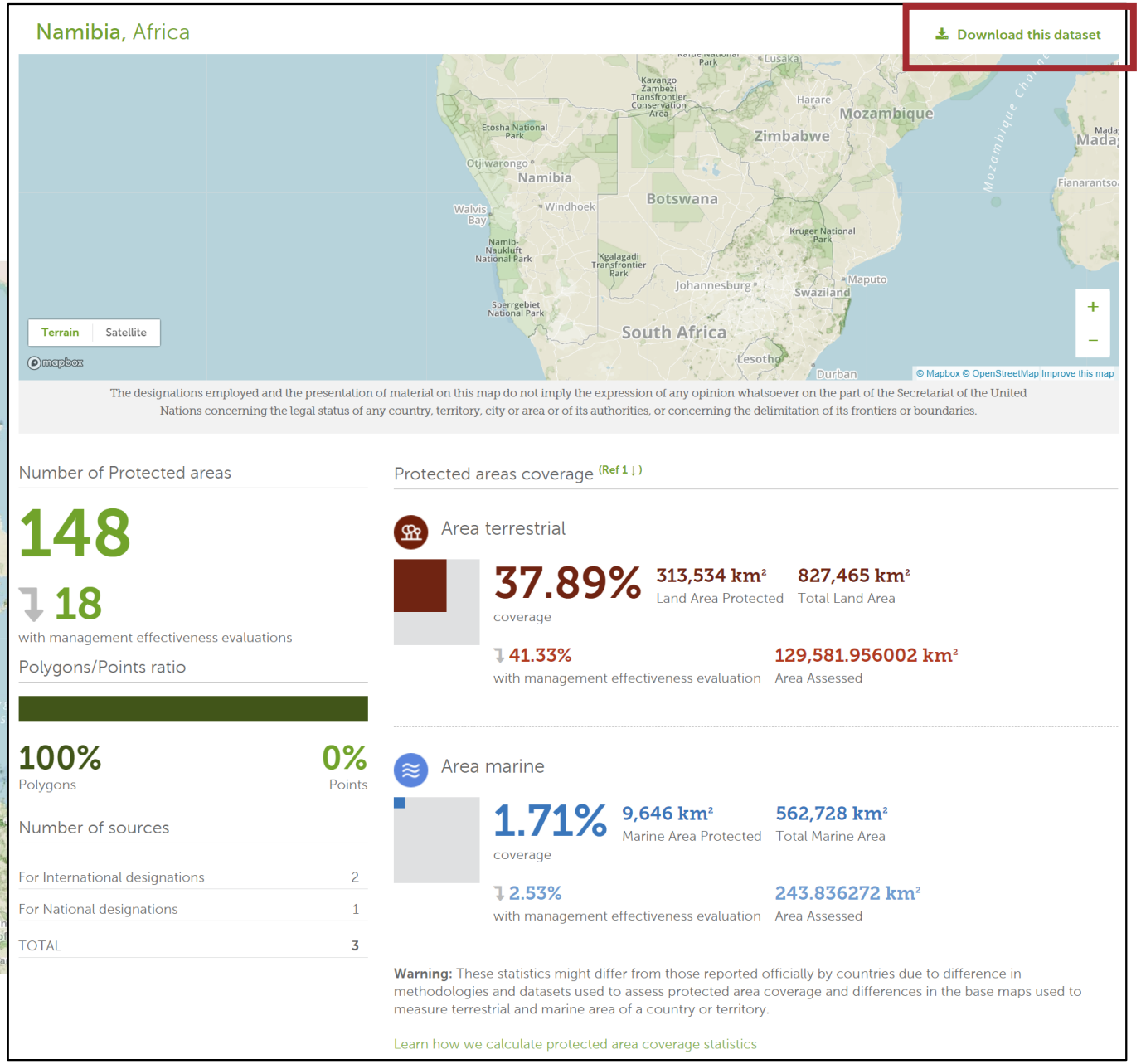
IUCN

UN environment WCMC 40 years

EXPLORE AND DOWNLOAD THE WORLD'S PROTECTED AREAS

www.protectedplanet.net

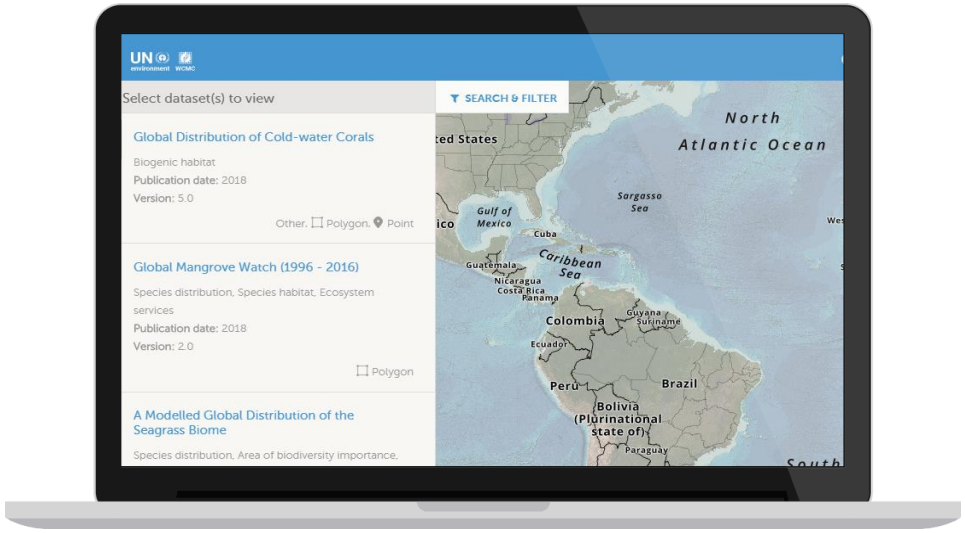




LME Indicator 35+

Ocean+

Data Viewer



data.unep-wcmc.org

A portal for **viewing and downloading spatial datasets** useful for managing and conserving marine and coastal biodiversity.

More than 2.5 million records
of marine and coastal habitats

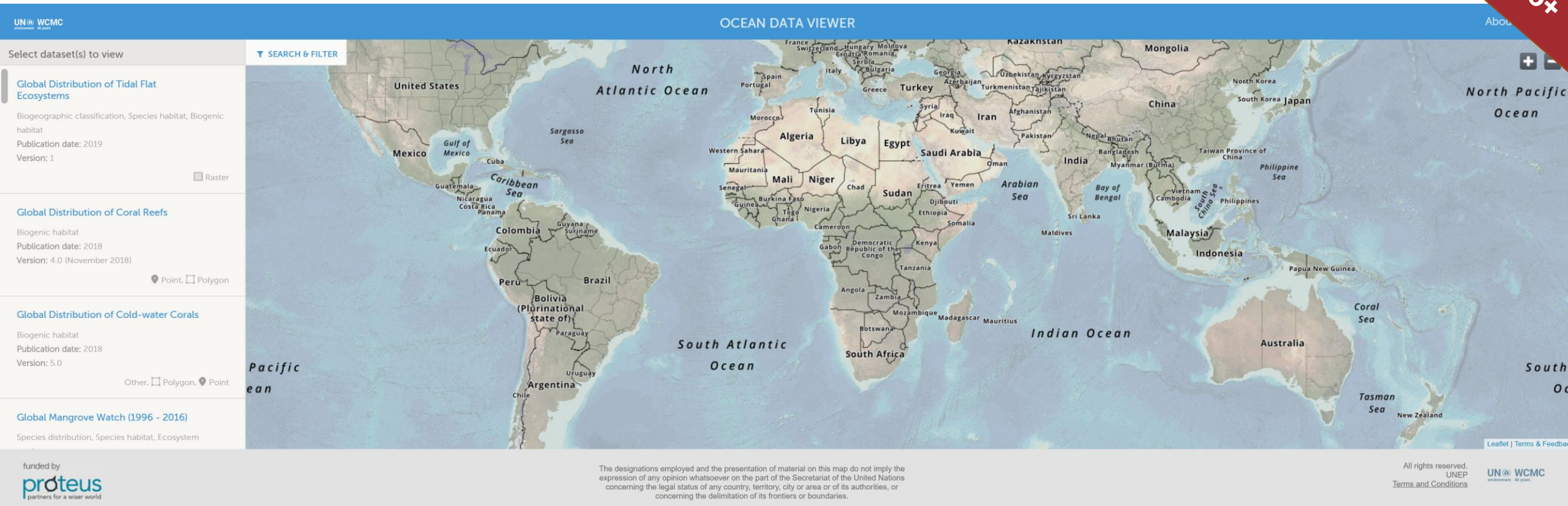
More than 2.1 million km^2
of marine and coastal areas mapped

More than 30 marine datasets
available for use

VIEW AND DOWNLOAD SPATIAL DATASETS ON MARINE BIODIVERSITY

wcmc.io/odv

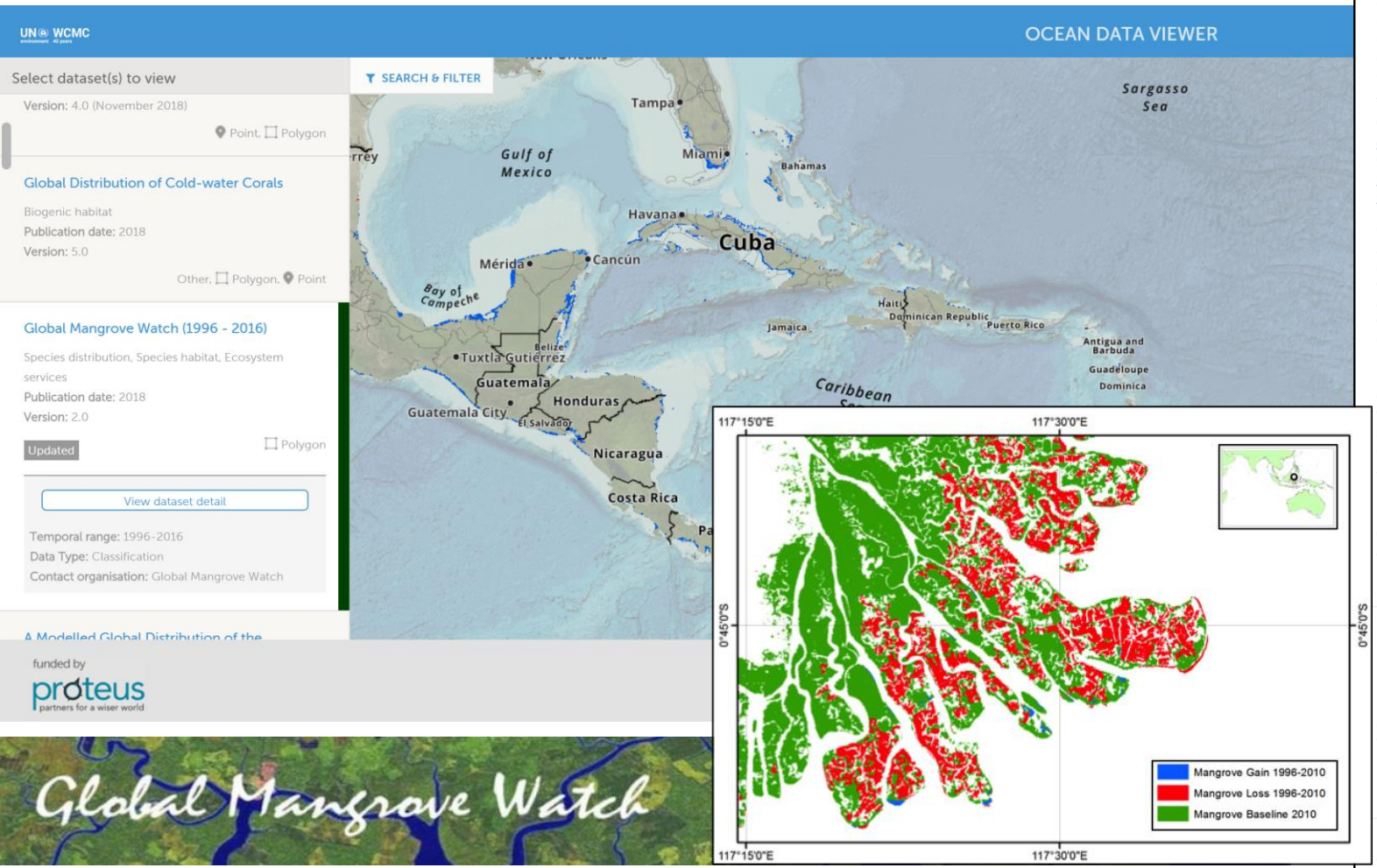
LME Indicator 35+

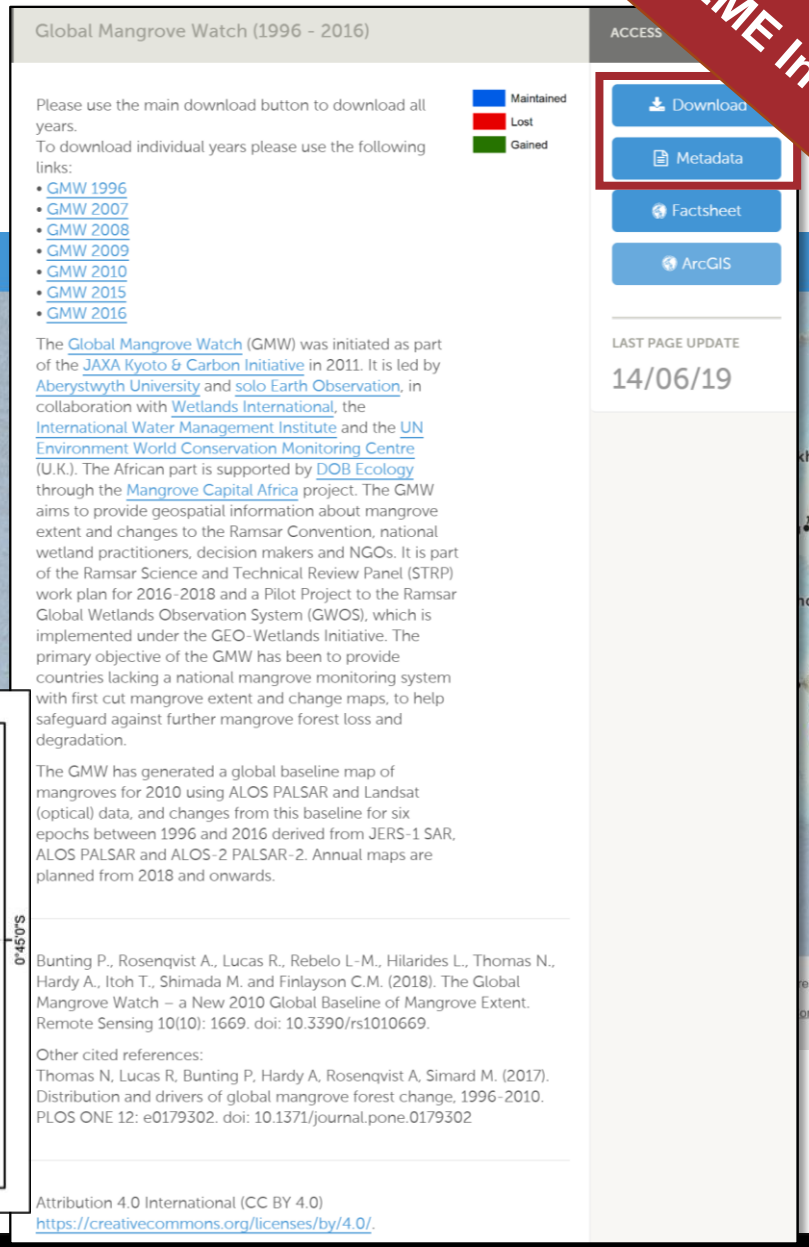


VIEW AND DOWNLOAD SPATIAL DATASETS ON MARINE BIODIVERSITY

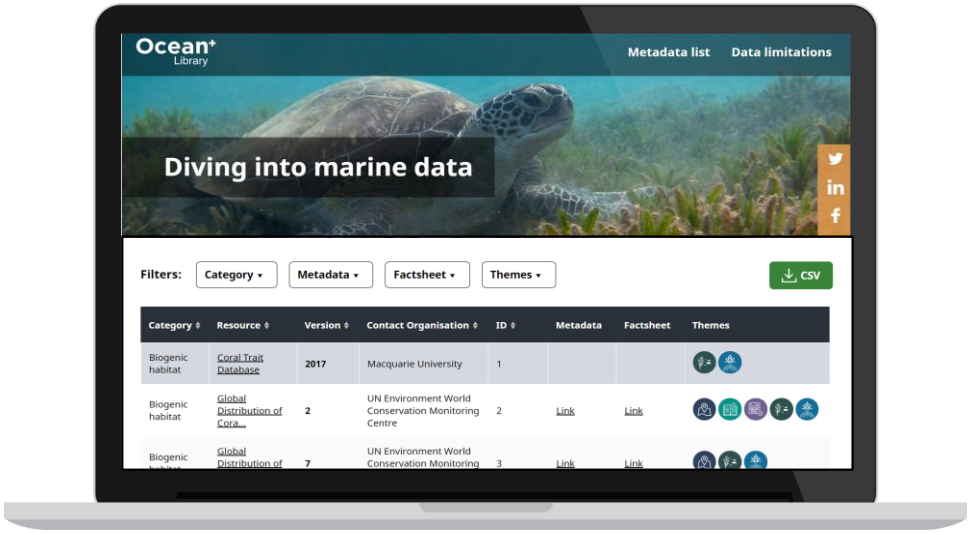
wcmc.io/odv

LME Indicator 35+





Ocean+ Library



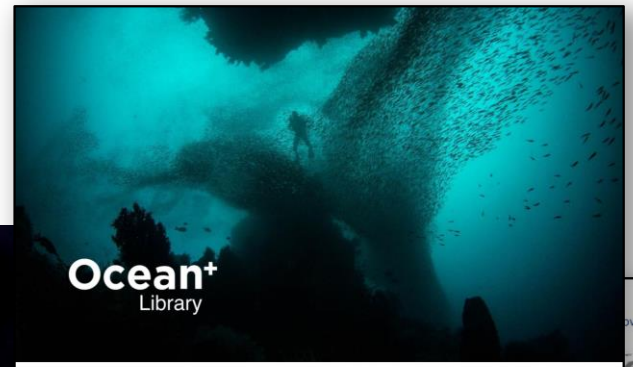
library.oceanplus.org

A **library of 190+ resources of data and information** relevant to marine and coastal biodiversity, and for uses related to:

- Marine spatial planning
- Education
- Environmental impact assessment
- Ecosystem assessment
- Ecosystem services

Links to detailed metadata for 116 resources (in Annex 3). (wcmc.io/MarineDataManual)

BROWSE OUR LIBRARY OF OCEAN RESOURCES

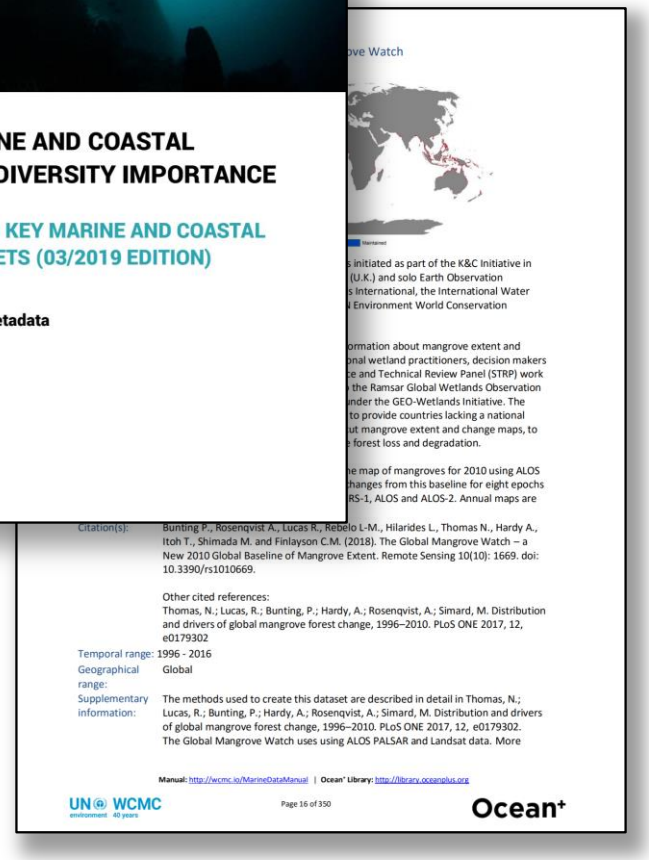


MANUAL OF MARINE AND COASTAL DATASETS OF BIODIVERSITY IMPORTANCE

AN INTRODUCTION TO KEY MARINE AND COASTAL BIODIVERSITY DATASETS (03/2019 EDITION)

Detailed dataset-specific metadata

UN WCMC environment 40 years



Filters: Category ▾ | Resource ▾ | Metadata ▾ | Themes ▾ | Country 1 ▾ | Region ▾ | Licence ▾

Category	Resource	Contact Organisation	Themes	CSV
Biogenic habitat	Global Distribution of Cold-water Corals	UN Environment World Conservation Monitoring Centre		
Ecological status and impact	Legacy dataset - Global Coral Disease Database (2010)	UN Environment World Conservation Monitoring Centre		
Administration	Global Distribution of Islands "IBPoW" (2010)	UN Environment World Conservation Monitoring Centre		
Species habitat	Global Distribution of Sea Turtle Feeding Sites (1999)	UN Environment World Conservation Monitoring Centre		
Species habitat	Global Distribution of Sea Turtle Nesting Sites (1999)	UN Environment World Conservation Monitoring Centre		

library.oceanplus.org

McDermott-Long et al. (2019). Available at: **wcmc.io/MarineDataManual**

BROWSE OUR LIBRARY OF OCEAN RESOURCES

Category	Resource	Contact Organisation	Themes
Trade	Species+	**UN Environment World Conservation Monitoring Centre**	
Taxonomic database	World Porifera Database (sponges)	**Flanders Marine Institute**	
Taxonomic database	Encyclopedia of Life (EoL)	**Encyclopedia of Life (EOL)**	
Taxonomic database	The Sponge Guide (tSG)	**Universidad Nacional de Colombia**	
Taxonomic database	World Register of Marine Species (WoRMS)	**Flanders Marine Institute**	

CSV

Resource: World Register of Marine Species (WoRMS)

Version:

ID: VLIZ-004

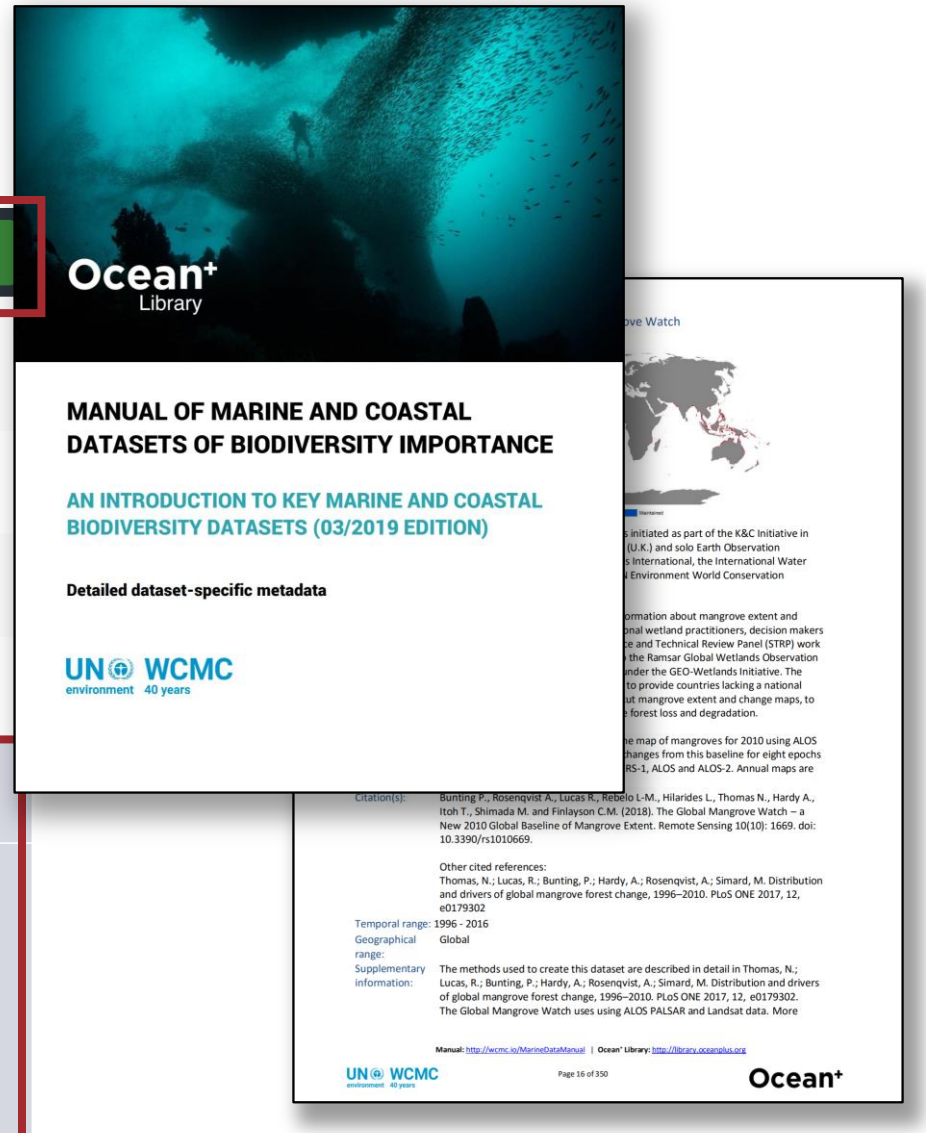
Metadata: Link

Factsheet:

Licence: CC BY 3.0

Themes:

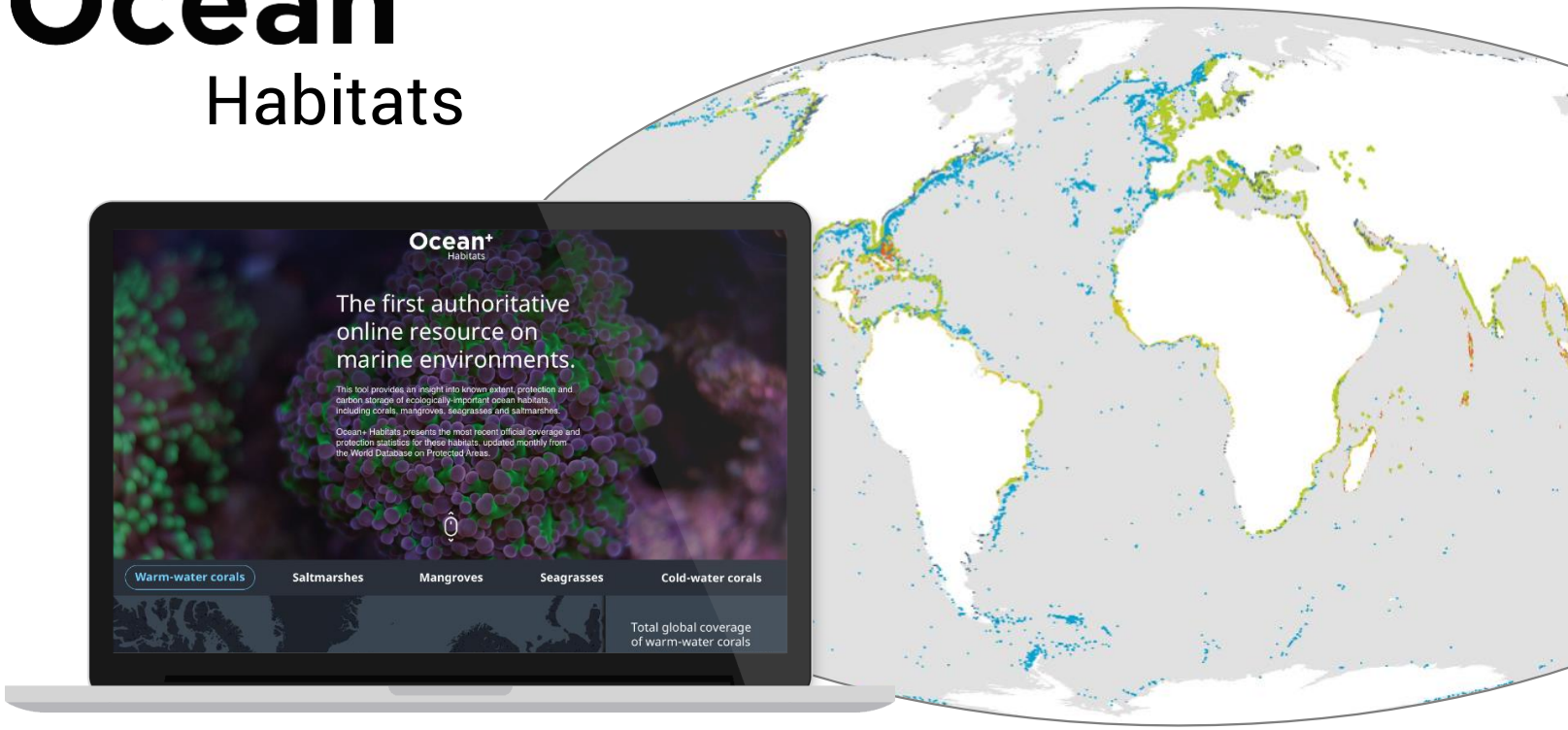
Ecosystem assessment



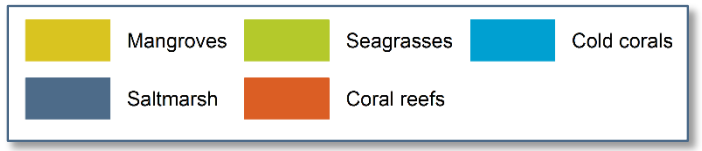
library.oceanplus.org
McDermott-Long et al. (2019). Available at:
wcmc.io/MarineDataManual

Ocean+ Habitats

Developing national, regional and global **inventories of ocean habitat occurrence,** with statistics on coverage and progress toward targets.



habitats.oceanplus.org



EXPLORE THE WORLD'S MARINE AND COASTAL HABITATS

habitats.oceanplus.org

Rate of loss of all natural habitats is at least halved.

Anthropogenic pressures on coral reefs and other vulnerable ecosystems are minimized.

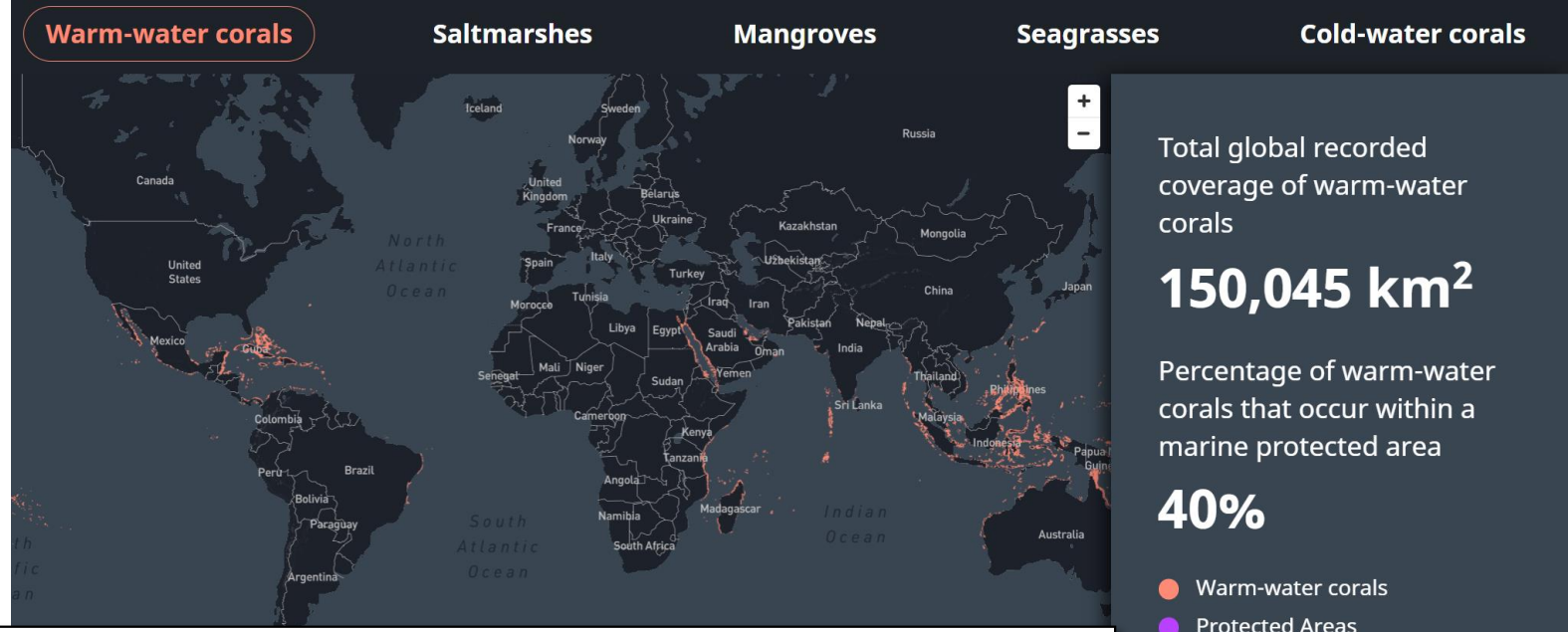
Coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved.

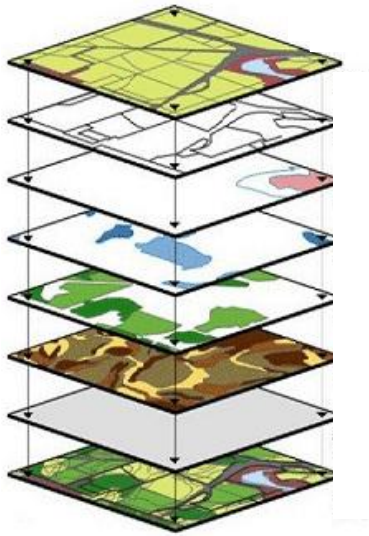
Ecosystems that provide essential services are safeguarded.

Ecosystem resilience and contribution of biodiversity to carbon stocks are enhanced.

NEXT STEPS?
(SNEAK PREVIEW)

- Next evolution of ocean habitat ‘Essential Ocean Variable’ (EOV) datasets
- National and regional dashboards (pilots welcome!)
- Answering:
  - Where are marine and coastal habitats?
  - How do they contribute to human wellbeing?
  - Are we protecting them?
  - How are they changing?
  - Where are hotspots of diversity?
  - Connectivity?





Remote sensing layers (global extent)

In situ occurrence layers (more detailed attributes, defined in the EOVs)

Habitat suitability / “transparency” layers (to determine “known unknowns”)

TRACKING COMMITMENTS TOWARD GLOBAL OCEAN TARGETS

Distribution of marine protected areas

The global coverage of marine protected areas (MPAs) is 6.35%. The Global Ocean can be divided into areas within national jurisdiction (National Waters) and those in international waters (Areas Beyond National Jurisdiction (ABNJ))

MPAs can be more easily created by governments in national waters where there are dedicated legal systems in place. In ABNJ it is more difficult to create MPAs due to the complex legal framework in place. As such, the percentage of MPAs created within national waters is much higher than that for ABNJ. National waters represent 39% of the global ocean and at present, 15.9% of these waters are designated as protected areas. In contrast, only 0.25% of ABNJ, which makes up the remaining 61% of the global ocean, has been established as protected areas. At present, international discussions are underway to establish ways of simplifying the process to create MPAs in ABNJ. For more information on this, please see the DOALOS website.

National waters and the High Seas

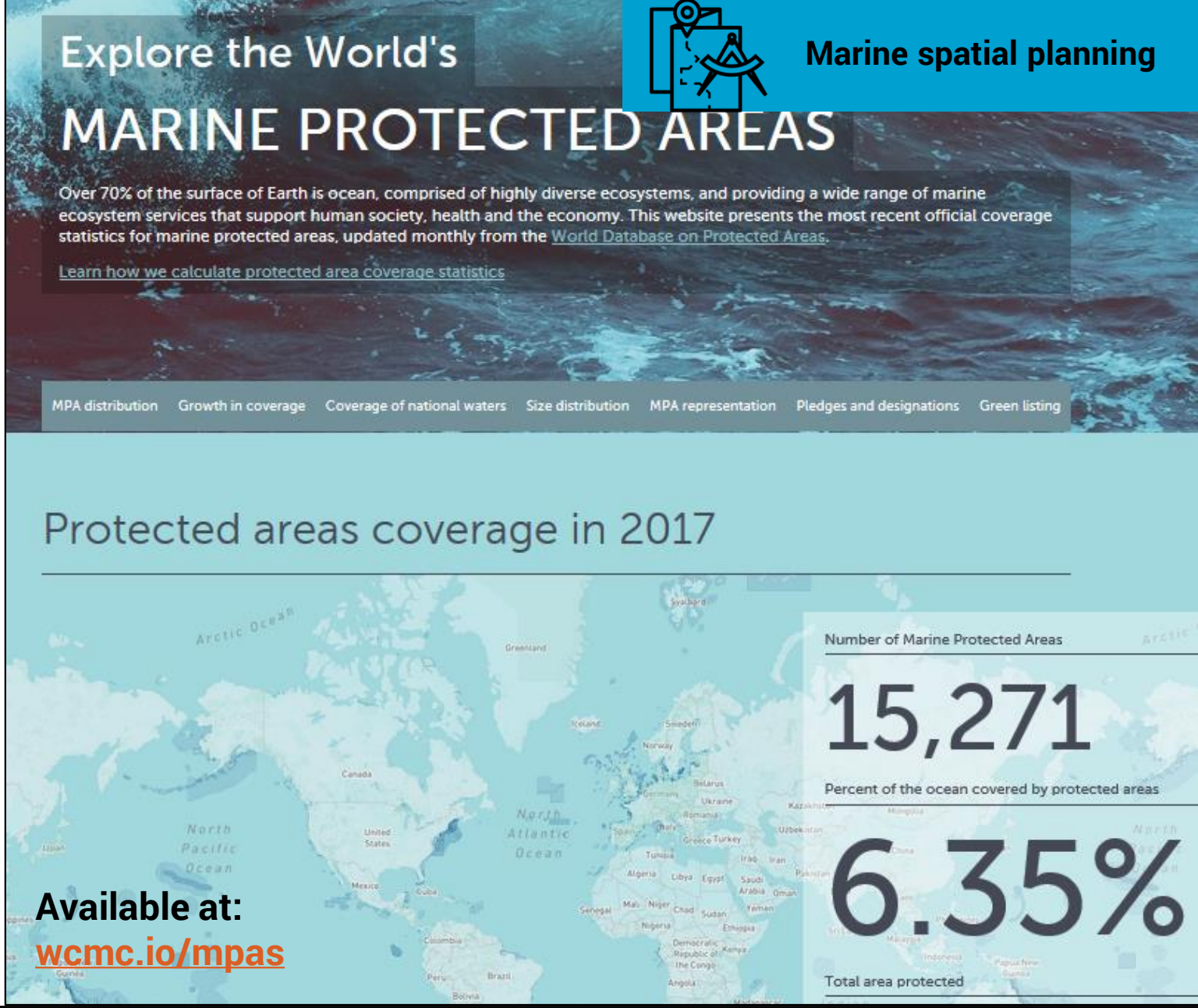
National waters represent an area of coastal water extending out to the limit of the Exclusive Economic Zone at 200 nautical miles from the baseline of a Coastal State. Coastal States have management jurisdiction over these waters, the resources within them and the resources in/under the seabed.

Marine Areas Beyond National Jurisdiction (ABNJ) are areas of the ocean that are not under the jurisdiction of any one country. Therefore, no individual nation has the sole responsibility for management of these areas. Defined in recent international discussions[1], ABNJ includes both the High Seas – all parts of the sea that are not included in national waters[2], and the "Area" – the seabed beyond the limits of national waters[3].

The Global Ocean

National waters	High Seas
39%	61%

Protected Area coverage of national waters	Protected Area coverage of the high seas
15.9% (22,445,068km²)	0.25% (558,116km²)



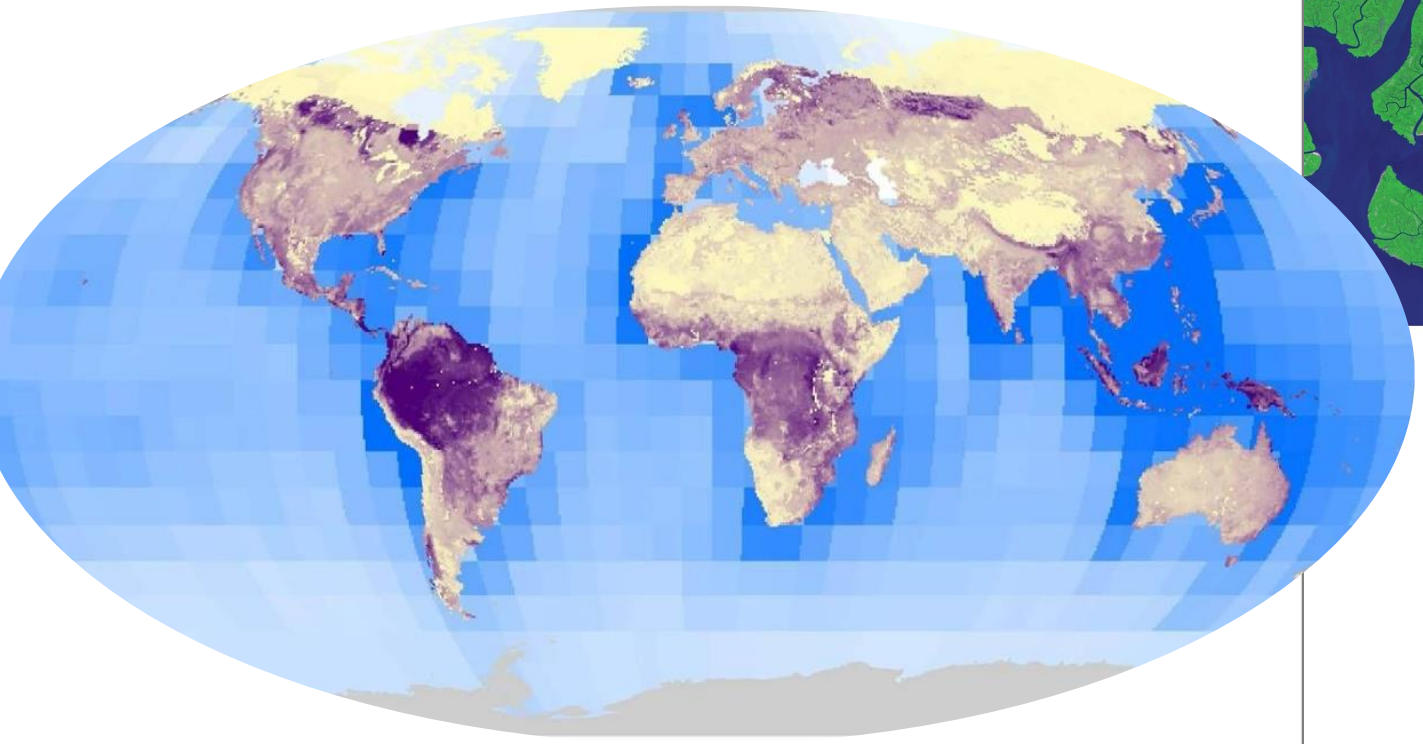
Marine spatial planning

Available at:
wcmc.io/mpas

ACCOUNTING FOR NATURAL CAPITAL

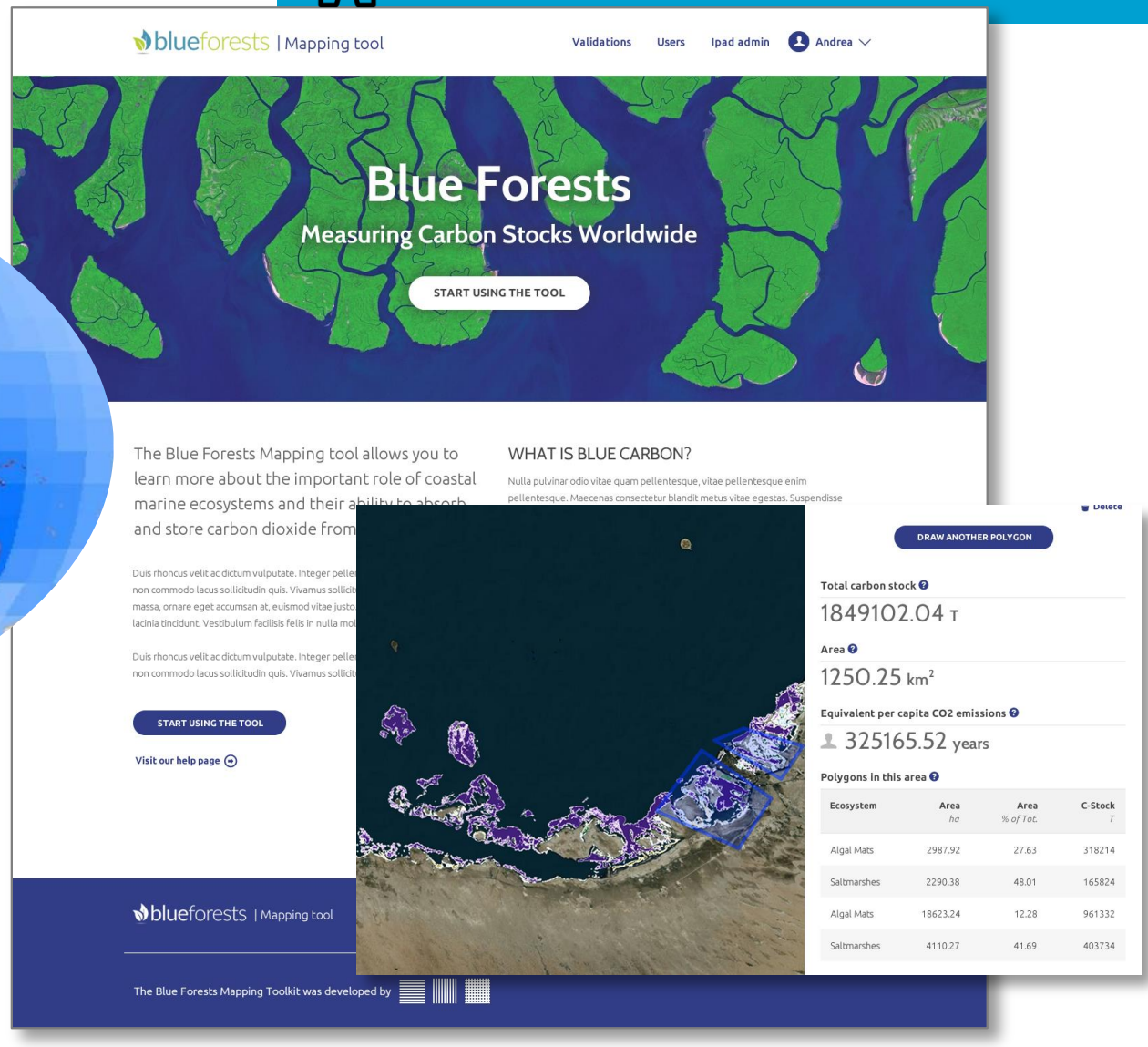
Ecosystem valuation and natural capital

Valuing key ecosystem assets and services



blueforests

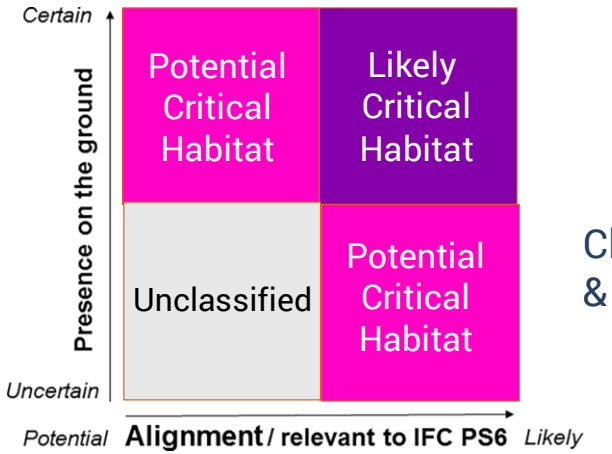
www.gefblueforests.com



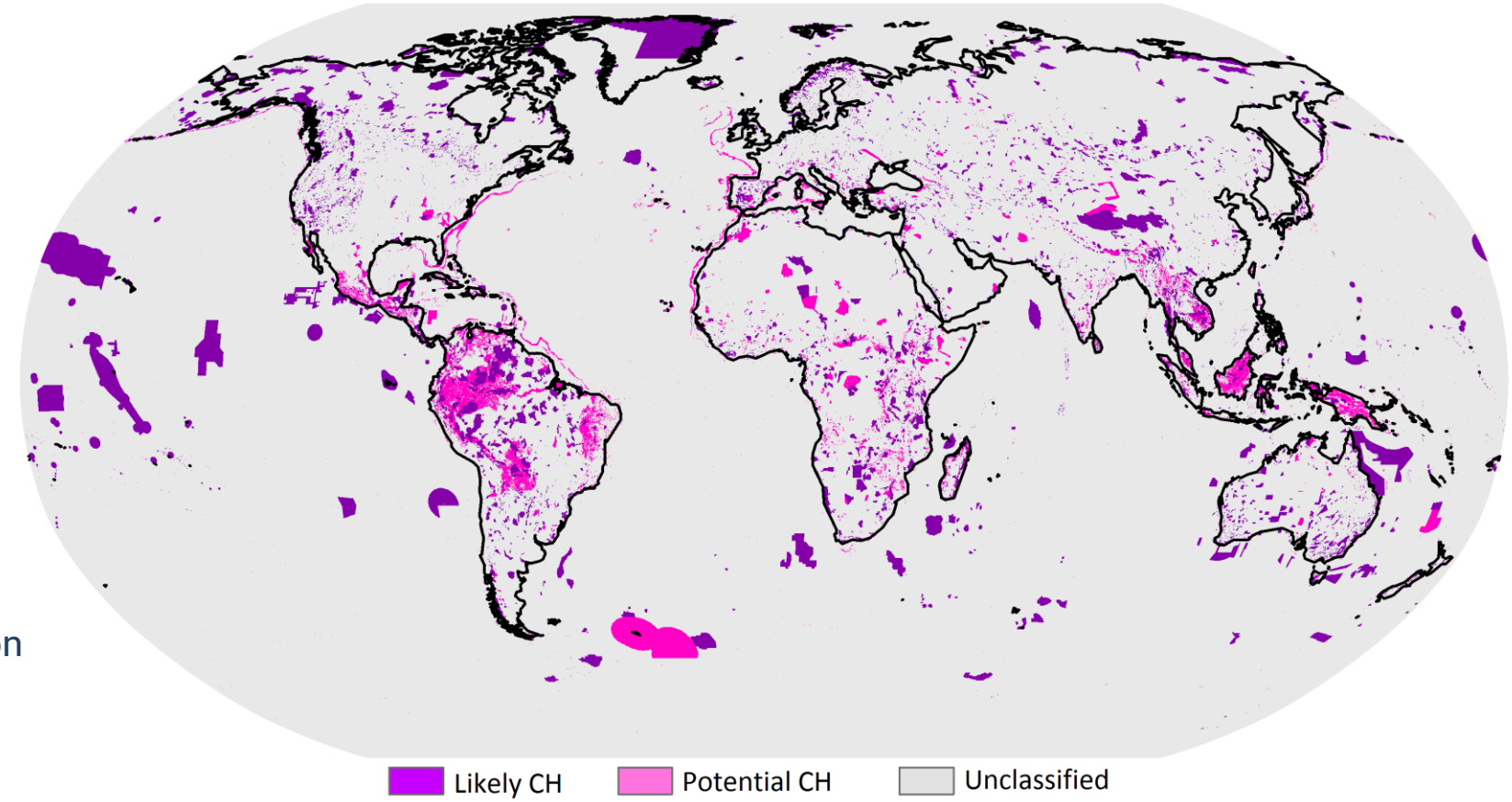
SCREENING FOR AREAS OF BIODIVERSITY IMPORTANCE

Environmental impact assessment and screening

17 biodiversity features: *Key Biodiversity Areas (KBAs), protected areas, turtle nesting sites, seagrass beds, tropical/cold corals, seeps, saltmarshes, mangroves, vents, seamounts, ever wet and dry tropical forests, tropical montane cloud forests, distributions of threatened species, Alliance for Zero Extinction sites*



Classification & mapping



Martin et al. (2015). *Marine Policy* 53: 45-53.
Brauneder et al. (2017) *PLOS ONE* 13(3): e0193102.

GROUP DISCUSSION

1. **What question(s) would you like Ocean+ to answer?**
2. **Where do you currently go for data?**
3. **How would these products be useful in your region?**

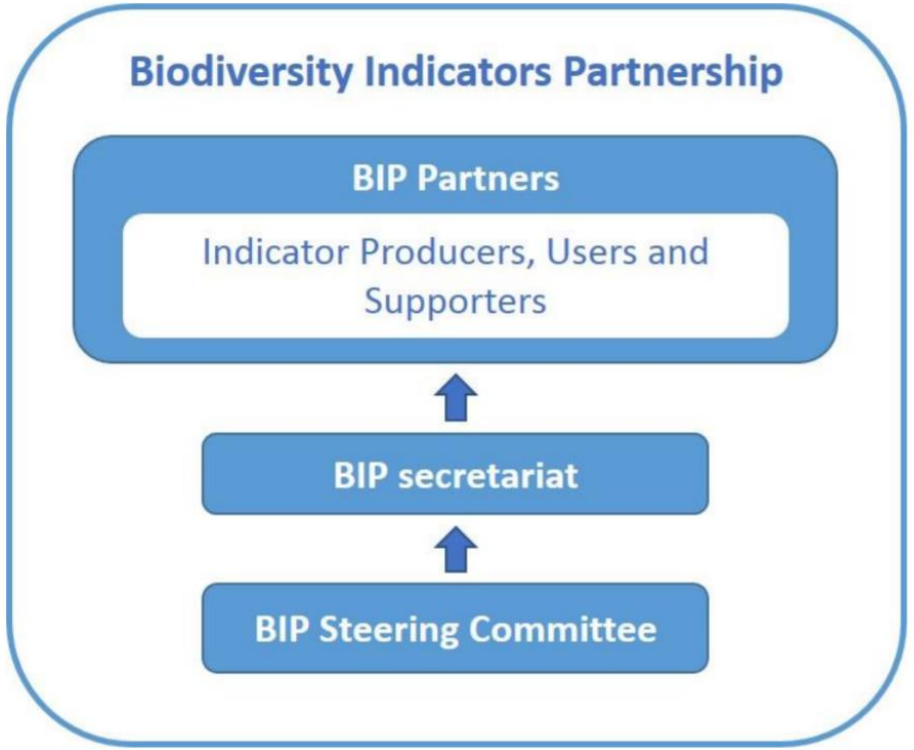
15 minutes **www.oceanplus.org / www.protectedplanet.net**

PART 3

SUPPORTING BIODIVERSITY INDICATOR DEVELOPMENT

BIODIVERSITY INDICATORS PARTNERSHIP

- **CBD-mandated initiative** to promote the development and delivery of biodiversity indicators.
- **Focused on national and regional needs for reporting.**
- **Supports other multilateral environmental agreements and targets.**

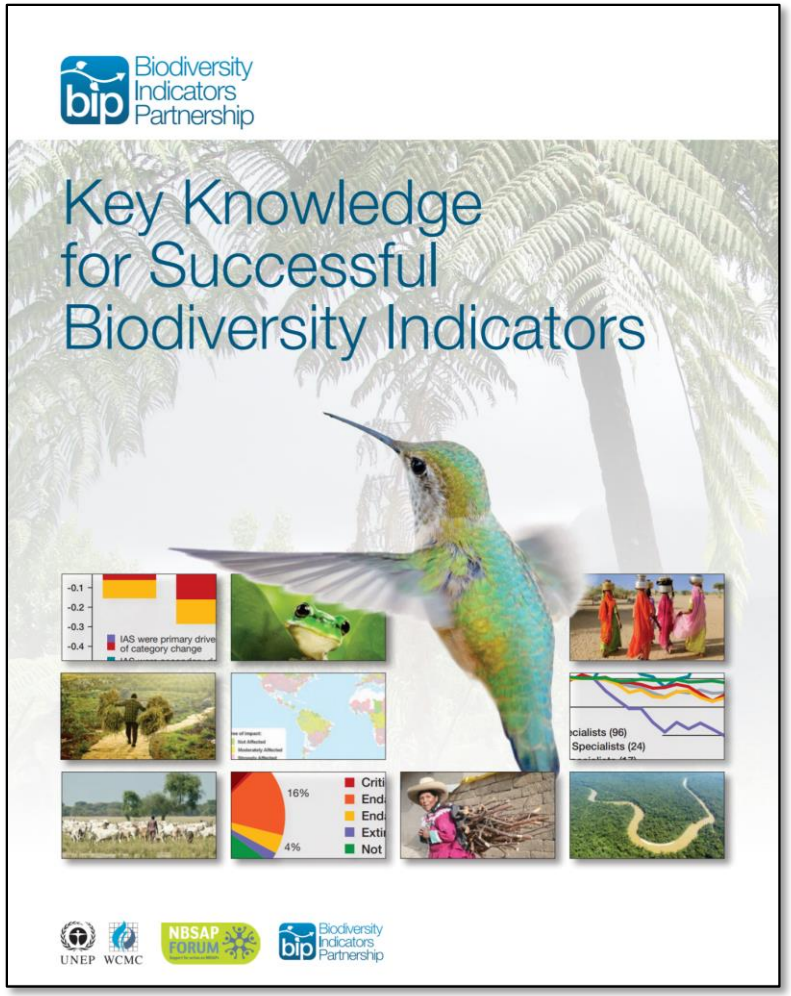


Biodiversity Indicators Partnership

PROCESS FOR SUBMITTING AN INDICATOR?

SUCCESSFUL INDICATORS?

- **Scientifically valid:** Relationship between the indicator and its purpose (what It means); reliability of data.
- **Based on available (accessible) data** over time, with active monitoring (i.e. ability to update regularly).
- **Responsive to change**
- **Easily understandable:** Conceptually + presentation + interpretation
- **It is used!** Need demonstration of use for measuring progress, early-warning, awareness-raising, understanding, etc.
- ****Transferable, adaptable and scalable across levels of capacity**



Biodiversity Indicators Partnership

PROCESS FOR SUBMITTING AN INDICATOR?

EVALUATION CHARACTERISTICS?

- **Category A.** Indicators which are **developed/operational** and feature in the indicative list of indicators for the Strategic Plan for Biodiversity 2011-2020 (Recommendation XIX/4).
- **Category B.** Indicators which are **under development** and feature in the indicative list of indicators for the Strategic Plan for Biodiversity 2011-2020 (Recommendation XIX/4).
- **Category C.** Other indicators, which have **potential for future use at global and regional levels**, in order to monitor progress towards one or more Aichi Targets and/or for other biodiversity-related MEAs and processes.

Note: *Recommendation XIX/4 explicitly mentions 'essential biodiversity variables' and that "further efforts are required to improve the monitoring of these variables" for indicator development.*

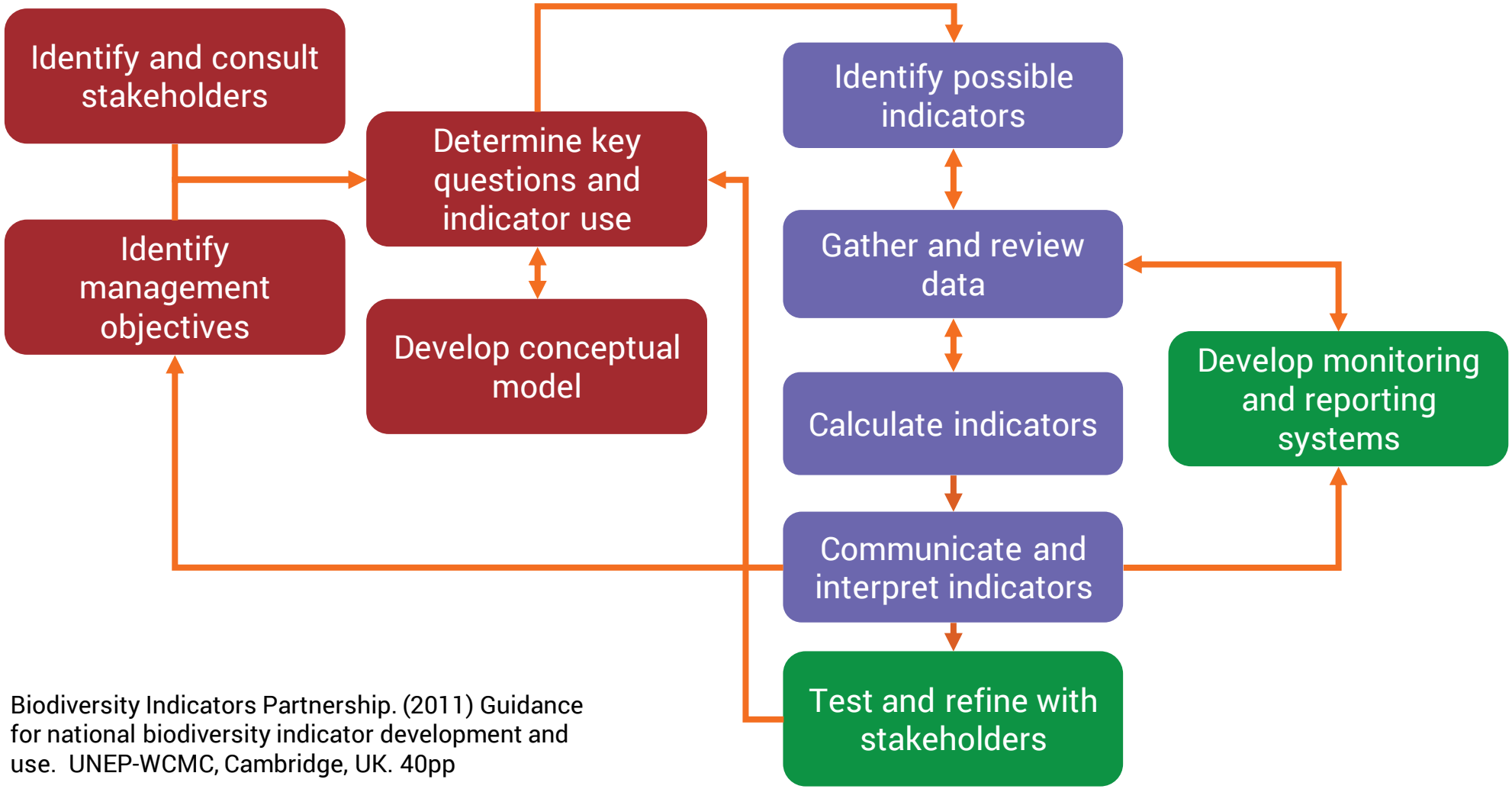
Biodiversity Indicators Partnership

Process for submitting an indicator for consideration?

EVALUATION CHARACTERISTICS?

Policy Relevant	***Essential:*** Indicator(s) relevant to one or more of the Aichi Biodiversity Targets. ***Desired:*** Indicator features in the indicative list of indicators for the Strategic Plan for Biodiversity 2011-2020; Indicator(s) relevant to the Targets of other biodiversity-related MEAs and processes, including the SDGs.
Temporal data production and sustainability	***Essential:*** Plans in place to continue indicator production and produce regular updates – not an isolated one-off study. ***Desired:*** Indicator data updated annually.
Aggregation and flexibility	***Essential:*** Indicator applicable at the global or regional scale. ***Desired:*** Indicator aggregated from national level data or can be disaggregated to the national level.
Scientifically sound	***Essential:*** Indicator(s) must be based on clearly defined, verifiable and scientifically acceptable data, which are collected using standard methods with known accuracy and precision, or based on traditional knowledge that has been validated in an appropriate way ***Desired:*** Peer reviewed in scientific literature
Sensitivity	***Essential:*** Indicators should be sensitive to show trends and detect changes in systems in time frames and on the scales that are relevant to the decisions, but also be robust so that measuring errors do not affect the interpretation.

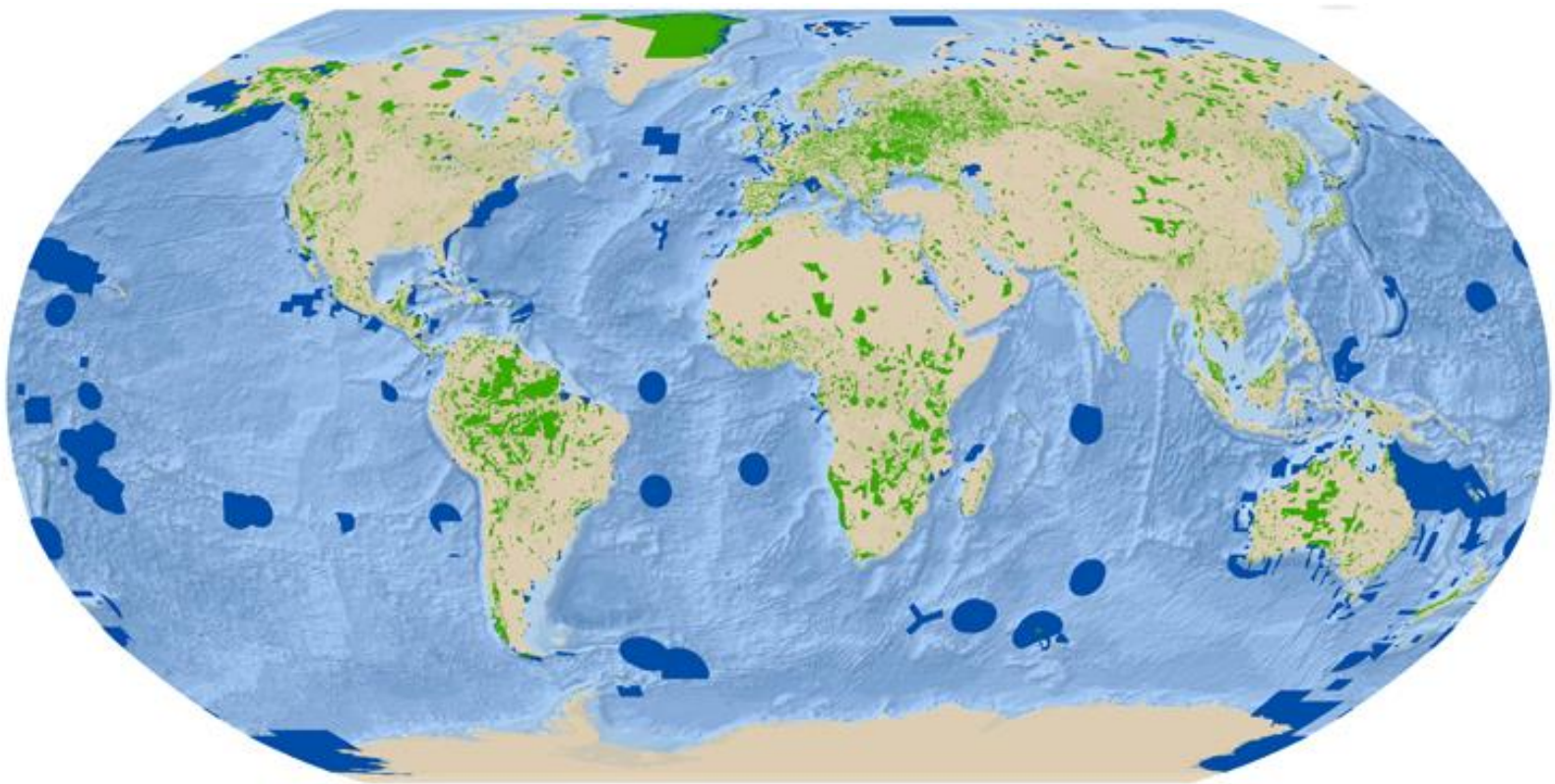
INDICATOR DEVELOPMENT FRAMEWORK



Biodiversity Indicators Partnership. (2011) Guidance for national biodiversity indicator development and use. UNEP-WCMC, Cambridge, UK. 40pp

Primary indicators

- Wildlife Picture Index in tropical forest protected areas
- Protected area coverage
- Protected Area Coverage of Key Biodiversity Areas
- Protected Areas Management Effectiveness
- Protected Area Coverage of Ecoregions
- Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type
- Protected Area Representativeness Index (PARC-Representativeness)
- Protected Area Connectedness Index (PARC-Connectedness)



GROUP DISCUSSION / Q&A

15 minutes

UN environment WCMC 40 years

UN Environment
World Conservation Monitoring Centre

www.unep-wcmc.org
@unepwcmc

Lauren Weatherdon

Senior Programme Officer

UNEP-WCMC

lauren.weatherdon@unep-wcmc.org

@LVWeatherdon