Achieving Aichi Biodiversity Target 11: The Importance of Spatial Data

Stocktaking, coordination and development of monitoring plan meeting for achieving Aichi Biodiversity Target 11 by 2020

Vilm, Germany

26 April 2019

www.unbiodiversitylab.org

UNBiodiversity Lab

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Convention on Biological Diversity

UN environment
United Nations Environment Programme

UNDP
Empowered lives. Resilient nations.

Part 1

- Spatial data/Reporting process
- UN Biodiversity Lab and status maps

Part 2

- Preliminary analyses for gaps, commitments and opportunities
- Group discussion
- Plenary
- Conclusions

GRID Geneva

NASA

UN environment

WCMC

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Spatial data can play a powerful role for nature & development:

- Identify risks and assess trade-offs for conservation and sustainable use
- Support accountability for the Aichi Biodiversity Targets and the nature-based Sustainable Development Goals

UNDP analysis of post-2010 NBSAPs and Fifth National Reports (5NR):

- On average, < than 5 maps / 5NR, < than 4 maps/NBSAP
- 80% of 5NR and 70% of NBSAP do not have maps that support decision-making
- < than 4% of all maps focused on ecosystem services

UN Biodiversity Lab:

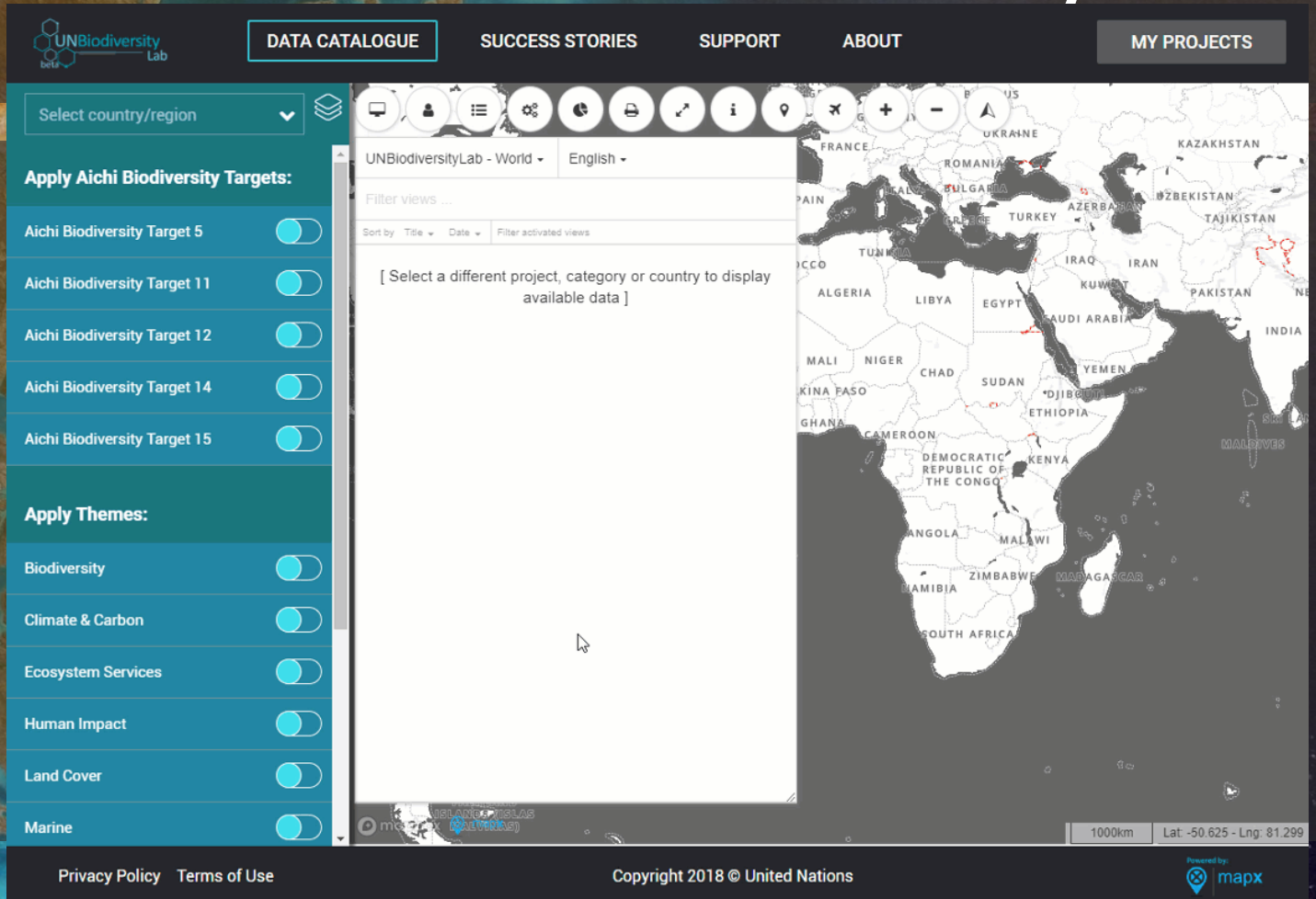
1. Build spatial literacy to enable better decisions
2. Use spatial data as a vehicle for improved transparency and accountability
3. Apply insights from spatial data across sectors to deliver on the Aichi Biodiversity Targets and nature-based Sustainable Development Goals

The UN Biodiversity Lab

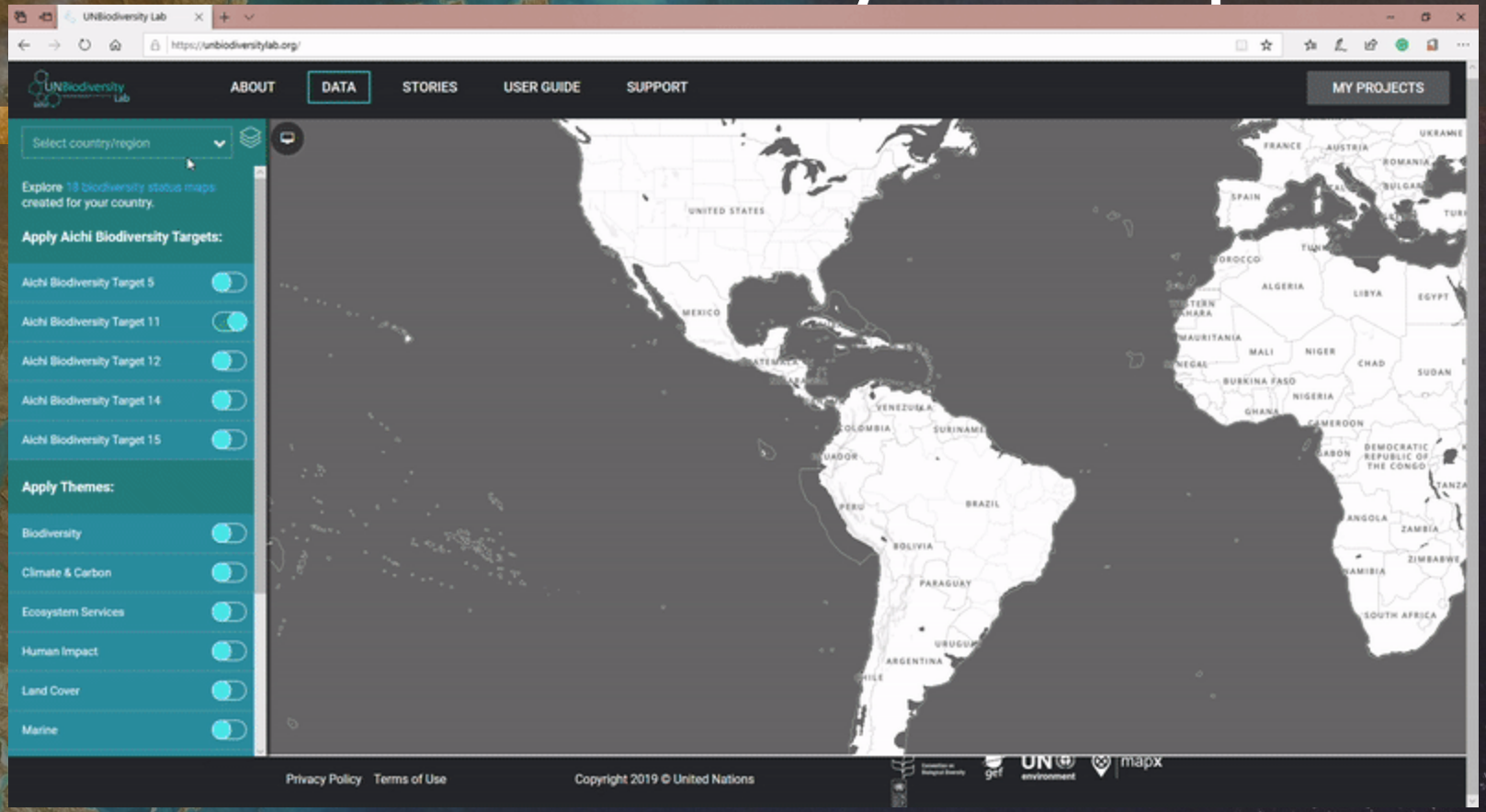
- Provides policymakers with FREE high-quality global spatial data layers and analytic tools
- Does NOT require GIS expertise
- Enables 137 governments to access spatial data for inclusion in their 6NR.
- Supports NBSAP implementation to achieve key conservation targets.

Access to ~ 100 Global Data Layers

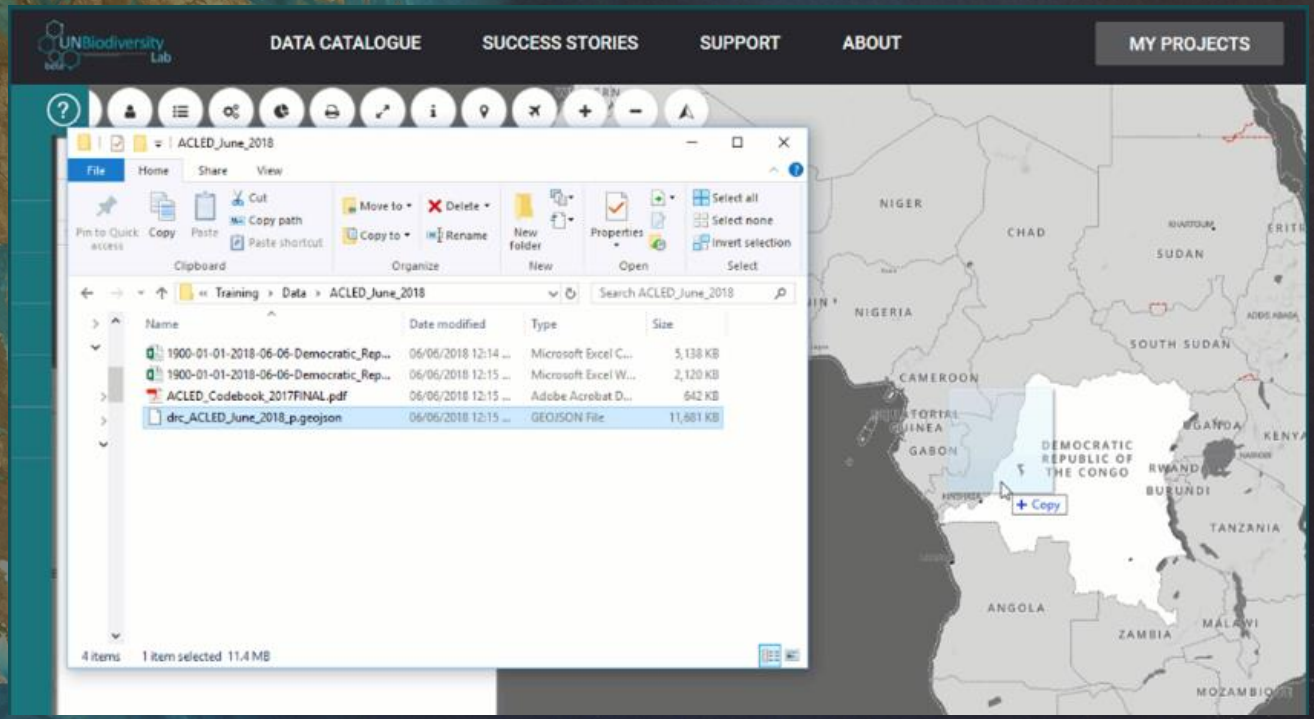
Access to ~ 100 Global Data Layers



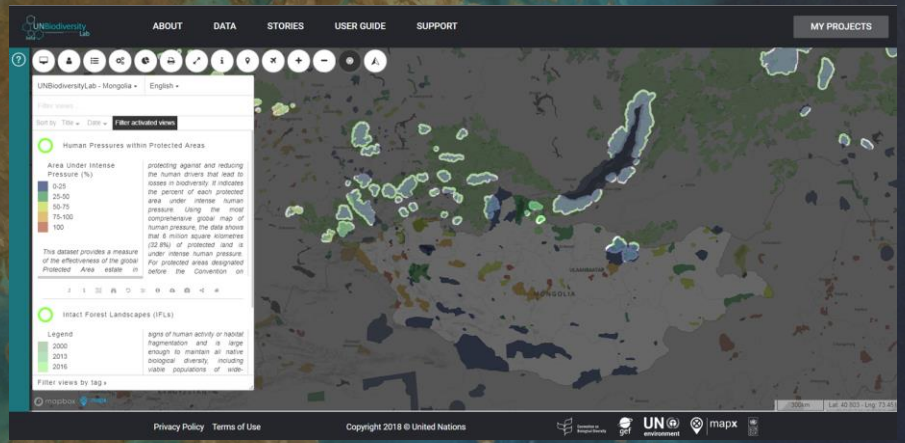
Access 18 Biodiversity Status Maps

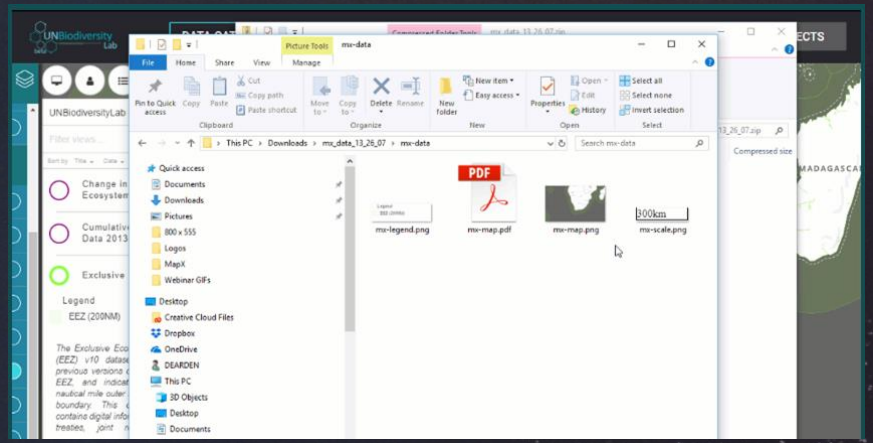


Upload National Data Layers

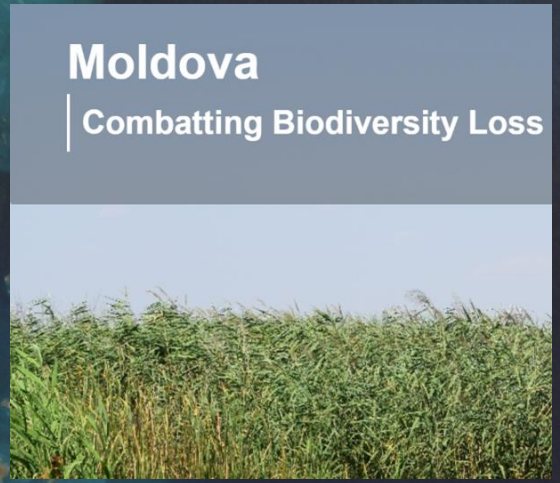


Create maps & Integrate into Reports

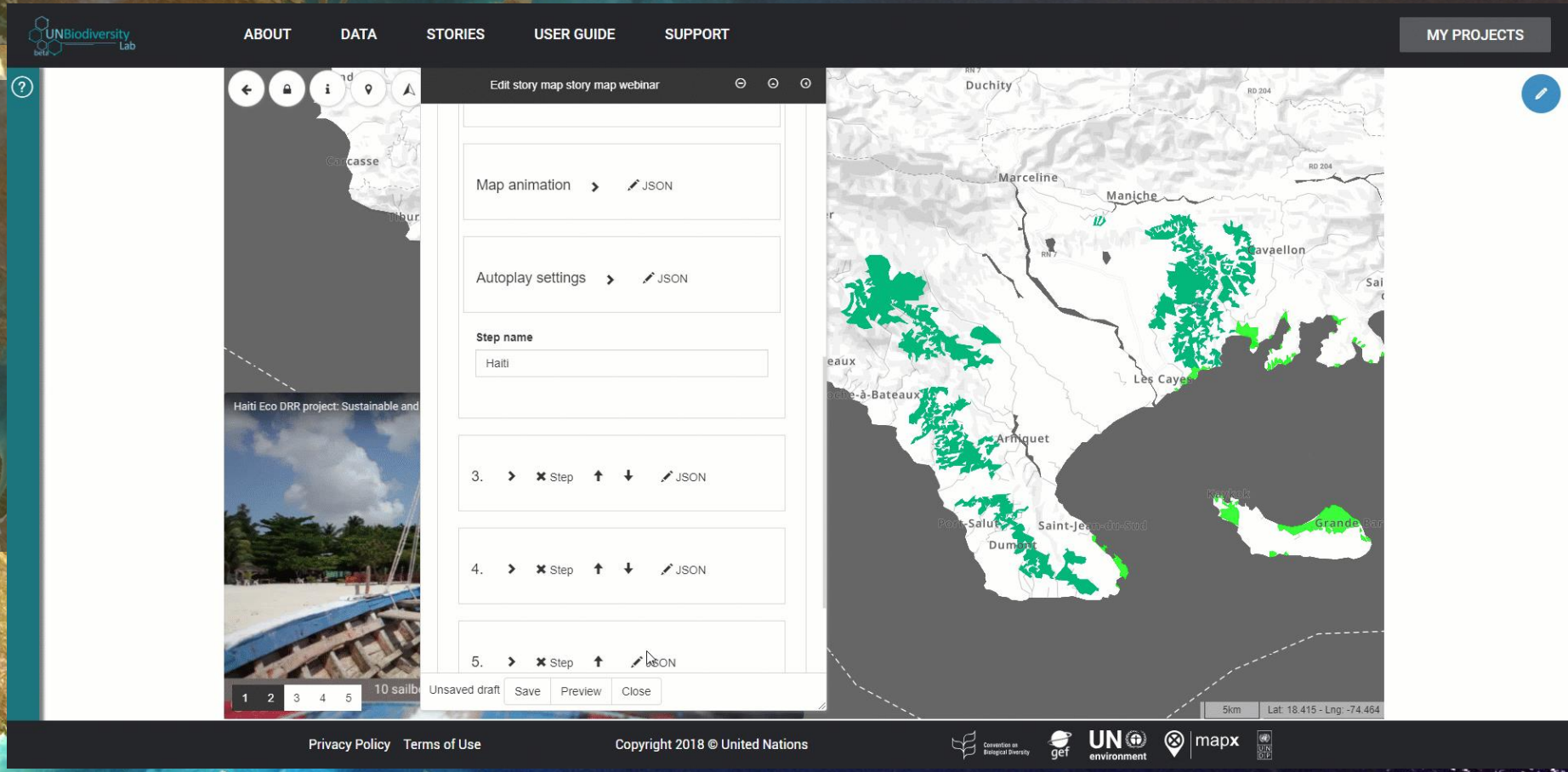




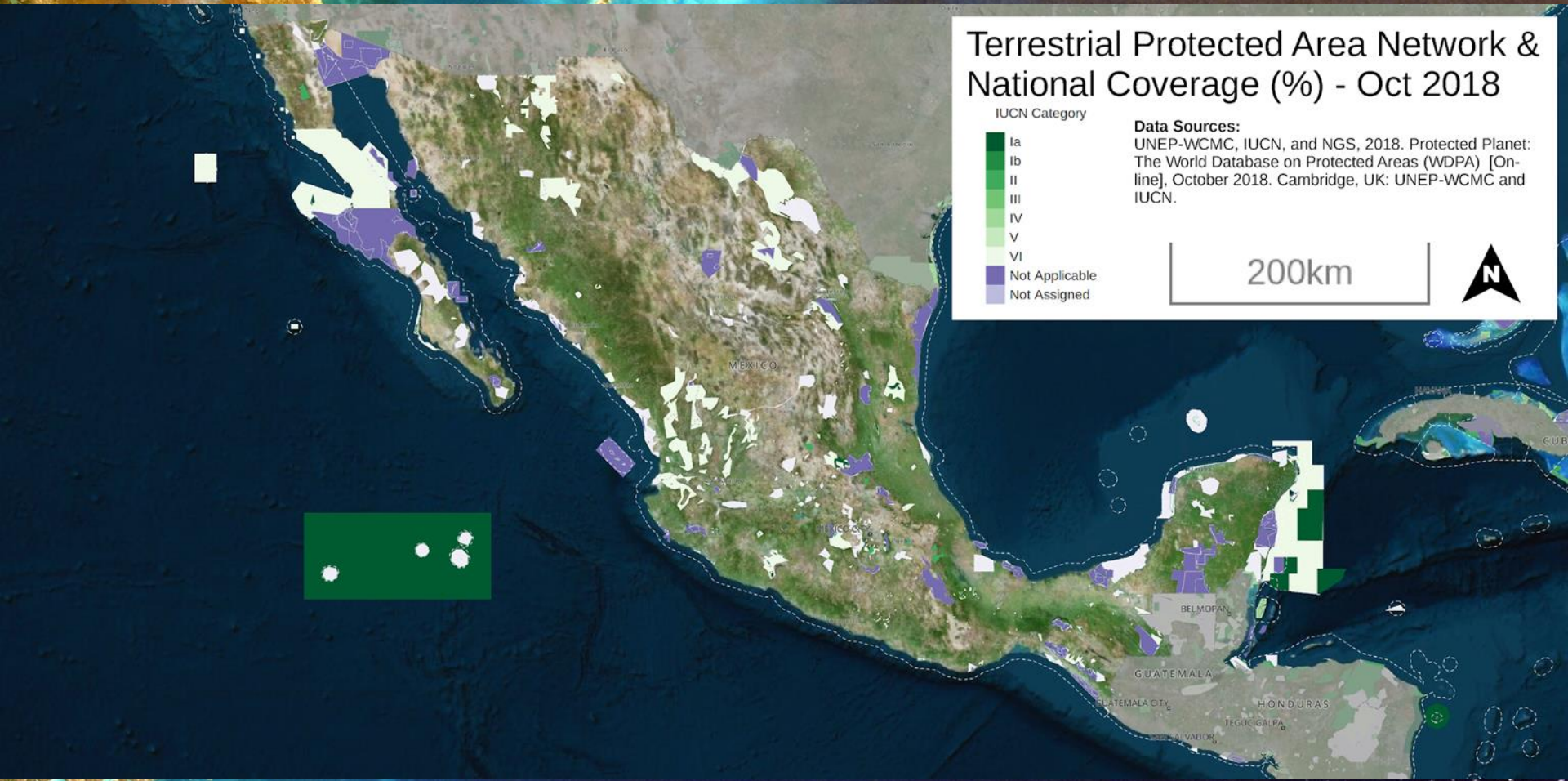
Communicate Conservation Success

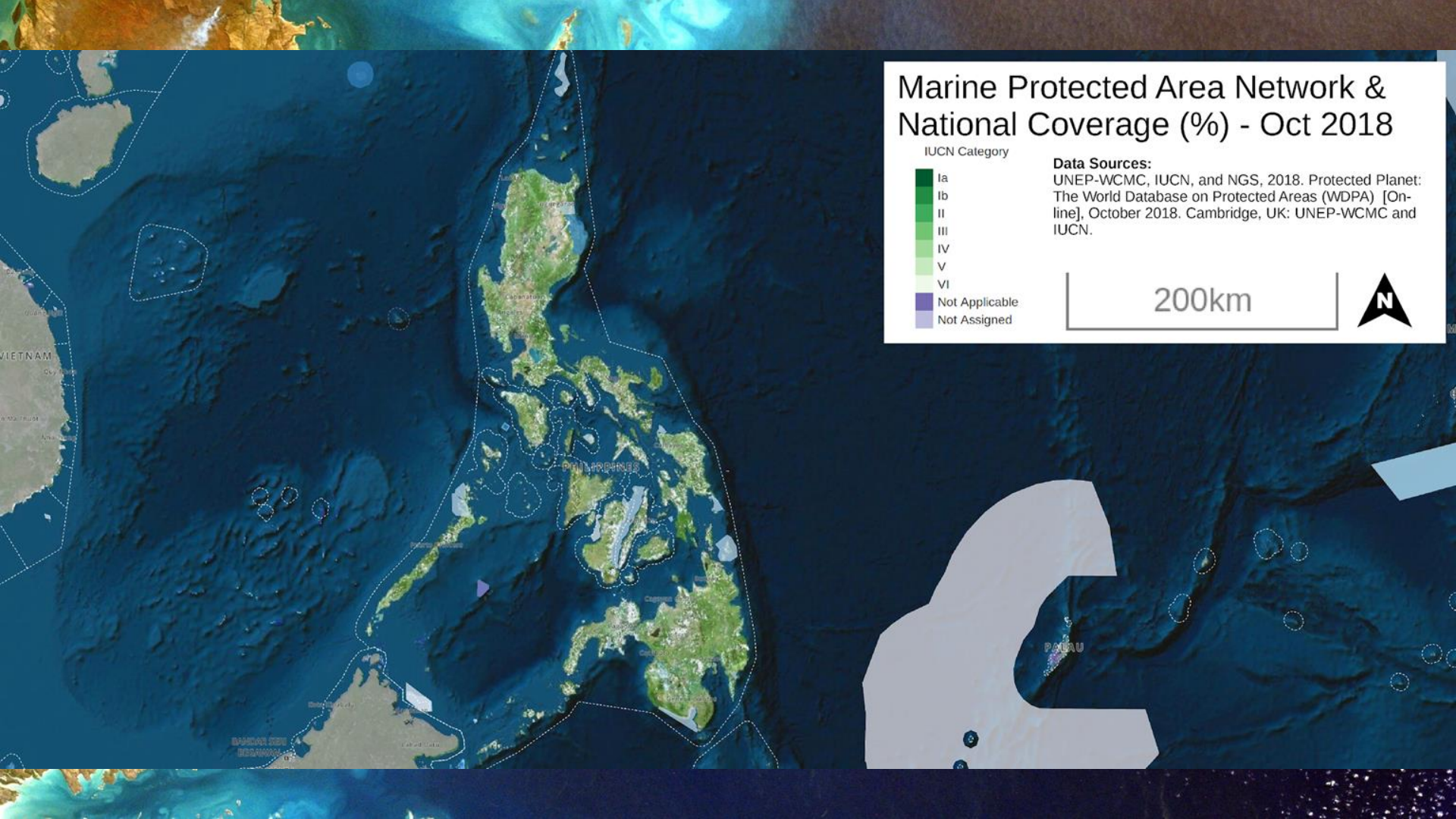


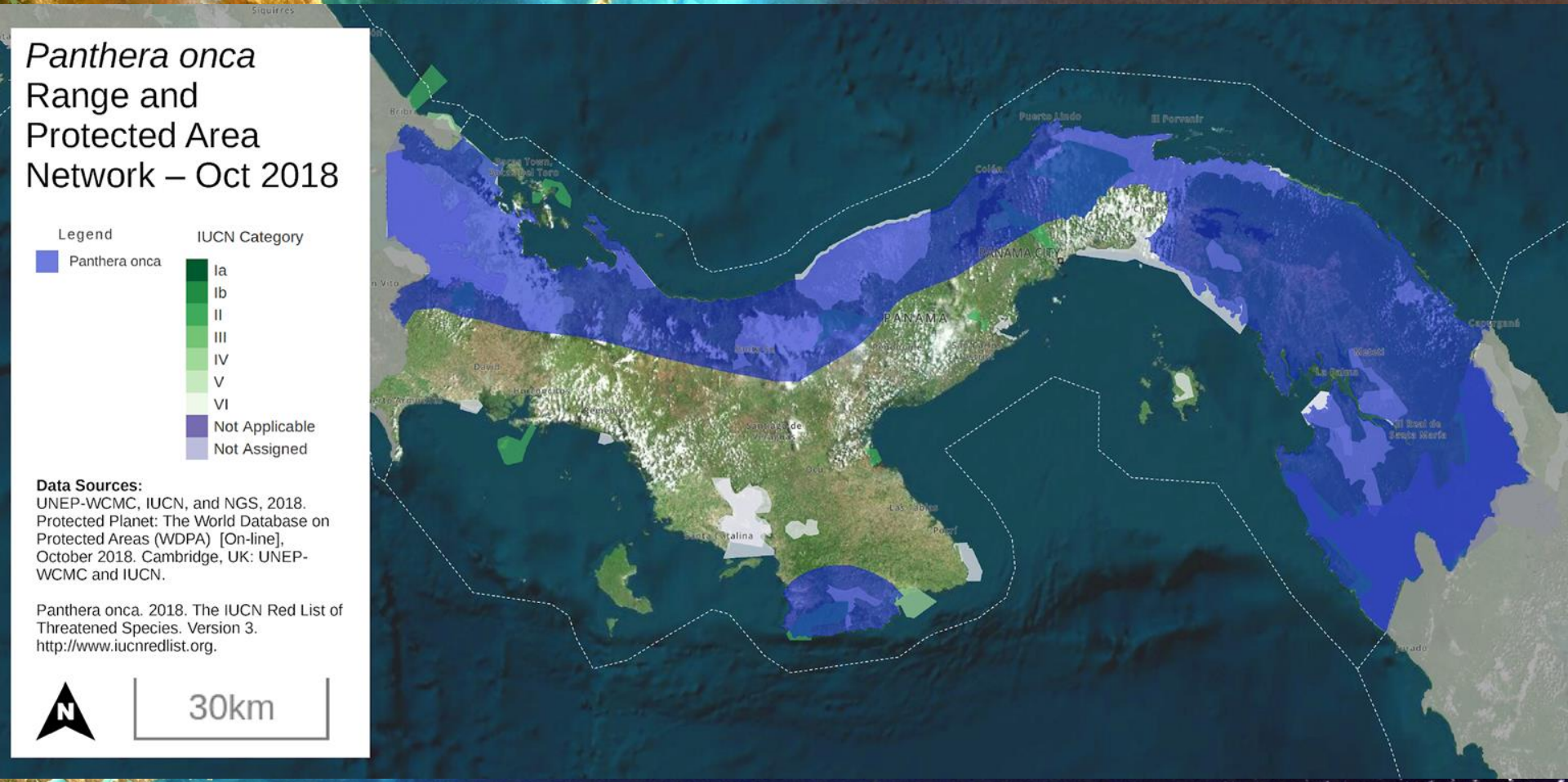
Communicate Your Conservation Success



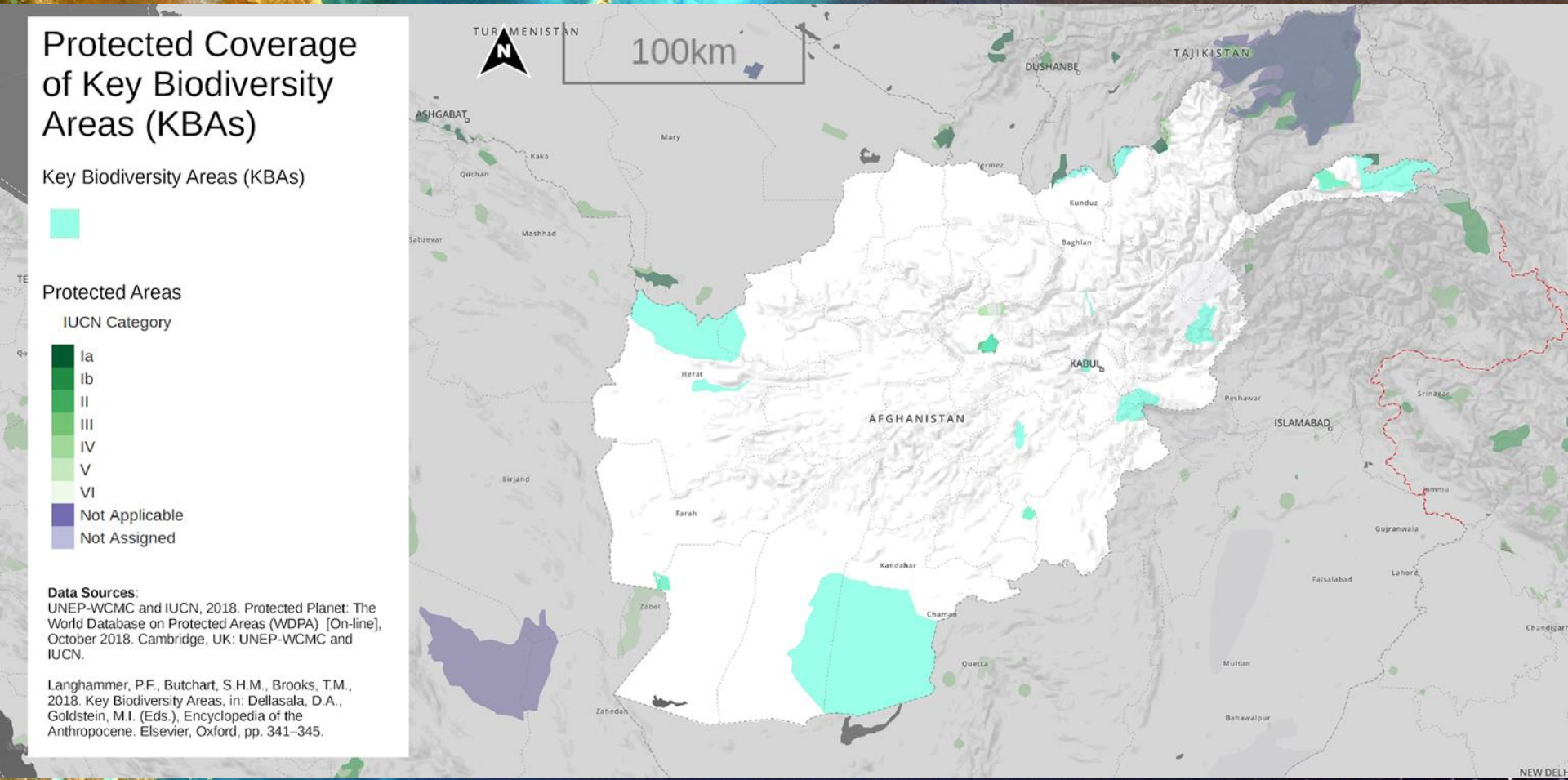
STATUS MAPS FOR ABT 11


Terrestrial Protected Area Network & National Coverage (%) - Oct 2018
IUCN Category
Ia
Ib
II
III
IV
V
VI
Not Applicable
Not Assigned
Data Sources:
UNEP-WCMC, IUCN, and NGS, 2018. Protected Planet: The World Database on Protected Areas (WDPA) [On-line], October 2018. Cambridge, UK: UNEP-WCMC and IUCN.
200km
N
MEXICO
GUATEMALA
HONDURAS
BELMOPAN
TEGUCIGALPA


Marine Protected Area Network & National Coverage (%) - Oct 2018
IUCN Category
Ia
Ib
II
III
IV
V
VI
Not Applicable
Not Assigned
Data Sources:
UNEP-WCMC, IUCN, and NGS, 2018. Protected Planet: The World Database on Protected Areas (WDPA) [On-line], October 2018. Cambridge, UK: UNEP-WCMC and IUCN.
200km
N
VIETNAM
PHILIPPINES
PALAU


Panthera onca
Range and
Protected Area
Network – Oct 2018
Legend
Panthera onca
IUCN Category
Ia
Ib
II
III
IV
V
VI
Not Applicable
Not Assigned
Data Sources:
UNEP-WCMC, IUCN, and NGS, 2018. Protected Planet: The World Database on Protected Areas (WDPA) [On-line], October 2018. Cambridge, UK: UNEP-WCMC and IUCN.
Panthera onca. 2018. The IUCN Red List of Threatened Species. Version 3. http://www.iucnredlist.org.
N
30km
PANAMA CITY
PANAMA
Colón
David
Puerto Limón
El Porvenir

Protected Coverage of Key Biodiversity Areas (KBAs)



Key Biodiversity Areas (KBAs)

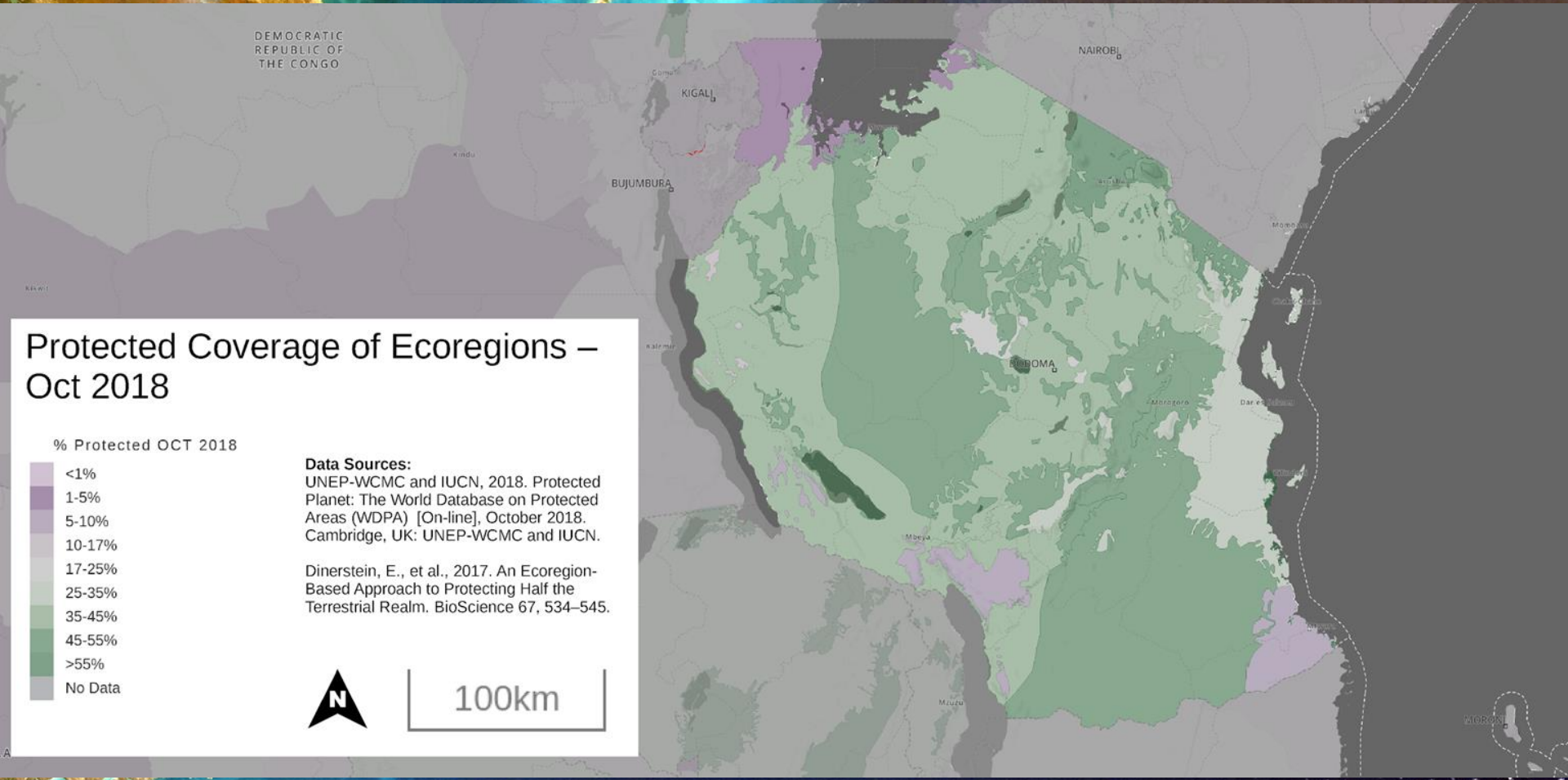
Protected Areas

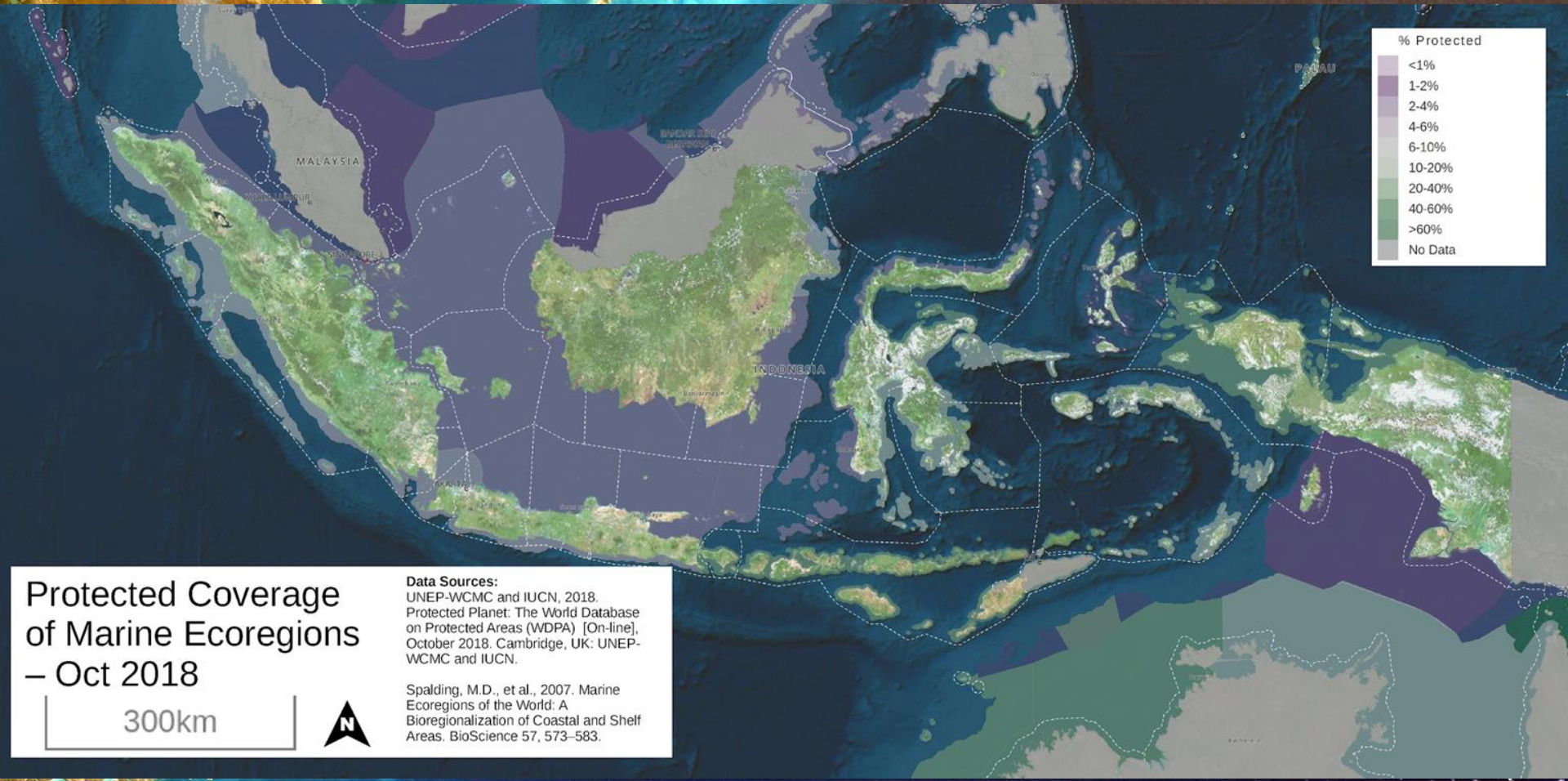
IUCN Category

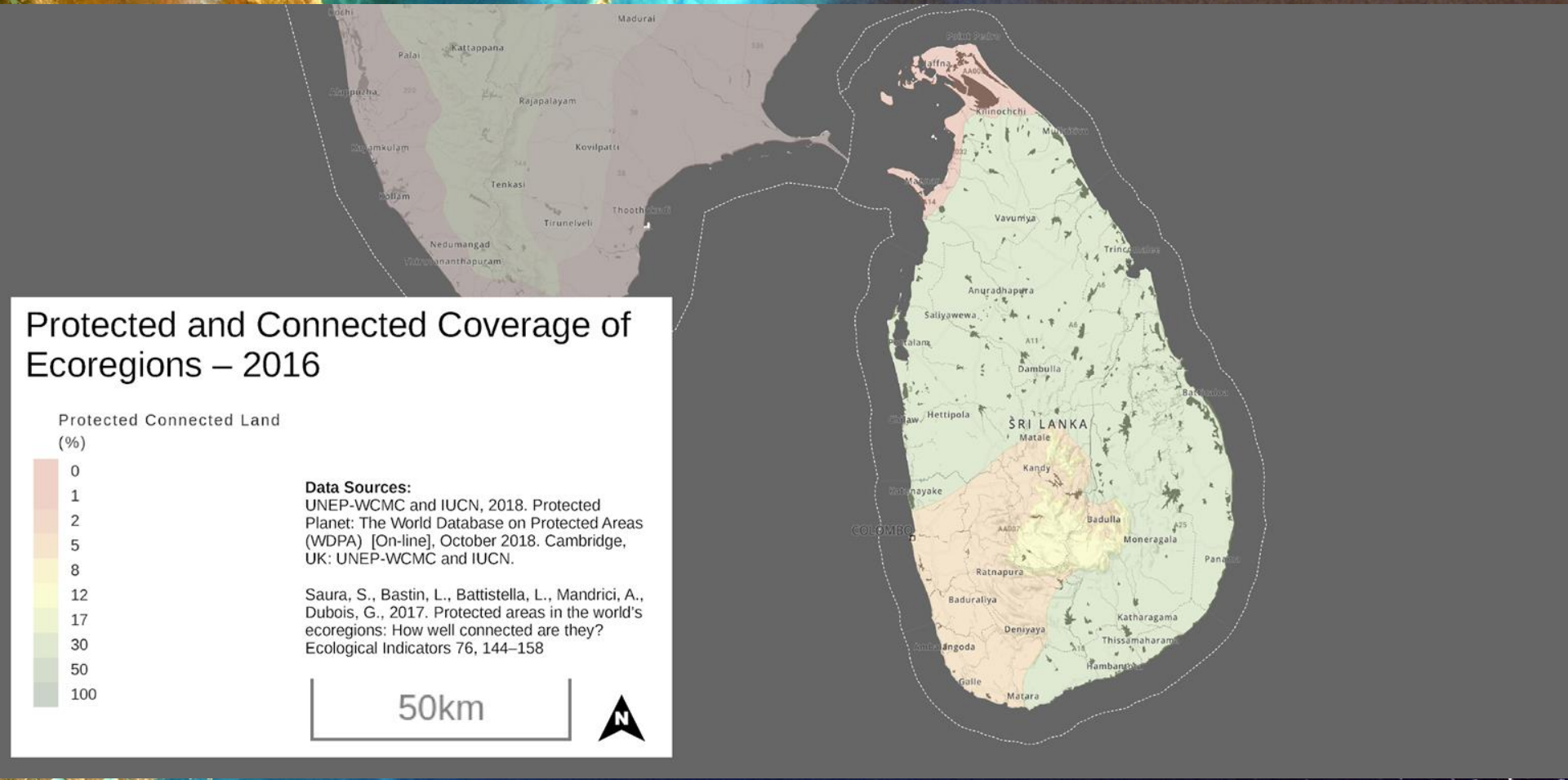
- Ia
- Ib
- II
- III
- IV
- V
- VI
- Not Applicable
- Not Assigned

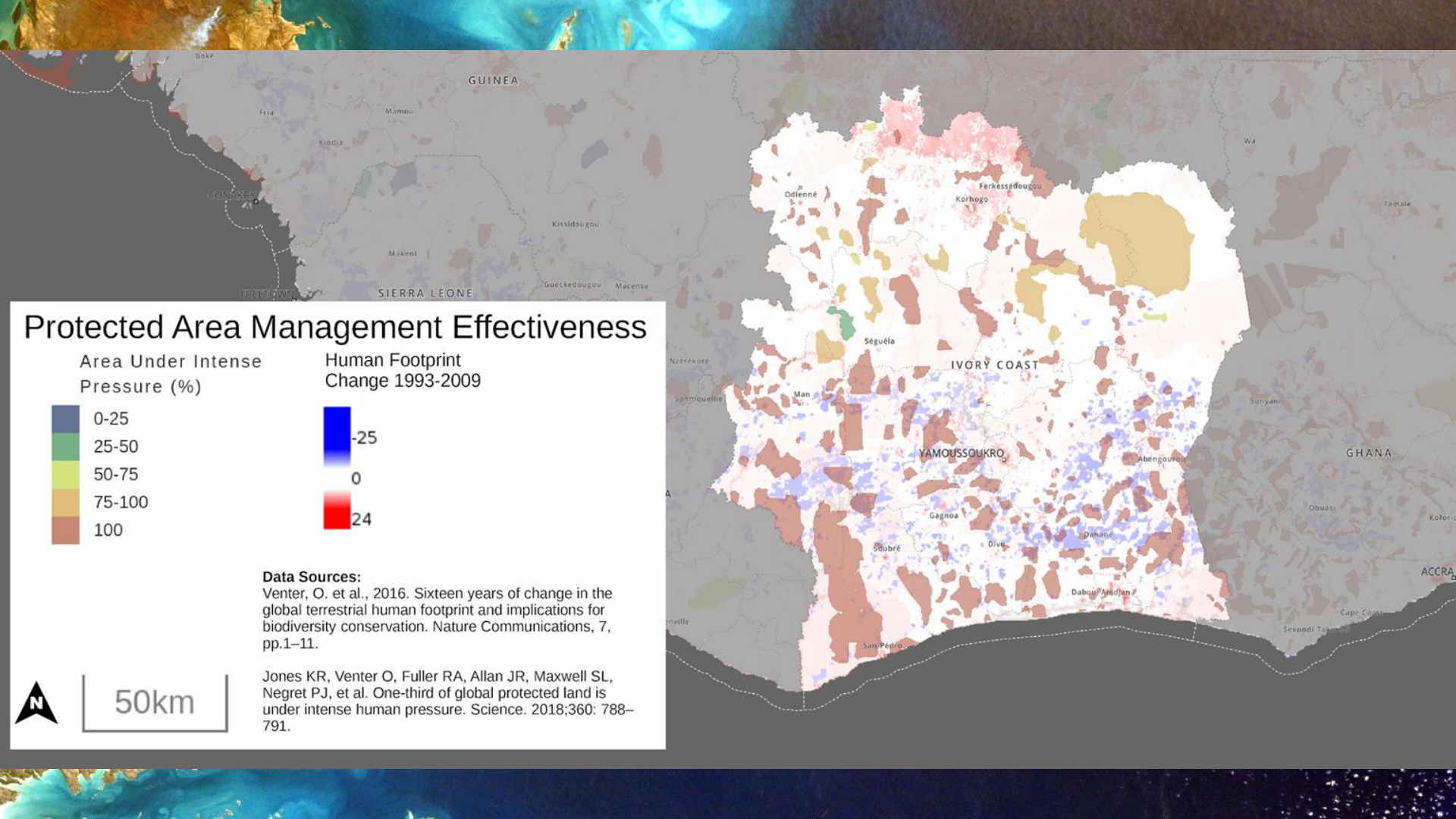
Data Sources:
UNEP-WCMC and IUCN, 2018. Protected Planet: The World Database on Protected Areas (WDPA) [On-line], October 2018. Cambridge, UK: UNEP-WCMC and IUCN.

Langhammer, P.F., Butchart, S.H.M., Brooks, T.M., 2018. Key Biodiversity Areas, in: Dellasala, D.A., Goldstein, M.I. (Eds.), Encyclopedia of the Anthropocene. Elsevier, Oxford, pp. 341–345.


DEMOCRATIC REPUBLIC OF THE CONGO
KIGALI
BUJUMBURA
NAIROBI
DODOMA
Morogoro
Mbeya
Mtwara
Protected Coverage of Ecoregions – Oct 2018
% Protected OCT 2018
<1%
1-5%
5-10%
10-17%
17-25%
25-35%
35-45%
45-55%
>55%
No Data
Data Sources:
UNEP-WCMC and IUCN, 2018. Protected Planet: The World Database on Protected Areas (WDPA) [On-line], October 2018. Cambridge, UK: UNEP-WCMC and IUCN.
Dinerstein, E., et al., 2017. An Ecoregion-Based Approach to Protecting Half the Terrestrial Realm. BioScience 67, 534–545.
N
100km


% Protected
<1%
1-2%
2-4%
4-6%
6-10%
10-20%
20-40%
40-60%
>60%
No Data
MALAYSIA
INDONESIA
PAPUA
Protected Coverage of Marine Ecoregions – Oct 2018
300km
N
Data Sources:
UNEP-WCMC and IUCN, 2018. Protected Planet: The World Database on Protected Areas (WDPA) [On-line], October 2018. Cambridge, UK: UNEP-WCMC and IUCN.
Spalding, M.D., et al., 2007. Marine Ecoregions of the World: A Bioregionalization of Coastal and Shelf Areas. BioScience 57, 573–583.


Protected and Connected Coverage of Ecoregions – 2016
Protected Connected Land (%)
0
1
2
5
8
12
17
30
50
100
Data Sources:
UNEP-WCMC and IUCN, 2018. Protected Planet: The World Database on Protected Areas (WDPA) [On-line], October 2018. Cambridge, UK: UNEP-WCMC and IUCN.
Saura, S., Bastin, L., Battistella, L., Mandrici, A., Dubois, G., 2017. Protected areas in the world's ecoregions: How well connected are they? Ecological Indicators 76, 144–158
50km
N
Madurai
Kattappana
Palai
Rajapalayam
Kovilpatti
Tenkasi
Tirunelveli
Nedumangad
Kochi
Kilinochchi
Vavuniya
Anuradhapura
Saliyawewa
Dambulla
Hettipola
SRI LANKA
Matale
Kandy
Badulla
Moneragala
Ratnapura
Baduraliya
Deniyaya
Thissamaharama
Galle
Matara

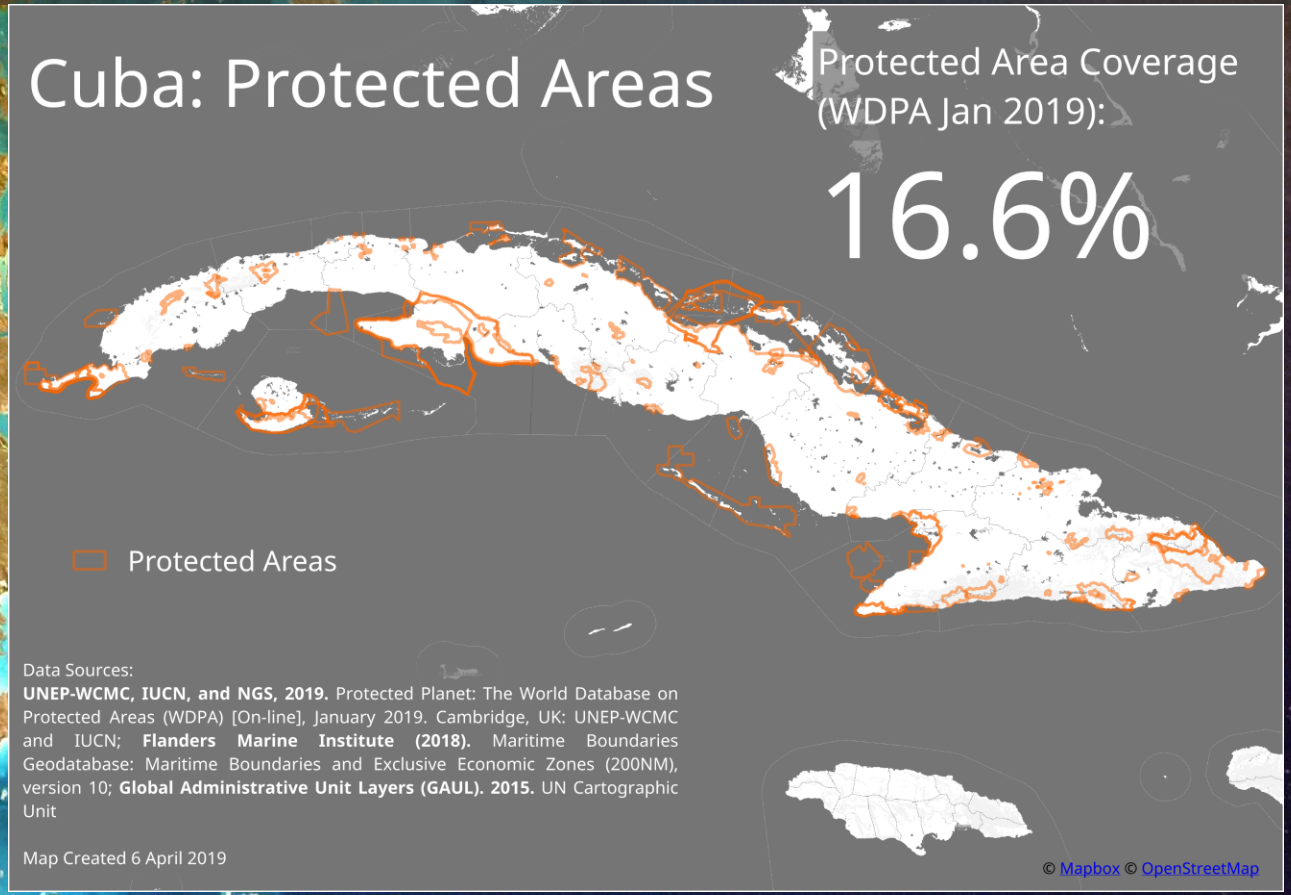

GUINEA
SIERRA LEONE
IVORY COAST
GHANA
CONAKRY
FREETOWN
Boké
Mamou
Kindia
Kissidougou
Makeni
Gueckedougou
Macenta
Odienné
Ferkessédougou
Korhogo
Séguéla
Man
Sanmiquellie
YAMOUSSOUKRO
Gagnoa
Soubré
Divo
Daloa
Abidjan
San-Pédro
Abengourou
Sunyani
Obuasi
ACCRA
Cape Coast
Sekondi-Takoradi
Wa
Tamale
Nzérékoré
Protected Area Management Effectiveness
Area Under Intense Pressure (%)
0-25
25-50
50-75
75-100
100
Human Footprint Change 1993-2009
-25
0
24
Data Sources:
Venter, O. et al., 2016. Sixteen years of change in the global terrestrial human footprint and implications for biodiversity conservation. Nature Communications, 7, pp.1–11.
Jones KR, Venter O, Fuller RA, Allan JR, Maxwell SL, Negret PJ, et al. One-third of global protected land is under intense human pressure. Science. 2018;360: 788–791.
N
50km

PART 2

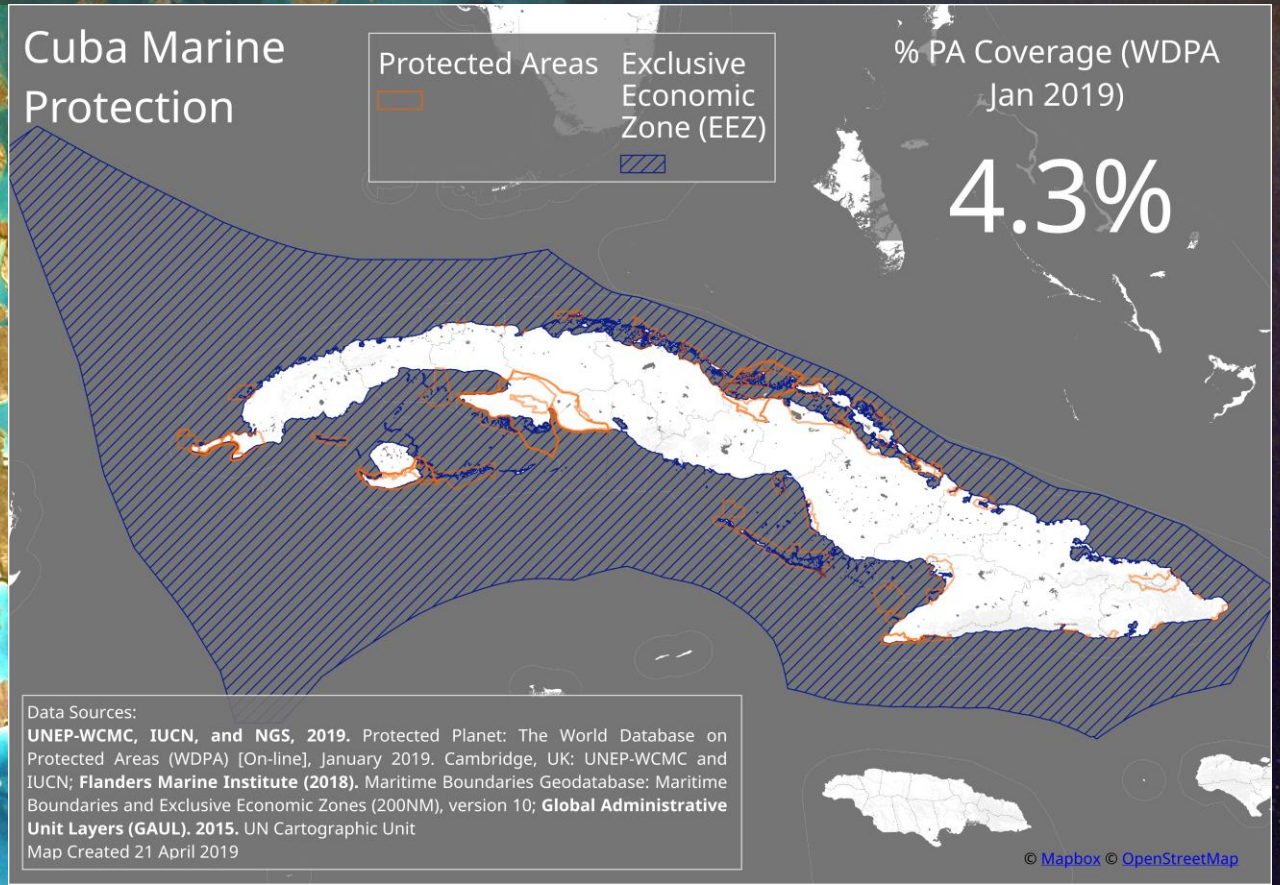
PRELIMINARY ANALYSES FOR ABT 11

STATUS, GAPS, COMMITMENTS AND OPPORTUNITIES

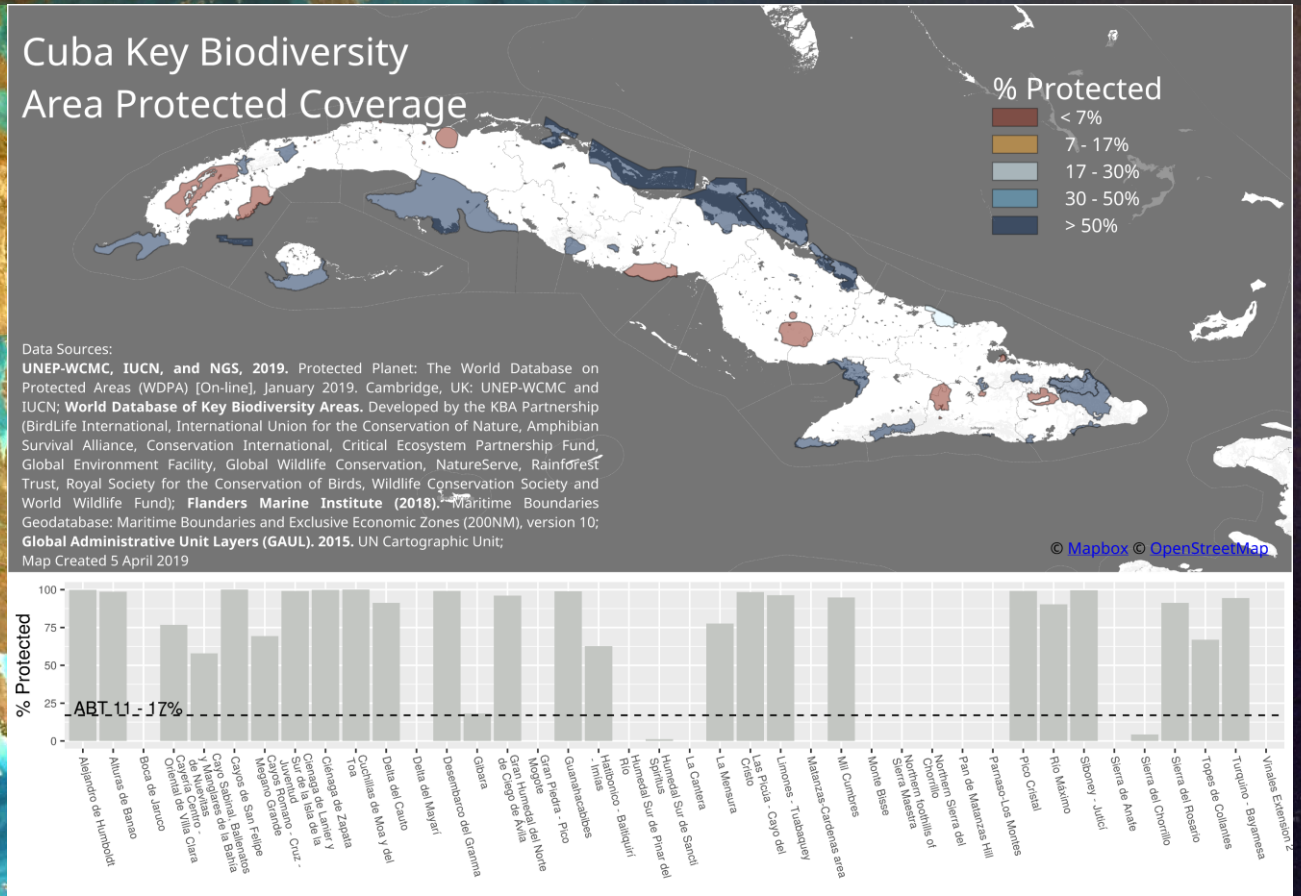
Terrestrial PA coverage



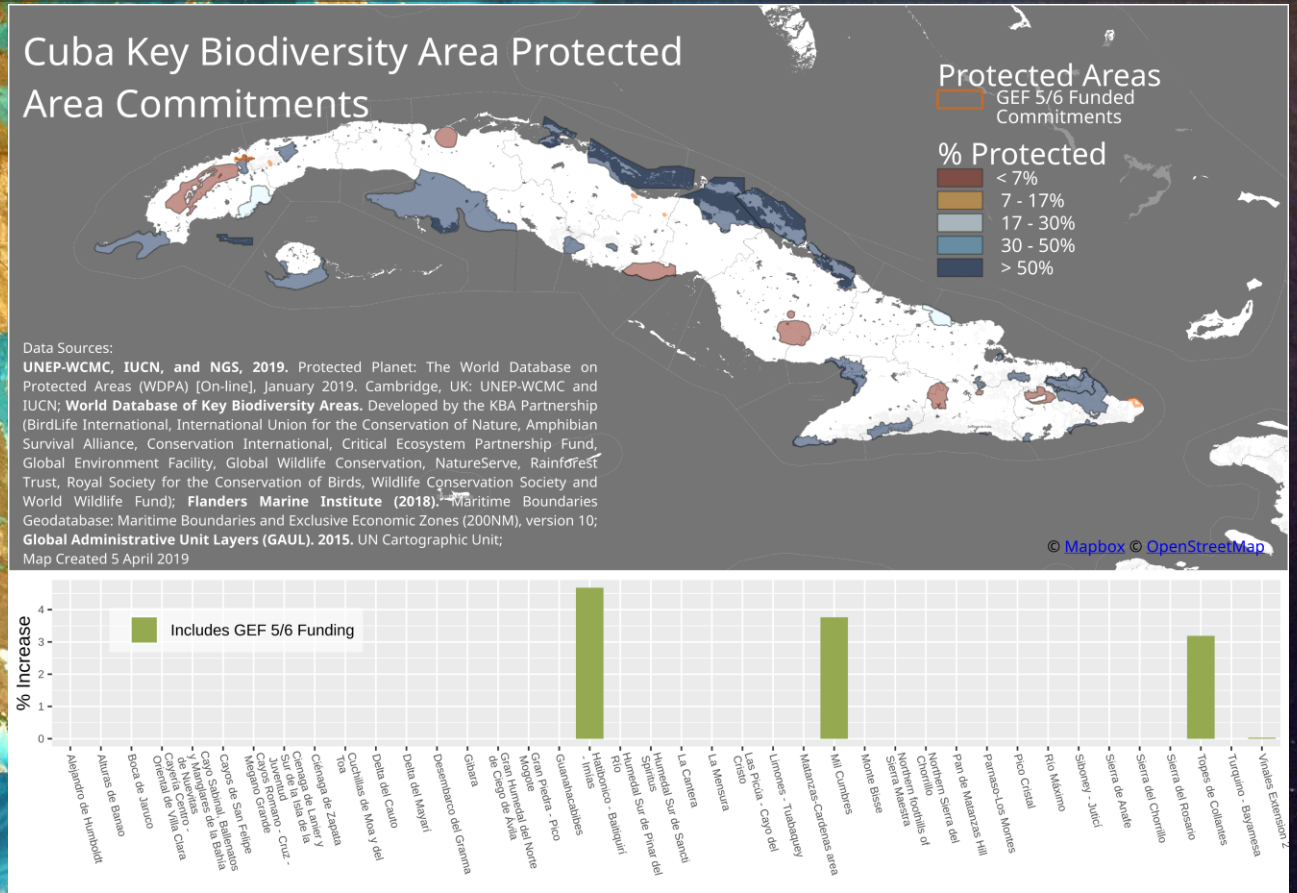
Marine PA coverage



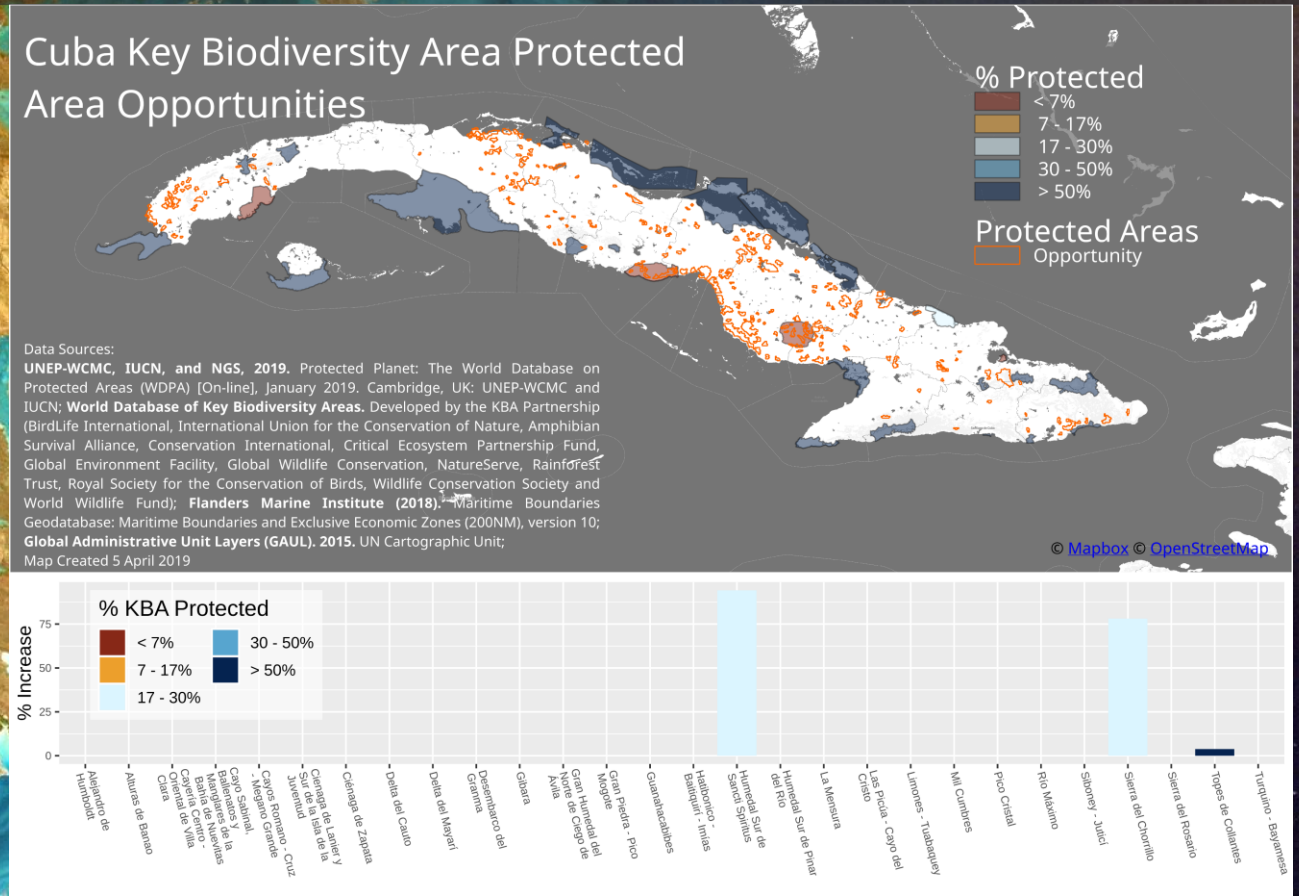
Areas important for biodiversity



Areas important for biodiversity

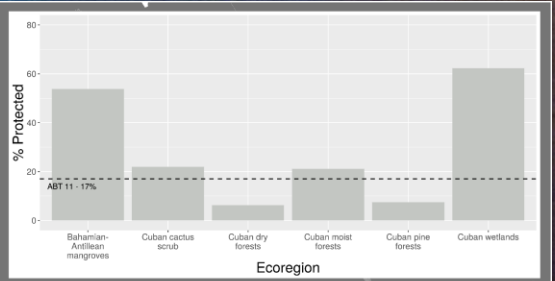


Areas important for biodiversity

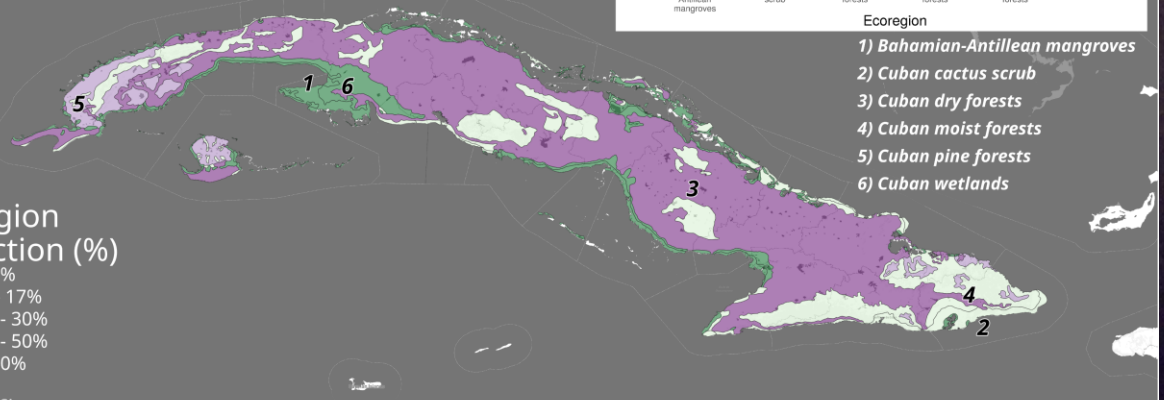


Ecologically representative

Cuban Ecoregions' Protected Coverage



1) Bahamian-Antillean mangroves
2) Cuban cactus scrub
3) Cuban dry forests
4) Cuban moist forests
5) Cuban pine forests
6) Cuban wetlands

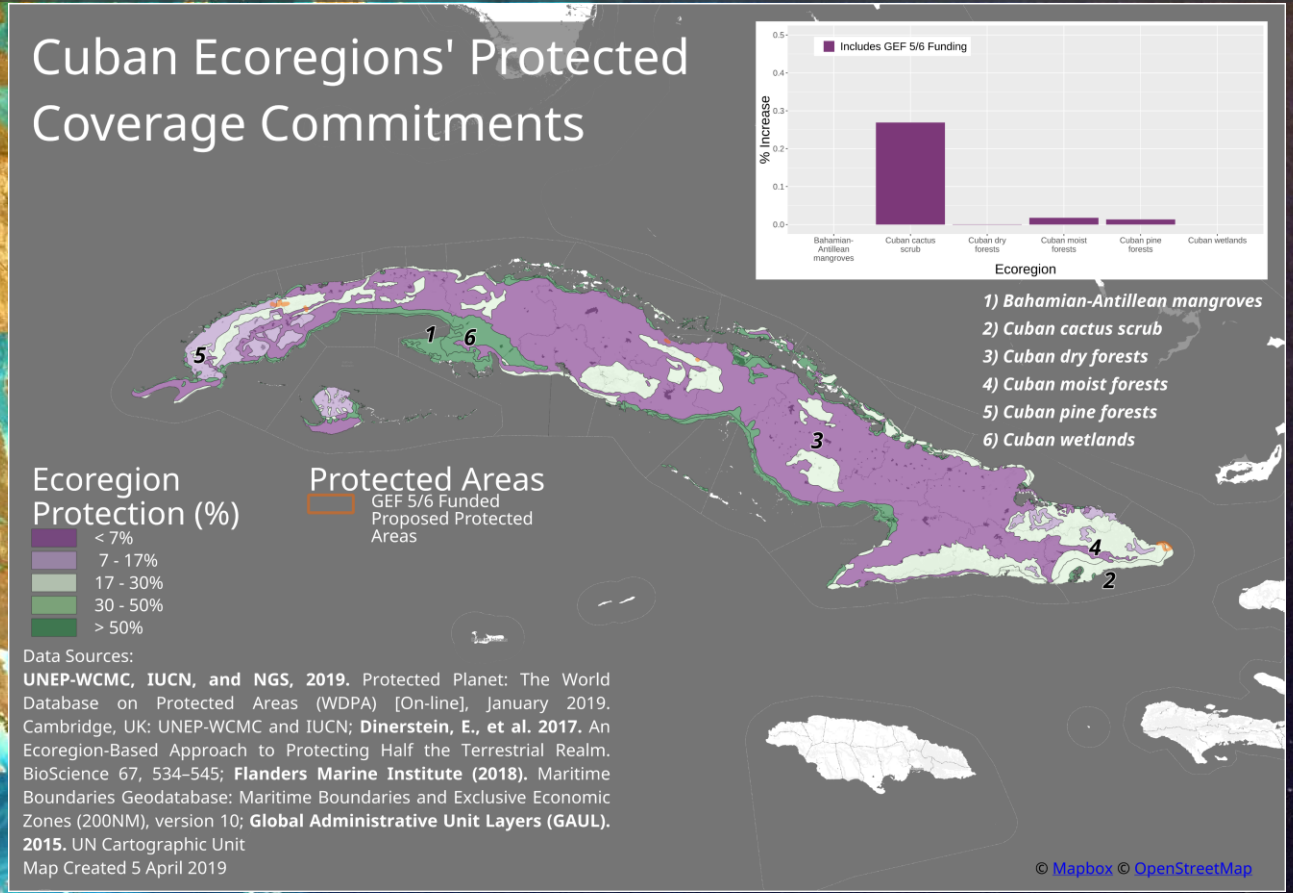


Ecoregion Protection (%)

- < 7%
- 7 - 17%
- 17 - 30%
- 30 - 50%
- > 50%

Data Sources:
UNEP-WCMC, IUCN, and NGS, 2019. Protected Planet: The World Database on Protected Areas (WDPA) [On-line], January 2019. Cambridge, UK: UNEP-WCMC and IUCN; **Dinerstein, E., et al. 2017.** An Ecoregion-Based Approach to Protecting Half the Terrestrial Realm. BioScience 67, 534–545; **Flanders Marine Institute (2018).** Maritime Boundaries Geodatabase: Maritime Boundaries and Exclusive Economic Zones (200NM), version 10; **Global Administrative Unit Layers (GAUL). 2015.** UN Cartographic Unit
Map Created 18 April 2019

Ecologically representative



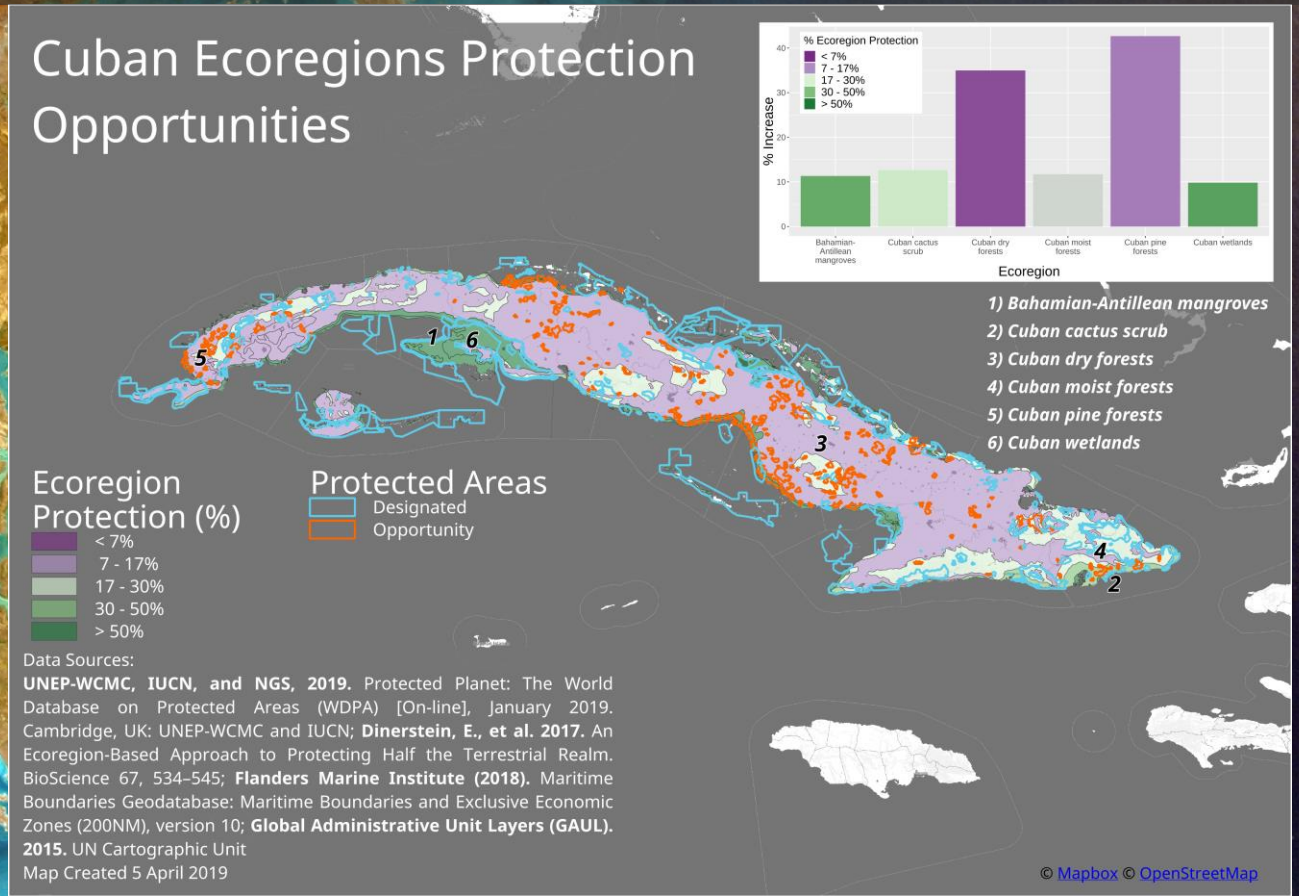
Ecologically representative

Ecoregion Name (terrestrial)	% of ecoregion in sub-region*	% protected globally (Jan 2019)/GAPS	Commitments
Bahamian-Antillean mangroves	51.4	48.4	48.4
Cuban dry forests	99.8	6.37	6.47
Cuban cactus scrub	100	21.7	28.7
Cuban moist forests	100	21.28	23.48
Cuban pine forests	100	7.57	7.67
Cuban wetlands	100	62.61	63.61

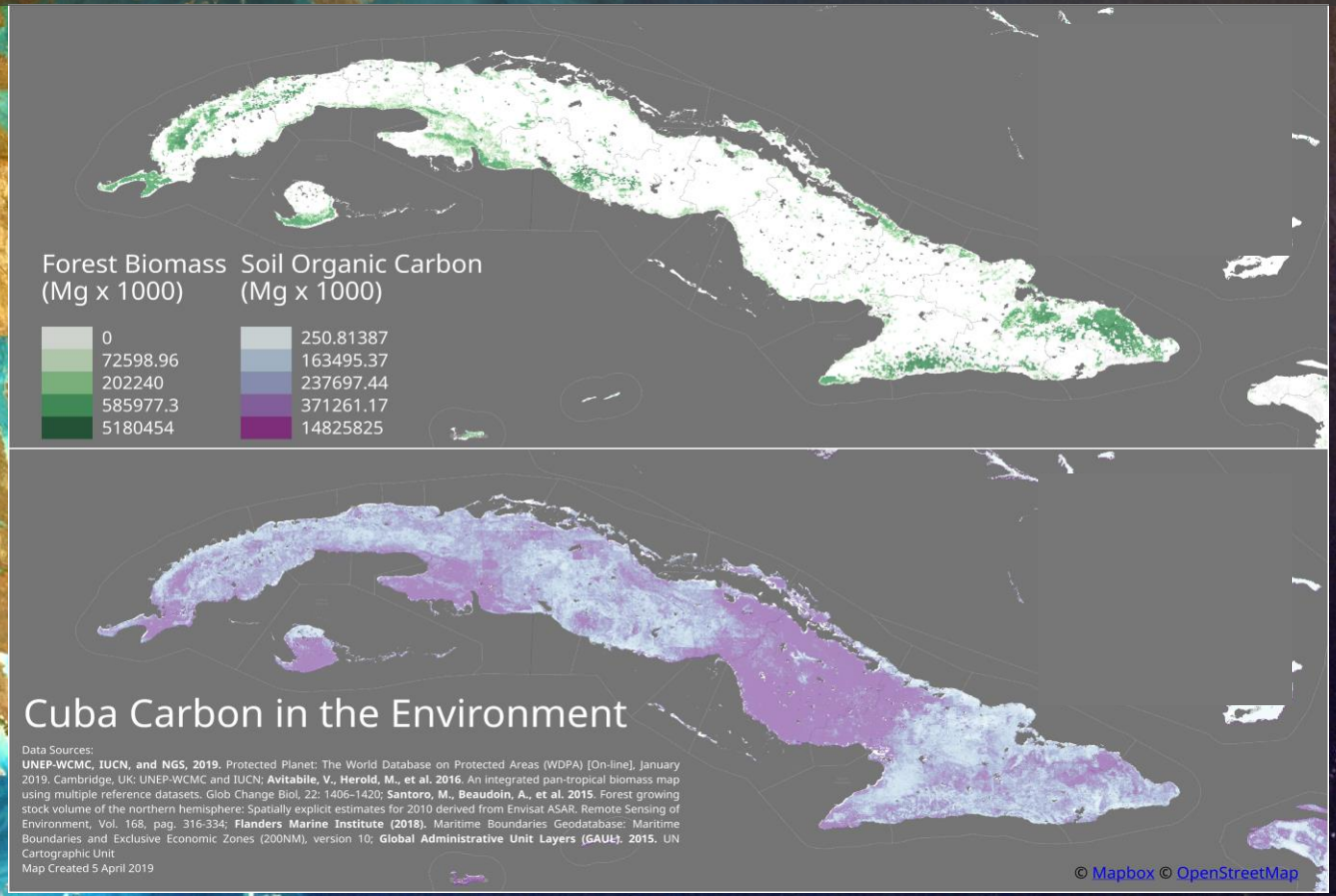
GRID Geneva

NASA

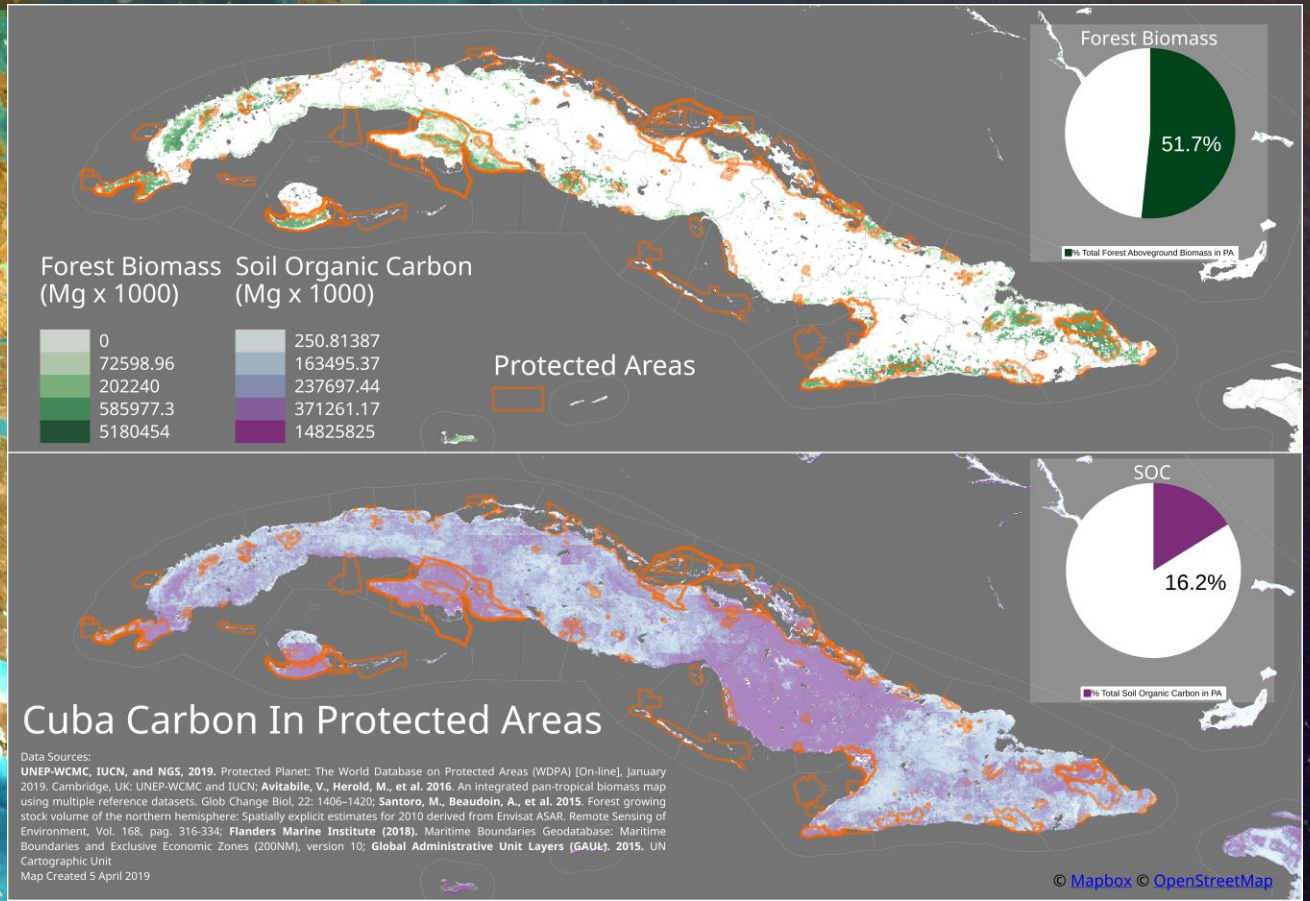
Ecologically representative



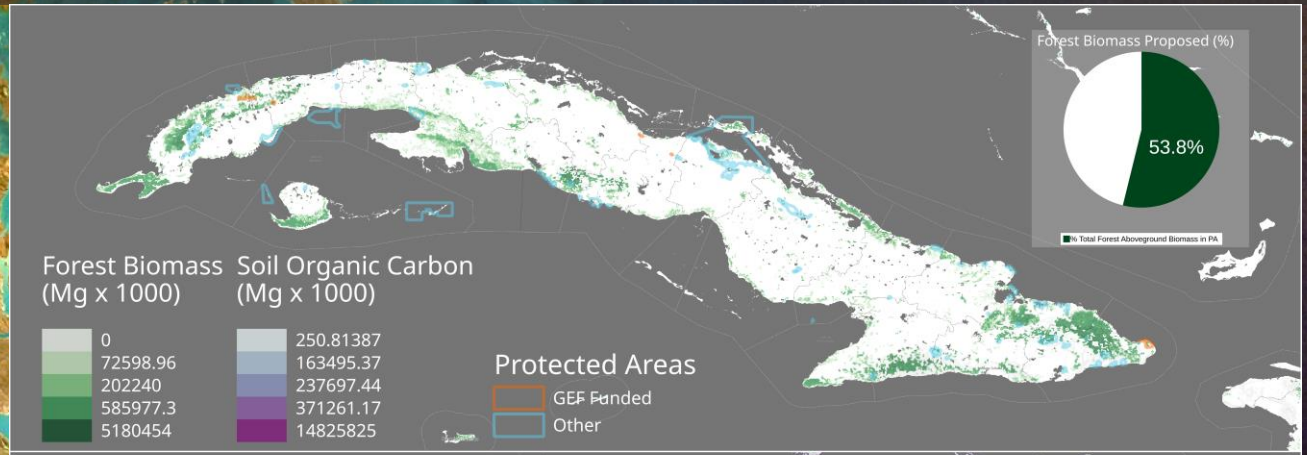
Areas important for ecosystem services – *Carbon*

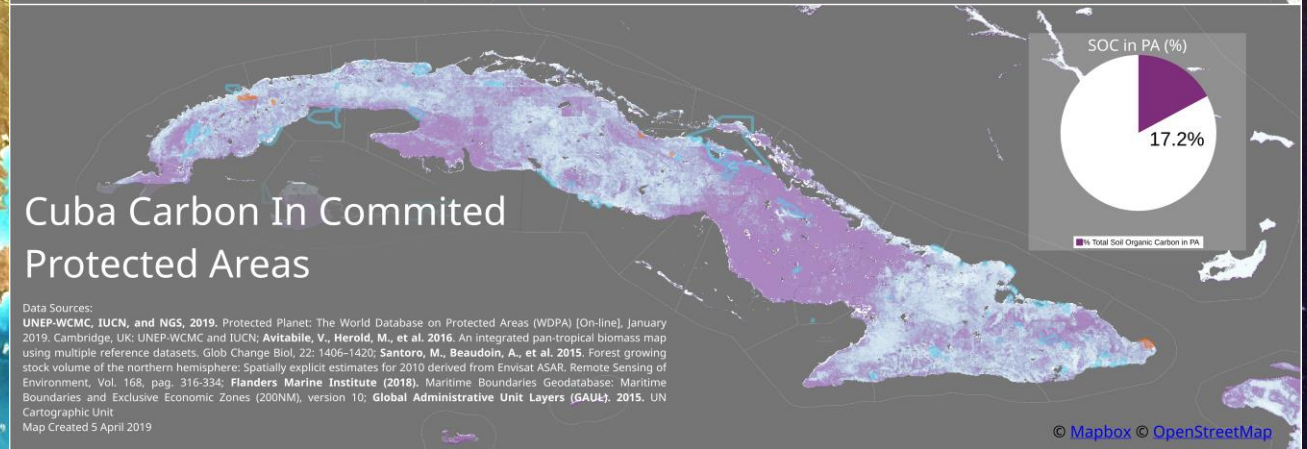


Areas important for ecosystem services – *Carbon*

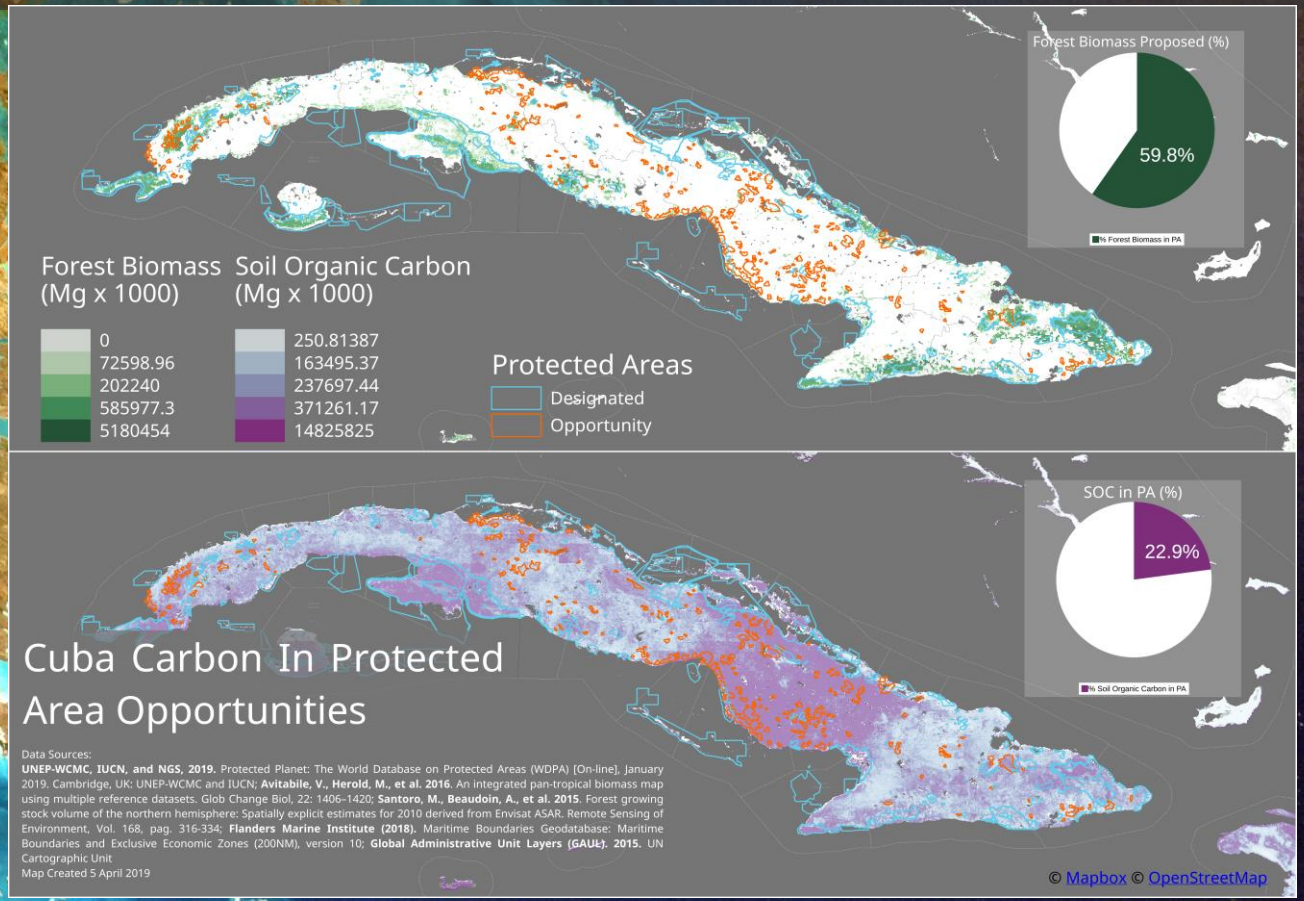


Areas important for ecosystem services – *Carbon*

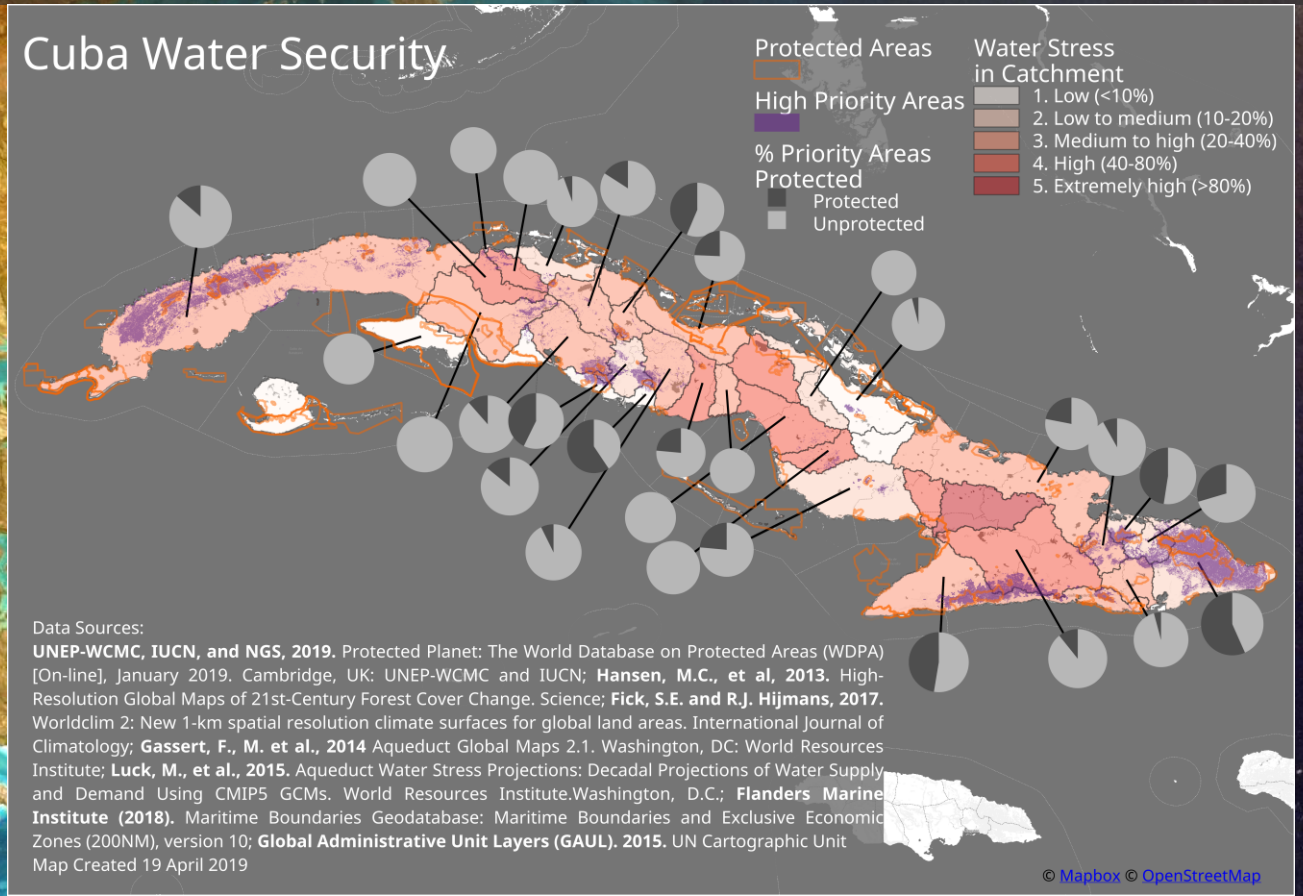




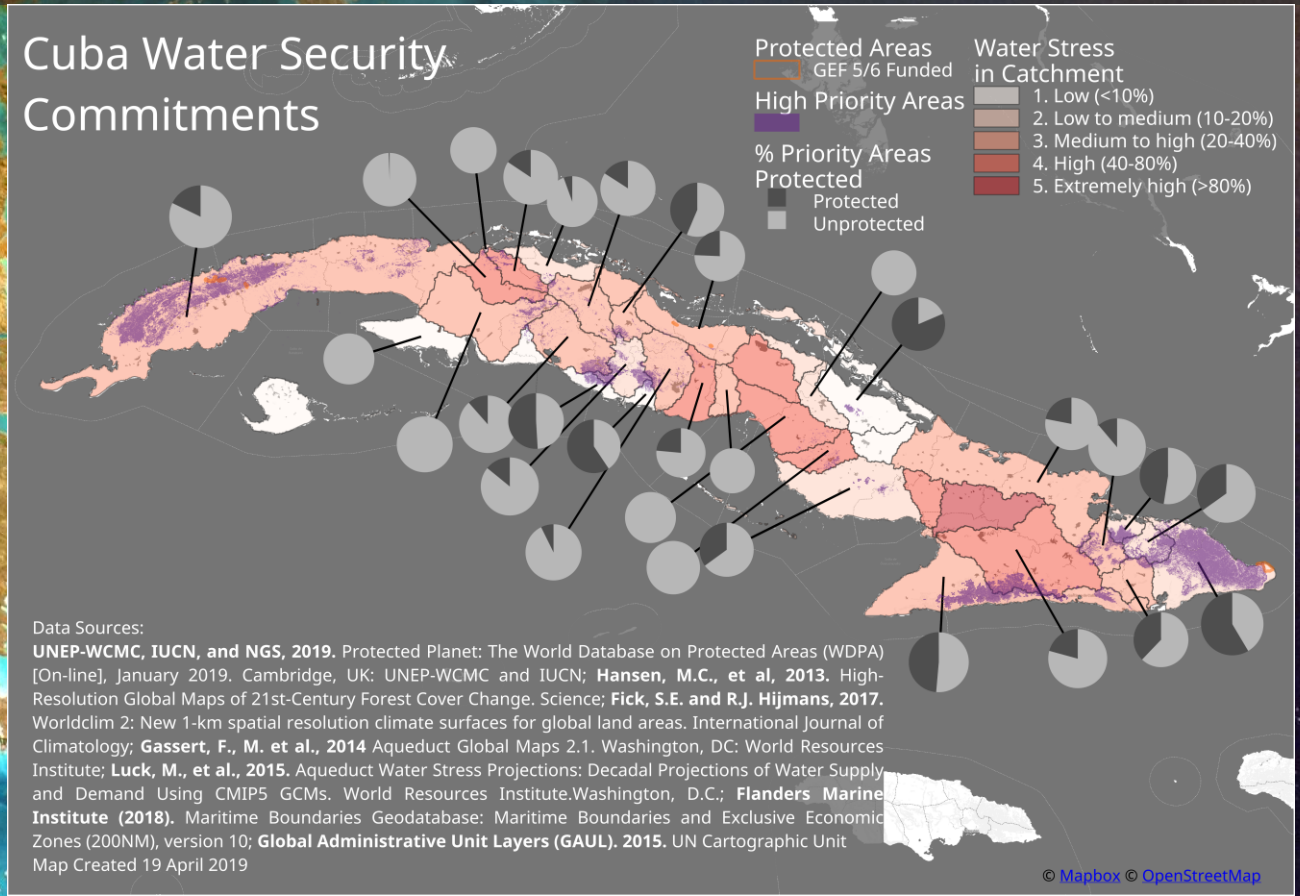
Areas important for ecosystem services – *Carbon*



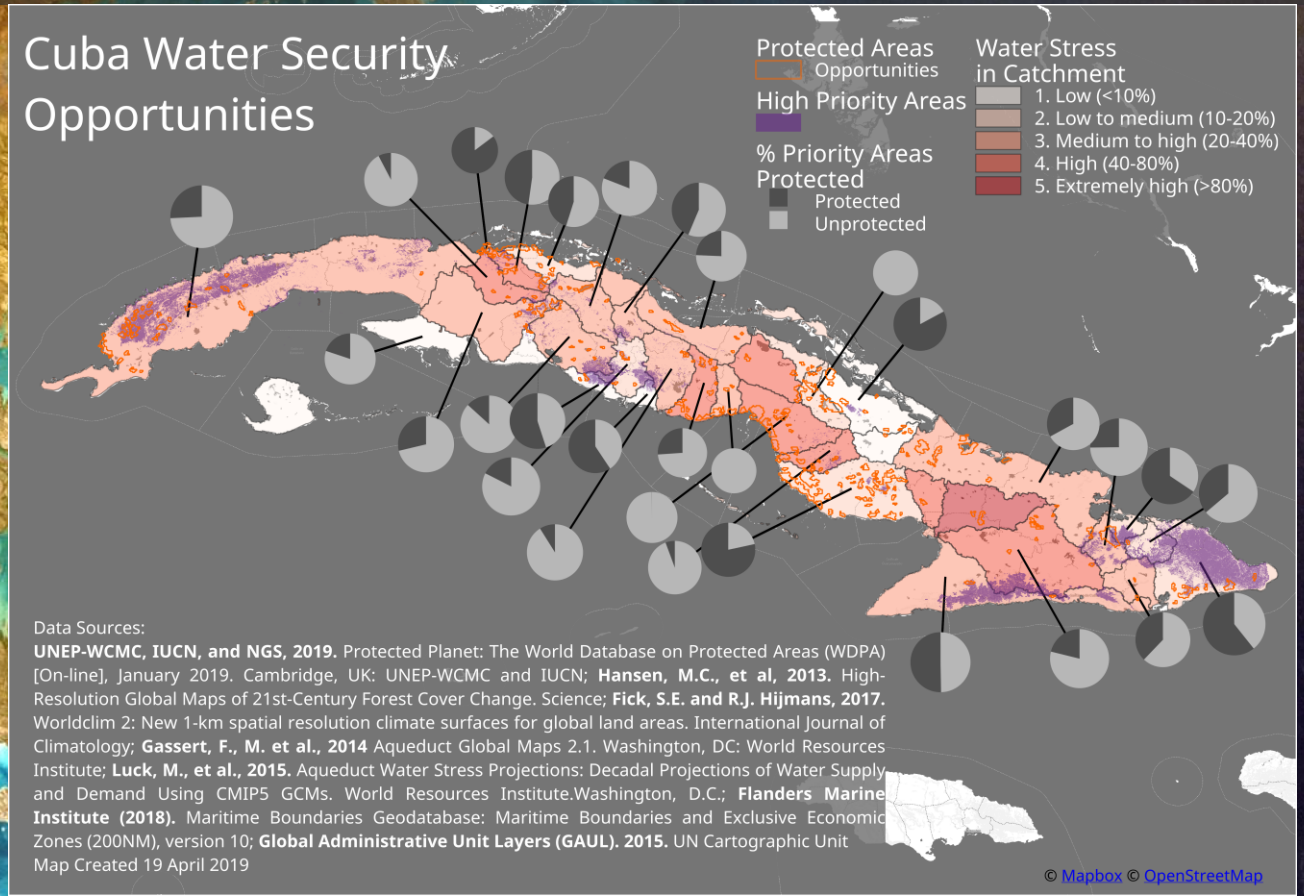
Areas important for ecosystem services – *Water*



Areas important for ecosystem services – *Water*



Areas important for ecosystem services – *Water*



Questions for reflection

Could these maps:

1. Help us to identify new areas that should be protected?
2. Help us to ensure that new PAs not only help us to meet ABT 11 but also are key for climate change mitigation, water security, livelihoods?
3. What other datasets we need to refine the analyses?

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Convention on Biological Diversity

UN environment
United Nations Environment Programme

UNDP
Empowered lives. Resilient nations.

Thank you/ Gracias

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NASA

UN environment

WCMC

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