

Spatial data and analytics:

UN Biodiversity Lab

Session Title: Integrating Biodiversity and Ecosystem Services

Dr Violeta Munoz-Fuentes



Agenda:

- About UNEP-WCMC
- Supporting the Kunming-Montreal biodiversity package
- What is UNBL?
- How can UNBL be used?
- Impact
- Other work at UNEP-WCMC in biodiversity and ecosystem services

About us

UNEP-WCMC is a centre of global excellence on biodiversity

It operates as a collaboration between UNEP and WCMC, based in Cambridge, UK

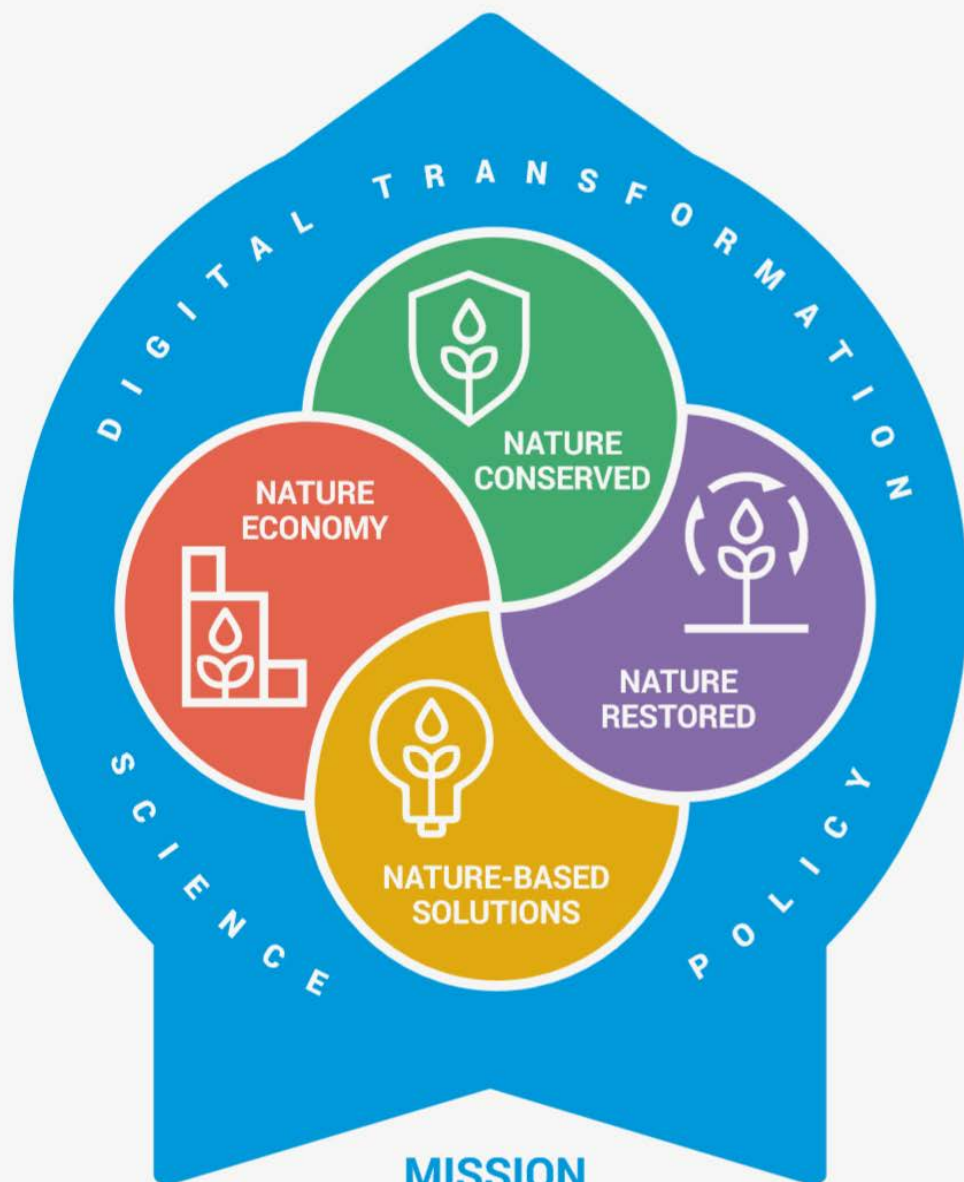
At the interface of science, policy and practice to tackle the global nature crisis

Vision 2050: Living in harmony with nature
Its mission is to develop knowledge and capacity for a nature-positive world



VISION 2050

Living in harmony with nature



We develop knowledge and capacity
for a nature-positive world

IMPACT AREAS



NATURE CONSERVED

Global Wildlife
Trade
Protected Planet
Connectivity
Conservation



NATURE RESTORED

Restoration for
Sustainable
Development
Ocean Recovery
Sustainable
Agricultural
Landscapes



NATURE-BASED SOLUTIONS

Ecosystem-based
Adaptation
Ecosystem-based
Mitigation
Nature for Health
and Well-being



NATURE ECONOMY

Economy
Transformations
Proteus
Partnership
Nature and
Trade
Targets and
Metrics for
Business
Finance for
Nature
Natural Capital
Approaches

INNOVATION AREAS



SCIENCE

Futures Modelling
Nature trends



POLICY

International
Policy &
Conventions
Nature Indicators
National
Ecosystem
Assessments
Nature, Gender
& Rights



DIGITAL TRANSFORMATION

Planet+
Data Innovation

Focal Initiatives
are in black text

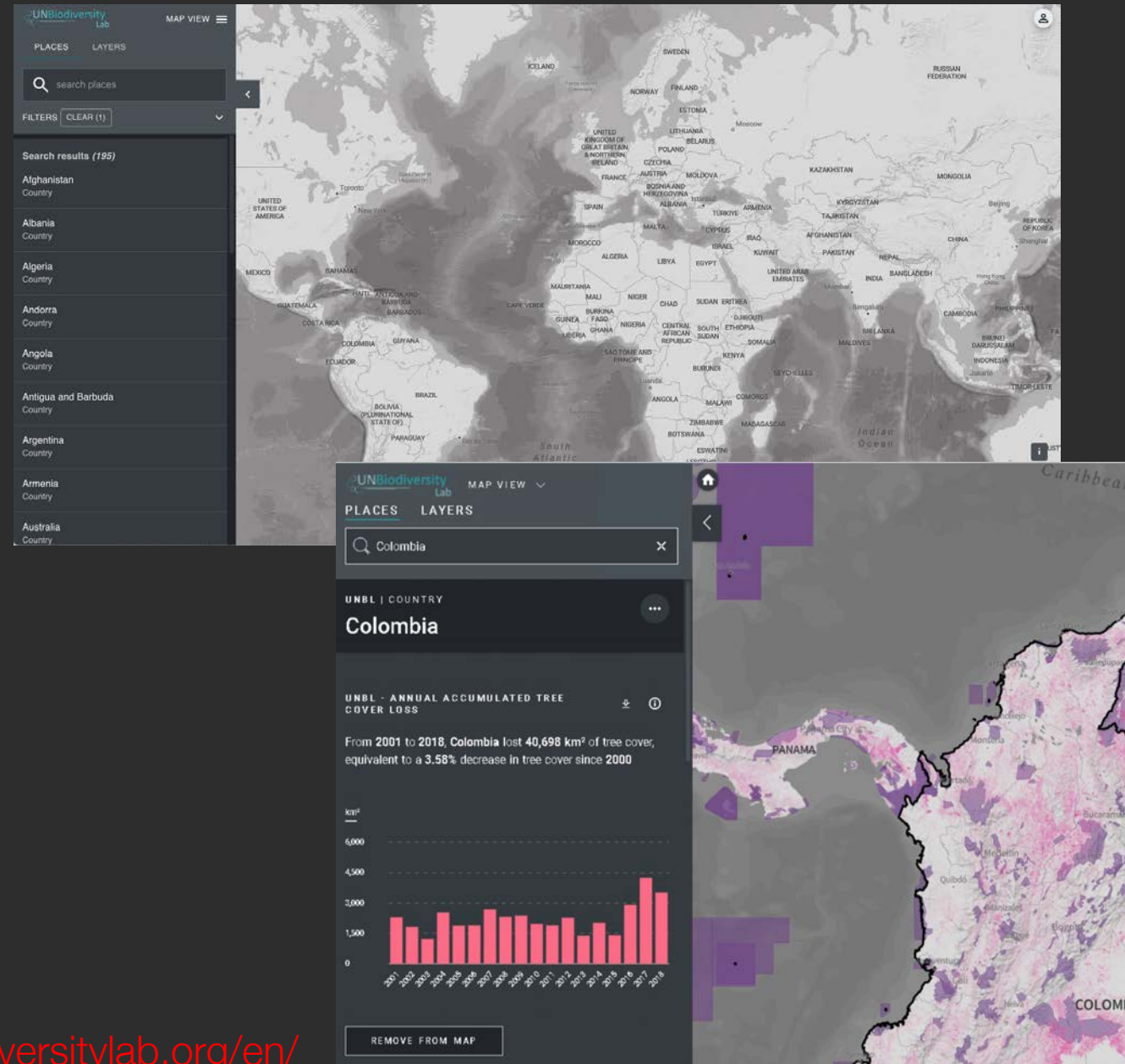
Kunming-Montreal biodiversity package

Adopted by the Conference of the Parties to
the Convention on Biological Diversity at its
15th meeting (7-19 December 2022 –
Montreal, Canada)



UNBL | SPATIAL DATA TOOL FOR DECISION MAKING

- Provide decision makers with the **best available spatial data** to put nature at the center of sustainable development
- **Open-source** web platform
- **Visualize** global spatial data
 - More than 600+ data layers
 - Focused on biodiversity and sustainable development data
- **Generate** maps
- **Perform** one-click analyses
- **Support** users with no GIS expertise



WHY UNBL?

- Created to support Parties in commitments to the CBD: led to a **2x** increase in the number of maps between **5NR** and **6NR** (**55 countries**)
- UNBL 2.0: UNBL re-envisioned >> support countries **planning, decision-making and monitoring** for the KM Global Biodiversity Framework
- **Partnership** of UNEP-WCMC, UNDP, UNEP and CBD
- **Funding** Betty and Gordon Moore Foundation





EXPLORE / VISUALIZE

Nashulai Maasai Conservancy

We are extremely grateful for new map of Nashulai Maasai Conservancy – and for opening our eyes to the ways spatial analysis, combined with our traditional knowledge systems, can be applied to support critical decisions for sustainability in our ancestral lands.



DATA ACCESS

SDG 15: Maintaining Life on Land

Colombia, Ecuador and Peru analysed scenarios of land use and climate change under The Life on Land project. Data identified as relevant will be regularly updated in UNBL through 2030 in response to requests from participating institutions in Colombia, Ecuador, and Peru.



SPATIAL PLANNING

Costa Rica - The ELSA methodology was impactful in supporting policies that get to the heart of our biodiversity and environmental challenges. These maps present us with three simple solutions: Protect, Restore, Manage. Maps of Hope can guide us to take action on nature for climate, on nature for life.

Kazakhstan - The ELSA methodology helped identify locations most amenable to planting drought-tolerant crop varieties, developing solar and wind technologies for irrigation and planning for protected areas commitments.



NATIONAL REPORTING

Uptake of UNBL by countries in the 6th National Report - 55 nations created at least one map using UNBL and 13 of these nations relied on UNBL to produce 70 percent or more of their maps.

RESEARCH AND ACADEMIA

UNBL has contributed to maps in scientific publications and was praised for easiness and intuitiveness to use

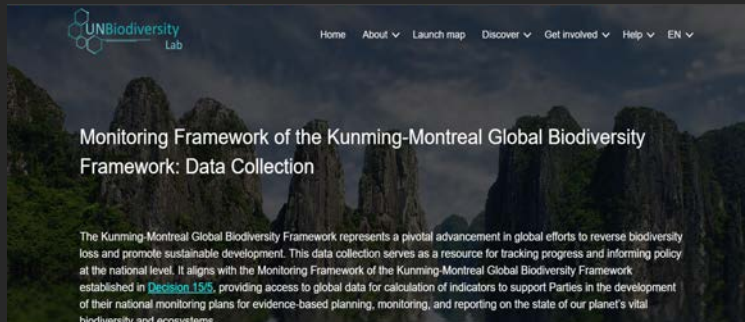
UN Biodiversity Lab

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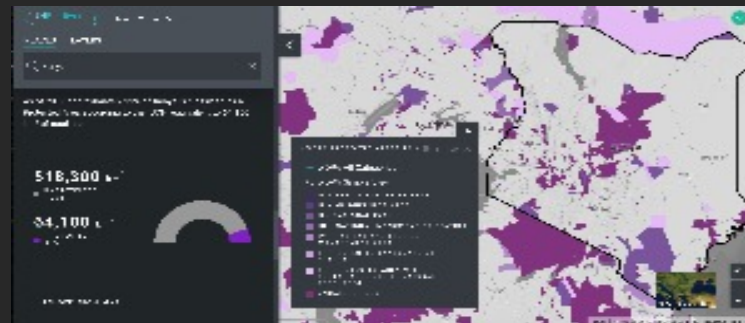
[Launch map](#)

<https://www.unbiodiversitylab.org/en/>

UNBL | KEY FEATURES & FUNCTIONALITIES



1. Access spatial data



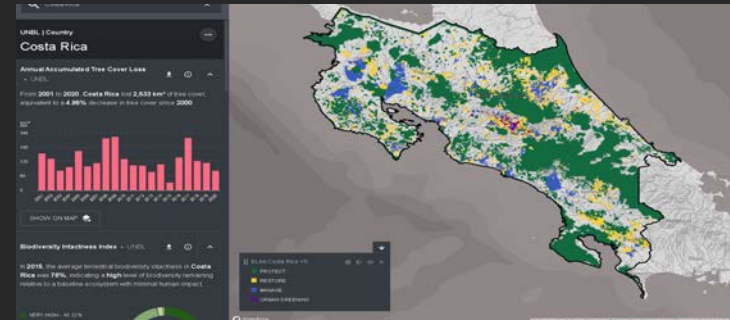
2. View & calculate the spatial metrics and (forthcoming) headline indicators



3. Create a UNBL workspace to support national monitoring systems



4. Create maps for national reports



5. Develop a **prioritized spatial plan based** using the ELSA Tool (*forthcoming*)

[Data collections](#)[Workspaces](#)[Maps of Hope](#)[Resources](#)

Access data through “Data collections”



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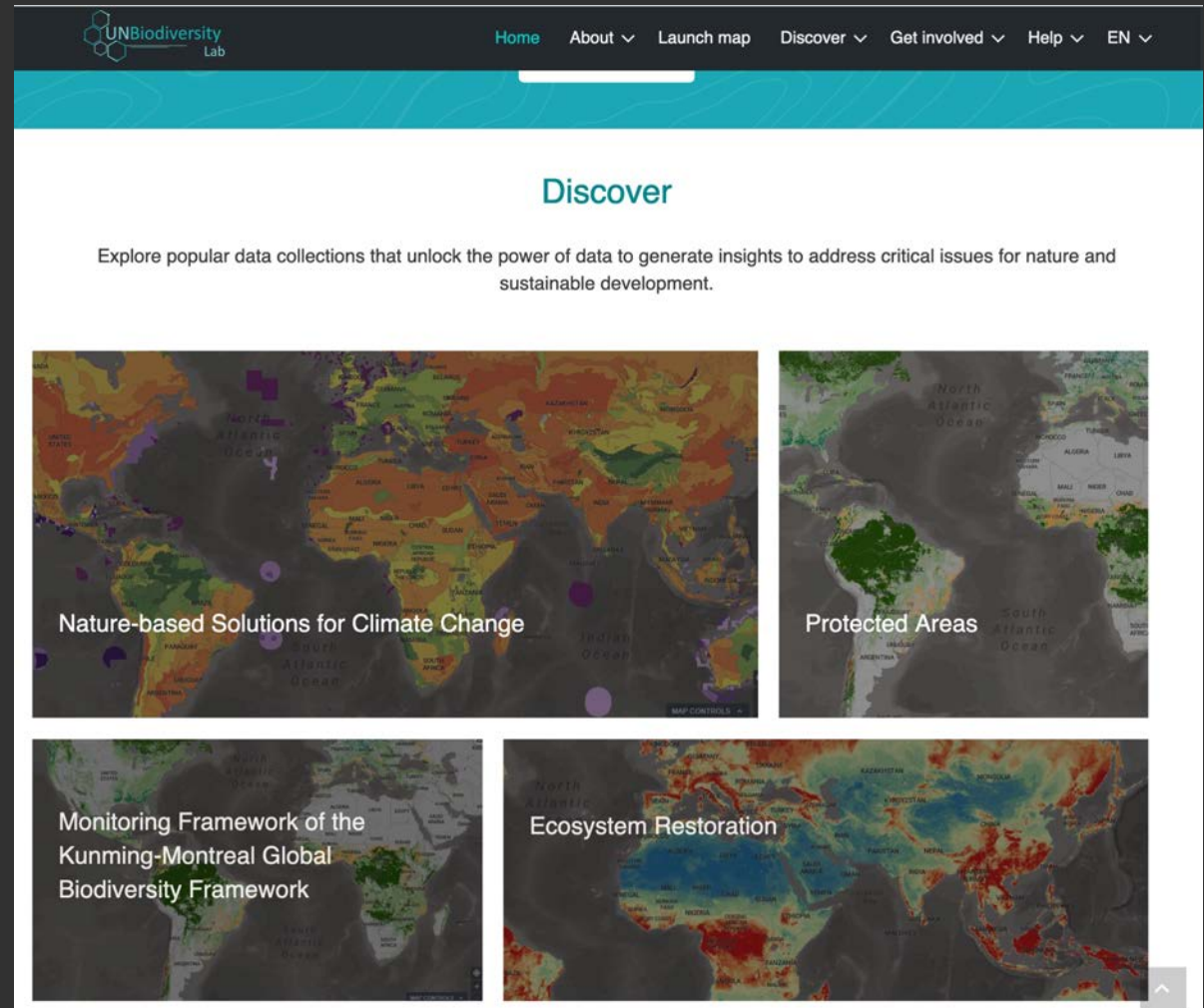
[Launch map](#)

UNBL DATA COLLECTIONS

- Protected areas
- Nature based solutions for climate change
- Ecosystem restoration

NEW DATA COLLECTION:

- Data to support the KM Global Biodiversity Framework



Access data through
“Launch map” for the
mapping function

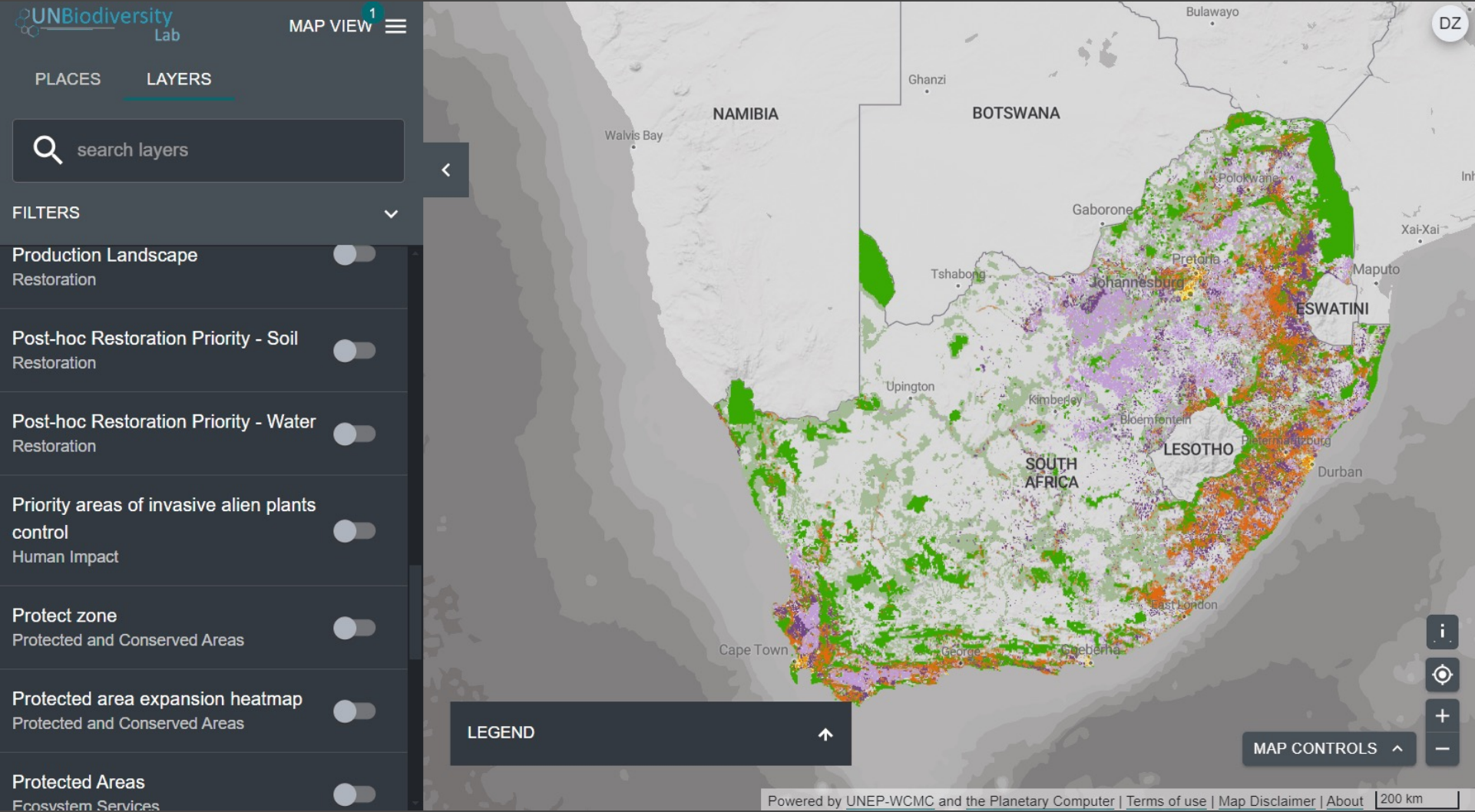


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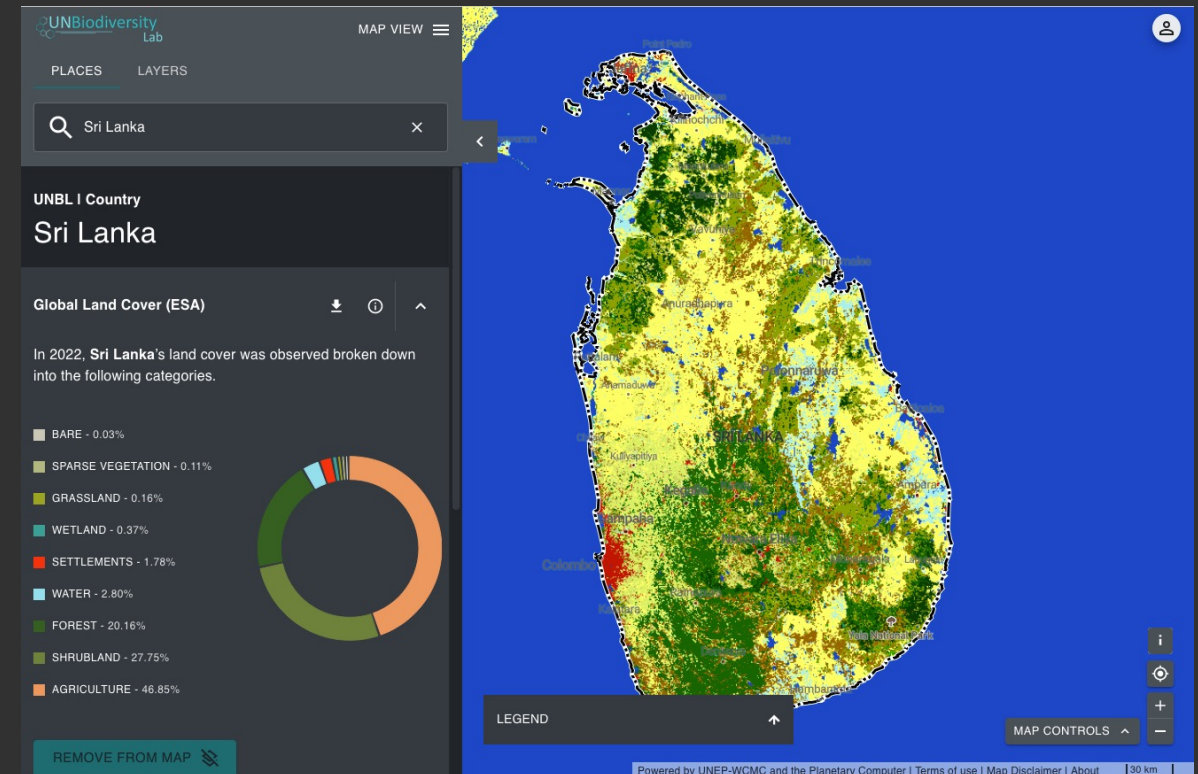
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CREATE YOUR OWN MAPS



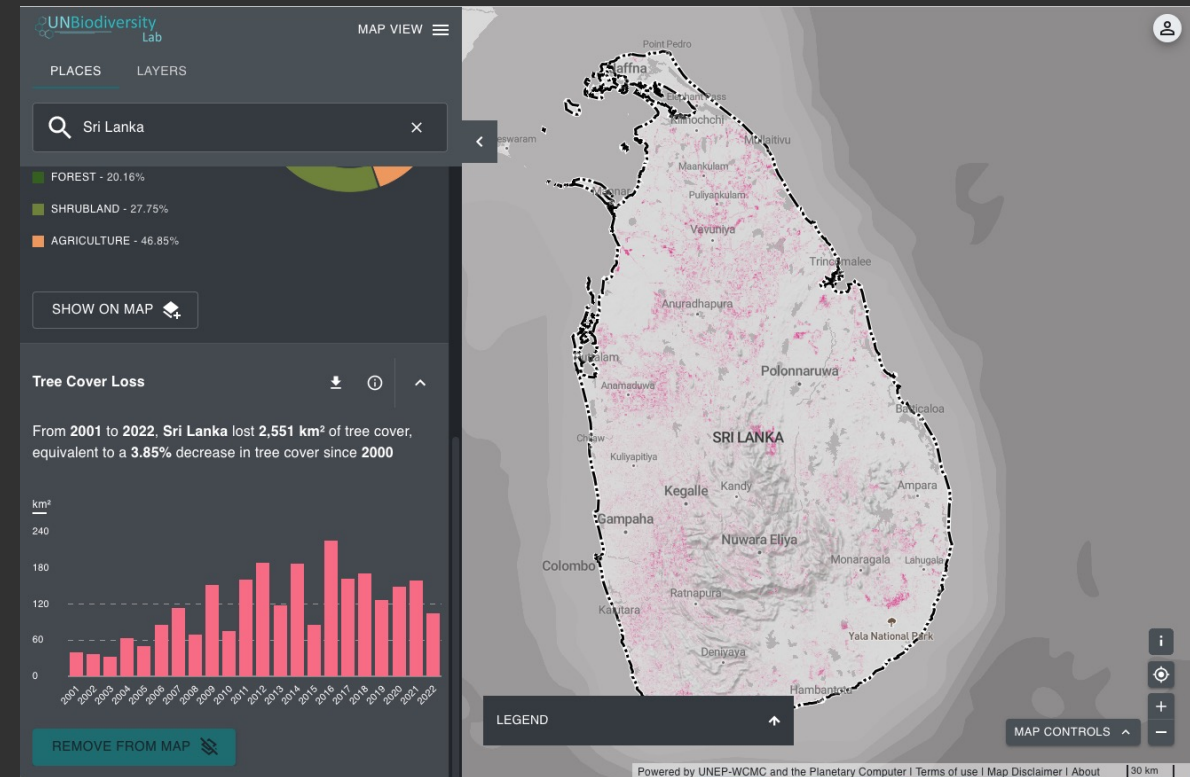
CALCULATE KEY METRICS *(Under Construction)*

- ✓ • Global land cover
- ✓ • Tree cover loss
- Biodiversity intactness index
- Enhanced vegetation index
- Monthly fire activity
- Protected areas
- Terrestrial carbon density
- Terrestrial human footprint



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[Data collections](#)[Workspaces](#)[Maps of Hope](#)[Resources](#)

Go to “Resources” to find
annual reports, use cases,
success stories, online
courses and **more**

**UN Biodiversity Lab**

Providing decision makers with the best available spatial data to put nature at
the center of sustainable development.

[Launch map](#)

[FAQs](#)[User guide](#)[Contact us](#)

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[Launch map](#)

Under “Help” users may find FAQs, user manuals and how to create and use UNBL workspaces

[Submit a success story](#)[Share data](#)

Contact us



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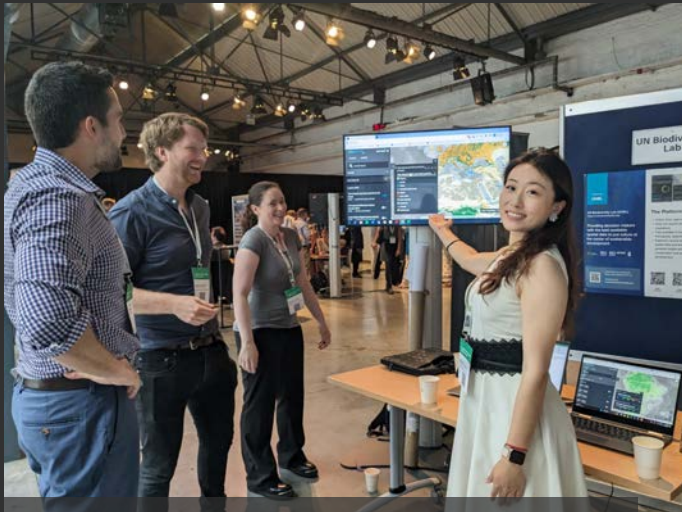
[Launch map](#)

IMPACT

- 2,662+ registered users from 153 countries
- 204+ UNBL workspaces
- Users' questions: 250+ responses in 2023
- Selected to present in conferences and referenced in others



UNEA6, 26 Feb – 1 March 2024



Land and Carbon Lab Summit,
Brussels, 27-29 June 2023



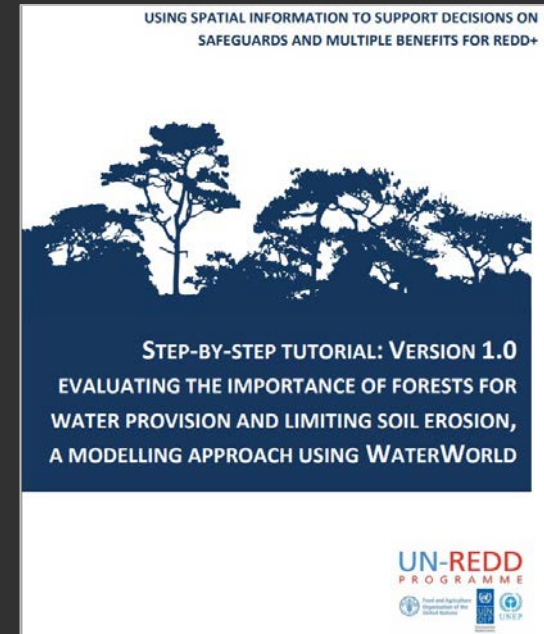
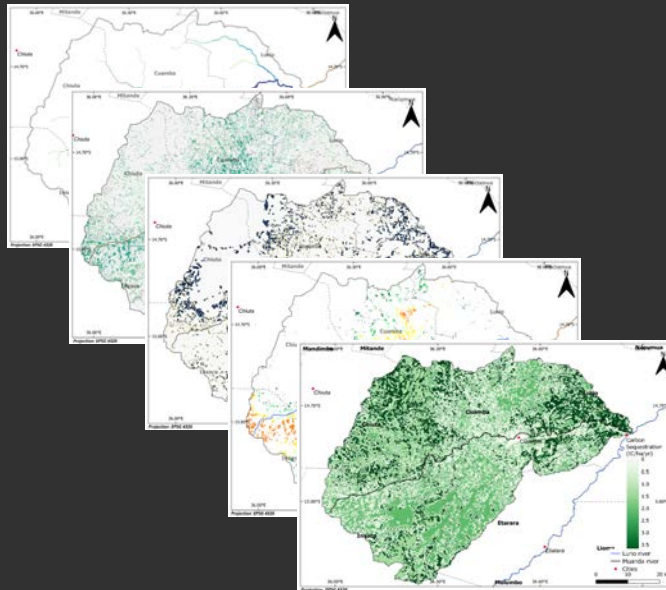
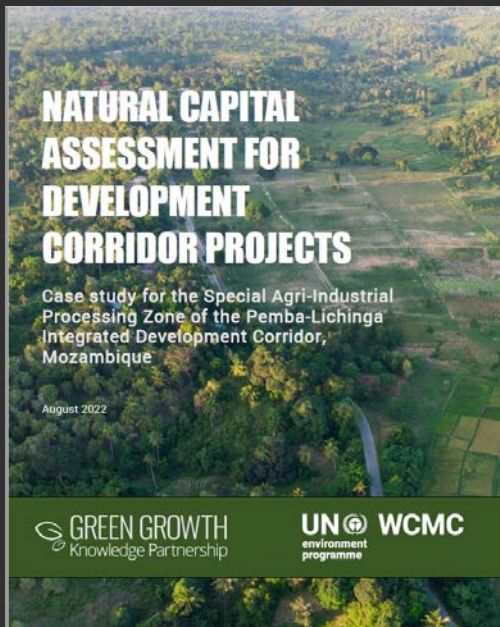
UN Digital Event (UN SDG Summit),
New York, 17 Sep 2023

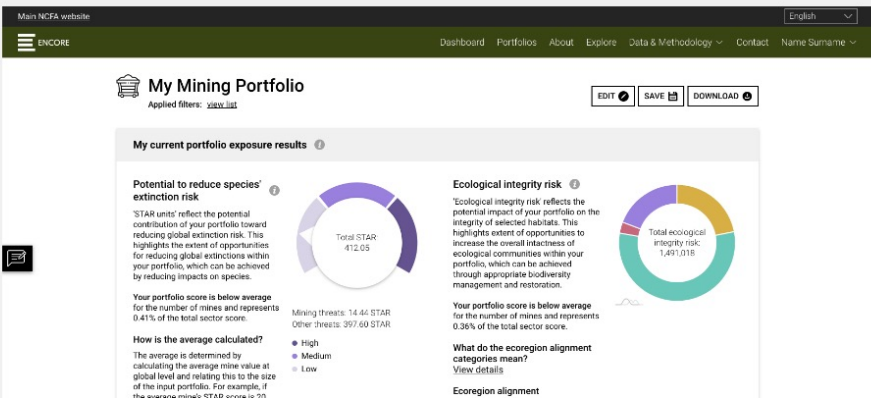
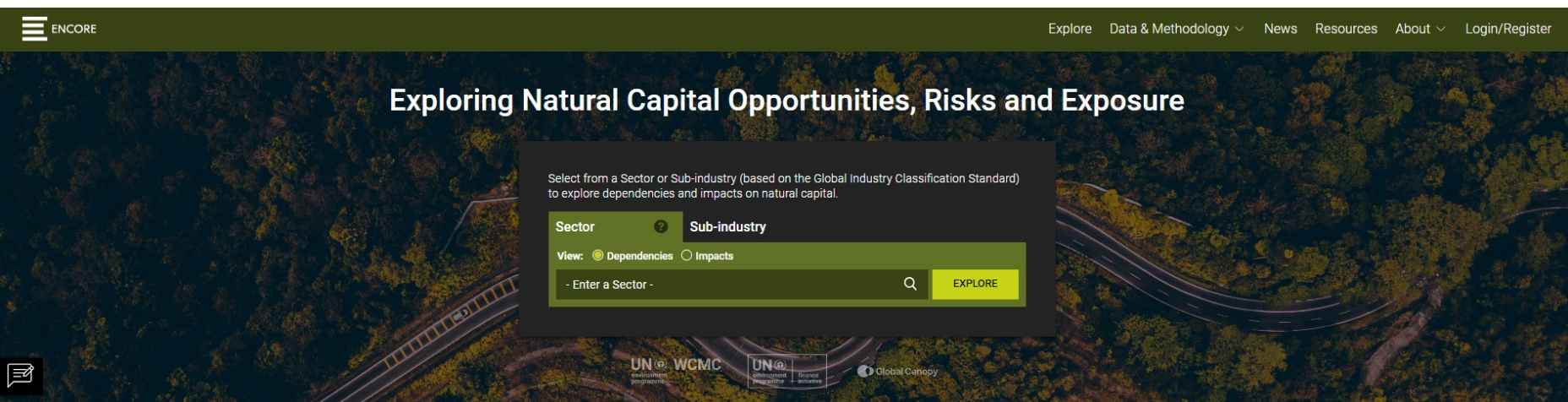


UNBL featuring in the Google Geo for
Good Summit opening session,
Mountain View (CA), 10-12 Oct 2023

ECOSYSTEM SERVICES AT UNEP-WCMC

- ES mapping and modelling at subnational, national, regional and global scales
- Capacity development





ENCORE



- Synthesises large body of literature on natural capital



- Helps users build understanding of dependencies and impacts



- Provides a foundation for further detailed analyses



Visit: encorenature.org

NATIONAL ECOSYSTEM ASSESSMENT INITIATIVE



- Building **shared knowledge** through **knowledge-exchange** on biodiversity and ecosystem services for policies and decision-making
- Promoting **platforms** that strengthen engagement between practitioners, policymakers, experts, knowledge holders and stakeholders
- Developing **capacity**, sharing **lessons learned**
- Supporting national engagement with international processes (**IPBES, CBD**)
- <https://www.ecosystemassessments.net/>
<https://www.unep-wcmc.org/en/news/new-national-ecosystem-assessment-initiative-platform-to-support-countries-around-the-world>



Thank you for
your attention!

<https://www.unep-wcmc.org/en>

<https://unbiodiversitylab.org/en/>

