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Convention on Biological Diversity

UN environment
United Nations Environment Programme

UNDP
Empowered lives.
Resilient nations.

UNBiodiversity Lab

Data for People and Planet

powered by mapx

Overview

As we enter the fourth industrial revolution, technology is revolutionizing our ability to map nature. Satellite data provide a bird's eye view of the Earth's surface in real-time, while drones and mobile apps enable local communities and indigenous peoples to map their knowledge of local ecosystems. Spatial data empowers governments to make well-informed decisions to ensure that nature is not left behind in the information age.

The UN Biodiversity Lab helps countries achieve the Convention on Biological Diversity's (CBD) Aichi Biodiversity Targets (ABTs) and the Sustainable Development Goals (SDGs). It provides a customized spatial analysis platform to support conservation and development decision-making around the globe. A partnership between the UNDP and UN Environment powered by MapX, the Lab will work closely with national governments to provide every country with the best available spatial data to make informed conservation decisions.

The Challenge

Unequal use of spatial data to meet conservation and development challenges

Geospatial data have the potential to play a transformative role in meeting conservation and development needs by identifying priority zones for conservation, mixed land-use, and development. However, many countries are not accessing geospatial data due to limitations in data availability, access, and technical capacity. A recent UN report shows that geospatial data will enable policy-makers to accelerate implementation of the ABTs and SDGs, but there are striking gaps between the potential for data to be used, and the actual capacity of countries to use data for effective decision-making.

The Opportunity

Mobilizing spatial data to achieve biodiversity and sustainable development targets

As we work to deliver on the Aichi Biodiversity Targets and Sustainable Development Goals, democratizing and accelerating access to spatial data will be an essential component of national planning and implementation. UN Conventions provide a global framework, however the translation of international agreements to local level action can often take years. We thus must work to ensure that spatial data is made available and used by innovative new partners including the private sector, indigenous peoples and local communities, and non-governmental organiza-tions. This project provides one of our best opportunities to share and develop spatial data layers as a public good, ensure they are utilized, and address existing capacity gaps.

The Platform

The UN Biodiversity Lab is an online platform that allows policy-makers and other partners to access global data layers, upload and manipulate their own datasets, and query multiple datasets to provide key information on the Aichi Biodiversity Targets and nature-based Sustainable Development Goals. The core mission of the UN Biodiversity Lab is three-fold: to build spatial literacy to enable better decisions, to use spatial data as a vehicle for improved transparency and accountability, and to apply insights from spatial data across sectors to deliver on the Convention on Biological Diversity and the 2030 Agenda for Sustainable Development. By creating a collaborative, open-source environment, the UN Biodiversity Lab is an inclusive and scalable data platform.

Key services of the UN Biodiversity Lab include:

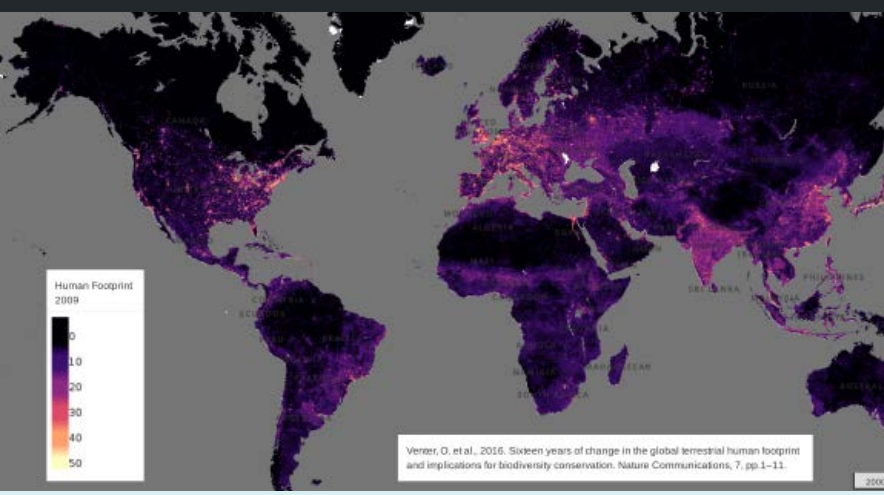
- Access to global spatial data layers for conservation and development planning
- Facilitated access to high-quality spatial data on forest cover developed by NASA
- Ability for countries to upload national data sets and manage the level of user access
- Ability for queries to answer essential questions for conservation and development
- Ability for users to export maps, data layers, and datasets for reporting and further analysis. Supported export formats include pdf, shapefile, GeoJSON, DXF, SQLite, and KML.
- Assessments of data layer integrity by the UN, including data reliability, technical accessibility, data openness, and data sustainability.

Ten key questions essential to achieving the ABTs and SDGs

The UN Biodiversity Lab can help policymakers to address these questions to accelerate action for conservation and sustainable development.

1. **Where are the most important areas to promote sustainable use of biodiversity to reduce poverty?**
   ABT 2; SDG 1.1; 1.2; 1.5
2. **Where is natural resource management in danger of exceeding safe limits?**
   ABT 4; SDG 6.4, 15.1, 15.2
3. **Where are the highest rates of loss of natural habitats occurring?**
   ABT 5, SDG 15.1, 15.2; 15.5
4. **Where are the most important areas for promoting sustainable agriculture, forestry and aquaculture?**
   ABT 7; SDG 15.2, 15.3
5. **Where are the most dangerous sources of pollution, including agricultural runoff?**
   ABT 8; SDG 3.9; 6.3; 14.1
6. **Where can we have the biggest impact in controlling, eradicating, and preventing invasive species?**
   ABT 9; SDG 15.8
7. **Where are the areas of coral reefs that are most vulnerable to climate change or ocean acidification?**
   ABT 10; SDG 14.3
8. **Where are most important areas to create new protected areas and improve existing ones?**
   ABT 11; SDG 14.5, 15.1, 15.4, 15.7, 15.9
9. **Where are the most important areas to protect ecosystems to avoid species extinctions?**
   ABT 12, SDG 14.2; 14.5; 15.1; 15.4; 15.7; 15.9
10. **Where are the most important areas to protect ecosystems in order to sustain essential ecosystem services, including water, health, livelihoods and well-being?**
    ABT 14; SDG 1.1; 1.2; 1.5; 2.1; 2.4; 6.1; 6.5; 6.6

Human Footprint Map Visualized in UN Biodiversity Lab



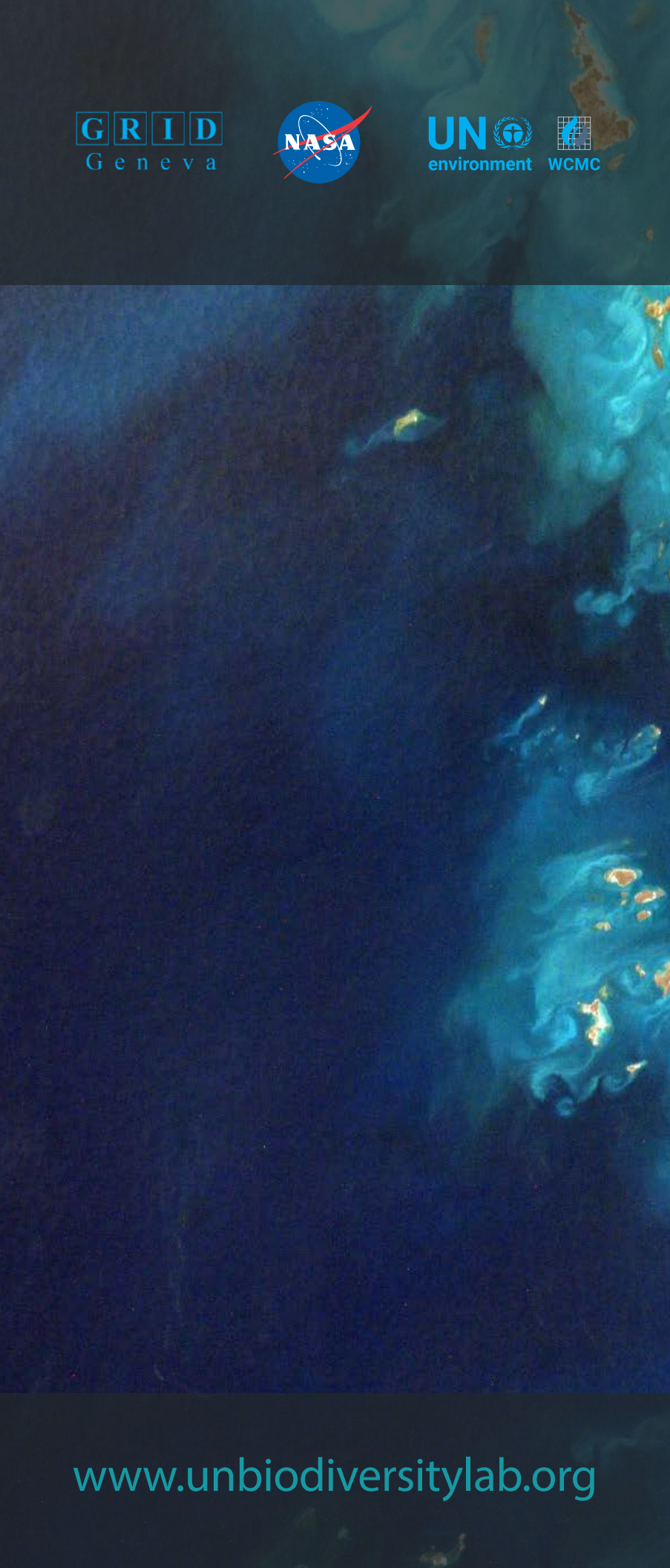
The Human Footprint provides a means to ascertain the extent of human modification of natural habitats. Scores above four are considered intense human pressure.

The Future

Out of 180 5th National Report submissions to the Convention on Biological Diversity, 33% either contained no maps or maps without actionable data. The UN Biodiversity Lab launches a new challenge to countries creating their 6th National Reports: double the amount of spatial data in their reporting. To support this challenge, UNDP and UN Environment will support communication and trainings on the use of the data in addition to monitoring its use, gathering best practices, and sharing these widely on the NBSAP Forum.

Building a Global Partnership to Provide Data for People and Planet

At the center of the UN Biodiversity Lab is a robust partnership between UNDP and UN Environment to provide high-quality data for government representatives. UNDP and UN Environment's direct engagement with over 140 governments allows for dynamic updates to the platform based on actual user needs. Likewise, engagement with diverse technical partners and data providers ensures the provision of cutting-edge data to take action for sustainable development. The UN Biodiversity Lab is not just another website; it is a platform for building partnerships among data providers and data users to ensure that governments have access and capacity to use cutting-edge spatial data to make key conservation and development decisions.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