

Eleventh Meeting of the Expert Group on Environment and Climate Change Statistics (EG-ECCS) (Virtual)

New York, 14-17 October 2024

Use of alternative sources, big data
and data science for climate change
statistics



agenda

INTRODUCTION
3

UN BIG DATA
4

GLOBAL SET AND BD
5

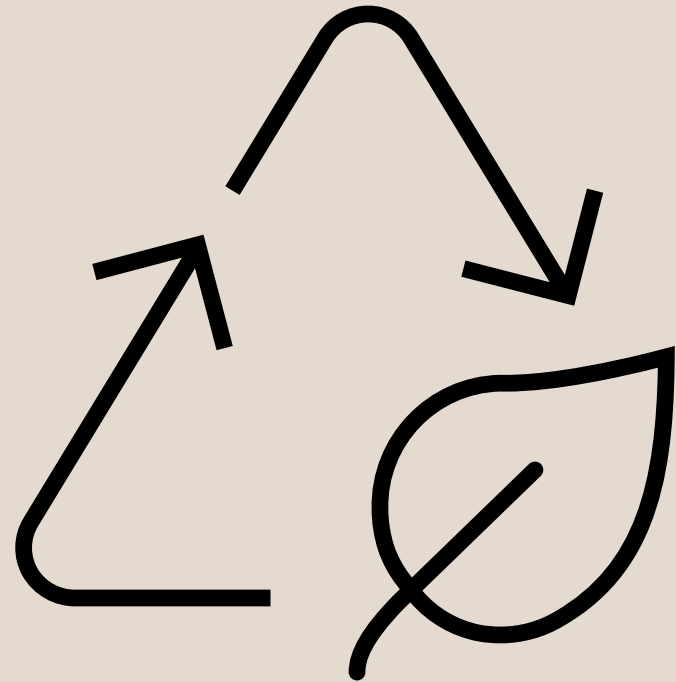
EXAMPLES
6

ENGAGING THE AUDIENCE
11

FINAL TIPS & TAKEAWAYS



UN BIG DATA





UN Global Platform Data For the World

A global collaboration to
harness the power of data for
better lives

- GLOBAL PLATFORM - CLOUD-SERVICE ECOSYSTEM
- USING NEW DATA SOURCES AND INNOVATIVE METHODS AND
- TO HELP COUNTRIES MEASURE THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) TO DELIVER THE 2030 SUSTAINABLE DEVELOPMENT AGENDA.

Themes

- AREIES for SEEA
- Climate change
- Biodiversity loss
- Sustainability of tourism
- More...<https://unstats.un.org/bigdata/index.cshtml>

GLOBAL SET AND BD

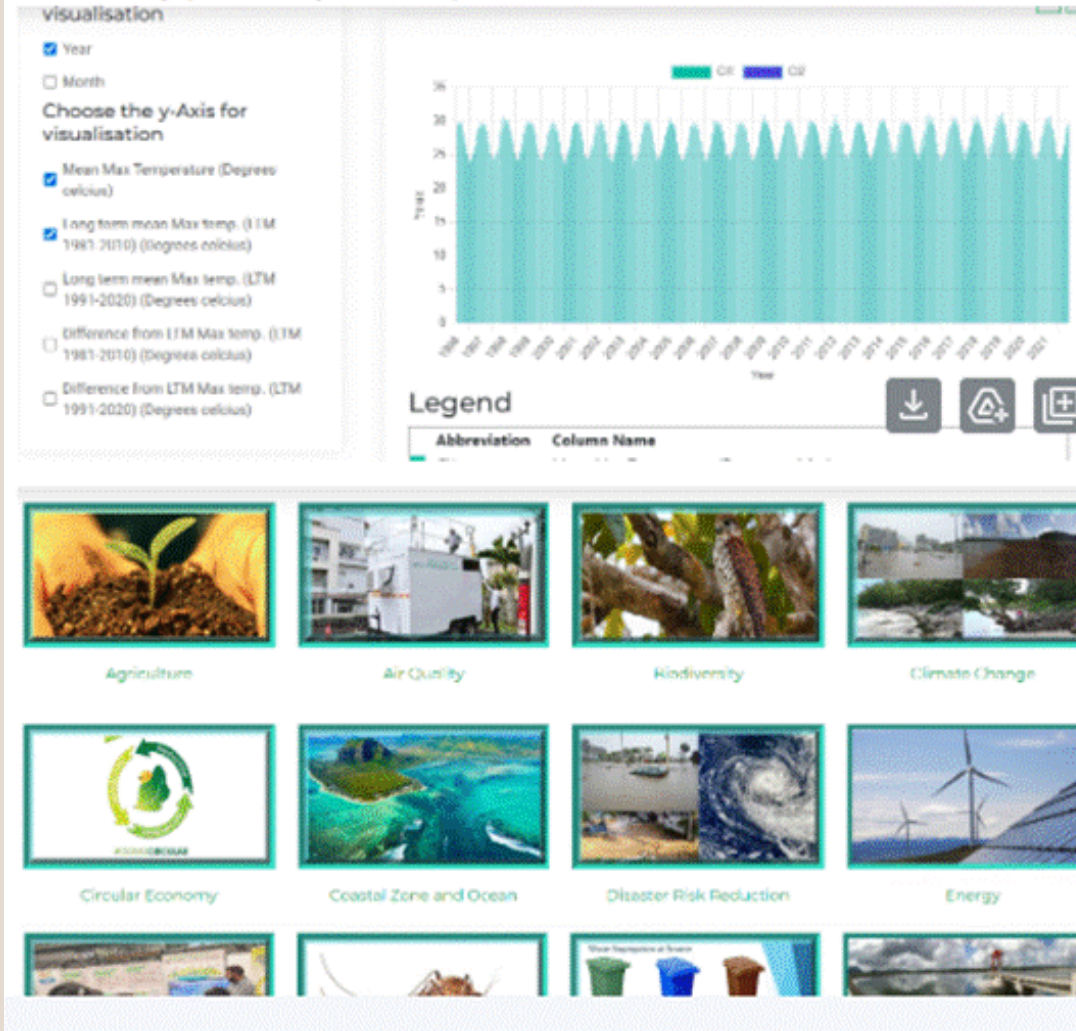
- LARGE AND COMPLEX DATA SETS THAT ARE DIFFICULT TO MANAGE AND ANALYZE USING TRADITIONAL TOOLS.
- BIG DATA CAN BE STRUCTURED, UNSTRUCTURED, OR SEMI-STRUCTURED, AND CAN COME FROM A VARIETY OF SOURCES, INCLUDING:
 - Computers, Mobile devices, Machine sensors, Weather satellites, Internet of Things (IoT) devices, Traffic cameras, and Social media

GLOBAL SET (GS) AND BD

- UNFCCC Reporting, etc
- NC, BURs, BTRs
- National databases sometimes use BD, e.g.
- **Mauritius - Environmental Observatory – web based**
- **Bangladesh – Forest Inventory –web based -**

- Computers, Mobile devices, Machine sensors, Weather satellites, Internet of Things (IoT) devices, Traffic cameras, and Social media
- Links to GS
 - Climate change drivers, GHG inventory, Mitigation, Adaptation etc

observatory (Env Inf System EIS) for Mauritius - see screenshots below:



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Monitoring on the basis of 7 criteria and 47 indicators

Forest extent and tree cover change

Biological diversity and conservation

Growing stock biomass and carbon

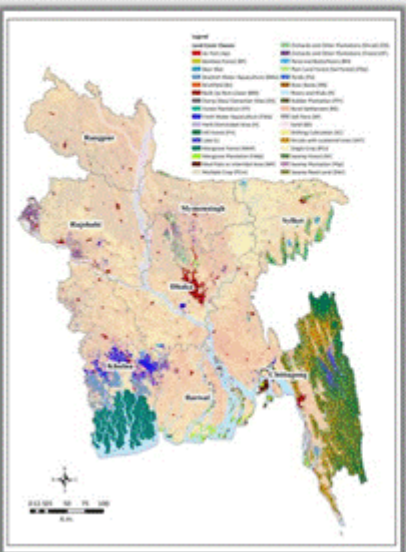
Management and ownership

Tree and forest disturbances

Sustainable forest management

Tree and forest services and livelihoods

Land Cover Map



- Follows the Land Cover Classification System (LCCS) and LCML ISO 19144 standard
- Developed with Object-Based Image Analysis (OBIA) approach
- 33 land cover classes determined by participatory process involving multiple stakeholders
- 1000 field data collection points

EXAMPLES

Data & knowledge resources



> PRAIS country reporting



> Drought Toolbox



> Sand and Dust Storms
Toolbox



> Library online catalogue



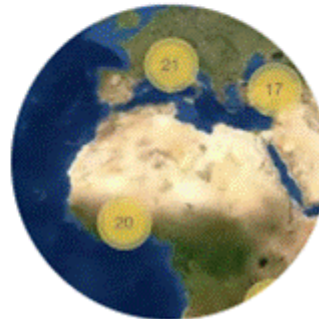
> Country profiles



> UNCCD terminology



> Best practices in SLM



> Knowledge Sharing
Systems

Datasets (input and output)

• Input datasets

- NDVI
- Soil Moisture
- Precipitation and Drought
- Evapotranspiration
- Land cover
- Soil carbon
- Agroecological Zones
- Administrative Boundaries
- Population

• Output datasets

- Land degradation (SDG 15.3.1)
- Drought hazard, vulnerability, and exposure
- Sustainable urbanization (SDG 11.3.1)
- Population

UNCCD

Trends Earth Plug-in for QGIS

EXAMPLES

2

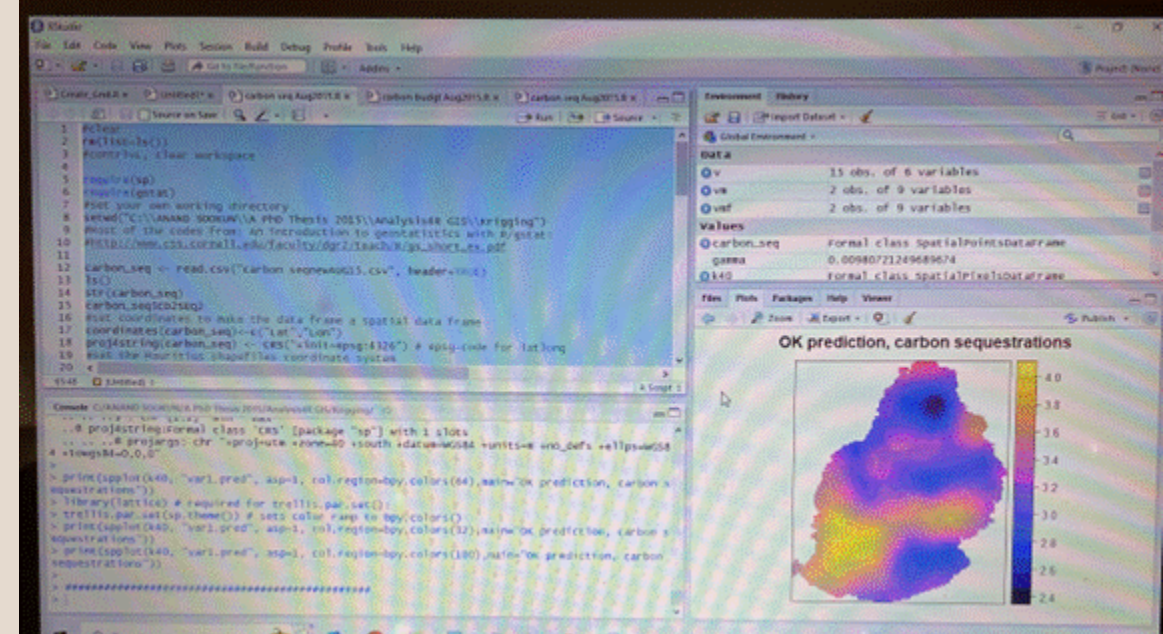
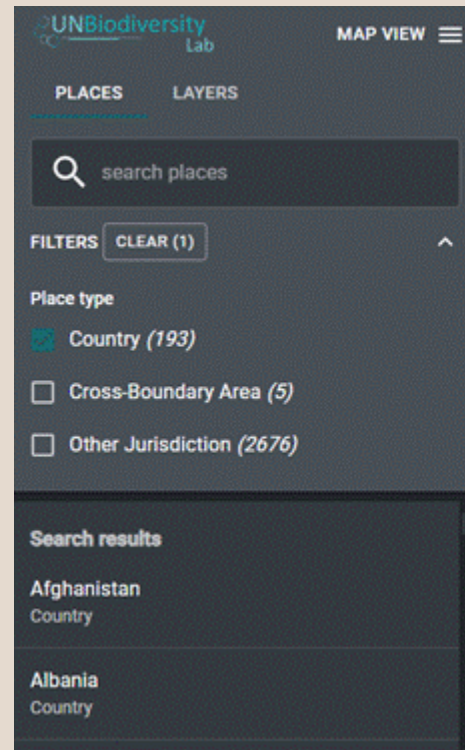
Using R Software to download and analyse data

UN Biodiversity lab

The platform provides the ability for users to:

- Visualize core global public good datasets at the heart of decision-making on nature and sustainable development
- Access curated collections that integrate spatial data for insight and action
- View and download dynamic indicators of change for any country in the world
- Create workspaces to securely upload national data for analysis alongside global data
- Develop communities of practice that nurture data transparency and cross-sectoral collaboration
- Draw on the expertise of UNBL partners to develop national strategies and plans

3



final tips & takeaways

BIG Data Links to GS –Group Work

1. Know your material in advance
2. Anticipate common questions
3. Rehearse your responses

Maintaining composure during the Q&A session is essential for projecting confidence and authority.



thank you

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