Chaplin–Essential Biodiversity Variables & Ecosystem Services

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GEO BON
Group on Earth Observations Biodiversity Observation Network

Essential Biodiversity Variables (EBVs):
Genetic
Species population
Species traits
Community composition
Ecosystem structure
Ecosystem function

Essential Ecosystem Service Variables (EESVs):
Supply
Demand
Use
Anthro. contributions
Instrumental
Relational

Data sources

- MODIS/Landsat EVI
  - C factor → Sediment retention
  - EFT → Pollination
- DEM, Soil data → Sediment retention
- IMN LULC → Pollination
- Climate data
- PRIAS/ iCAFE crop map → Pollination
- Pollinator relative abundance
  - GBIF species occurrence
  - Species Distribution Models
- Vertebrate abundance/richness
- Nature-based tourism
- Roads, hotels, human footprint data

Analyses

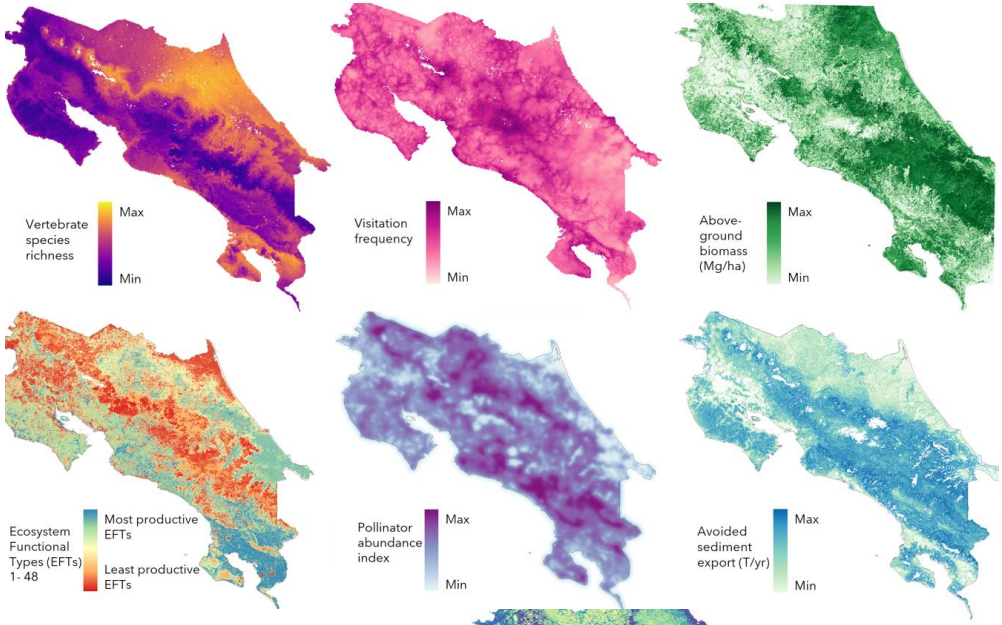
- Mapping ES, overlap/hotspots
- Summarizing total ES, by ecosystem type/ admin boundary
- Evaluating change in ES over time
- Scenario analysis of restoration opportunities / conservation priorities
- Developing monitoring plans/ priorities

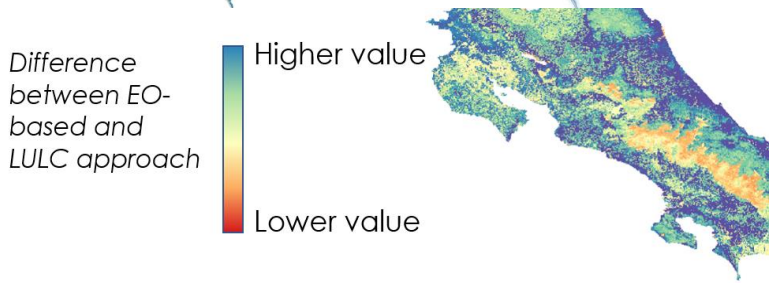
Decision-support

- UNDP Essential Life Support Areas
- National Adaptation Plan
- SEEA National Accounts
- State of the Environment Report
- CBD Global Biodiversity Framework
- CBD Biodiversity Strategy & Action Plan
- National PES Reboot: PSA 2.0
- SDG indicators

End users

Costa Rica Gobierno del Bicentenario 2018-2022
BC CR Banco Central de Costa Rica
PRIAS
MINAE Ministerio de Ambiente y Energía
CENIGA Centro Nacional de Información Geoambiental
SINIA Sistema Nacional de Información Ambiental
SIMOCUTE
ICE
Icafe Instituto del Café de Costa Rica
BIOFIN
UNDP
SEEA





InVEST integrated valuation of ecosystem services and tradeoffs

natural capital PROJECT