

A Sourcebook of Methods and Procedures for Monitoring Essential Biodiversity Variables in Tropical Forests with Remote Sensing

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Background

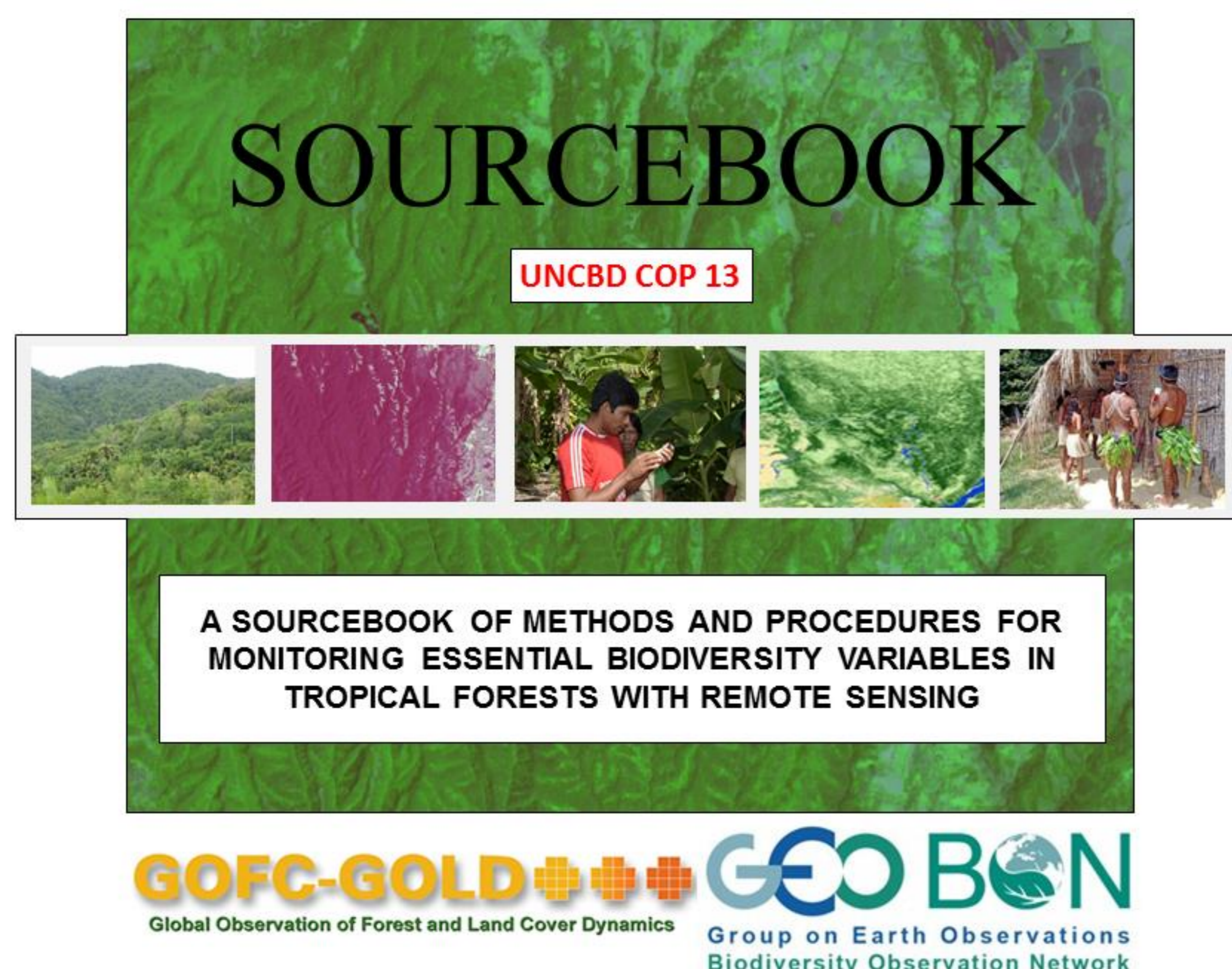
Past decades have seen a **growing demand for biodiversity data** to inform development decisions at the local to national scale for underpinning global and sub-global assessments (e.g. United Nations Convention on Biological Diversity (**UN CBD**), and National Biodiversity Strategies and Action Plans (**NBSAP**)).

The Essential Biodiversity Variables (**EBV**) concept proposed by GEO BON, Space Agencies, and the Earth Observation research community at large aims to support efforts for biodiversity monitoring. However, there is a lack of information and consensus on the **standardised** and **harmonised** biodiversity **data** and **monitoring methods** that are required to assess how **tropical forest biodiversity** is evolving, and what the drivers of change are.

In this context GOFC-GOLD and GEO BON propose a new **sourcebook**. This joint effort based on a wide international group of forest researchers and Earth observation practitioners, aims to promote the **best operational monitoring practices** for the relevant EBVs based on scientific literature, and consensus.

Objectives

- **Purpose:** guide biodiversity monitoring in tropical forests using remote sensing to inform national and sub-national policy and decisions, convention commitments and targets.
- **Target Users:** project managers, technical level practitioners in national, sub-national government agencies, academic institutions, NGOs, assuming audience has a background in remote sensing.



- **Focus:** validated remote sensing techniques, integration of *in situ* and remote sensing observations, present sampling approaches, emerging technologies presented separately, list available Earth observation datasets, discuss synergies between biodiversity monitoring and REDD+ activities.

Outline

The biodiversity sourcebook is structured around relevant EBVs for tropical forest environments presented in Chapter 2. Related remote sensing and sampling techniques are presented in Chapters 4, and 5.

- **Chapter 1:** Policy context and rationale underpinning EBVs,
- **Chapter 2:** Five relevant EBVs presented: Vegetation phenology, Net primary productivity, Ecosystem extent and fragmentation, Habitat structure, Disturbance regime
- **Chapter 3:** Drivers of biodiversity loss
- **Chapter 4:** Guidance on remote sensing data and methods
- **Chapter 5:** Emerging approaches
- **Chapter 6:** Citizen science-based monitoring approaches
- **Chapter 7:** Regional biodiversity networks
- **Chapter 8:** Synergies with REDD+

Release

The release of the **first version** of the biodiversity sourcebook was made during the IPBES Plenary 2017. This release follows the 13th UN CBD Conference of Parties (COP) held in December 2016, and hence is labelled as "COP 13" release. **Updates** will be made on a **yearly basis** following policy, scientific, and technical developments. More than **70 authors** have contributed to the sourcebook.

The biodiversity sourcebook is accessible in **pdf format for free** from:

- GOFC-GOLD Land Cover Office website: http://www.gofcgold.wur.nl/sites/gofcgold-geobon_biodiversitysourcebook.php
- GEO BON website: <http://geobon.org/>



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