The Avian Index of Tropical Forest Health
An open data tool to promote sustainable forest use to combat climate change

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Tropical Forest: An Emissions Source or Sink

Deforestation

- One of the largest sources of GHG Emissions (15%).
- Largest source in several countries.

Sustainable Forest Use

- A solution to Climate Change
- Cost-effective, immediate
- Absorb up to 30% of Net Emissions
- Associated benefits: Biodiversity, Ecosystem Services, & Livelihoods
- Target of SDG 15

Challenge: Lack of ecological information or indicators

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Open Data on Birds

Birdwatching Records (Citizen Science)

eBird
- Nearly 1 Billion observations
- \( \approx 700,000 \) users
- 99 % of species
- 253 subregions
- Growth rate \( \approx 20 \% \) per annum

Coverage of eBird Observations up to 2019

Potential to extract useful ecological information
An Avian Index of Tropical Forest Health
*Using birds present to indicate ecological health*

**Method:**
- Sensitivity scores of species present -> Indicator Variables
- Standard Method
- Validation with fieldwork
- Cloud Computing for Online Map of forest health

**Functions:**
- Assess forest health,
- Identify Sources of Impact
- Monitor Trends
- Set Goals

**Criteria:**
- Rapid, Inexpensive, Easy-to-use

**Crucial Information to take Climate Action:**
- Informed Action (Sustainable Forest Use)
- Track Progress (SDG 15)
- Evaluate Impacts (on tropical forests)
- Understand Risks (e.g., tipping points)
Roadmap to Reality

- PhD at University of Oxford (UK), Bonn or Göttingen (Germany), 2021 - 2024
- **Study Location:** South & Central America
- Work with local partners, eBird etc.
- Share through publication and Online Map
- Incentivise use, achieve policy relevance

**Requirements:**

- **Funding:**
  - Fieldwork (US$ 15,000)
  - Cloud computing (US$ 13,000)

- **Technical Support**

- Invite **YOU** to join in to **TAKE CLIMATE ACTION USING OPEN DATA.**
Thank you!