



Project factsheet

Stethoscope for tropical forests – biodiversity monitoring tool for sustainable forest management / Principal Investigator: Zuzana Burivalova

<p>Snapshot</p> <p>Life of Project 2019-2021</p> <p>Current project phase: Preparation of mission</p> <p>Financial support by PFF: USD 161'532 (of total budget of USD 293'696)</p> <p>Partner organisations:</p> <ul style="list-style-type: none">- University of Wisconsin Madison- The Nature Conservancy- Queensland University of Technology- The Rainforest Connection		
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Executive Summary

The Forest Stewardship Council (FSC), currently lacks an objective, cheap, and verifiable way to measure the effectiveness of sustainable forest management in terms of biodiversity. An emerging combination of new technology developments – bioacoustics and big data analysis – creates an opportunity to address this important gap. We are developing a tool that measures the vocalizing biodiversity, as a proxy of overall biodiversity, by recording the soundscapes in tropical forests that are selectively logged. Soundscapes – the collection of all sounds at a particular place – have been shown to detect even light forest disturbance, and preliminary results from Indonesia show that soundscapes are able to track the recovery of forest biodiversity over time. Investigating the tropical forest soundscapes' natural variation, and their change due to sustainable and unsustainable logging in Gabon will provide a crucial next step in developing a robust bioacoustic monitoring tool. Forest concession managers and FSC auditors could use this tool to verify faunal integrity in certified concessions and attribute changes in biodiversity (both positive and negative) to management. Ultimately, increasing the transparency, rigour, and ease of monitoring of forest certification is fundamental for making this, and other conservation strategies effective at preventing further species extinctions from tropical forests.

Expected Impact

- 1) In five years' time, if the project succeeds, fewer species will have been lost from tropical forests than under a business-as-usual scenario, through better management of certified forests. Bioacoustics will be an industry standard for monitoring forestry companies' achievement of their biodiversity conservation commitments and will be an established tool within the world's leading forest certification organization for certified forests across the tropics.
- 2) Scaling up - ultimately, if successful, all FSC-certified forestry companies in tropical forests will use the bioacoustics monitoring tool – as a stethoscope for forest health.
- 3) The bioacoustic tool will make it much easier to transparently show, on a case-by-case basis, how well each forest concession (or protected area) is performing in terms of biodiversity conservation.

Precious Forests Foundation has been established in May 2018 and is committed to the sustainable preservation of tropical forests through the valorisation of their ecosystem services and the responsible, multiple use of their renewable timber and non-timber products.