



## **GEO BON Global Conference**

# **MONITORING BIODIVERSITY FOR ACTION**

A whole of society approach for urgent and transformative change

# **Abstract Booklet**

# 200031 - Soundscape monitoring in protected areas: technical challenges, lessons learned and future perspectives

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The *Monitora* is one of the largest biodiversity monitoring programs in the world. It has the main goals of assessing the effectiveness of the Brazilian Federal Protected Areas, contributing to the evaluation of species' conservation status, providing data on invasive species, and detecting biodiversity variations due to climate change. However, generating comparable data on different ecosystems is a technical challenge. Traditionally, each ecosystem type (forest, grassland, desert etc) has its own sampling methods. There is a need for standardized *in situ* sampling protocols capable of providing information on biodiversity states and trends in different biomes.

To address this challenge, since 2021 the ICMBio runs an acoustic monitoring project at the *Serra do Cipó* National Park, a core area of the *Espinhaço* Biosphere Reserve. The protocol was designed to be modular, to cover different ecosystem structures and to provide data for soundscape studies. The data is used to detect the main soundscape differences between sites and in a single location across time. Acoustic indices are used within the acoustic regions approach to generate seasonal signatures of the daily acoustic dynamic. Activity of birds, anurans, insects and mammals will be measured. Automated detection of species of interest will also contribute to the monitoring of taxa focus of conservation actions.

Within the next three years, it is expected to implement this acoustic monitoring project in protected areas in four different Brazilian biomes (Amazon, Atlantic Forest, *Cerrado* and *Caatinga*). The proposed protocol has a great potential to soundscape monitoring of protected areas worldwide.

## Presentation type

Poster

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## Session

Linking Biodiversity Monitoring Networks to Assess Biodiversity Change Across Scales