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# Back to the future:

bridging history into upcoming scenarios

# BOOK OF ABSTRACTS

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Poster 6

## FSC forest certification effects on biodiversity: a global review and meta-analysis

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FSC is a worldwide recognized forest certification scheme, that aims to promote the sustainable management and conservation of the world's forests. Despite its broad application, there is little evidence of its effect on biodiversity. To address this important knowledge gap, here we conducted a systematic review and a hierarchical meta-analysis of the effects of FSC on biodiversity worldwide. Our review gathered 57 studies from 2004-2022. Most studies were in the Americas and Europe (31% and 28%, respectively), and largely focused on flora (41%). Half (51%) of the studies aimed to determine the effect of FSC certification on biodiversity. We retrieved 15 studies for the meta-analysis, resulting in 231 effect sizes for mammal, bird, and flora abundance and 10 for flora richness. Overall, there is a neutral effect of certification on taxa abundance, with only a positive effect on mammal assemblages. Moreover, flora species richness was promoted by FSC. Responses varied considerably between mammals' traits. Threatened species, individuals with reduced body weight, and omnivorous species benefit from sustainable management under the FSC scheme. Our systematic review and meta-analysis revealed strong variation in biodiversity responses to FSC, and major geographic and taxonomic knowledge gaps. The overall neutral effect and the divergent responses of taxa and species traits suggest that taxa/species-specific management and improvement of FSC criteria are required.

**Keywords:** Forest certification; Forest stewardship council; Biodiversity conservation; Review; Meta-analysis.