XVI congreso de la SECEM

Granollers diciembre 23

# XVI Congreso Internacional SECEM

## Granollers, 6-9 diciembre 2023

SECEM
Sociedad Española para la Conservación y Estudio de los Mamíferos

MUSEU DE CIÈNCIES NATURALS DE GRANOLLERS

Generalitat de Catalunya

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

Gonçalo Matias, Luís Miguel Rosalino & Francesca Cagnacci

As a result of human pressure, the world's native forest area was reduced on average by 4.7 million hectares per year between 2010 and 2020. As a complement to protected areas, forest certification has been the most prominent private initiative to address responsible conservation management targeting forestry systems. FSC is a worldwide recognized forest certification scheme, that aims to promote the environmentally responsible 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 yielded 57 studies spanning 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. There were 15 studies with sufficient information for 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. 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 responsible 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.

**PÓSTER**