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Comparing Alternative Systematic Conservation Planning Strategies against a Politically Driven Conservation Plan

Decisions regarding the level of detail included in conservation planning and the importance given to feasibility considerations can greatly influence results in terms of total area required, achievement of conservation targets and costs.

The Chilean government released a conservation strategy with the goal of protecting 10% of the area of every ecosystem in the country. Chile also identified a set of priority sites, which were delimited based on expert opinion within a politically driven framework.

In a paper published in *Biodiversity Conservation*, we 1) compared priority sites proposed by the Chilean government to the results of alternative systematic conservation planning scenarios; and 2) compared the efficacy of systematic conservation planning based on different types of conservation targets (forest types and bird species) and minimum area thresholds.

To address these issues, we used vegetation cover as well as field data on forest birds in central Chile. Bird species distributions were modeled using a variety of climatic and environmental layers, allowing for the integration of environmental heterogeneity into the planning process. We then ran several conservation planning scenarios considering conservation targets based on vegetation types alone, birds alone, or a combination of vegetation and birds.

Collectively our results show that conservation planning results differ significantly when considering birds or vegetation types, and that minimum area requirements for each conservation

feature has a great influence on the final results. Moreover, important conservation sites are not represented in the current government plan, and these sites are related to the small representation of rare vegetation types.

This study suggests that using appropriate minimum area requirements can greatly affect the results of a conservation planning exercise and therefore represents a key knowledge gap in the region.

Main Points

- Politically driven conservation plans may exclude important conservation sites.
- Conservation priority site selection resulting from our systematic process varied greatly depending on the minimum area assumed necessary to protect particular species.
- Minimum area requirements represent a key knowledge gap in the conservation planning process.
- The protection of forest types serves as an effective umbrella to achieve conservation goals related to individual bird species.

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