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Capturing the full suite of nature values in decision making: the case of wilding conifers in New Zealand

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Abstract:

Investment decisions to control invasive species are complex, in particular because different levels of infestation require different management strategies in both public and private land. The New Zealand government has allocated resources to control wilding conifers. However, in some cases, wildings have arguably a positive value to tourists and locals (e.g. “Lord of the Rings” landscapes). In this context, prioritizing investment to control wildings results is challenging. Moreover, there is a gap of decision support frameworks that account for the full suite of values that should be considered. This paper responds to an expressed need of the New Zealand Department of Conservation to provide guidance on how different social, economic and environmental values can be presented to decision-makers in a clear, transparent and robust manner. We first assessed the effectiveness of methods that include the value of nature in decision making through crowdsourcing. We asked a “crowd” of international natural resource management practitioners for “frameworks that work” that have successfully resulted in change in practice or change in policy and that consider both non-market (e.g. cultural values, recreation, species conservation, etc.) and market values. More than sixty crowd responses were screened and a review of literature conducted. Fourteen frameworks were selected for analysis. The key elements of these frameworks were used to distil a set of principles of an ideal decision-making support framework that captures the full suite of values. This framework was then applied to the wilding conifer case study using a holistic approach to valuation. By using this framework decision-makers will be in a position to look at all possible impacts and benefits not only of wilding conifers control but of any decision impacting nature, and will be able to assess the trade-offs inherent to their decisions.