

Integrating socio-ecological dynamics into land use policy outcomes: A spatial scenario approach for native forest conservation in south-central Chile

Manuschevich, Daniela

Sarricolea, Pablo

Galleguillos, Mauricio

Chile is one of the first documented nations to undergo a forest transition dominated by tree farm expansion. Scenario modelling can inform the possible outcomes of forest conservation policies, especially when the scenarios are rooted in the political dynamics that shaped the current legislation. In Chile, tree farms of non-native Radiata Pine and Eucalyptus provide a fast return on investment. Today, fast-growing plantations compete for land area with forest conservation, putting the unique bundle of ecosystem services provided by the latter at risk. Based on a previous political analysis, we propose scenarios projected to 2030 to compare a business-as-usual scenario with A) a conservation scenario based on strict land use restrictions B) an optimistic conservation scenario; C) an unrestricted industrial land use scenario; and D) a restricted industrial land use scenario. The scenarios differ in terms of the implemented policy instruments and the land area required for each lan