

Web-Interface for geo-referencing forest economic valuation surveys

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Introduction

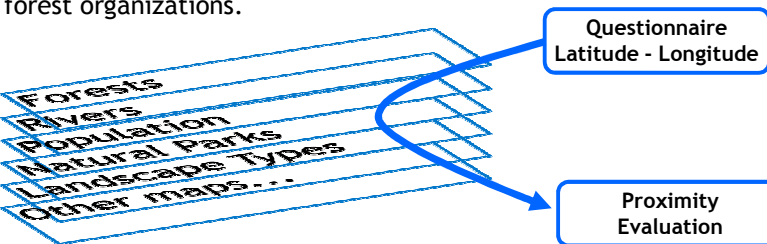
In New Zealand, 90% of the 1.8 million-hectare planted forests consist of one type of exotic tree: Radiata pine (*Pinus radiata*). A study on how to manage these exotic planted forests for the conservation of threatened native animals and plants (e.g., brown kiwi (*Apteryx* spp), kakabeak (*Clianthus* spp)) is in progress. This study examines the value that people place on the management of threatened native species in exotic forests using an economic valuation approach (i.e., choice experiment). An economic survey instrument was developed to collect data for examining the relationship of the willingness-to-pay (WTP) values to landscape elements, either natural (e.g. mountain) or more artificial (e.g. buildings). An online tool to geo-reference respondents' coordinates has been developed to retrieve these spatial data for analysis.

Methodology

Survey respondents across New Zealand were recruited by calling people listed on the white pages directory. People who agreed to complete the survey were given the option to do the survey online or by mail. 200 surveys were completed so far. The residential address of each survey participant was recorded. This address was used to locate the geospatial coordinate of each respondent using the link to the geolocator interface (Fig. 1). These coordinates will be used to link the answers of the questionnaires to geomorphologic surroundings characteristics. Technically, the tool uses a mix of programming languages (HTML, Javascript, PHP, and Ajax) as well as the GoogleMaps© application programming interface to interact with the user to locate their living place.

Forthcomings

One of the study hypothesis is that the will for conservation is related to the living environment where we live/grow. A wide range of relationships is possible and current work is focusing on existing geographic datasets to explore the relations possibilities. The tool is under development and receiving "expressions of interest" for further improvement to be accomplished in additional project missions. Nevertheless, the tool already enabled a good interaction between different scientific backgrounds as well as interest from forest owners and private forest organizations.



Front-End (www.isa.utl.pt/~joapalma/surveys/nzfalcon)

Geolocator for socio-economic interviews
Threatened Native Animals and Plants in New Zealand's Planted Forests



Fig 1: Interface for georeferencing questionnaires (Front-End)

Back-End

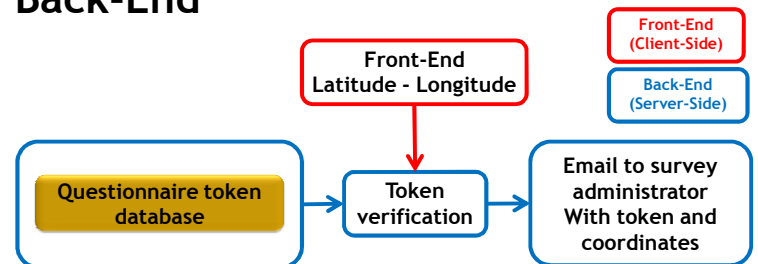


Fig 2: Back-End architecture to receive coordinates and send information to survey administrator

Analysis/Questions:

- Is the willingness-to-pay (WTP) of a respondent for conservation influenced by the living environment (i.e., living in a city or in a rural area)?
- Is the WTP for biodiversity conservation in exotic planted forests related to living close (less than 10 km) or far to planted forests?
- Does the proximity (less than 20 km) to protected native forests influence the WTP for conserving native biodiversity in exotic planted forests?

Acknowledgements: This research was carried out as part of the TRANZFOR (Transferring Research between EU and Australia-New Zealand on Forestry and Climate Change) Marie Curie International Research Staff Exchange Scheme. TRANZFOR was funded by the EU under its Marie Curie - People programme, contract number 230793. The support is gratefully acknowledged.



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