A decision support tool for analysis of the aesthetic value of regional landscapes in Quebec, Canada

Alison Munson¹, Nancy Gélinas², Steve Déry², Dominique Arseneault³, Yan Boucher⁴, Jie He⁵, Stéphanie Uhde⁶, Hirondelle Varady⁷, and Mylène Armstrong⁸

¹Centre d’Etude de la Forêt, Université Laval (Faculté de foresterie, de géographie et de géomatique) – Québec City, Québec, Canada
²Faculté de foresterie, de géographie et de géomatique, Université Laval (FFGG) – Canada
³Université du Québec à Rimouski (UQAR) – Canada
⁴Ministère des ressources naturelles, Québec (MRNQ) – Canada
⁵Université de Sherbrooke – Canada
⁶Institut de la Statistique du Québec – Canada
⁷Consortium en forsterie Gaspésie-Les-Île – Canada
⁸Groupe des PDFD de Charlevoix et du Bas-Saguenay – Canada

Abstract

The aesthetic value of a landscape is an ecological benefit that is less often quantified, due to the difficulty in objectively representing this value in relation to more easily quantifiable services. The Charlevoix and Gaspé regions of Quebec, Canada, are well known for the beauty and particularity of their landscapes, which combine natural and agricultural elements in a rich, historical context. This new, collaborative project proposes to evaluate this aesthetic value, which contributes significantly to local socio-economic development and is embedded in the cultural values of local communities. We are working with local regional groups, concerned with natural resources development, to identify the most sensitive landscapes in each region, and the underlying biophysical attributes and attribute levels that underpin aesthetic value; the watershed scale is used for the first demonstration study area. Subsequent to this step, the typology of attributes developed will be used to consult both local and non-local populations on the monetary value they assign to each attribute and level of attribute. A diversity of consultation methods will be used in order to reach a maximum number of citizens and to cover large range of socioeconomic status. Economic values assigned from the outcome of this consultation will be represented spatially on the landscape in relation to the specific biophysical attributes. This process will form the basis for developing a regional framework to map other ecosystem services, with the eventual goal of refining a decision support tool that will allow analysis of different scenarios of land use and associated ecosystem services. The study is predicated on use of local knowledge and experience at each step, in order to both refine the process and assure an outcome that will be pertinent and applicable to local community decision-making.

Keywords: ecosystem services, modeling, decision, making, frameworks, land management, participation, socioecological systems

*Speaker