Series Conclusion

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Central Interior Ecoregional Assessment: Next steps

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Abstract

The Central Interior Ecoregional Assessment brought together professionals from the Nature Conservancy of Canada, provincial government ministries, and academic researchers in a 3-year collaborative effort to complete a conservation-based scientific analysis of the Central Interior region of British Columbia. This effort produced four principal products: (1) conservation portfolios; (2) Marxan summed solutions; (3) conservation value maps; and (4) a comprehensive compilation of conservation data for the ecoregion. The data compiled and developed for this assessment are useful to anyone involved in conservation planning, priority setting, and decision making. The Nature Conservancy of Canada will use the assessment to assist with current work in the Central Interior ecoregion and to focus on priority areas for finer-scale planning and research. This assessment is one tool that it will use to work with partners in improving conservation of biodiversity within the Central Interior ecoregion.

KEYWORDS: *biodiversity; British Columbia; Central Interior Ecoregional Assessment; climate change; conservation planning; Nature Conservancy of Canada.*

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Introduction

The Central Interior Ecoregional Assessment brought together professionals from the Nature Conservancy of Canada, provincial government ministries, and academic researchers to complete a conservation-based scientific analysis of the Central Interior region of British Columbia. With the completion of this assessment, the Conservancy has developed conservation plans for the vast majority of British Columbia (Nature Conservancy of Canada 2010a).

Assessment products

Four principal products emerged from this effort:

1. conservation portfolios,
2. Marxan summed solutions,
3. conservation value maps, and
4. a comprehensive compilation of conservation data for the ecoregion.

A number of important supplementary products were also produced. These should be useful to groups who need answers to specific questions about threats, freshwater conservation, and conservation site priorities in the Central Interior ecoregion.

The conservation portfolios depict a set of conservation areas that most efficiently meet a specific set of conservation goals defined for the ecoregion (see Maps 22 and 24 from Nature Conservancy of Canada, 2010b). The conservation areas identified in each portfolio are important for a number of reasons. First, some are the only places where one or more species or plant community targets are known to occur. This is particularly true for those associated with low-elevation, old-growth coniferous forests. Second, some areas such as parks and wilderness areas form the last large, relatively undisturbed landscapes in the ecoregion, which are especially important to wide-ranging species such as grizzly bears, wolverines, and fishers. These places are vital to conserving ecoregional biodiversity and maintaining landscape-scale ecological processes. Third, wherever possible, the portfolios identify areas where conservation is most likely to be successful.

The Marxan summed solution maps depict a prioritization of all assessment units (hexagons and watersheds) by representing the percentage of times each unit was selected out of the 500 Marxan runs (see Maps 18 and 21 from Nature Conservancy of Canada, 2010b). The summed solution adds to information in the conservation portfolios by providing more information to consider when making land use decisions in areas that might fall outside conservation portfolios but still have conservation value. Conservation value is a measure of how valuable an area is for biodiversity conservation. It is a measure of target abundance, uniqueness, and value (see Maps 15 and 16 from Nature Conservancy of Canada, 2010b). These maps can be used to compare assessment units when making ecoregion-level conservation decisions and can also inform conservation decision making at a smaller scale.

The data compiled and developed for this assessment are useful to anyone involved in conservation planning, priority setting, and decision making.

The data compiled and developed for this assessment are useful to anyone involved in conservation planning, priority setting, and decision making. In addition, these products can be used for other analyses that address different conservation-related questions. These data are especially useful because they are in a geographical information system format that has undergone review to correct data errors. Much of the data from this assessment will be available to view, query, and download from HectaresBC (*http://www.hectaresbc.org*) or can be obtained by contacting the Nature Conservancy of Canada directly.

Assessment uses

Users must be mindful of the regional scale at which this assessment was prepared. Many places deemed low priority at the ecoregional scale are, nevertheless, locally important for their natural beauty, educational value, ecosystem services, and conservation of local biodiversity. These include many small wetlands, small patches of natural habitat, and other important parts of the natural landscape. These places should be managed to maintain their own special values. Furthermore, because of their large size, high-priority assessment units and conservation portfolio sites may include areas unsuitable for conservation. It is expected that local planners who are equipped with more complete information and higher-resolution data will develop refined boundaries for these sites. Many

of the high-priority conservation areas described in this assessment may also accommodate multiple uses as determined by landowners, local communities, and appropriate agencies. Rather than creating protected areas in the usual sense, we speak of the need for portfolio sites to be conserved. Although effective conservation can necessitate restricted use, it does not necessarily exclude all human activities.

Biodiversity conservation in the ecoregion will attain its fullest potential if all conservation organizations, government agencies, and private landowners co-ordinate their conservation strategies according to the priorities identified through this assessment. The Central Interior Ecoregional Assessment puts forth a baseline to be built upon and refined by site-specific planning efforts. It is intended to guide users to areas with high biodiversity value and suitability. The specifics of conservation site delineation, planning, and management will rely on more localized expertise.

Priority conservation areas (portfolio sites) span lands and waters that fall under various ownerships and within various jurisdictions; as such, we recognize that some organizations and agencies will be better suited to work in specific areas than others may be. The ultimate vision of the ecoregional assessment process is to facilitate the thoughtful coordination of current and future conservation efforts by the growing number of federal, provincial, state, local, private, and non-governmental organizations engaged in this field. To this end, we encourage wide use of the data and products developed and welcome comments on how future iterations may be improved.

Conservation goals

Establishing conservation goals is one of the most crucial steps in the conservation planning process (Tear et al. 2005). Conservation goals form the basis from which to gauge the success of how well the Central Interior portfolio of conservation areas performs in conserving the ecoregion's biodiversity. Conservation goals set the context for planning and implementation, as well as measuring progress towards meeting established goals and objectives. These goals also provide a clear purpose for decisions and lend accountability and defensibility to the assessment (Pressey et al. 2003).

Setting goals for conservation targets in the assessment primarily involves reliance on expert opinion and informed guesswork and is likely to have a high degree of uncertainty (Groves et al. 2000); however, there will be irreparable consequences if conservation efforts are delayed until new procedures or better estimates become available. As human populations continue to grow, many large habitat blocks will face development pressure to meet human needs.

This assessment is one tool that the Nature Conservancy of Canada will use to work with partners in improving conservation of biodiversity within the Central Interior ecoregion.

Conclusion

The Central Interior Ecoregional Assessment represents a 3-year collaborative effort between the Nature Conservancy of Canada and various groups and individuals. The purpose was to prioritize the landscape and provide a starting point for further conservation efforts in the region. This assessment provides a measure of relative conservation value, but the scale of analysis was such that it should only be used at a regional level. Property-level and other finer-scale areas will require additional information and local knowledge to fully assess conservation value.

The Nature Conservancy of Canada will use the assessment to assist with current work in the Central Interior ecoregion and to focus on priority areas for finer-scale planning and research. This assessment is one tool that it will use to work with partners in improving conservation of biodiversity within the Central Interior ecoregion. Results will be made available to all interested persons, both through the Hectares BC portal (***http://www.hectaresbc.org***) and the Nature Conservancy of Canada' British Columbia region website (***http://science.nature conservancy.ca/centralinterior/cimaps.php***).

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References

Groves, C., L. Valutis, D. Vosick, B. Neely, K. Wheaton, J. Touval, and B. Runnels. 2000. Designing a geography of hope: A practitioner's handbook for ecoregional conservation planning. The Nature Conservancy, Arlington, Va. *http://conserveonline.org/workspaces/cbdgateway/era/standards/intro* (Accessed April 2011).

Pressey, R.L., R.M. Cowling, and M. Rouget. 2003. Formulating conservation targets for biodiversity pattern and process in the Cape Floristic Region, South Africa. Biological Conservation 112(1–2):99–127.

Nature Conservancy of Canada. 2010a. Canada's ecoregions. *http://science.natureconservancy.ca/initiatives/ecoregmap_w.php* (Accessed September 2010).

_____. 2010b. Central Interior Ecoregional Assessment. Map volume. *http://science.natureconservancy.ca/resources/docs/CI_ERA_Maps_sm.pdf* (Accessed April 2011).

Tear, T., P. Kareiva, P. Angermeier, P. Comer, B. Czech, R. Kautz, L. Landon, D. Mehlman, K. Murphy, M. Ruckelshaus, J.M. Scott, and G. Wilhere. 2005. How much is enough? The recurrent problem of setting measurable objectives in conservation. BioScience 55(10):835–849.