

Review of Economic Spatial Gains Analysis: Non-Timber Forest Products

Darcy A. Mitchell, Ph.D. and Wendy Cocksedge, MSc.
Centre for Non-Timber Resources, Royal Roads University

Summary

Our review of the Non-Timber Forest Products (NTFP) Economic Spatial Gains Analysis Report found a number of difficulties with the use and application of scientific information, with the completeness and relevance of information used, with the treatment of uncertainty, and with management directions proposed. Some of these problems are rooted in the many difficulties inherent in evaluating the potential for NTFP to make a greater economic contribution to the British Columbia economy and particularly to remote, resource-dependent communities, on a sustainable basis.

With the exception of a few products in a few areas of the province, the NTFP sector is poorly developed and poorly documented.

The Report does not appear to meet the deliverables required by the Terms of Reference (CIT, Background and general questions for EGSA peer reviewers, November 2003, p. 1), that is, to estimate economic gains over at least the years 2003-2023 in 5 year increments under 3 sets of future conditions (Optimistic, Intermediate, Pessimistic). No clear scenarios of this nature are provided. In fairness to the authors, the state of knowledge in the NTFP sector generally, and for the target area in particular, does not support the type of analysis requested by the TOR.

The report would have been more effective, however, were it not for a number of problems arising from methodological shortcomings and an incomplete analysis of the issues involved in development of the sector. In our view, the recommendations do not respond adequately to uncertainty, to a variety of practical problems in economic diversification of remote communities, and the consequent requirement for adaptive, incremental and integrated approaches to NTFP development.

Use of scientific information/relevance and completeness of data

Documentation of methodologies and sources of information is lacking in many parts of the report. Many statements are thus, poorly supported, and in some cases misleading. Some specific examples of these concerns are as follows.

Estimates of biological availability of product.

- The methods described (page 4-5) are too vague to be helpful. It is not clear what type of data was collected and what statistical analysis was done to determine “best bets”. When and how much ground-truthing was used? What scale were the maps if predicting from forest cover/ecosystem type maps? Do

volume estimates take into account accessibility to the harvesters (e.g the availability of logging roads, other road access, water access?)

- The authors “assume” a 1% cover of devil’s club (page 14), which given the diversity of landscape may be questionable. The assumption of one plant per square metre may also be high. References to support these assumptions are lacking. The review would have benefited from the extensive work on the harvest of devil’s club by Trevor Lantz (Lantz, 2001) or Nancy Turner’s work on traditional harvest methods (1982).
- Again in this section, in the table, they cite sustainable yield of plants (25% per annum in the wild), but citations or explanations are lacking.
- Page 24 Section 5.6.1 – the authors state that they “examined and researched seven sites on Haida Gwaii for the presence of these species” - no methodology is given.

Limitations of data cited

The report has not benefited fully from other relevant research. As a result, it is difficult to have confidence in the sources and applications of information provided. Of the 15 citations listed in the endnotes, almost half are from the authors themselves, and only about one-third appear to be peer-reviewed. Some examples of inadequate, missing or poorly referenced information include (in addition to the devil’s club example cited above):

- Pine mushroom cultivation – there has been extensive work on this done in Japan, including what has succeeded and what has not – none are cited in the report;
- Discussion of medicinal mushroom properties, in section 5.3: the authors discuss the inconsistent chemical composition of fruiting bodies in the wild, but do not cite any of the undoubtedly extensive scientific studies on chemical composition;
- Many numbers are cited throughout the text regarding economic values, but these are almost never cited. When cited, it is often “Cognetics estimates” which does not lend additional credibility to the work of the same authors unless independent or source documents are also cited;
- In Section 2.7 under the discussion of floral greenery, the authors cite estimates of “good” salal production, but do not acknowledge the discussion from the original article, which stated that salal values should not be extrapolated to the broad scale as the results from studies have been extremely varied based on site characteristics;
- There appear to be inconsistent approaches between the different geographically areas. Although perhaps the data collection approach might be similar (though this is difficult to determine given the lack of methodology given), the reporting is very different for each of the three areas (for example, 5.6.2 – the forest type is provided in far more detail than for the discussion of Swindle Island).

There are some misleading comments in the report. For example:

- Page 28 re: “harvested from existing wild stocks” is “equivalent to organic certification”. It is not. There is currently no practicable way to formally certify NTFPs on Crown land as a result of lack of property rights and chain of custody issues, among others.
- On page 36, the authors state that “ (picker) income is not taxed”. Except in very specific circumstances (as may apply to income earned by First Nations members on reserve lands), all income is subject to taxation.

Treatment of Uncertainty

The NTFP sector is characterized by uncertainty in virtually every possible dimension, including species presence and abundance in specific geographic areas, commercial quality, supply chains for specific industries or products, physical accessibility of product, market demand at a scale that is relevant at the level of individual products or firms, prices, availability and interest of local individuals in becoming engaged in NTFP harvesting, processing, and marketing, the production conditions best suited to optimize NTFP and other forest resource values, and a multitude of other questions. Overall, the analysis and recommendations fail to adequately recognize the dimensions of uncertainty or to recommend approaches that would allow uncertainty to be addressed in the process of encouraging commercial development of non-timber products and services. Examples of this problem include:

- In section 5.5 the authors acknowledge that there is “too little data regarding populations of wildstocks” to promote commercial harvest, but then state in Table 5 not only a sustainable yield (impossible to predict without baseline data) but also that this venture would have “good” viability.
- In section 7.4, the authors state several times the economic importance of pine mushrooms, and quote various prices/pound, but do not effectively deal with the overall trends of the industry. It would appear both from some of their numbers and from more recent price data in BC that pine mushrooms may no longer offer the same price levels as in the past. Even if prices do recover to historic highs, industry must be able to respond to high levels of uncertainty from year to year.

Are management directions clear, concise and practical?

- The principal recommendation of the report is the creation of cultivation forests on Haida Gwaii, near Klemtu and near Bella Coola. The report does not clearly explain why a quasi-agricultural approach to NTFPs in this region is justified at this time in this region. As discussed at some length in Tedder et al, 2002, the physical, technical, economic, and social characteristics of the NTFP sector are such that it is not clear which management system is best suited for different

NTFPs in different areas of the province. In particular, it is not clear that investment in cultivation forests is justified relative to any expected price premium or other advantages (e.g. Table 6, p. 38). In Table 3, the operating cost identified for operations based on both wildstocks and cultivated stocks is the same, which seems to ignore the costs of management of the cultivation forest.

- The recommendations focus on a single product or small range of products, without reference to opportunities for co-management of a range of NTFPs within a wider resource management and economic development framework. Results from the North Island NTFP Demonstration Project (Royal Roads University, 2002, 2003) and predecessor reports spanning 6 years of work in the North Island region suggest that there are many challenges common to economic diversification of rural communities apart from the availability of raw product and of markets. Local levels of entrepreneurial and management experience and interest, a supportive policy environment for investment and resource stewardship, and the need to construct livelihoods based on a variety of income opportunities (as opposed to necessarily “creating jobs”) are all considerations in NTFP development (and likely in development of any other sector which departs from established resources, technology and industrial organization). These do not appear to have been addressed adequately in the report.
- The report seems inconsistent with regard to the proposed distribution of benefits from NTFP development. The authors state that “our scenarios are aimed at directing all profits from the development of the non-timber forest resources to First Peoples who inhabit the lands where these species grow (p. i.)” They observe, however, that “these scenarios discuss how First Nations *and other local people* can benefit from these non-timber forest resources (emphasis added) (p.i.)” Depending on the strictness of the definition of profits, limiting all returns to First Nations people may create difficulties in attracting private investment (which is likely to be required for value-added enterprises, at least) and in encouraging participation of other residents of the coast. Options for the creation and equitable distribution of wealth need to be more fully discussed.

In summary, we believe that the question of whether (and how much) NTFPs can contribute to the economic well-being of the Central Coast, North Coast and Haida Gwaii will not likely be adequately assessed without the development of integrated, adaptive strategies to identify NTFP opportunities within the context of a wider range of available resources and opportunities and an assessment of local requirements for transition to a different type of economy.

References

Lantz, Trevor (2001) Examining the Potential Role of Co-operatives in the Ethical Commercialisation of Medicinal Plants: Plant Conservation, Intellectual Property Rights, Ethics, and Devil's Club (*Oplopanax horridus*) BC Institute of Cooperative Studies. Available on-line. Also as University of Victoria unpublished Master's thesis (2002)

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Tedder, S., Darcy Mitchell and Ann Hillyer (2002) Property Rights in the sustainable management of non-timber forest products. Victoria, B.C.: B.C. Ministry of Forests and Forest Renewal B.C. Available on the B.C. Ministry of Forests website.

Turner, N.J. (1982). Traditional use of devil's-club (*Oplopanax horridus* ; Araliaceae) by Native Peoples in western North America. *J. Ethnobiol.* 2: 17-38.).