

Summary of:

An Economic Impact Assessment Model for the Prince Albert Model Forest Region.

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Awareness and concern regarding the role of Saskatchewan's forests have been rapidly increasing. The management, harvesting, processing and marketing of timber and non-timber resources provide many job and economic opportunities, particularly in northern Saskatchewan. At the same time, forests are essential to the social well-being of many of the Province's inhabitants, as well as to its environmental health.

Within an economic framework, every type of activity impacts some other agent within the economy. No one industry, consumer or government may subsist in isolation from others. Economic interdependencies result in a network of linkages between industries and those who depend on them for products or household income.

Economic changes initiated by industries or consumers are referred to as direct impacts. Introducing these changes into a regional economy causes a series of repercussions. Economic changes resulting from direct impacts are considered secondary impacts. Secondary impacts are of two types:

- 1) indirect impacts through inter-industry purchases of goods and services
- 2) impacts of a more removed nature that are induced by the spending of household incomes incurred through indirect changes in the economy.

The total economic impact of a project or activity is assessed as the combination of the direct and all secondary impacts which transpire. Measuring direct impacts is fairly straightforward. The difficulty in assessing total economic impacts lies in the estimation of the secondary impacts. An input-output model which assesses total economic impacts has been created for this reason.

The general objective of this study was to develop a methodology to estimate the impacts of changes in the use of the forest sector in the Prince Albert Model Forest (PAMF) region. The specific objectives were:

- 1) to develop a two-region input-output model for Saskatchewan. Region 1 is the PAMF Economic Region. Region 2 is the rest of Saskatchewan.
- 2) to disaggregate the forest sector into several economic activities of particular interest to the PAMF Association.
- 3) to demonstrate the use of the model for a selected forest use.

This report is divided into 5 chapters:

- 1) Introduction
- 2) Considerations involved in specification of the study model
- 3) Conceptual input-output model

4) Development of the model for economic impact estimation model

5) Assessment of economic impacts of fee structure change in the Prince Albert National Park

The model discussed in this report has been designed to evaluate economic impacts due to forest-related activities specifically within the PAMF region. The analytical framework of this model allows for specification of many economic variables which are characteristic of this distinctive region. For example, the inclusion of Aboriginal people and their economic activities are a unique feature of this model. These activities are largely confined within the PAMF region, but their economic impacts are felt in regions beyond due to their expenditure patterns. Therefore, without modifications, the model cannot estimate local impacts (ie. within the PAMF region) of changes in forest management or adoption of new management strategies. For this reason, economic impacts were estimated for the entire PAMF Economic region.

Accuracy of predictions by the model is highly dependent upon the accuracy in predicting direct impacts. To the extent that direct changes of proposed measures are not accurate, the resulting economic impacts will be biased. Since the model is based on fixed coefficients, the results are more accurate in depicting short run changes, than those occurring in the long run. The use of such a model in predicting such changes assumes no major structural changes in the regional economy.

The case study used for economic impact estimation is the change in user fees for Prince Albert National Park. The model predicted that proposed changes would lead to a loss of \$3.9 million for the PAMF Economic Region, much of which would be felt within Prince Albert National Park. The loss in GDP for the province as a whole was estimated at \$7.7 million.

The economic impacts assessment model presented in this report constitutes an important step in prioritizing/evaluating the economic/social desirability of alternative forest management programs/strategies for the PAMF region and its periphery. The PAMF is attempting to employ integrated resource management. This economic impact assessment model supplies a tool useful to these types of management practices. Both resource managers and regional developers will find this economic assessment model invaluable.