

Integrated Silviculture Strategies – an evolution

What is in the name? The name implies the evolution of the process described below.

- **Integrated**, allows for incorporation of the varied objectives and inherent site and landscape attributes within the planning unit.
- **Silviculture** is the art and science of controlling the harvest, establishment, growth, composition, and quality of forest vegetation for the full range of forest resource objectives. Successful silviculture depends on clearly defined management objectives. However, silviculture is often confused with managing stands and forests purely for timber. Remember that silviculture is also used to manage forests for wildlife, water, recreation, aesthetics, or any combination of these or other forest uses.
- **Strategies** provide the opportunity to look into the future with various scenarios to create options or strategies from which to guide management.

Overview - Integrated Silviculture Strategies

Silviculture strategies provide context for management decisions necessary to achieve forest level (TSA or TFL) objectives. Since their inception, silviculture strategies are always improving, and creating solutions for an increasing number of forest management issues.

Type 1 – Fibre Production. The first iteration, the Type 1 used expert opinion to identify timber supply objectives and potential silviculture actions to address those timber objectives (e.g., spacing, fertilization). Treatments were identified to fill midterm timber supply short falls and to create conditions for higher value products (e.g., pruning). The amount and location of the treatments and their impact on timber flow and supply were estimated.

Type 2 – Link to Modelling. The next version of the Silviculture Strategy used simulation modeling based on the forest inventory to test various funding and treatment scenarios on their impact to timber supply. These Type 2 and Type 1 strategies were used as the basis for silviculture funding and implementation provincially and locally. Note as Type 2s evolved they employed terms such as enhanced, forest level or incremental to indicate added analyses to the ongoing process.

Type 3 – Some habitat needs included. The Type 3 strategies elevated habitat as a key objective and part of the funding priority for assessing scenarios. These were limited by data and analytical tools.

Type 4 – Second growth and Mountain Pine Beetle. With the move towards harvest of second growth and the serious reduction in living volume due to the mountain pine beetle, a more robust strategy was identified as being needed; one that takes into account what is being harvested, existing retention strategies, and the impact of climate change. This became the Type 4 Silviculture Strategy.

Next – Integrated Silviculture Strategies (ISS). Today, resource professionals are looking at enhancing strategies to take into account all local values. The process is collaborative and iterative. The process

brings together practitioners to assess the situation within an administrative unit and decide upon key questions, risks to values, and solutions.

The newly formed Provincial Timber Objectives document provides relevant guidance to test scenarios. For example, co-location for habitat retention can be used as a key objective to assess retention strategies impact on timber supply within a unit. As we shift towards the harvest of second growth we have a clearer understanding of the implications of our actions in creating future stands and products, thus objectives for volume and piece size can be used to assess options. Species deployment to achieve long term resilience from climate change is another objective that can be explored. To reduce long term risk, both ecologically and financially, fire and its potential impacts are brought into the decision process. The issues and solutions can drive funding priorities as well as management actions.

The Integrated Silviculture Strategy process is flexible as it uses local plans, timber supply and stewardship issues to derive opportunities through scenario analysis. In some cases, the shift to second growth may suggest an acceleration of late rotation fertilization, while in other areas it may be the need for greater understanding of the population of a species considered threatened or of special concern.

In 2014/15, the Arrowsmith TSA began the process in concert with its TSR, and is exploring added direction on co-location of reserves as directed by the Acting Chief Forester. In 2015/2016, new ISS processes have been initiated in the Mackenzie TSA and in the Fort St. James timber supply blocks of the Prince George TSA where the new process will promote First Nations input, input from guide outfitters and address other local conditions (e.g. spruce beetle.) A fourth ISS strategy has been initiated in the Merritt TSA, where in addition to the key purposes described above, it will continue and expand upon many of the planning elements of the Innovative Forest Practices Agreement.

The Integrated Silviculture Strategy provides an active venue for local First Nations to provide their objectives and key values into the planning process.

This approach promotes identification of issues now and into the future and explores opportunities which benefit all those who rely on the landbase including local hunters, guides, trappers, tourism, and others. The process builds upon the previous backwards looking Timber Supply Review with additional actions to achieve desired objectives. The objective is to provide options that attempt to balance economic (e.g., timber supply and flow) with environmental (e.g., wildlife habitat) and social objectives (e.g., jobs) to aid decision makers in assessing resource management options.

The Integrated Silviculture Strategy process is meant to provide guidance for the range of management options, not simply incremental silviculture treatments that were the main focus for previous strategies.