

# The Arrow IFPA framework for sustainable forest management: An early precedent

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The transition from traditional sustained yield forest management to sustainable forest management began in the early 1990s based on concepts arising from natural disturbance. The development of sustainable management frameworks followed in the late 1990s, during the emergence of certification systems, but the frameworks were largely untested, seldom included social sustainability issues, and lacked mechanisms for trade-off analysis.

British Columbia's Innovative Forest Practices Agreement (IFPA) provided an opportunity to develop these conceptual frameworks into a pragmatic, but science-based, system. The initiation and evolution of the Arrow IFPA represented one of the earlier comprehensive efforts to develop and test a sustainable forest management framework in depth. It was supported by one of the first large interdisciplinary research teams established in the Faculty of Forestry at the University of British Columbia, and included forestry practitioners and disciplinary experts at the provincial and local (Arrow Timber Supply Area) level.

The project provided a unique opportunity to develop a planning paradigm that integrated coarse-, medium-, and fine-filter techniques to sustain biodiversity; simulation modelling to evaluate ecosystem productivity; innovative methods of public participation; and new criteria for addressing "social licence" issues. Most importantly, this model provides a comprehensive approach to multi-criteria, multi-scale problems in considering diverse alternatives over long time horizons, especially when compared to the Forest Practices Code or other more limited Code pilots.

These extension notes demonstrate the team approach to sustainable forest management that created a set of procedures to integrate ecological and social trade-off analysis in an adaptive management framework. A wide array of innovations are examined, including criteria- and indicator-led planning, ecosystem representation techniques, integration of planning and public participation, spatial modelling tied to visualization, and new zoning and partial cutting strategies to conserve various resource and habitat elements.

This effort represents the work of the planning team, the experts involved, the local community, government, licensees, and other interested stakeholders, who participated and supported these groundbreaking procedures and studies. Much has already been learned, and it is hoped that still more can be learned from considering, adapting, and applying these approaches elsewhere.

\* *Dr. Daryll Hebert is a wildlife biologist who has considerable experience in applying ecological principles to the development of sustainable forest management in British Columbia and Alberta. Dr. Hebert contributed insight and ideas during the initial conceptual stages of the development of the Arrow IFPA's sustainable forest management framework. He currently works as a consultant with forest companies to help them incorporate these principles into their forest practices.*