



Summary of the 2008 SISCO Winter Workshop, Part 2:

The resilient forest: Defining

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In the first part of this Winter SISCO 2008 summary in the last issue of LINK, we discussed how the ecological community defines resiliency and how existing practices and population growth are threatening to ecologically transform our current ecosystems. So when faced with these serious environmental changes, what silvicultural solutions can the practitioner rely on? Answering this question is the focus of this second portion of the Winter SISCO summary.

One possible strategy was presented by **Jack Woods**, Program Manager for the Forests Genetics Council of British Columbia, who said that “not all seeds are equal.” We must proactively manage climate change to understand what the changes will be, he said; this will help us maintain forest productivity. Because natural regeneration rates are not expected to keep up with climate change, forests will become less resilient over time. Species ranges will change and natural regeneration will become less and less desirable as local seed will not be well adapted to climate changes. This means we will probably have to rely on artificial planting and seed supply.

This change leads to other questions: How can our current planning system deal with expanding ranges that require us to plant species that are outside their current areas? How will we know what seedlots are appropriate, since a good seedlot choice may improve productivity with climate change? Choosing the right seedlot to assist in species migration will be increasingly important, but who is going to take the risk and responsibility of leading this migration? “We can talk about change” said Woods, “but how do we line up all of the rules, policies, and operations to allow that change to happen. How do we deal with the risk and responsibilities and who takes these on?”

To try and address some of these issues, the Forest Genetics Council is developing a new strategic plan based on the results of its recent Challenge Dialogue session related to Forest Tree Genetic Resource Conservation and Management (GRM) in British Columbia (available at http://www.for.gov.bc.ca/hti/grm/grm_dialogue.htm). According to the discussions, we need bioclimatic modelling research to forecast how climates might change,

genecology research to better match suitability of various seed sources, and good information to guide operational decisions. Incremental changes are necessary to the policy and seed-transfer zone changes and can be phased in as we learn more. In terms of operational needs, changing policy costs money and existing capital investments in seed inventories and seed orchards are considerable. Engaging operational people in the change process is also needed; rule changes must be slow so that operations can respond and capital can be realigned. Currently underway is the assisted migration of tree populations through operational actions that include planting, establishment of seed orchards, and seed collection in wild stands.

The Association of BC Professional Foresters Stewardship Advisory Committee has also been thinking about the question of resilient forest planning, said **Casey Macaulay**, a member of this committee. Planning has been identified as a common topic across the BC membership and there is a collective concern that a lack of co-ordinated planning across industries, sectors, and agencies may have a downward effect on stewardship.

In 2007, the Stewardship Committee embarked on a “Utopian Planning” exercise to collect thoughts from practising forestry professionals around the province. Using interviews, workshops, and brainstorming sessions with key people from government, industry, and consulting, information was collected and a report is now being prepared. Macaulay said the committee is considering recommendations that include:

- Advocating for a land-based management philosophy in BC that is applied in a consistent fashion, is comprehensive, and integrates all sectors and all interests.
- Urging the province to create a set of land-management objectives that can be applied spatially, at a variety of scales, and is built on past work such as Land and Resource Management Plans.
- Urging provincial agencies and regulated stakeholders to co-ordinate, collate, adjust, and revise current land-based monitoring structures to be consistent with this land-based management philosophy.



it, designing it, and planning for it

It is the intent of the committee to try and encourage discussion that will capitalize on the existing framework of legislation, policy, and relationships and will not overburden the already too-busy operations community.

In planning for a resilient forest, we cannot forget that one of the key partners is the urban community who are also looking at and working towards sustainability. According to **Barb Jackson**, Community Planner for the Thompson-Nicola Regional District, the goals and objectives of the urban community should complement and support the objective of ecosystem integrity in the adjacent forest land base. Jackson provided SISCO participants with the eight principles of smart growth and their benefits to the land base, such as protecting it from urban sprawl. She also presented tools that community planners use to ensure communities are moving towards sustainability, such as regional growth strategies, official community plans, and development permits. Also discussed were the effects of clearcutting and the mountain pine beetle on the community of Kamloops, as well as the city's need to adapt to the resulting changing water supply conditions.

One speaker who can be counted on to provide food for thought at SISCO is **Bruce Fraser**, Chair of the Forest Practices Board. Using a phrase that he attributed to **Jack Staddler**, Professor of Wood Science at UBC, Fraser introduced SISCO participants to the concepts of "carbohydrate-based economy" versus the "hydrocarbon-based economy." Our current model of the world is based on hydrocarbons, with its reality of mechanized, industrially concentrated, and energy-rich living. According to Fraser, this view may be the greatest barrier to maintaining the resilient forest. In a carbohydrate-based economy, people must come into balance with the photosynthetic/carbon cycle that supports life; history tells us that when we grow beyond the carrying capacity of this system, disaster ensues. The implications of a carbohydrate-based economy include astutely managing all functioning ecosystems, husband farmland, and forests; sustaining healthy domestic animals; and using renewable fuels. A carbohydrate-based economy is based on balancing human numbers with the carrying capacity of the earth. Fraser said that we are facing many challenges ahead and as we manage our forests we will be dealing with a complexity of objectives that

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are driven by new demands and that require new solutions.

The final speaker of the 2008 Winter SISCO was **Ian Miller**, Manager, Integrated Resource Section of the BC Ministry of Forests and Range, Forest Practices Branch. Miller was tasked with providing participants with his thoughts on "Alternatives to Legislation and Regulation: Influencing Practice and Managing Change Outside the Box." The alternatives, he suggested, will be based on information and how we access and use it.

As the province transitions from the *Forest Practices Code of BC Act* to the *Forest and Range Practices Act (FRPA)*, statutes are not the only information sources available for resource managers. In this technology age with information available at our fingertips, forestry professionals must be able to filter the messages and then understand their relevant application. We now have information that is part of the legal realm (FRPA interpretive bulletins, decision-making principles used by statutory decision makers, and extension services from government officials) and information that is outside of this realm. Information outside of the legal realm should offer good guidance and should be relevant, clear and understandable, credible, compelling, and genuinely geared to help or inform. In this networking world, the competitive advantage goes to those that can find, assimilate, and use emerging knowledge to their benefit. Miller said we may all have to adjust our learning styles to accommodate this change.

So perhaps in the future we will be "blogging" to solve silvicultural challenges rather than attending a SISCO meeting. Who knows? Stay tuned. 🌲