

# FINLAND TRIP

September 25, 2023 – October 2, 2023

## 1. Executive Summary

### 1.1 Finland Visit Overview

A group of 30 foresters visited Finland Sept 25 – October 2 with the objective of benchmarking forestry practices. Top focus areas included:

- Intensive forestry (thinning, pruning, fertilizing),
- Wildfire risk reduction and
- Bio-products / new value-added products.

We toured multiple logging sites across Finland and observed / discussed in detail intensive forestry operations including:

- Brushing (at 5-7 years of age);
- First thinning (at 25-35 years);
- Second thinning (at 40-55 years); and
- Final Regenerative Felling (clearcutting) at 60-80 years of age.

Also, we visited bio-energy plants, district heating systems, harvesting equipment manufacturers, training centers, data collection companies and bio-product mills.

During the last few days, we spent most of our time meeting together and in small break-out groups to summarize what we learned and begin developing the roadmap to move BC forest practices forward. **There seems to be strong alignment with all the participants to move to managed forests (intensive forestry).** We committed to meet regularly when we return to Canada to finalize recommendations & drive implementation.

### 1.2 Key Learnings

- FORESTRY is a national PRIORITY and a source of PRIDE in Finland (majority of the land base is privately owned with well over 100,000 owners so there is a far greater % of the population directly involved in forestry)
- FORESTS ARE MANAGED for VALUE not volume.
- FORESTS are ACTIVELY MANAGED (Brushing at 5-7 years, first thinning at 25-40 years, second thinning at 45-60 years and final harvest (which they call regenerative felling not clearcutting) at 65-80 years.
- CLEAR CUTS ARE SMALL (0.3 ha to 2-3 ha in size)
- ROAD NETWORK is DENSE and well established (no road deactivation) so only has very minor road maintenance costs.

- 100% UTILIZATION (Large logs – sawlogs and peelers, small & damaged logs – pulpwood, and tops & branches and bark are chipped to make biofuel for Energy (District heating and Electrical generation plants))
- GOV'T SUPPORT – cover 50-60% of road costs plus when land is damaged or cutting area reduced, landowners are FINANCIALLY COMPENSATED.
- CUTTING PERMITS are issued quickly and simply (weeks). Government does not get over involved with prescriptive constraints and does higher level planning PRIOR. As well, the need to consult with FN is not as widespread (except in Lapland, where the forests are marginal so no real material loss)
- LIDAR – have a detailed mapping of all forest attributes updated every 5 years and FUNDED 100% by Government. Info is accurate and trusted by all.
- TRAINING – they have a few large training centers to do in depth training of harvesting, forwarding operators to optimize value and do proper thinning prescriptions. Believe this is also paid for by Gov't. (All education in Finland is)
- INVESTMENT – Finland has community energy systems in every town and many biomass electrical generating plants = demand for all their biomass (tops, branches, bark) and they have invested heavily in their pulp facilities (new high pressure recovery boilers, bio-products, replacement of fossil fuels in kilns etc)
- MULTI-USE – Every person in Finland has the right to enter public or private forests to pick mushrooms, berries, and hike. Forests provide their LIVELIHOOD and recreation = part of the reason why the government pays for much of road costs.

### 1.3 Recommendations for BC Forestry

- EXPEDITE THE ADOPTION OF INTENSIVE (MANAGED) FOREST PRACTICES
  - On all lands designated available for harvesting AND work with FN on lands that are potential multiple use / allow some harvesting AND investigate new models of managing old growth forest lands (vs simple “preservation”).
- PURSUE A STAGED APPROACH to move to managed forests including:
  - **Phase 0 – TODAY**
    - Summarize learnings and knowledge gaps of what we have DONE TO DATE (there are several thinning trials already completed or in process). We are not starting from scratch!
  - **Phase I – Next 6 MONTHS**
    - First Pass thinning of stands age 35-45 years of age. Rationale: IMMEDIATE conversion of forests to a managed regime and supply badly needed incremental fiber (pulp wood mainly and some sawlog) as all this fiber will have a home
  - **Phase II – Next 3 Years**
    - Build District heating plants (CES) throughout BC
    - THEN Commence brush clearing of stands at 5-7 years (as the fiber will now have a home).
    - Upgrade Pulp mill infrastructure – Recovery boiler upgrades mainly
  - **Phase III - > 3 YEARS**

- Construct Bio Product plants and new value-added solid wood facilities
  - Move fully to a 4-step intensive forestry regime (brush clearing, first and second pass thinning and regenerative felling)
- IMPLEMENTATION – REQUIRED SUPPORTING POLICIES & PROCEDURES
  - **Data** - Complete LIDAR mapping of entire forested land base (Gov't funded) supports better decisions & addressing NGO misinformation.
  - **Streamline Cutting Permit process** – Companies to partner with FN and negotiate agreements asap (shortens consultation materially) & Gov't to simplify / expedite CP process (new simpler tenures, less steps, more resources)
  - **Address Constraints** – such as 95% volume rule at maturity for commercial thinning and the 45-year rule (perhaps 40 years on the coast and 50-60 years in the Interior so it is more aligned with stand development variation) plus remove need to de-activate roads.
  - **Social License** – Implement a pro-active PR campaign including...
    - Joint ownership between Gov't, Industry, FN, and Academia
    - Funding (to hire professionals to assist with messaging & materials)
    - Change narrative vocabulary to positive (regeneration felling vs large clear cuts; Managed forests to emulate old growth with 200-400 stems per ha upon second thinning vs commercial thinning etc)
    - Bring Forestry into every classroom - JN suggests we...
      - ✓ initially focus: EVERY Grade 1 class – have every forester in BC meet with at least one Grade 1 class each – show kids all the every day products that are part of their life made from trees including obvious ones like packaging, tissue and books to less obvious ones such as Ice cream, toothpaste, cereal & clothing, and then give each a tree to plant so they can help clean up our environment (trees store carbon & make O<sub>2</sub>).
      - ✓ Have Forestry part of the curriculum of every high school.
      - ✓ Build a demonstration center (like at Aanekoski) that in simple, high impact terms explains the green, renewable, sustainable nature of the Forest sector.
  - **Training / Capacity to Carry out Intensive Forestry**
    - People – bring over Finnish resources in the short term to provide immediate capacity and to train our people. Then create training center(s) in BC to train our people.
    - Equipment – we will need to purchase harvesters, forwarders, specialize trucks. Gov't can play a key role here by providing interest free loans or grants to logging contractors along with guaranteed offtake agreements from Solid wood and pulp sector.

**o Financial Enablers**

- For cutting down and replanting damaged stands (fire / beetle)
- For brushing activities
- For fire resilience around communities
- To support logging contractors, buy the equipment they need.
- Supporting fertilization
- Completing regular LIDAR surveys