

# BC's old-growth crisis requires effective old-growth protection targets in provincial legislation as soon as possible

Backgrounder prepared by Jens Wieting, Sierra Club BC<sup>1</sup>, February 2019

The BC government recently started conversations about amendments in the Forest & Range Practices Act (FRPA). The province should use this opportunity to remove barriers<sup>2</sup> that prevent effectively conserving ecological values and introduce science-based old-growth targets to safeguard and allow recovery of old-growth forest ecosystems that are at high ecological risk<sup>3</sup>.

Old forest policy in the province is built on the Biodiversity Guidebook direction (1995), but modified in different areas of the province through FRPA direction and implementation mechanisms (e.g. aspatial order versus spatial in some land use plans, etc.). The latter reduced potential effectiveness across the province (with the exception of the GBR).

In the vast majority of the forested ecosystems in the province, the base targets for old forest retention are significantly lower than what the science shows is needed (i.e. they represent high-risk or higher than high-risk targets).<sup>4</sup>

In addition, the 'drawdown' policy, i.e. 'temporarily' going below targets presuming recovery later, allowed the target for low Biodiversity Emphasis Option area (covering 45% of the province) to be reduced by two thirds for 250 years. For example, under the current approach a unit with a 9% target would require to meet 3% of the target today, and the remaining 6% by setting aside harvested blocks that will become old-growth over 250 years.

In addition, this policy is based on the assumption that 12% of each ecosystem was set aside in protected areas—an incorrect assumption for most low- and mid-elevation ecosystems in BC.

An example of the risk level, assuming accurate and effective implementation of the policy, is shown for two ecosystems below:

## Risk example #1:

ICHmw2 – mid elevation forest in the inland temperate rainforest.

Stated natural level of old forest (BGB) = 29%<sup>5</sup>

Protected Area = ~4% (not 12% as assumed in BGB)

Target for retention in BGB = 3% in Low BEO<sup>6</sup>, 9% in Intermediate, 13% in High BEO.

Cumulative total = 6.7% of ICHmw2 is retained as old forest by policy.

Target retention as a percent of natural = 23% of natural

**High risk overall, and very high risk over the 45% of the landscape where 3% old is supposed to be maintained.**

<sup>1</sup> With assistance from Dr. Rachel Holt, [veridianecological.ca](http://veridianecological.ca)

<sup>2</sup> For example FRPA language requiring that actions to safeguard ecological values "must not unduly impact the supply of timber"),

<sup>3</sup> For more information on ecological risk and old forest representation as indicator of coarse filter biodiversity, see the EBM handbook <https://www.for.gov.bc.ca/tasb/slrp/citbc/ebmscie.html>

<sup>4</sup> The Great Bear Rainforest is the only larger region in BC where this is not the case.

<sup>5</sup> Based on return interval of 200 years, and old >250 years.

<sup>6</sup> Based on 2/3rds drawdown, and meeting whole target only over 250 years, allowing existing old forest to be harvested and 'managed' for identifying clearcuts to be maintained for the future.

#### Risk Example #2:

CWHvm- wet west coast forest ecosystem

Stated natural level of old forest (BGB) = 37%<sup>7</sup> > 250 years

Evidence-based natural level of old forest (from FLRNORD<sup>8</sup>) = ~78 – 92% >250 years.

Target for retention in BGB = 4.5% in Low BEO<sup>9</sup>, 13% in Intermediate BEO, 19% in High BEO.

Cumulative total = 9.7% of CWHvm is retained as old forest by policy.

Target retention as a percent of natural = 12% of natural based on evidence based numbers.

**Very high risk overall, and extreme high risk over 45% of the landbase where 4.5% old forest is supposed to be maintained.**

#### Where in the province is the risk most acute?

- **In ecosystems with low levels of natural disturbance.** These are the most spectacular ecosystems in the province, the most ecologically diverse, and the hardest impacted by industry and cumulative impacts. This includes coastal temperate rainforests outside of the GBR land use planning region (e.g. Coastal Western Hemlock), inland temperate rainforest ecosystems (e.g. interior cedar hemlock ecosystems in the Kootenay / Columbia), and moist and wet mid-elevation ecosystems (e.g. Montane Spruce zone).
- **In ecosystems where the levels of protection in protected areas are low.** These are typically low elevation ecosystems which are extremely poorly represented in protected areas (e.g. Coastal Douglas Fir <1%), Interior Douglas Fir (<2%), Ponderosa Pine ecosystems (X), Boreal White and Black Spruce ecosystems (in the productive boreal forest of NE BC - <1% protected).
- **In ecosystems where there is little crown land.** The Coastal Douglas Fir ecosystem is notable in being at very high risk due to the very small proportion of crown land, and continued development on this crown land, leaving total old forest at extremely low levels.
- **In low-elevation ecosystems in general.** These areas have seen most cumulative footprint development pressure, and are generally poorly managed for their ecological values (e.g. in the Okanagan, Vancouver Island, and South Coast of BC). They also have the highest biodiversity values (most productive ecosystems), highest use by people, and highest need for connectivity.

**Conclusion:** The current old forest management approach in BC leaves the majority of productive ecosystems being managed to increasingly high ecological risk. The amount of natural old forest intended to be maintained by existing policy is far below natural levels, resulting in a high probability that ecological integrity will not be maintained.

#### Implementation Issues

Implementation issues are extensive, and include:

- **Targets are not actually being implemented**— there is no appropriate provincial capacity to ensure that targets are being met (Professional Reliance has put the onus on forest professionals and removed the onus of the Province to ensure legal targets are met). In a 2018 analysis in the Kootenays, 47 of 220 LU x BEC combinations did not meet legal targets<sup>10</sup> outlined in the land use plan;

<sup>7</sup> Based on return interval of 200 years, and old >250 years.

<sup>8</sup> Based on evidence based estimates compiled by the FLNRORD Old Forest Working Group. D. Lewis Pers. Comm., and used in GBR analyses. Range provided by return interval of 1000 – 3000 years for stand replacing disturbance.

<sup>9</sup> Based on 2/3rds drawdown, and meeting whole target only over 250 years, allowing existing old forest to be harvested and ‘managed’ for identifying clearcuts to be maintained for the future.

<sup>10</sup> FLNRORD. 2018. Biodiversity Analysis for Arrow and Kootenay Lake. Mackillop et al.

- **No requirement to identify functional patches of old forest.** Where OGMA's are identified spatially in the province<sup>11</sup>, many (most) of the areas 'set-aside' for old forest retention are not large enough to contain any interior forest habitat. Many OGMA's are <1 or <2 ha in size and are often less than one tree length in width.
- **No requirement to include the most endangered, a minimum amount of old-growth or the oldest available forest** in OGMA's. For example, in a recent analysis in the Kootenays, mapped OGMA's contained <18% old forest<sup>12</sup> and 25% of the forest in OGMA's was mid-seral and younger. In 2010, the province set aside 42,000 hectares of forest as OGMA's on Vancouver Island and Sierra Club BC found that close to half were very poor or zero productivity forest.<sup>13</sup>
- **Variable provincial policy for maintaining values in OGMA's.** Different areas of the province have variable standards to determine whether OGMA's can be harvested, and what type of stands must replace harvested areas. In some parts of the province (e.g. the Kootenays), there has been no enforcement of standards to ensure that biodiversity values are not reduced when companies decide to harvest OGMA's<sup>14</sup>.
- **No requirement to manage for connectivity across landscapes.** The concept of Forest Ecosystem Networks was an important concept included in the Biodiversity Guidebook. However, the requirement was removed. The need to manage for connectivity is significantly increased by climate change.
- **Professional Reliance – government not managing for public interest.** District Managers have no powers to ensure that the legal intent of biodiversity management is maintained. They also have no powers to assess the adequacy of the policies.

## Solution

Ecological and climate emergency requires meaningful and effective old-growth targets without delay, either as stand-alone regulation or as part of FRPA reform. It also requires removing the economic qualifier regarding impact on timber supply throughout FRPA.

### Short-term steps:

- Use existing information<sup>15</sup>, to identify ecosystems at high risk today (i.e. those in deficit, or with targets that are too low based on best available information) that need immediate protection from further reduction in old forest while additional steps below are undertaken;
- Increase the percentage threshold by ecosystem across the province (as part of FRPA, other legislation or in land use orders across the province) based on best available information (for coastal ecosystems EBM handbook)
- Remove the 'drawdown' policy that applies to 45% of the province to ensure overall intent of current coarse filter approach is realised

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<sup>11</sup> In many areas of the province, no OGMA's are identified spatially, and old forest targets are 'met aspatially'. This means that targets can be made up of many many slivers of forest, and in addition, no one can check how the targets are being maintained.

<sup>12</sup> FLNRORD. 2018. Biodiversity Analysis for Arrow and Kootenay Lake. Mackillop et al.

<sup>13</sup> <https://sierraclub.bc.ca/wp-content/uploads/2015/08/Restoring-the-Balance-for-Climate-and-Species.pdf>

<sup>14</sup> FLNRORD. 2018. Biodiversity Analysis for Arrow and Kootenay Lake. Mackillop et al.

<sup>15</sup> E.g. Provincial FLNRORD *Cumulative Effects Framework Forest Biodiversity Assessment* that has been under development for at least 5 years, but not yet released, or other locally generated recent information (e.g. Mackillop et al. 2018).

- Ensure old forest targets are met using actual representative old forest or the oldest available forest everywhere in the province.
- Re-instate the rules for interior forest and Forest Ecosystem Networks as a starting point and improve upon them. This is crucial for climate change adaptation.
- Require representative old forest in OGMA's

For coastal rainforest the science-based high-risk thresholds accepted by all parties of the GBR Agreements is 30% old-growth remaining by ecosystem and landscape unit. This threshold should be applied immediately to other coastal landscape units and inland rainforest ecosystems with similarly low levels of natural disturbance. Site series groups must not cross thresholds of productivity – and quality assurance mechanisms are needed to ensure that forests are set aside in a representative manner, including productivity (good, medium, poor).

Use the GBR restoration reserve approach for higher than high risk landscapes on Vancouver Island, the South Coast and Inland Rainforest landscapes (UVIC's ELC will start working on recommendations in short order).

Mid-term steps:

Develop science-based ecosystem targets for the entire province, outlining long-term targets for ecosystem retention similar to GBR model (the GBR order is guided by the goal to maintain 70% of the natural variation of all forest ecosystems across the region, allowing for a range of targets between 30 and 100% in landscapes, regional targets will be lower in ecozones with higher levels of natural disturbance).

Develop spatial forest reserves across all landscape units, where possible/requested, expand and develop new indigenous protected areas, seek conservation financing, carbon project revenue, etc. to support communities.