Setting Old Growth Representation Targets That Account for Range of Natural Variability (RONV): Conference Call Summary

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Prepared for the
Ecosystem Based Management Working Group

Disclaimer

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1.0 Introduction

A conference call was held in June of 2007 to follow-up on one of the outstanding questions from the old growth representation workshop held in February of that year. The question posed was

> *How can targets set as a proportion of natural old forest (based on natural disturbance rates) be achieved and implemented while natural disturbance continues on the landbase?*

An expert response based on best available ecological information was requested. The advice on this subject was not intended to account for economic costs or social choices.

2.0 Attendance

Attendance on the call included expert panelists from the February workshop, whose consensus recommendations were sought. Other call participants included invited "participants" from the February workshop and organizers of the call/workshop.

"Expert panelists"	"Participants"	Organizers
Pam Dykstra	Melissa Todd	Audrey Roburn
Karen Price	Richard Jeo	Carolyn Whittaker
Rachel Holt	Marty Locker	
Laurie Kremsater		
Paul Alaback		

Several individuals in attendance at the February workshop were unable to join the conference call so they provided written comments that were discussed on the call.This summary incorporates comments subsequently provided by panelist Allen Banner.

3.0 Agreed-to problem statement:

Old growth representation targets captured in the EBM Planning Handbook and in draft legal objectives based on Government-to-Government agreements in Central and North Coasts require the maintenance of a percentage of the natural distribution of old growth forest by site series surrogate, as a coarse filter biodiversity strategy to maintain habitat for a variety of organisms. The implicit assumption, recently confirmed by the old growth representation workshop held Feb 27th-28th in Vancouver, is that managing ecosystem representation as a proportion of the natural range of variability in disturbance regimes is a reasonable approach for defining representation targets because it reflects the processes that create and maintain ecosystems, and therefore the conditions to which component species are adapted.

Although the management targets in the EBM Planning Handbook and recent Government-to-Government agreements have been created primarily to direct forestry practices in the region, natural disturbances will continue in the region, and will also reduce the amount of old forest. If the legal requirement is only to retain proportions of the natural percentage of old forest from logging without requiring that this proportion be

maintained over time, the end result could be amounts of old forest substantially lower than the stated target, since the old forest amount would be reduced first by logging, then again by natural disturbance. Consider the following scenarios which assume a retention target of 30% of the natural proportion of old forest:

Variable	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Total Area	1000 ha	1000 ha	1000 ha	1000 ha
Natural old-growth (%)	80%	80%	60%	60%
Natural old-growth (ha)	800 ha	800 ha	600 ha	600 ha
Target retention (% of natural)	30%	30%	30%	30%
Area set aside for retention ignoring disturbance in set-aside area	240 ha	--	180 ha	--
Area set aside for retention accounting for disturbance in set-aside area	--	300 ha	--	300 ha
Old-growth in set aside area after centuries of natural disturbance	192 ha	240 ha	108 ha	180 ha
% of natural old-growth after centuries	**24%**	**30%**	**18%**	**30%**
% area in old-growth after centuries	19%	24%	11%	18%

Scenarios 1 and 3 provide sufficient representation in the short term, but do not account for natural disturbance in the long-term. Scenarios 2 and 4 account for natural disturbance in the set-aside area. The difference between short-term and long-term retention becomes more pronounced as % natural old decreases (compare 1 vs. 2 with 3 vs. 4).

4.0 Recommendations made on the call:

The implementation approach to address the problem described above should depend on three key factors: (1) the current condition of the ecosystem; (2) the representation target that is being applied; and (3) the natural disturbance rates associated with the ecosystem. In particular certain conditions merit significant concern in setting old growth representation targets:

- Circumstances where the old growth representation targets being applied are not ecologically precautionary;
- Ecosystem types that are already below 30% of total habitat at the sub-regional scale.
- Areas/ecosystems where natural disturbance rates are higher.

The consensus view of those on the call and those unable to attend is that, in most places, this issue is of relatively minor practical importance. Many ecosystems will have much more than 30% of total habitat maintained due to low productivity, inaccessibility and reserves designed for other purposes. However, there are ecosystems that meet

the conditions for concern defined above and demonstrated in Scenario 3 (see Table above).

The draft legal objectives for the Coast do not apply precautionary targets; they apply a target of 30% of the natural amount of old forest ("RONV") over most of the landbase. However, the scientific literature indicates that representing 30% or less of total habitat overall (not 30% of RONV) is a high risk strategy.

If there are ecosystems for which the target being applied at the subregional scale is 30% of RONV, we recommend that 30% of total habitat should remain unharvested, to account for ongoing natural disturbance. This would ensure that a minimum of 30% of RONV will be captured over time, while maintaining 30% of total habitat over the short term. Total habitat would include forest protected by a variety of means including hydroriparian reserves, red- and blue-listed ecosystems, inaccessible and low productivity sites and, in some cases, stand-level retention.

If there is not enough old growth to achieve this, existing old growth should be reserved, and additional younger forest should be set aside in recruitment reserves to capture a 30% of total habitat target. Monitoring of the amount of old forest at any given time will determine when habitat levels have fallen to RONV targets, and when action is necessary.

Where the target being applied is precautionary (i.e., 70% of RONV for each ecosystem type at a sub-regional scale), then disturbances can reduce the amount of old growth without it becoming a high-risk situation. If a severe natural disturbance event significantly reduces existing old growth reserves, then we expect a planning team would recognize the reduction and act to recruit additional old growth over time to eventually recover to the precautionary amount at the regional scale.

Where targets are not high risk, but not low risk (i.e., between 30 % of total habitat and 70 % of RONV), it is appropriate to apply the previously described approach, and adjusting if disturbances are severe. A second possible approach, when targets are below 70 % of RONV, is to capture the RONV target plus an additional amount of old forest collectively. The amount of additional old forest to reserve should be equal to the estimated losses of old growth to natural disturbance over a given time period before this gap is filled by existing younger forest becoming old forest