British Columbia
Greenhouse Gas Offset Protocol

Forest Carbon Offset Protocol

What We Heard Report

BRITISH COLUMBIA
Ministry of Environment and Climate Change Strategy

December 2021

Table of Contents

Introduction

The Government of British Columbia is updating B.C.'s Forest Carbon Offset Protocol (FCOP) to create a revised FCOP version 2.0. This document provides a summary of the feedback received during the engagement period from March to May 2021. The feedback will inform final revisions to the protocol, which is expected to be released in the Spring.

The input received from consultants, industry, Indigenous Nations, environmental non-governmental organizations, and others is critical to developing robust offset protocols. The government appreciates the time and effort taken to contribute feedback and support our transition to a low-carbon economy.

B.C.'s Offset Program

The B.C. Offset Program is enabled under the provincial Greenhouse Gas Industrial Reporting and Control Act (GGIRCA) and governed by the Greenhouse Gas Emission Control Regulation (GGECR). GGIRCA gives powers to the Director to approve offset protocols, which specify quantification methodologies for particular types of carbon offset projects. Protocols are also authorized to set additional eligibility and methodological requirements. Offset project plans for the B.C. Offset Program must be prepared according to protocols established under GGIRCA.

For more information on the program or offsets generally, please visit the B.C. Offset Program webpage.

B.C.'s Forest Carbon Offset Protocol version 2.0

FCOP 2.0 sets out the instructions on how to quantify greenhouse gas (GHG) emission reductions and sink enhancements from forest sequestration and storage activities. The protocol establishes project requirements for forest carbon offset projects, including the development of a project plan, as well as validation and verification requirements.

FCOP 1.0 was introduced in 2011 and repealed in 2015 with the introduction of GGIRCA. Projects approved under FCOP 1.0 continue to generate credits under grandparenting provisions of GGIRCA. There is demand for additional offset options from purchasers in the voluntary market, Federal Output Based Pricing System, and Carbon Neutral Government programs. Using input from stakeholders, technical experts, and Indigenous Nations; government is developing an updated FCOP 2.0 that reflects changes in B.C. legislation and updated best practices.

Consistent with international approaches to carbon offset protocol requirements, including the International Standards Organization (ISO) 14064-2: 2019, the World Resources Institute/World Business Council for Sustainable Development Greenhouse Gas Protocol, and others, FCOP 2.0 establishes the following:

- General eligibility;
- Guidance and requirements for establishing baseline and project scenarios;
- Categorization and calculation of forest carbon project sources, sinks, and reservoirs (SSRs) for both the baseline and project activity scopes;
- Requirements for mitigating project risk; and
- Monitoring requirements.

Moreover, the protocol outlines requirements for project proponents to ensure that the resulting offsets are real, additional (meaning they would not occur on their own in the absence of the offset investment), measurable, permanent, and verifiable.

Summary of feedback

The engagement period on the draft FCOP 2.0 ran from March 30 to May 31, 2021. During that time, government posted the draft FCOP 2.0 protocol, a discussion document, and hosted a webinar to outline key changes in the new version.

In total, government received 56 formal submissions with 568 individual comments. This response also accompanied an article written by CarbonPulse highlighting some of the feedback by interested parties.

The largest number of submissions and comments came from consultants, industry, Indigenous Nations, and environmental non-government organizations.

Table 1: Submissions by party

Party	**Submissions**	**Individual comments**
Academics	3	8
Consultants	15	197
Environmental NGOs	7	93
Indigenous Nations	11	134
Industry and Associations	12	127
Labour	1	1
Municipalities	1	1
Other	1	2
Private Citizens	5	5
Total	**56**	**568**

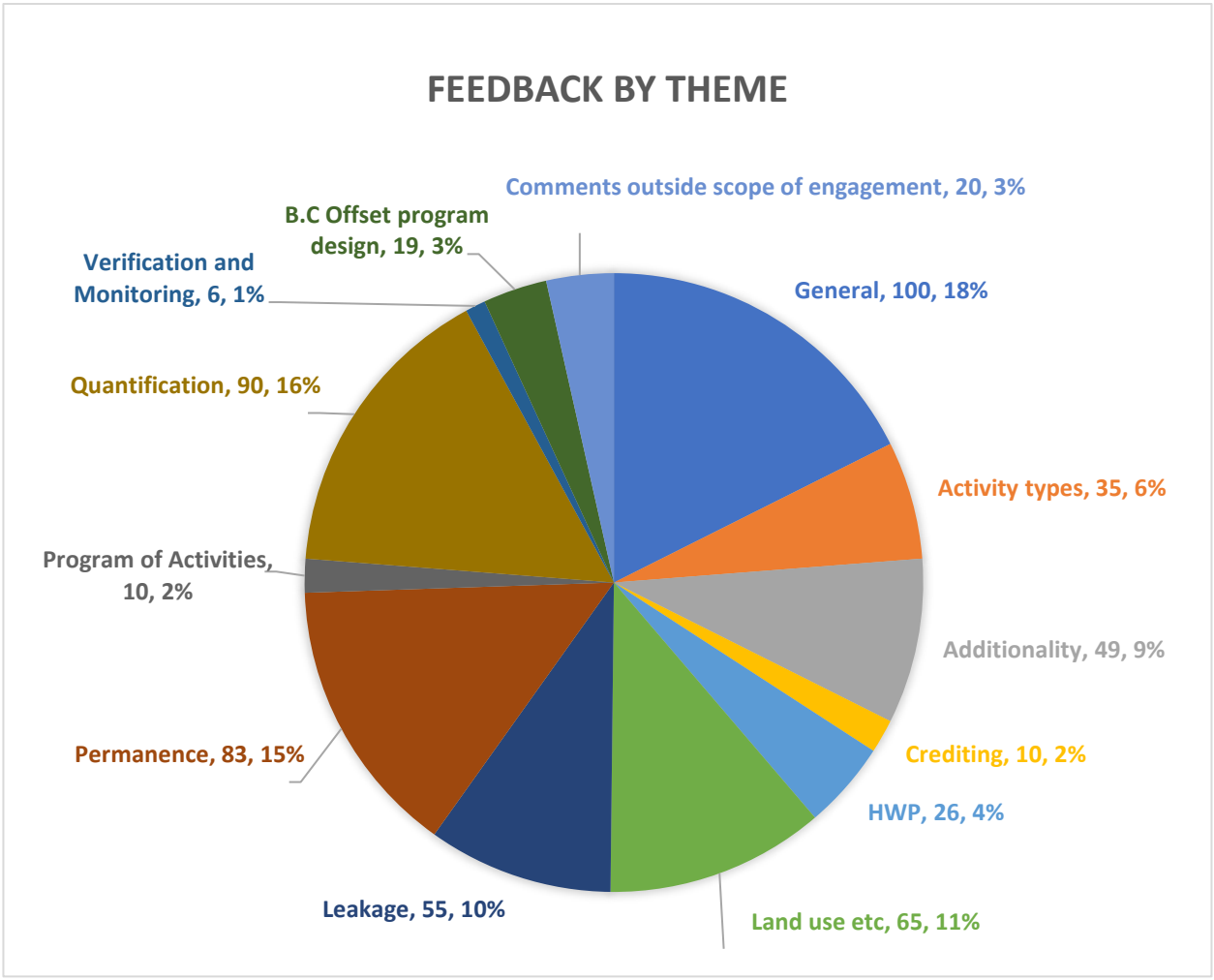
Based on the feedback received, the following 13 key themes were identified:

- General
- Project types
- Additionality
- Crediting
- Harvested Wood Products (HWP)
- Land use, entitlement to offset units, and right of access
- Leakage
- Permanence
- Program of activities
- Quantification
- Verification and monitoring
- B.C. Offset Program design
- Comments outside scope of engagement

Overall, there were a high number of responses regarding quantification, permanence and land use. Broadly, comments noted that the cumulative number of deductions due to leakage and risk of reversal

render projects uneconomic. Deductions are made to the total number of offsets generated to represent increased emissions elsewhere as a result of the activity (i.e. increased harvesting). Deductions are also made to address the risk that projects may not be permanent (i.e. encounter fire or pests). Comments also requested that government allow for more flexibility and customization of quantification methodologies, including flexibility for determining forest carbon reservoirs and leakage.

Figure 1: Feedback by theme



The following sections summarize the feedback received for each of the 13 themes.

Theme 1: General comments

Many comments emphasized the role of forest carbon offsets in Indigenous reconciliation and how the draft protocol may represent a missed opportunity for the government to build reconciliation. Historically, forest carbon offset projects have helped enable forest management activities for First Nations in B.C., and have led to economic diversification. Many comments noted that the development of FCOP 2.0 may impact the ability of Indigenous communities to derive benefits from carbon that is sequestered as a result of forest policy and land-use decisions on Indigenous territory, and therefore engages the province's duty to consult. Indigenous Nations noted the importance of Indigenous representation and aligning with the *Declaration on the Rights of Indigenous Peoples Act* or the Draft Action Plan. Indigenous Nations also noted the lack of capacity funding for Indigenous communities to engage in forest sequestration activities. It was recommended that the Province develop an Indigenous forest carbon entity that serves Indigenous communities as they scope future forest carbon offset projects. Proponents encouraged government to review the protocol and accompanying land use policy by the Ministry of Forest Lands, Natural Resource Operations and Rural Development (FLNRORD) and Ministry of Indigenous Relations and Reconciliation.

Other comments requested a clear recognition of co-benefits (such as Indigenous reconciliation, traditional ecological knowledge, biodiversity, climate change adaptation, and ensuring no net environmental harm). Comments further requested acknowledgement of forest management strategies that allow for bundling of nature-based solutions beyond carbon sequestration, and development of a provincial nature-based solutions policy. Other comments spoke to the need for diversification in the forest sector, of which carbon sequestration can play a role.

Many comments questioned the need for a Registered Professional Forester to develop the Project Plan and Project Reports and the need for an appraisal (in the case of avoided conversion projects) prepared by a member of the Appraisal Institute of Canada, noting that both requirements will add to project development costs.

Several comments from current project proponents strongly recommended government ensure that adequate pathways are available to extend the crediting period of legacy projects (as discussed below under the "Crediting" theme).

A few comments stated that the definition of Forest Land should be modified to be more consistent with the National Forest Inventory, which defines forest land as land spanning more than 0.5 hectares where the tree canopy covers more than 10% of the total land area and the trees can grow to a height of more than five metres. Regarding standards for seed use, it was recommended that projects be required to use species native to B.C. and locally adapted provenances and limit the planting of genetically modified and non-native tree species.

A few comments requested that the government consider ways to reduce barriers for smaller land-holders and local and Indigenous governments, for example, by creating more public frameworks for assessing regional carbon stocks or establishing a spatial information system to assess tenure-level carbon sequestration.

Other comments noted that FCOP should be frequently updated to ensure consistency with national and international best practices in offsetting and that government consider all future forest policy enhancements with carbon sequestration and climate resilience in mind.

Theme 2: Project types

Currently the protocol enables three types of projects:

- Tree planting (afforestation and reforestation);
- Conservation/improved forest management (i.e., such as avoided harvest, extended rotation age, establishment of conservancies); and
- Avoided conversion (of forested land to non-forest land).

Feedback on the protocol identified several other potential project types, such as improved utilization of wood fibre into longer-lived Harvested Wood Products (HWP), or the recognizing of the substitution benefits of HWP in lieu of concrete and cement (see the "HWP" theme below). Many respondents also identified the potential of an avoided slash pile activity scope, as well as fuel management that would reduce future wildfire risk.

Many comments noted the pitfalls associated with the existing project types. Several comments noted how afforestation and reforestation projects would be difficult to implement under FCOP as there are high deductions. Comments also stated that without the ability to issue forward crediting in advance of the actual reduction occurring, they would not be able to secure the upfront financing needed to make tree-planting projects work.

Several comments specifically focused on the avoided conversion project type. Some respondents requested that FCOP recognize the protection of intact forests that are not subject to development pressures, and that the funding from credits would help fund Indigenous Guardianship programs. Other comments noted how avoided conversion projects have been accused of overstating claims of deforestation that may not actually occur.

Some submissions requested clarity from government on several edge-cases where proposed activities straddle one or many activity types, or do not necessarily align with the established eligibility requirements in section three of the protocol.

Theme 3: Additionality

Additionality in the draft FCOP is established through several different mechanisms. First, proponents must demonstrate how the financing from offsets enables the project to overcome financial barriers that would have prevented the project from starting. The project must also establish a conservative baseline that most accurately represents what would have happened in the absence in the project. The draft protocol also includes a requirement that when establishing the project and baseline scenario, "[a]ny declines in normal harvest levels in the short- to mid-term must be no more than or equal to 10% per decade". The justification for the 10% per decade requirement was to put guardrails around baseline-setting and ensure conservativeness, however as shown below, that may have impacted the viability of projects.

10% harvesting limits in the project and baseline scenario

A significant number of comments stated that the draft FCOP's requirement that "[a]ny declines in normal harvest levels in the short- to mid-term must be no more than or equal to 10% per decade" for the project and baseline scenario undermines the purposes of the protocol and limits the ambition of projects. These comments suggested that the requirement be removed or modified to allow for a greater quantum of credits to be generated. Stakeholders further suggested that FCOP should not be the mechanism under which land use (i.e harvest rates) should be dictated, and instead should be the tool to recognize and quantify eligible projects.

One comment added that hypothetical harvest forecasts in the baseline should not only consider historic annual allowable cut, but market capacity and social license. Such a baseline could be below historic annual allowable cut.

Fund stacking and financial barriers

Many comments were focused on the criteria FCOP uses to assess the extent to which proponents must demonstrate they are overcoming financial barriers. Commenters expressed a desire to have FCOP 2.0 rules allow proponents to combine funding sources from different sources beyond the offset market in order to finance offset projects. Many comments requested clarity on the financial additionality provision in section 3.6 of the protocol.

Establishing and adjusting baseline scenarios

Proponents suggested several additional baseline scenario candidates or approaches which would best represent what would have otherwise happened in the absence of the project. Several comments recommended the use of 'common practice' tests in lieu of, or within the project specific baseline scenario approach. Common practice tests or candidates would allow for proponents to point to forest practices occurring within a certain regional boundary, and use that as the basis of the baseline. A few comments also recommended that government consider a baseline approach that considers the maximum net-present value of future timber harvest flows or forecasts, which may include long-term sustainable yield (at the low end), or liquidation logging (at the high end). Several comments recommended the adoption of baseline approaches from the American Carbon Registry Improved Forest Management on Non-Federal U.S. Forestlands protocol.

A few comments noted that five to 10 years of historic records is adequate to determine additionality, and that 20 years of historical records is unnecessary and unreasonable, particularly for Indigenous communities. Other comments expressed satisfaction with the 20-year reference period.

One comment noted that internationally successful forest carbon offsetting programs had seen pre-approval of the baseline scenario by the program administrator. This would entail submission of the baseline scenario approach to the Director, followed by a review and decision by the Director which would be contained within the eventual project plan.

Several comments noted that after-the-fact adjustments to the baseline as a result of new and more stringent regulatory requirements will erode the ability of the project to generate emissions reductions and removal enhancements. An example of such a regulatory requirement would include landscape level protections that would encompass the project site prohibiting logging. It was recommended instead that baselines and additionality be assessed at the time a project plan is submitted, therefore locking in the project and ensuring that the forecasted emissions reductions and removals established at the time of approval of the project plan extend throughout the full life of the crediting period.

Additionality for avoided conversion projects

Avoided conversion projects involve demonstrating that forest land is under imminent threat of conversion to non-forest land use (i.e. commercial, industrial, or residential). One comment identified how avoided conversion projects in the past had struggled to demonstrate the actual potential threat to the forest, therefore the protocol requires rigorous safeguards to ensure additionality (i.e. imminent threat). Others requested clarity as to how 'imminent threat' is defined under the avoided conversion activity scope.

Theme 4: Crediting

Credits are generated from approved projects that sequester GHGs out of the atmosphere or keep emissions from being released. A crediting period is a period during which project GHG emission reductions or removals are eligible for issuance.

Comments received during the feedback period noted that legacy projects previously approved under GGIRCA do not have a clear path to extend their crediting periods. Further, comments noted that the proponent needs to justify a new baseline to extend the crediting period of existing projects. Proponents of legacy projects noted that there are inadequate provisions to establish a baseline scenario representing what would have otherwise occurred.

Some comments recommended a single continuous crediting period for 100 years or a 75-year automatic extension to existing projects, or if that is not possible, then recognition of original additionality justification in the original project plan. Other comments recommended the ability to change crediting periods, specifically from 25 years to a 50-year scope.

Another common comment from submissions was that the protocol should be designed to ensure that credits generated are eligible for acceptance and inclusion of the federal offset program. Comments also asked for government to clarify how projects prior to January 1, 2017 would be eligible under that system.

Theme 5: Harvested Wood Products

Harvested wood products (HWP) are wood-based materials used in furniture, plywood, paper, paper-like products, and energy. The length of time of use and disposal methods of wood products can significantly impact the carbon sequestered in a project.

Comments requested that government modify FCOP or develop a new protocol that acknowledges the substitution effects of increased harvested wood production compared to conventional building materials. Comments also recommended that FCOP quantify storage of carbon in HWP in landfills.

Other comments requested the ability to make custom assessments with regard to the storage of carbon in HWP, and asked for the development of a HWP calculator tool that allows for easy plug-in of values. Alternatively, comments requested the incorporation of the B.C. HWP Carbon Calculator tool.

Comments also requested guidance on assessing wood density values for not only green biomass, but oven-dried and air-dried biomass.

Other comments requested the inclusion of tonne-year accounting to describe the radiative forcing benefits of forest carbon sequestration, particularly in long-lived wood products.

Some comments noted that there is a need for revised thinking around eligible activities. Some sources noted that the amount of carbon that remains stored in HWP after 100 years is only a small percentage of the original stored amount, therefore the increase in HWP should not be considered an eligible activity under FCOP. Other feedback concluded that the option of considering carbon stored in HWP to emit instantly is only available where project harvesting is higher than baseline harvesting. Therefore, HWP determinations must be made for conservation projects. Other proponents requested to construct their carbon fractions in HWP for other wood products, such as mass wood.

Other comments requested that government direct funds from FCOP towards collating research on the greenhouse gas impacts of traditional harvest, milling, and harvested wood product carbon lifespan.

Theme 6: Land use, entitlement to offset units, and right of access

Currently, the draft FCOP requires that for projects on Crown land, the project proponent must have authority to access and use Crown land (i.e. a tenure, land use agreement, master licence of occupation) and entitlement to the atmospheric benefits generated by the project for the duration of the crediting period and monitoring period. For projects on private land, proponents must hold proof of fee-simple ownership for the duration of the crediting and monitoring period. Projects must secure a right of access to the project site for the duration of the crediting and monitoring period.

Projects on Crown land

A significant number of comments requested clarity around how Indigenous peoples, timber producers, and other interested parties can establish projects on Crown land.

Several comments requested that the protocol explicitly recognize and affirm Indigenous Rights and Title and include the requirement for free, prior, and informed consent for all projects. Indigenous Nations who submitted comments on the draft FCOP stated that they already have the authority and access to use Crown land outside of reserves and tenures. Several comments noted that the draft protocol places responsibility for approval of access to Crown land for the use of forest carbon offset projects in the hands of the Ministry of FLNRORD.

In the past, rights to the offsets (atmospheric benefits) generated on Crown land have been recognized under Atmospheric Benefit Agreements (ABAs), Atmospheric Benefit Sharing Agreements (ABSAs), or Indigenous Atmospheric Benefit Agreements (IABAs) which are negotiated between proponents and the Crown. Some groups noted however that the government does not have clear guidance on how to establish ABAs, ABSAs, or IABAs. Some comments noted how the current Treasury Board Directive 2/15 (Authority to dispose of Atmospheric Benefit Rights and enter into Agreements respecting sharing of Atmospheric Benefits Rights) does not apply to Indigenous Nations already engaged in a reconciliation agreement process. Some groups asked for clarity as to when the government would deny the request to undertake an ABA/ABSA/IABA.

One comment noted how the previous protocol included language that enabled projects if there were land use agreements legalized through Ministerial Order that require that all industrial activities comply with these and any additional legislation within the project area.

Several comments requested clarity on how future forest carbon offsets will interact with the existing tenure system, specifically where there is conservation or reduced harvest in the timber harvesting land base. One comment requested clarity from the government on how current tenure holders will be consulted in any planned land-use changes. Some noted how the current tenure system (i.e. tenure, land use agreement, master license of occupation) does not afford a minimum length of 125 years, which is the length of one crediting period and the monitoring period.

Projects on private land

Several comments recommended that the definition of 'private land' include Indian Reserves, Title land, Treaty land, and other forms of Indigenous Title. Another comment suggested that Indigenous land be treated distinctly from Crown land.

Some comments suggested requiring covenants on private land to ensure permanence. One submission requested that government consider developing a streamlined land covenanting process for carbon and biodiversity offset projects for private lands.

Theme 7: Leakage

In forest carbon offset projects, leakage occurs when emissions increase elsewhere as a result of the project activity. The protocol establishes deductions that are applied to the total number of net GHG removal enhancements to compensate for land use-shifting leakage and harvest-shifting leakage. The protocol calculates land use-shifting leakage by estimating the loss of carbon reservoir elsewhere due to changing demand in non-forest land use. The protocol also uses domestic and international timber market data to estimate harvest-shifting leakage, which assesses the loss of carbon reservoir elsewhere due to change in the supply and demand of timber.

Currently, the draft FCOP assesses leakage at the onset of the project. Project proponents have the ability to reassess leakage throughout the life of the project. Proponents agreed that revisions to leakage calculations should be permitted over the life of the project to reflect for real-time market dynamics.

Overwhelmingly, comments on leakage focused on harvest-shifting (market-shifting) leakage. Very few comments focused on land-use (activity-shifting) shifting leakage. Comments on harvest-shifting leakage generally advised that the factors would significantly impair the ability of the forest carbon offset project to be economically viable.

Several comments requested the adoption of different approaches to determine harvest-shifting leakage found in other methodologies, such as the Climate Action Reserve, American Carbon Registry and Verified Carbon Standard (VM0010 and VM0012).

Some comments pertaining to leakage recommended that government only consider market dynamics inside Canada and omit international market supply and demand. Other comments suggested that since globally, harvesting has increased, external harvest shifting leakage could be 100%, and that the current methodology in the draft protocol is inadequate.

Further comments focused on particular terms of the equation used to determine external harvest-shifting leakage introduced by Murray, McCarl, and Lee (2004) and found in Appendix C of the protocol. Particularly, responses provided commentary on how to determine demand and supply price elasticity of timber harvested in B.C. and the preservation parameter (market share of timber of the project).

Comments suggested updating the default price elasticities found in Appendix D of the protocol. Some comments noted that integrated or dynamic global forest product and trade models could provide more accurate values. It was noted that due to the long time horizons, inputs into this calculation see high ranges of uncertainty. Some stated that in the long run, supply becomes more elastic, reducing leakage. Others stated that growing climate ambition reduces supply elasticity at a global level, and therefore harvest-shifting leakage is overstated.

Comments regarding the preservation parameter or the projects market share of timber requested the ability to adjust the parameter and consider smaller scale projects. Comments stated that the preservation parameter is too high, and results in understated leakage.

Theme 8: Permanence

Forests are subject to a variety of disturbances that reduce carbon storage. To address this risk and help ensure projects have real and permanent emissions reductions, FCOP and GGECR require that sequestration must be guaranteed for 100 years after the end of the project crediting period.

Contingency Account

To ensure permanence for 100 years, B.C. requires that up to 51 percent of offset units generated are contributed to a regulator-managed contingency account. In other jurisdictions, the contingency account is called a 'buffer pool'. Many comments noted that the contingency account contributions, based on the risk of reversal, are prohibitive for project development. Some suggested using the same flat risk of reversal as the California Air Resources Board, noting that there has never been a reversal large enough to come close to depleting a buffer pool. Others recommended adopting the VCS Non-Permanence Risk Tool, which assesses internal, external, and natural risks.

Several comments requested that contingency account units be returned to the project proponent at the end of the monitoring period or in segments throughout the monitoring period to incentivize monitoring after crediting. Comments recommended re-evaluating the risk of reversal factors every ten years, and if the risk profile of the projects is low, then a percentage of units should be made available to sell.

Government also received comments on whether the risk of reversal accounted for intentional reversals. One comment requested clarification if intentional reversals see contingency account unit retirements. Some comments recommended that only unintentional reversals see retirement in the contingency account. Others suggested terminating projects if carbon stocking falls below the baseline.

One stakeholder expressed concern about proponent default due to a) timber market pressures and trade-offs and b) impairments to the property's liquidity and market value. The stakeholder continued that defaulting has no monetary consequences to the developer as adjustments are made to the contingency account until the project reaches the baseline and/or the project is terminated. Another comment sought clarity as to if the government could simply put land in trust during the monitoring period.

For previous forest carbon offset projects, negotiated agreements using Crown land for the purposes of carbon offset projects disclose an amount of credits that are deposited to the Crown in the event of government-mandated changes to land use. Several comments requested that FCOP consider Crown-induced impairments as removals to be managed by the contingency account. Other comments recommended that government compensate the proponent for the value of the reversal (including verification costs) in the event such a reversal occurs. It was noted that any unilateral decision by the government to impair removals on Indigenous community-led projects would not be met with support.

Examining the risk of reversal

Four comments addressed the use of biogeoclimatic ecosystem classification zones and natural disturbance return intervals. One comment stated that depending on the biogeoclimatic zone, some stands might have less than a 100-year fire return interval, which is to say that only a percentage of trees will not reach full permanence according to the government's regulatory requirements. One

comment indicated that the risk of reversal percentage would be 0.184% per year according to natural disturbance data in other Timber Supply Areas.

Several comments noted that inputs into determining the risk of reversal are dated and are unlikely to consider future increased climatic risk. Three comments noted how neither Biodiversity Guidebook (1995) or Fire and Vegetation Dynamics by Johnson (1992) refers to pre-Indigenous contact risk of reversal and post-Indigenous contact risk of reversal, which may be problematic. Several comments also noted that since the climatic risk is intended to be captured by the risk of reversal discounts, quantification (S. 8.1.1.2) should not need to consider future increased climatic risk.

Seven comments noted that there are no defined values for risk mitigation measures. One comment recommended that each factor represent a "10% deduction from the percentage of units contributed to the Contingency Account at each issuance". Another comment suggested the use of a matrix-style approach with "low," "medium," and "high" magnitudes, such as the VCS Non-Permanence Tool. Another comment suggested that transparency around the quantum of credits that are deducted would help investment in such risk mitigation measures by the proponent.

Permanence and Indigenous Communities

Four comments noted that "natural disturbance types already account for Indigenous stewardship and sustainable land management practices." One comment further noted that the process of assigning risk mitigation measures is unfair for Indigenous Nations as stewardship and sustainable land management activities would not be eligible for risk mitigation measures.

Other comments on permanence

Some comments suggested that government consider the inclusion of legal provisions which discourage default. It also noted that this might result in costly and lengthy legal challenges.

Some comments recommended tonne-year accounting that recognizes the radiative forcing benefit over a standard 100-year timeline and avoids the need for permanence requirements in FCOP.

Theme 9: Program of activities

Government received comments describing the benefits of a well-designed program of activities methodology for projects, specifically smaller-scale projects.

Some comments recommended that individual project instances be considered separately in terms of risk of reversal, and that reversals that occur on one project instance remain tied to that instance. Another commenter noted how a program of activities could reduce project risk as the risk is pooled for the entire program. Other comments requested clarification on the criteria of "homogenous" for different project instances under a program of activities. There were also comments requesting that the start date of the first project instance not limit the crediting period of project instances that join a project later and, instead, suggested that they receive full 25-year crediting periods and not terminate when the first instance reaches full term.

Theme 10: Quantification

The draft FCOP 2.0 includes requirements for establishing a forest inventory, selection and use of models, and adjustments to modelling over time.

Model use and quantification of sources, sinks, and reservoirs (SSRs) solicited the most comments during the draft engagement. Most of the comments advocated for flexibility in the protocol regarding selection of methodologies for establishing forest inventory data, estimating timber growth and yield, and use of a carbon budget model. Some submissions contained very detailed summaries of the shortfalls of the models that had been specified in FCOP. Several stakeholders noted that the Verified Carbon Standard VM0034 allows for the inclusion of particular models based on principles and approaches included in the protocol, and requested similar flexibility.

Forest inventory

Comments pertaining to the establishment of forest inventory data for a project were generally opposed to the requirement that the B.C. Vegetation Resource Inventory sampling protocols are required by FCOP. Many comments outlined shortcomings of the Vegetation Resource Inventory, such as plot size requirements and difficulty in achieving statistical certainty. It was recommended that alternative methods for establishing forest inventory be offered in FCOP, such as FLNRORD's cruising procedures for stumpage appraisal, or other methods.

Growth and yield

Many comments illustrated the shortcomings of growth and yield models identified in FCOP, namely the Variable Density Yield Projection (VDYP), Tree And Stand Simulator (TASS), and Table Interpolation Program for Stand Yield (TIPSY) models. Comments described the limitations of these models in considering future scenarios involving climate change and handling diversity in species, age and structure. It was recommended that alternative models be permitted to assess growth and yield of forest stands.

Carbon budget models

Several comments expressed concern that the protocol requires the Carbon Budget Model of the Canadian Forest Sector Version 3 (CBM-CFS3) and recommended the use of other models such as FORECAST, CO2Fix, and Landis II be allowed under FCOP. As with the growth and yield models above, comments noted that the CBM-CFS3 does not adequately handle stands with species or age diversity. A few comments noted how it is difficult to incorporate field sampling into CBM-CFS3 results. Some comments noted how model pre-selection of the CBM-CFS3 resulted in under-crediting in some current legacy forest carbon offset projects in B.C., and that the integrity and accuracy of the selected model should be evaluated at the validation and verification stages of project development. Comments also noted that the protocol does not offer guidance on how to link growth and yield models with the CBM-CFS3, which could result in over-crediting.

Other comments on quantification

There were comments requesting that proponents be enabled to have credits issued retroactively respective of credit vintage if it has been determined that projects had been underestimated. Some comments expressed frustration that the Province would not accept liability for any errors with government-developed models. Other comments called for a mechanism for credits to be issued

retroactively where offsets under previous projects have been underestimated and emphasized these projects' role in advancing Indigenous reconciliation.

One comment requested that government consider publishing case studies to demonstrate how development of an inventory and modelling is expected to be performed as per FCOP 2.0.

Theme 11: Verification and monitoring

Protocols cover GHG accounting rules and program requirements for monitoring, reporting and verification of carbon offset projects. In other words, they outline the rules and procedures to determine project eligibility, additionality, and baseline and project emissions for a particular project type.

Some comments focused on the processes in the verification and monitoring phase. For example, the draft FCOP prescribes which forest inventory and carbon budget models are suitable and requires that a Registered Professional Forester be involved in all phases, whereas one comment noted that the focus should be on the validation and verification stages.

Other comments suggested aligning the reporting, verification, and issuance processes to the forest inventory timing. These comments proposed that a mandatory five-year verification and annual issuances based on the estimate from the last verification would save time and money.

Some comments noted that the draft protocol treats the validation of new projects and projects seeking to extend their crediting the same, resulting in projects seeking extension failing validation as those conditions are likely no longer to be additional.

Theme 12: B.C. Offset Program design

The BC Carbon Registry Offset Program is designed to regulate and enable offset projects within B.C. Government received many comments stating the need to scale up the program by expanding the current market from B.C. to include an international market. There was also interest in integrating with the Federal Greenhouse Gas Offset system and improving fungibility with other systems.

Comments also emphasized the need to increase the customer base rather than just having the B.C. government as the primary purchaser of offsets. Other comments expressed interest in expanding the scope of the offset program to allow offsets to be used to reduce carbon tax payments.

It was also noted that being accredited under the International Carbon Reduction and Offset Alliance would signal the integrity of the B.C. Offset Program and further enable sale of offsets.

Comments outside the scope of engagement

During this engagement process, many comments were submitted encouraging the government to take stronger action in the conservation of old-growth forests. However, these comments were considered outside of scope as FCOP is only an enabling mechanism for establishing forest carbon offset projects undertaken at the initiative of project proponents.

Pathway to completing FCOP 2.0

Feedback is currently being incorporated into a final version of the protocol. During this time, government will conduct independent analysis of the submissions to ensure the usability and rigour of the protocol. A final version of the protocol is expected to be released in early 2022.