

Draft Forest Carbon Offset Protocol

Overview Presentation – Dec 7, 2010 (9:00 am – 11:00 am)



Webinar Presenters

- Carolyn Kamper - Director, Business Partnerships
Climate Action Secretariat
- Tim Lesiuk - Executive Director, Business Development
Climate Action Secretariat
- Moderator:
- Ken Baker - Project Manager, Forest Carbon Offset
Protocol (FCOP)

Agenda

Time	Topic	Presenter
9:00 am	Introduction of Presenters	Ken Baker
9:05 am	Agenda Review and Webinar Objectives	Ken Baker
9:10 am	Offset Project Fundamentals, Purpose of a Forest Carbon Offset Protocol	Tim Lesiuk
9:20 am	FCOP Overview	Carolyn Kamper
9:30 am	Protocol Structure and Content	Tim Lesiuk
10:30 am	FCOP Next Steps	Ken Baker
10:35 am	Questions from Participants	Presenters
10:55 am	Closure of Webinar	Ken Baker

Webinar Objectives

- Purpose of BC based forest carbon offset protocol
- Protocol development process
- How the protocol supports development of carbon offsets in BC's forests
- Next steps and implementation

The Role of BC Forests in Climate Action

- BC's forests play an important role in sequestration of carbon
 - Approximately 2/3 of BC is forest and range lands
 - 59 million hectares of forests in BC
 - carbon is sequestered in the trees, roots and soils
 - harvested wood products from BC's forests represent a significant sequestered carbon pool
 - Land use and forest management choices influence the amount of carbon removed from the atmosphere and stored in the forest and harvested wood products
- Government initiatives to increase carbon sequestered by BC forests include:
 - Zero-net Deforestation – replace forests lost through development
 - Wood First Initiative – shift to seeing wood as preferred choice
 - Forests for Tomorrow – replace trees lost to fire and insect impacts

What is a Carbon Offset Protocol?

- A Carbon Offset Protocol is a set of instructions enabling project proponents to quantify GHG offsets for a particular project type
- Requirements must be flexible enough to be used by a wide variety of projects of a given type
- Why is a Forest Carbon Offset Protocol important for BC?
 - Encourage enhanced forest carbon sequestration capacity through BC forest management activities
 - Unlock new streams of revenue for the Province, First Nations, forest companies, private land owners and environmental enhancement projects
 - Ensure BC offsets are high quality and credible
 - 2008 Throne Speech commitment to partner with First Nations to confront challenges of climate change through, among other actions, development of emission offset projects that benefit BC First Nations

Two types of Carbon Offset Projects

- Carbon Offset Projects are designed to achieve **REDUCTION** of GHG emissions and/or **REMOVAL** of GHG emissions from the atmosphere

Examples include:

1. Fuel switching from use of diesel fuel to natural gas results in a net **REDUCTION** of emissions
2. Growth of trees results in a **REMOVAL** of carbon from the atmosphere as atmospheric CO₂ is converted to sequestered carbon (biomass) through photosynthesis

Key carbon offset recognition criteria

Key Offset Recognition Criteria

1: Real

- An identifiable project
- Sound methods available to quantify GHG emissions

2: Additional

- Reduction beyond business as usual and regulatory requirements
- Allows project to overcome economic and technical barriers

3: Permanent

- Offset has a lasting impact, measured relative to a 100 year time scale

4: Verifiable

- Can be quantified, monitored and audited
- Measurement uncertainty is minimized

5: Clear Ownership

- Clear ownership of the offset attributes by the party claiming them

FCOP Project Objective

- Create a forest carbon offset protocol by February 2011
 - Meet provincial regulatory requirements and guide the design, development, quantification and verification of forest carbon offset projects in BC;
 - Eligible for use under both the Greenhouse Gas Reduction Targets Act and the Greenhouse Gas Reduction (Cap and Trade) Act; and
 - Streamline the creation and recognition of credible forest offsets in BC to attract investment into the forest and silviculture sectors

FCOP Project Overview

Who is involved?



Climate Action Secretariat – project sponsor

- CAS is part of Ministry of Environment and responsible for climate action policy and protocol approval/implementation



Project Steering Committee – project direction and decision

Tim Lesiuk (Climate Action Secretariat), Scott McDonald (Pacific Carbon Trust), Kathy Chopik (Ministry of Forests, Mines and Lands), Rob Draeseke (Ministry of Aboriginal Recognition and Reconciliation)



Project Team – project implementation

Agency representatives – Carolyn Kamper (CAS), David Muter (PCT), James Sandland (MFML), Lindsay Wood (MARR)

Project Support – Ken Baker (Project Manager), Stephan Wehr (Technical Writer)



Technical Working Group – expert advice

Experts in forest management, forest carbon, and carbon offsets

FCOP Project Overview

Project Plan

Project Stages	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan-Mar
Design – project plan	Active							
Direct – project oversight	Active							
Draft – protocol content		Active						
Engage – expert advice			Active					
Refine – revise protocol				Active				
Consult – stakeholder input						Active		
Finalize – protocol document								Active
Formalize – approve protocol								Active

FCOP Project Overview

Engagement Approach

Activity	Objective
Technical Working Group	Obtain advice from knowledge-based group of experts on forest management and forest carbon
Public Info Sessions	Inform interested and affected stakeholders, First Nations and public about project and engagement opportunities
Sector Info Sessions	Share information on protocol content and progress during project
Public Consultation	Provide opportunity for individuals and organizations to comment on draft protocol http://www.env.gov.bc.ca/cas/mitigation/fcop.html

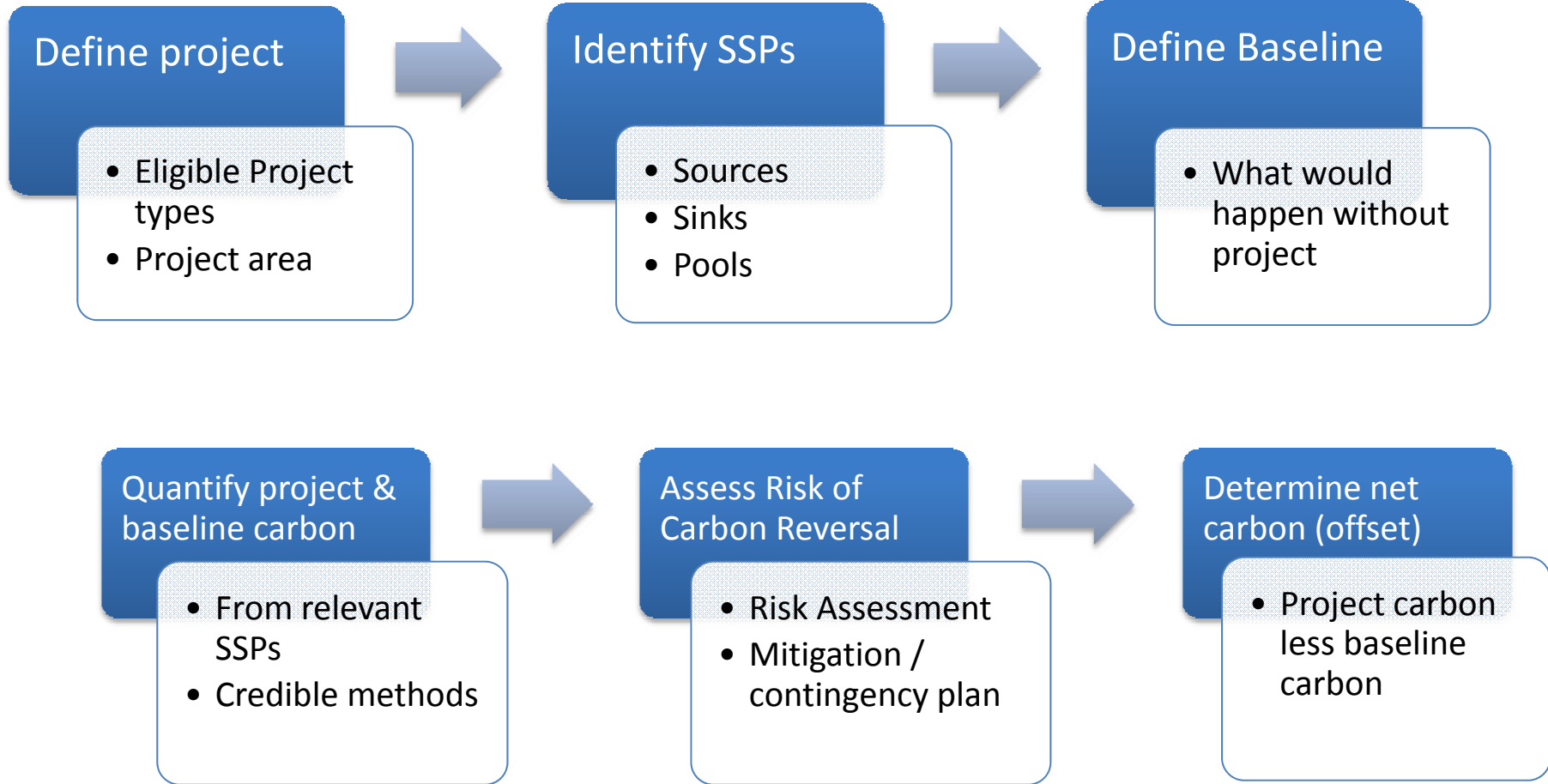
Protocol Structure

- Applies to a wide variety of forest project types
 - Core sections apply to all forest project types
 - Subsections provide additional project-type specific detail where required
- Modular document that can be revised in the future
 - as knowledge and experience is gained
 - when additional project types are added
- Demonstrates conformance to BC regulatory requirements for offsets and ISO 14064-2
 - Includes transparent explanation/justification of approaches used to develop protocol methods and choices made

Scope

- Four project types
 1. Afforestation: establish new forested land base
 2. Reforestation: re-establish forests beyond the requirements of existing BC regulation
 3. Improved Forest Management: enhanced forest management practices in addition to those required by law
 4. Conservation/Avoided Deforestation: prevent deforestation of land for non-forest land uses
- Protocol does not consider non-GHG criteria or carbon ownership
 - ‘no-net-environmental-harm’ provisions not included
 - Relies on BC’s strong framework for forest management, environmental and other laws to manage non-GHG aspects of offset project activities
 - A separate initiative is investigating how to clearly define and streamline the process of assigning and transferring ownership of carbon rights

Protocol 'flow'



Protocol Applicability, Project Eligibility

- Clear, concise definitions of eligible project types
- High-level project types defined, rather than detailed eligible activities (e.g. Improved Forest Management generally, rather than specific types of IFM)
- Goal is to ensure that only project types for which appropriate quantification methods have been provided in the protocol are eligible to use the protocol
- Focus is on carbon accounting, not other factors

Project GHG Sources, Sinks and Pools (SSPs)

- **Sources:** GHG emissions
 - e.g., fuel combustion, decay of trees
- **Sinks:** removals of GHGs from the atmosphere
 - e.g., tree growth
- **Pools:** where carbon is stored
 - e.g., live and dead biomass, harvested wood products (HWPs) , etc.
 - where a pool is identified, associated source and sink processes are not separately identified
- Protocol includes a flow diagram of main forest project activities, including ‘upstream’ and ‘downstream’ activities, and then uses the diagram to identify potentially relevant SSPs for the project

Project Baseline Selection

- For emission reduction / removal projects the comparison baseline scenario is a key variable affecting offsets
- Baseline: ‘what would have happened in absence of the project’
- Need to consider range of potential baseline options and select appropriate approach for the project type
 - Historic benchmark
 - Legally required practices
 - industry standard practice
 - projection based standard
- Goal for the protocol is, for each project type, to simplify the baseline selection and justification process as much as possible
 - Rule out options that would clearly not be potential baselines for project types
 - Specify key criteria to be considered on a project-specific basis

Project Additionality

- Credible offset projects must be ‘additional’ to what would have happened without the project
- BC Emission Offset Regulation requires demonstration of financial, technological or other project barriers at least partially overcome by value of offsets
- Afforestation and reforestation projects on Crown land are automatically deemed to be additional (as long as not required by law)
- Other project types need to complete a standard additionality assessment

Project and Baseline SSPs

- Process where project and baseline activities, both on-site as well as ‘up-stream’ and ‘down-stream’ are considered
- Potential GHG emission sources, sinks, pools identified
- Identified project and baseline SSPs compared in order to create a final set of ‘relevant’ sources, sinks and pools
 - SSPs that do not change between project and baseline, or that are immaterial are not relevant

Project and Baseline SSPs

- Carbon Pools:

Standing live trees

Shrubs, herbaceous understory

Live roots

Standing dead trees

Lying dead wood

Litter and forest floor

Soil

Harvested Wood Products in Use

Harvested Wood Products in landfills

- Also, other emission sources related to fuel combustion, fertilizer N₂O emissions, etc

Quantification of SSPs

- For each relevant SSPs, the protocol must specify quantification methods to be used
- For forest carbon inventories and modeling, protocol includes detailed instructions for selecting standard approaches that meet criteria for rigorous, consistent results
- Methods for emission sources like fuel combustion are more explicitly stated in the protocol
- Protocol aligned to allow the use of as much current forest inventory practices as practical, such as Timber Supply Review

Project Monitoring

- All parameters to be monitored / collected by the project proponent to perform each SSP calculation will be described
 - Requirements could include general monitoring approaches, monitoring frequency, etc
- Intent is to specify minimum criteria without being too prescriptive
 - Must be flexible to allow for a variety of projects
- Leverage Ministry of Forests, Mines and Lands Timber Supply Review process

Specific Topics – Managing Risk of Reversal

- Proponent required to assess the risk of reversal
 - Specific criteria to be assessed generally left up to proponents
- Risk assessment results must be used to help prepare required risk mitigation and contingency plan
 - Details of specific mitigation and contingency plans left up to the proponent and buyer of the credits, though some options suggested
- Integrity maintained by the ability to hold project proponents accountable under the BC Emission Offset Regulation and the Greenhouse Gas Reductions Targets Act (GGRTA)

Specific Topics – Addressing Leakage

- Leakage: where a project changes the level of goods or services provided, causing a subsequent change to supply outside the project area
- Two main types:
 - land use shifting
 - harvest shifting
- Protocol distinguishes between:
 - “internal leakage” to other lands controlled by a project proponent, and
 - “external leakage” out in the broader market

Specific Topics – Addressing Leakage

- Leakage is typically difficult to assess
- Internal leakage easier to assess than external leakage, given data availability
- Draft methods presented for both types of land use leakage, as well as internal harvest shifting leakage
- For external harvest shifting leakage, a general approach has been proposed that considers market conditions

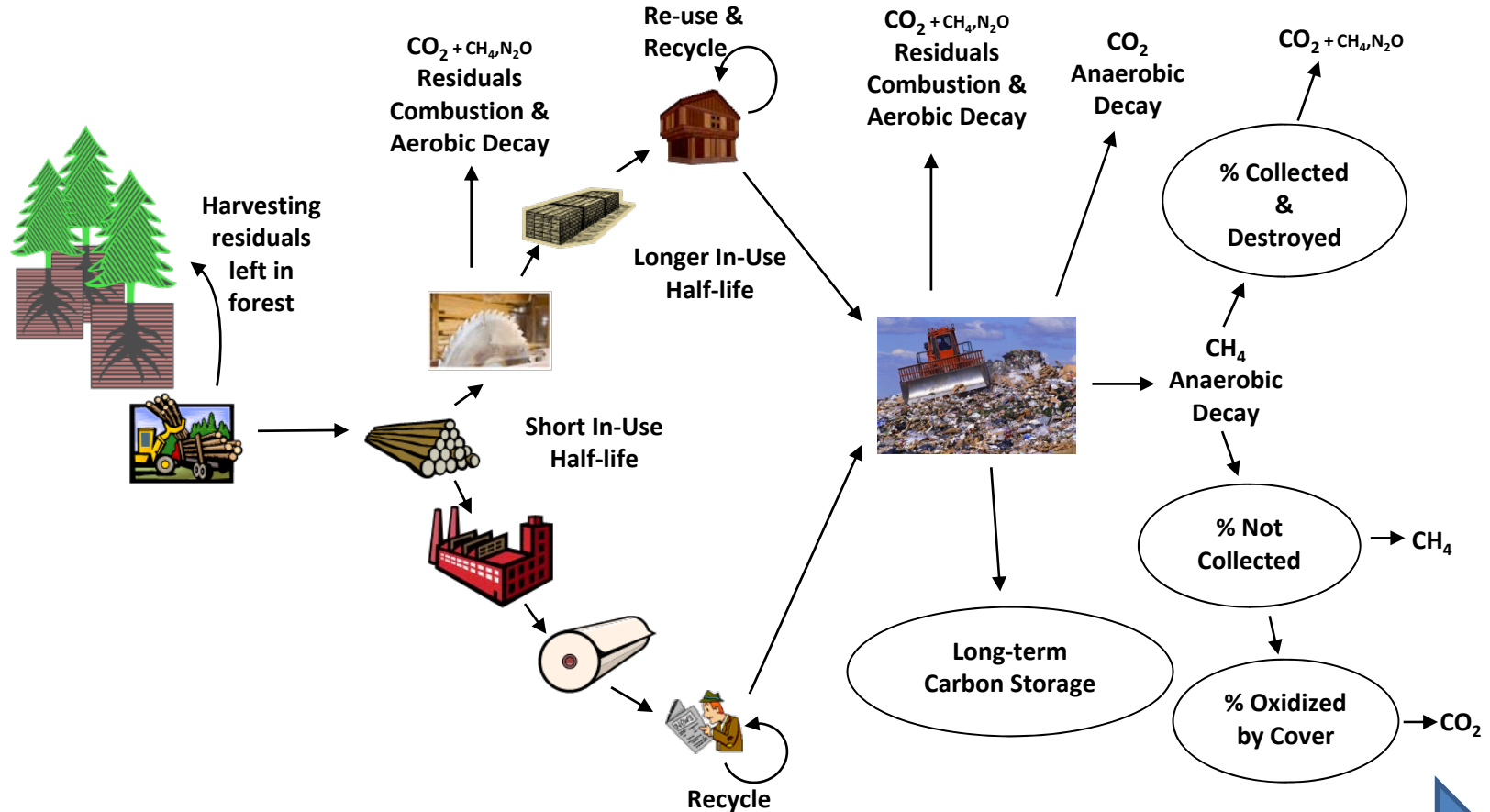
Specific Topics – Harvested Wood Products (HWP)

HARVESTING

PRODUCTION

IN-USE

DISPOSAL



| 80 years | 100+ years

Specific Topics – Harvested Wood Products

- HWP storage in-use and in landfill considered
 - Both count towards assessing total project and baseline carbon storage
- Storage remaining after 100 years is assessed, using the work of Smith *et al*, 2006 (US Dept. of Agriculture Forestry Service)
 - This reference used by Climate Action Reserve (CAR) and others to estimate storage in wood products
- Methane emissions from landfilled HWPs that would not be caught by a typical landfill gas collection system counted as a related emission source for project and baseline

Next Steps

Timing	Activity
November 24, 2010	Begin public review and comment period
December 7, 2010	Host public information session to outline draft protocol
January 31, 2011	Conclude public review period for draft protocol
Mid February, 2011	Summarize feedback, identify required protocol refinements
Late February, 2011	Refine protocol, provide to Ministry of Environment
By March, 2011	Host public information session to outline final protocol