



Ministry of  
Environment and  
Climate Change Strategy

# British Columbia's Draft Forest Carbon Offset Protocol 2.0

April 14, 2021



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Environment and  
Climate Change Strategy

Forest Carbon Offset Protocol version 2.0

# Territorial Acknowledgement



**Signs of Lekwungen**

Artist: Butch Dick

Outside the Royal BC Museum, Victoria  
British Columbia

# Agenda

- Background
- Overview of draft FCOP
- Next steps

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Background

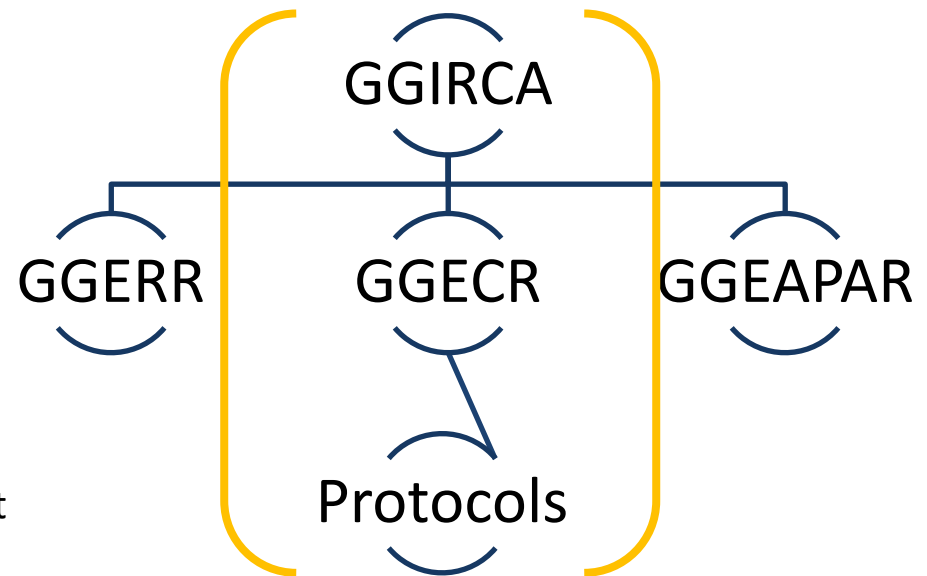
# **B.C.'S OFFSET PROGRAM**

# B.C.'s Legislative Framework for Offsets

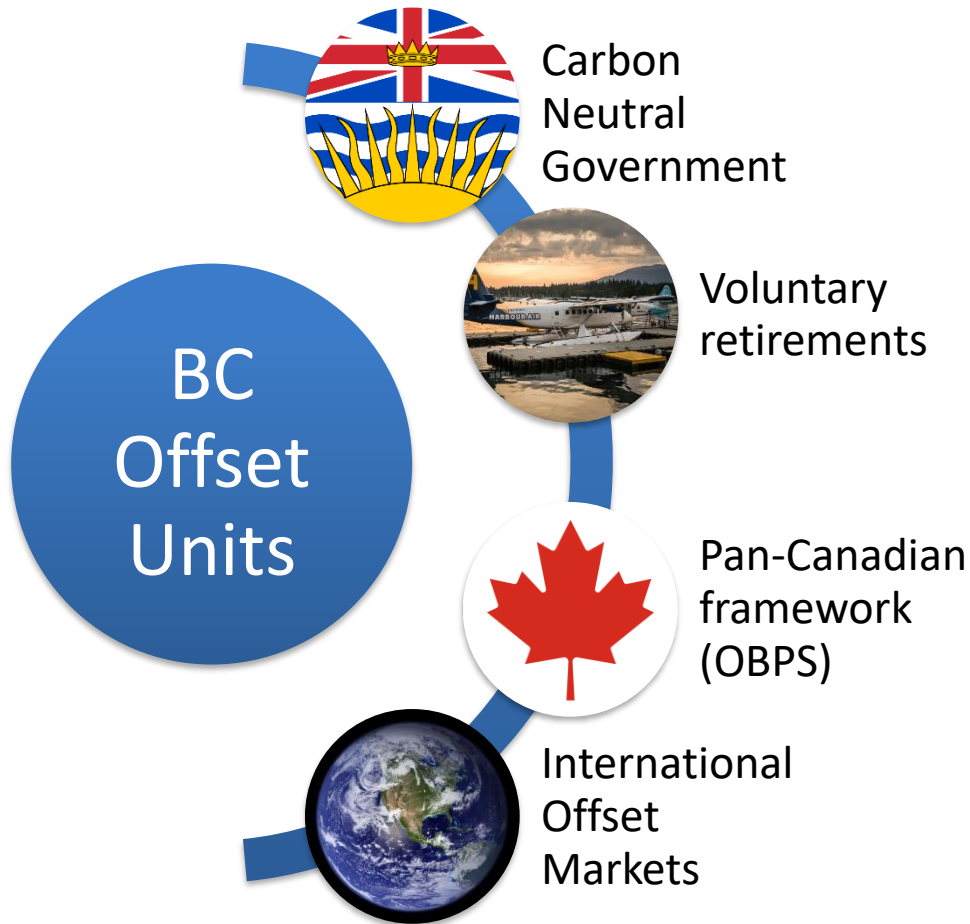
Under GGIRCA (2016), Offset projects **must meet approved protocol requirements and criteria established in the Greenhouse Gas Emission Control Regulation.**

Offset units may be credited for **verified** project activities **located in B.C.** involving the:

1. **Reduction** of greenhouse gas (GHG) emissions into the atmosphere; and/or
2. **Removal** of GHG emissions from the atmosphere.



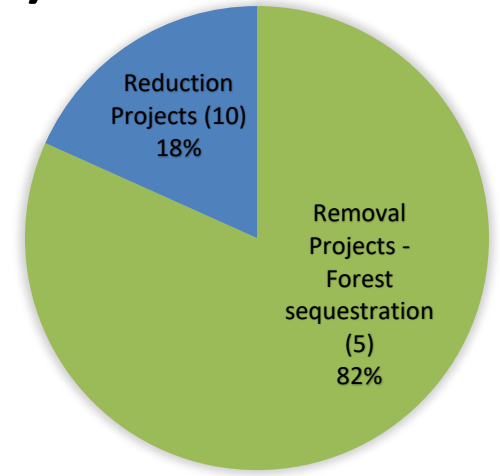
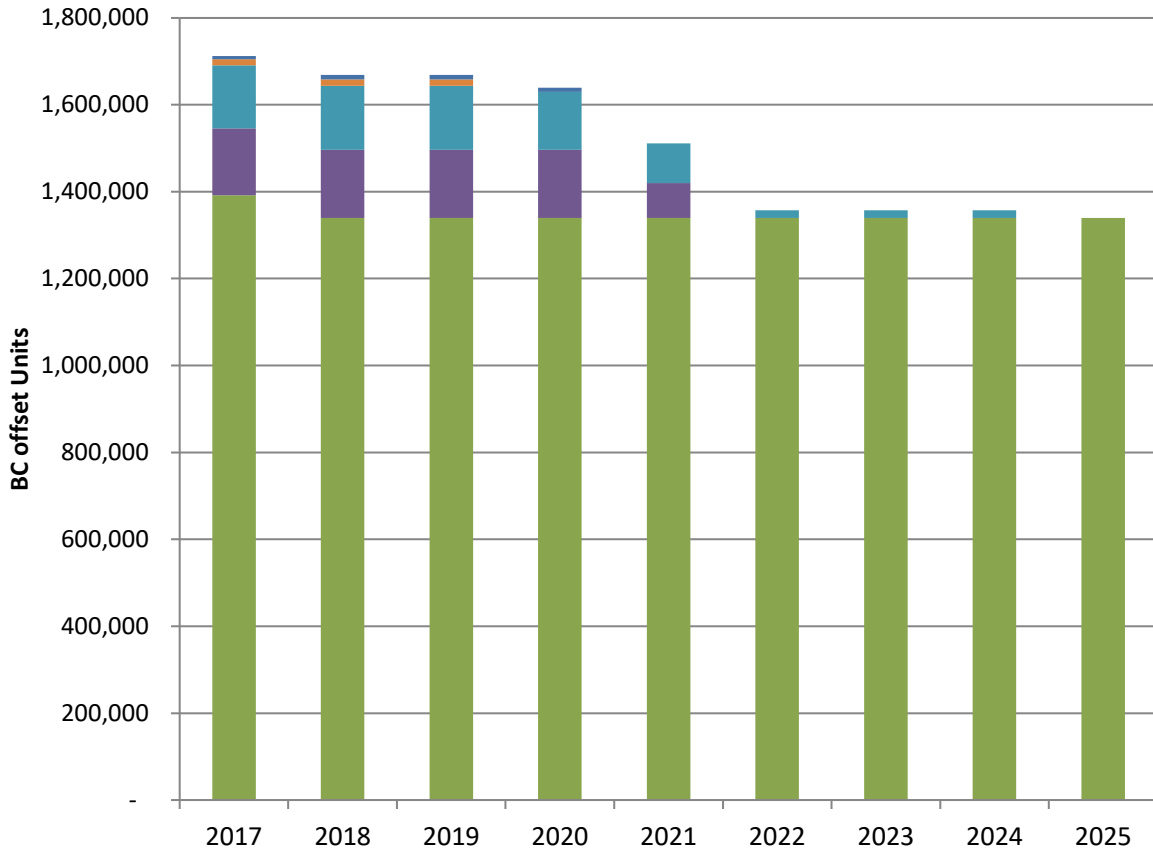
# B.C. Offset Program Overview



BC's Carbon Offset Program supports:

- 1) Additional GHG emission reductions and removals; and
- 2) Transition to a resilient, innovative, low-carbon economy that works for everyone.

# B.C. Annual Offset Supply (Pre-GGIRCA legacy projects)



- Landfill Gas Management (1)
- Fuel Switch - Biomass Gasification (1)
- Fuel Switch - Biomass in Forestry (6)
- Fuel Switch - Electrification O&G (3)
- Forest Sequestration and Storage (5)

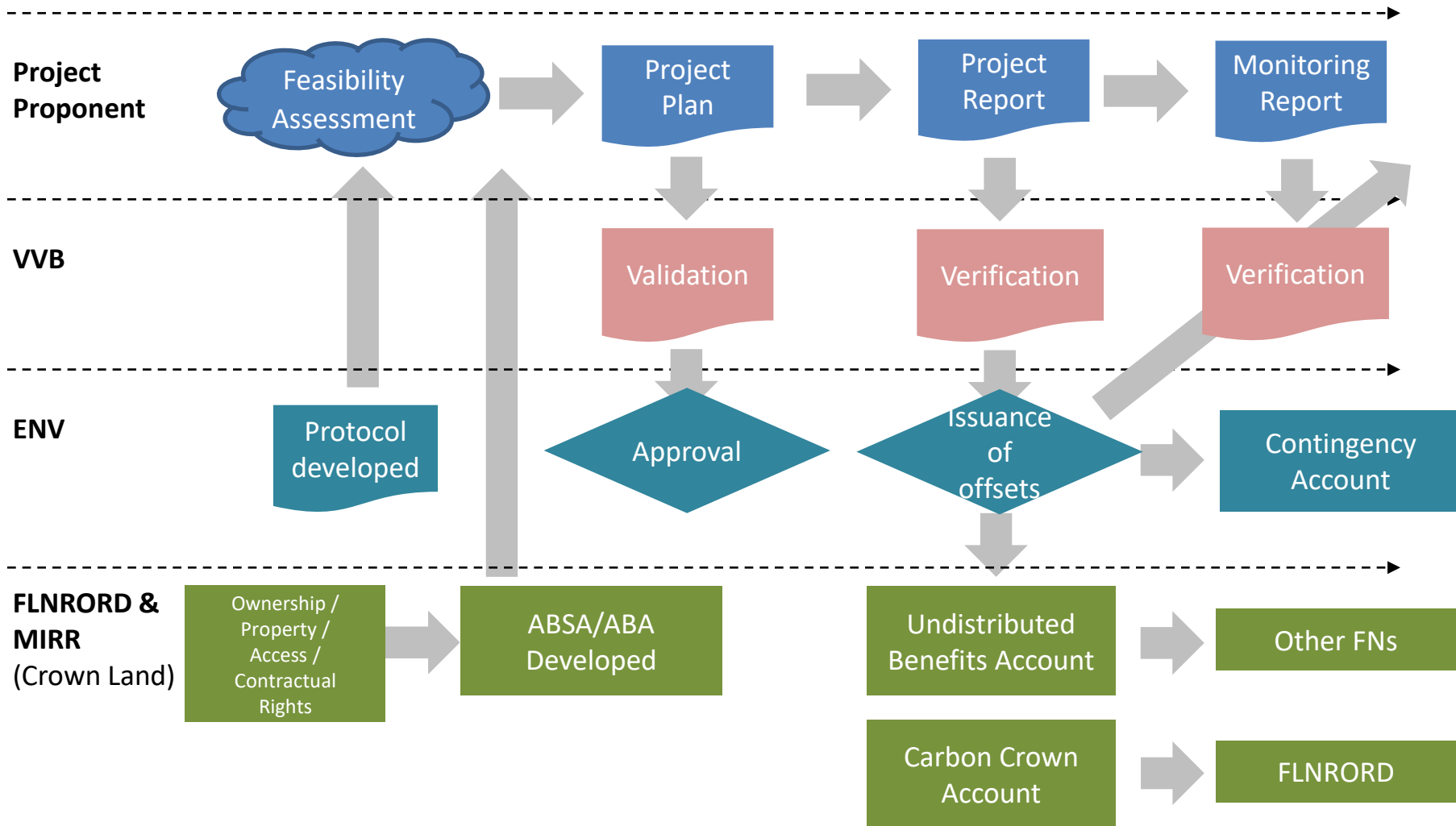


# Current Status

- **Fuel Switch Protocol**
- **Forest Carbon Offset Protocol** (currently out for feedback)
- **Methane Management Protocol** (currently under development)
  - Landfill gas management
  - Organic waste diversion
  - Anaerobic digestion (wastewater and manure)
- **Offset Guidance** (currently under development)



# Process flow diagram for forest carbon offset projects



Technical Briefing

# OVERVIEW OF FCOP 2.0

# Key Technical Considerations

1. Eligibility
2. Start date, crediting period, and materiality
3. Project types under consideration
4. Program of activities
5. Additionality and the Baseline Scenario
6. Baseline vs. Project
7. What is calculated: Sources, sinks, and reservoirs
8. Reservoir determinations, modelling and uncertainty
9. Deductions (leakage and the contingency account)
10. Risk and reversals
11. Monitoring

# 1. Eligibility

- Projects on Crown and private land are eligible.
  - Projects on Crown land must have authority to access and use Crown land.
    - TB Directive 2/15: Authority to dispose of Atmospheric Benefit Rights and enter into Agreements respecting sharing of Atmospheric Benefits Rights.
  - Projects on private land must have fee-simple ownership.
- Proof of ownership must be demonstrated for crediting and monitoring period.

## 2. Start date, crediting period, and materiality

- Start date: Project must be initiated after January 1, 2017.
- Crediting Period: 25 years, renewable.
  - Project report periods are typically annual.
- Materiality
  - 5% per calendar year for projects < 500,000 tCO<sub>2</sub>e/yr.
  - 2% per calendar year for projects > 500,000 tCO<sub>2</sub>e/year.

# 3. Project types under consideration

- Afforestation and Reforestation
  - Tree-planting.
- Conservation / Improved Forest Management
  - Includes activities such as fertilization, improved utilization, establishment of conservancies, increasing rotation age, increasing proportion of harvested wood products, etc.
- Avoided conversion
  - Preventing the direct human-induced conversion of Forest land to a non-Forest land use.

# 4. Program of activities

- A Program of Activities is a type of Project that consists of smaller Project Instances. These Project Instances may be added over the course of the Crediting Period.
- The date of the Project is the date of the first Project Instance.
- Each Project Instance must provide a geo-referenced map allowing for unique identification.
- Project Instances must be homogenous.

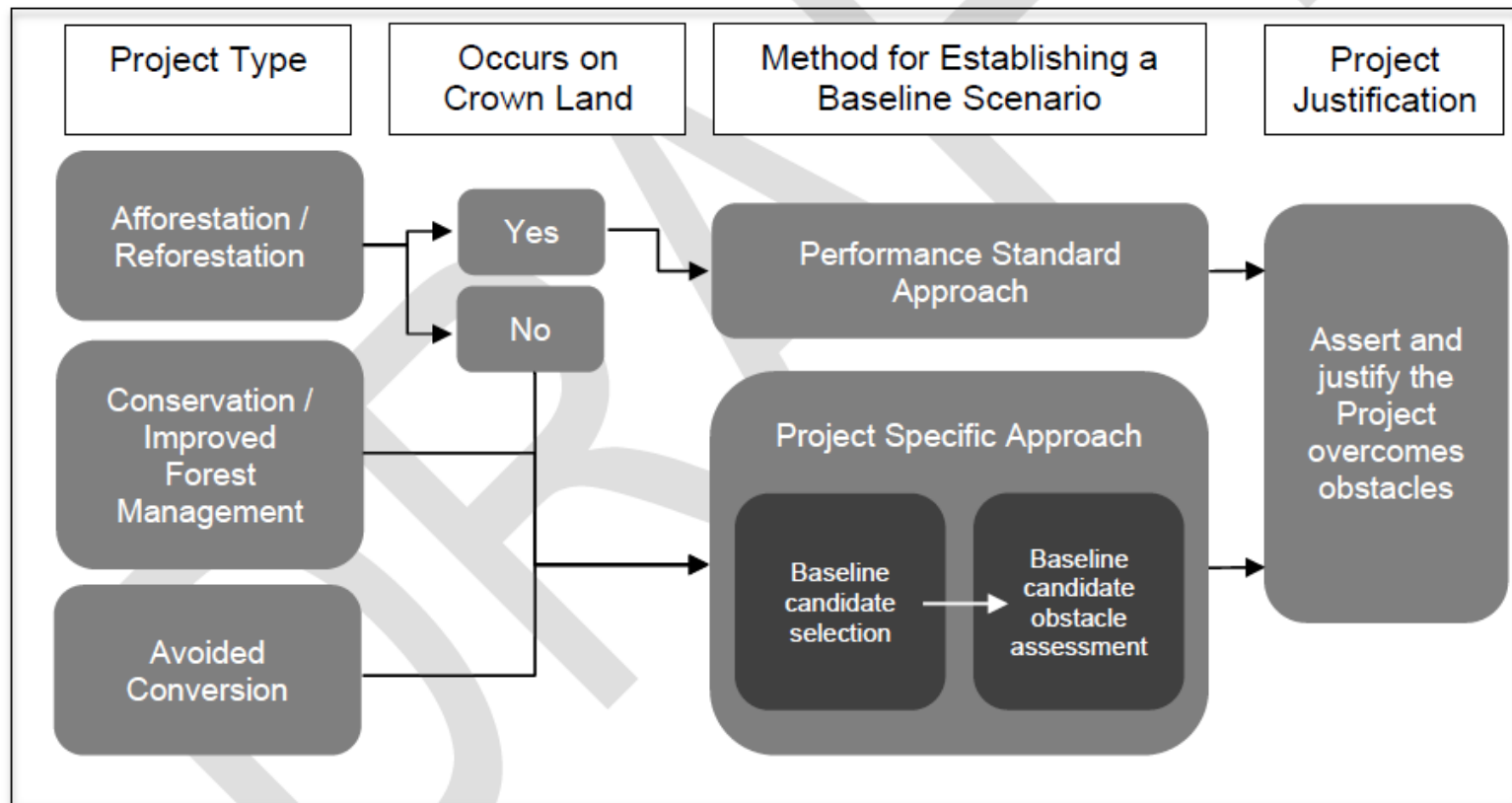


# 5. Additionality and the Baseline Scenario

- In the Project Plan, Project Proponents must demonstrate that the project is justified (additional).
  - Additionality considerations in Section 3.6 state that project must demonstrate they:
    - Exceed common practice or business as usual conditions, and
    - Exceed regulatory requirements.
  - Proponents must assert that the project has not received financial incentives on a per-unit of reduction/removal basis, and that receiving carbon offsets was among the main motivating factors for project development.
- Methodology for establishing a Baseline Scenario is specific to each project type.
  - A Baseline Scenario is a hypothetical reference case for what would have happened in the absence of the project.
  - The Project Scenario must see greater emission reductions and removal enhancements than this Baseline.

# 5. Additionality and the Baseline Scenario (continued)

Figure 1: Selection of Baseline Scenario Approaches and Project Justification



# 5. Additionality and the Baseline Scenario (continued)

- Baseline Scenario approaches include:
  - Performance Standard and
  - Project Specific
    - Candidate and obstacle assessment.
    - Most conservative candidate is the Baseline Scenario.

# 5. Additionality and the Baseline Scenario (continued)

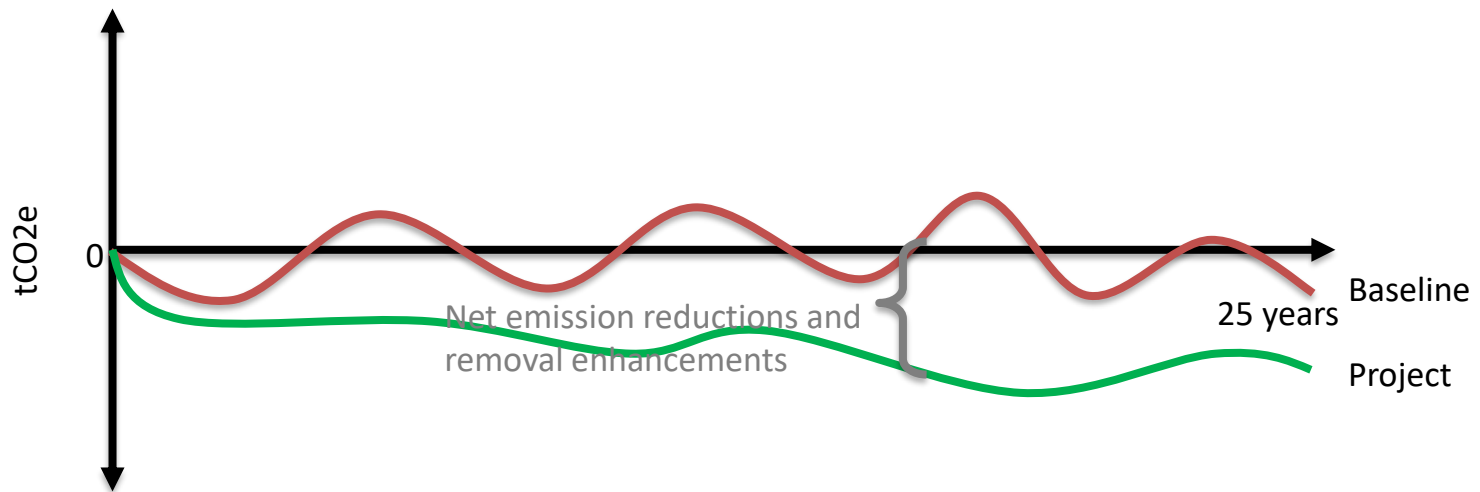
- Project-specific Baseline Scenario Candidates:

AFF/REF Projects	CONS/IFM Projects	AC Projects
<ul style="list-style-type: none"> <li>Project without carbon financing</li> <li>Production of commercial crops</li> <li>Pastureland, abandoned land, or degraded land</li> <li>Land development (i.e. residential, commercial, or industrial)</li> <li>Continuation of historic practices and regulatory requirements</li> <li>New regulatory requirements that do not justify the project as determined in Section 6.0 Project Justification</li> </ul>	<ul style="list-style-type: none"> <li>Project without carbon financing</li> <li>Park or protected area status</li> <li>Harvest to projected Annual Allowable Cut (AAC) (Crown land)</li> <li>Harvest at historical harvest rates, or continuation of historic practices and regulatory requirements</li> <li>New regulatory requirements that do not justify the project as determined in Section 6.0 Project Justification.</li> <li>Harvest to long-term sustainable yield</li> </ul>	<ul style="list-style-type: none"> <li>Project without carbon financing</li> <li>Park or protected area status</li> <li>Harvest at historical harvest rates, or continuation of existing management and regulatory requirements</li> <li>New regulatory requirements that do not justify the project as determined in Section 6.0 Project Justification.</li> <li>Scenarios that reflect the nature of land development activities in the region</li> <li>Proposed (but not yet in effect) natural resource management activities for the Project lands (which defines the type of land use that the Project would intend to avoid by initiating the Project)</li> </ul>

# 6. Baseline vs. Project

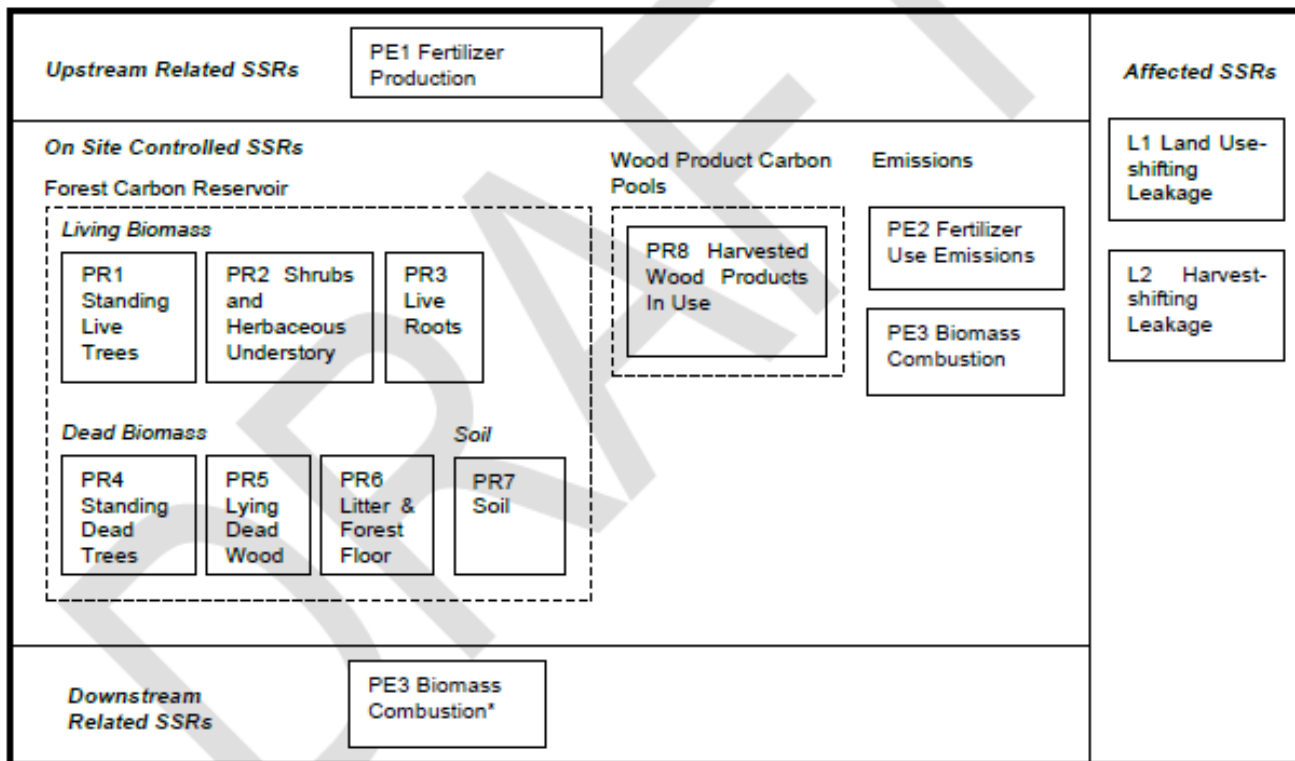
- Net emissions reductions and removal enhancements are calculated as the difference between:
  1. Baseline emission reductions and removal enhancements, and;
  2. Project emission reduction and removal enhancements.
- Deductions are also made (see further slides).

# 7. Baseline vs. Project (continued)



# 7. What is calculated: Sources, sinks, and reservoirs

Figure 2: Project SSRs – All Eligible Project Types



\* PE3 Biomass Combustion is determined both on-site and downstream

# 8. Reservoir determinations, modelling and uncertainty

- Reservoir sampling or modelling must be supervised by a Registered Professional Forester.
  - Must use approach used in previous Timber Supply Review.
- Carbon budget model:
  - CBM-CFS3.
- Managing uncertainty:
  - Targeted sampling error for total biomass should be less than or equal to 20% at 90% confidence level.



## 8. Reservoir determinations, modelling and uncertainty (continued)

- Storage of C in Harvested Wood Product (HWP) in-use is quantified.
  - Two methods:
    - Default approach: standard HWP mixes for NA and offshore HWP utilization.
    - Optional approach: all harvested wood C is assumed to be emitted as CO<sub>2</sub>e – only available where project harvest is  $\geq$  baseline harvest.
- Storage of C in HWP in landfills and dumps is not considered.

# 9. Deductions

- Once emissions reductions and removal enhancements determined, three deductions take place:
  - Leakage.
  - Remittance to the Contingency Account.
  - Remittance according with contractual obligations (i.e. ABAs/ABSAs).

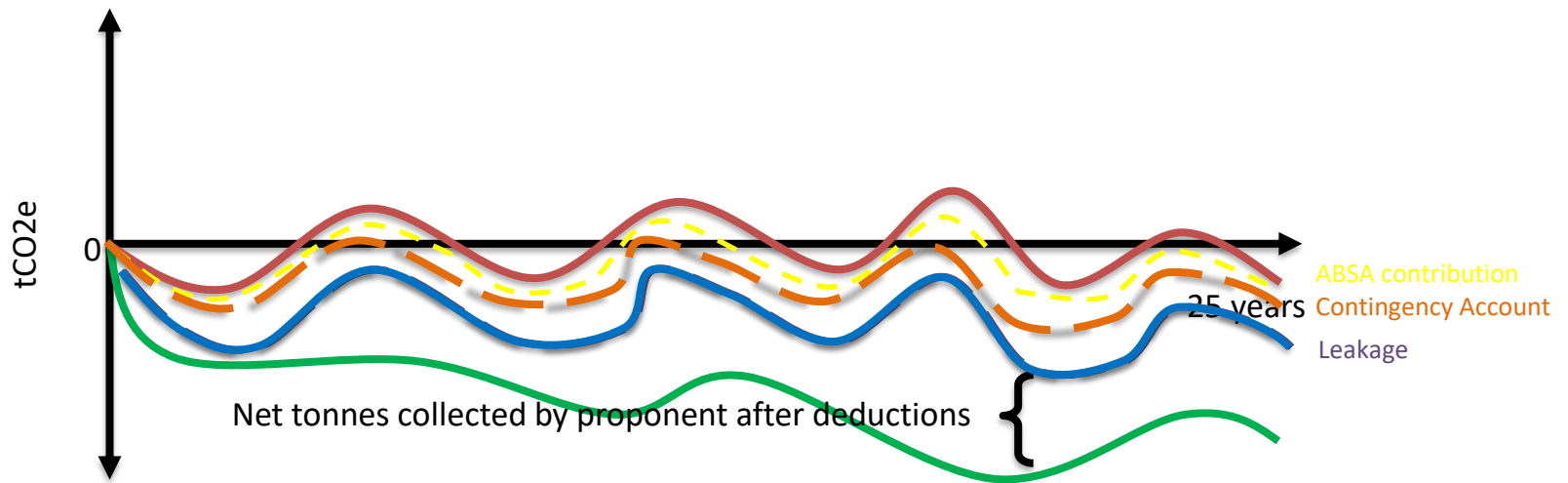
# 9. Deductions (continued)

- **Leakage** broadly refers to an increase in emissions elsewhere as a result of the project.
  - Land Use-shifting Leakage refers to deforestation to lands owned by the proponent.
  - Harvest-shifting Leakage refers to the increase in GHGs from areas outside the project site due to a change in the supply and demand market equilibrium, resulting in a shift of production elsewhere to make up for the lost supply.
    - Two options to establish external Harvest-shifting Leakage:
      - Selection of region-specific default values, or
      - Project-specific external Harvest-shifting Leakage assessment.

# 9. Deductions (continued)

- The **Contingency Account** requires % of offset units be held in a government-managed account in case of reversals.
- Other deductions are subject to agreements used to justify proof of ownership / right of access (i.e. ABA/ABSA).

# 9. Deductions (continued)



# 10. Risk and Reversals

- The Contingency Account ensures each unit issued represents a real and permanent reduced or sequestered tCO<sub>2</sub>e.
  - Contingency Account units are retired in the event of a reversal.
- Risk of reversal is based on chance of survival up to 125 years.
  - Default Risk of Reversal values specific to biogeoclimatic zone.
  - Risk Mitigation Measures bring down Project Risk of Reversal.
- Risk will be mitigated through the development of a Risk Management and Monitoring Plan as part of the Project Plan.

# 11. Monitoring

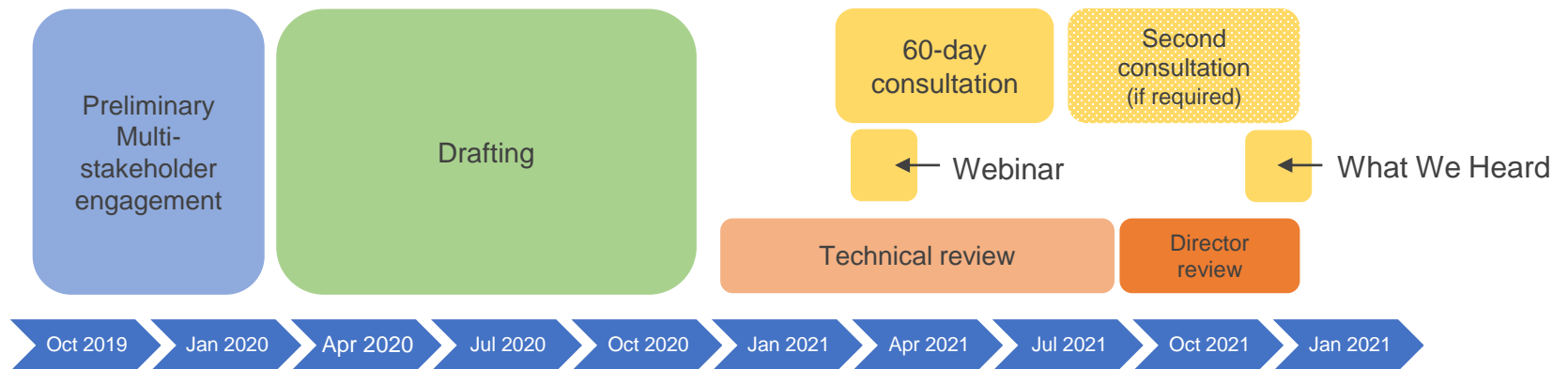
- Monitoring Period: 100 years.
  - Four monitoring reports are required; each must be third-party verified.
  - Must be completed at 25, 50, 75, and 100 years after the Crediting Period.

FCOP 60-day comment period

# **NEXT STEPS IN ENGAGEMENT**



# Timeline for protocol development



# Next steps in consultation

- 60 day consultation will close on May 31, 2021.
  - Written feedback is encouraged.
  - [GHGRegulator@gov.bc.ca](mailto:GHGRegulator@gov.bc.ca)
- Discussion document provides a summary, as well as points of interest for the Director.
- Ministry of Environment and Climate Change Strategy Representatives are available to meet on request.

# Key areas of consideration for consultation

- Project types
- Data sources and modelling requirements
- Establishing a baseline scenario
- Harvested wood products
- Program of activities
- Contingency account and project risk
- Calculation of leakage
- Monitoring, validation, and verification requirements

# Contact

## Greenhouse Gas Emission Offset Projects Website:

- <https://www2.gov.bc.ca/gov/content/environment/climate-change/industry/offset-projects>
- <https://www2.gov.bc.ca/gov/content/environment/climate-change/industry/offset-projects/consultation>

Please direct all enquiries and feedback to  
[GHGRegulator@gov.bc.ca](mailto:GHGRegulator@gov.bc.ca)

Questions?

