Silviculture Approach to IFM Baseline

The purpose of this presentation is to explore the concept of a baseline approach that is based on investments in silviculture activity by providing some initial thoughts for discussion.

Some rapid thoughts will be shared followed by a group discussion.

Consideration could be directed explicitly for small landowners or for all landowners, large or small.

Common Practice silviculture/interventions

Common Practice has ‘traditionally’ been based on overall project forest inventories, which includes stands managed for a variety of management objectives. This can make it difficult to point to the specific action(s) that are resulting in climate benefits.

Specific management interventions (investments into enhancement or avoided emissions) would be compared to Common Practice silviculture baselines to assess climate benefits.

Interventions may include:

- Increasing rotation age
- Enhancing recovery of wood products
- Increasing number of large trees in uneven-aged management
- Increasing retention
- Investments into stocking resulting in increased enhancements
- A commitment to non-declining inventories

Examples to follow

Assumption: Determination of Common Practice

The determination of Common Practice silviculture would need to address variation by:

1. Forest Vegetation Community (Assessment Areas)
2. Landowner Type
    - Public
    - Industrial
    - Family
3. Silviculture Type
    - Even aged
    - Uneven aged
    - Unmanaged
4. Management Zones
    - Production – the likely focus of changes in silviculture activities
    - Protected (watercourse, scenic, habitat, etc.)

Default CO2e projections of Common Practice silviculture are envisioned, which could be updated periodically to reflect changing Common Practice silviculture activities (i.e., dynamic baseline). Common Practice silviculture should be based on practices that do not include carbon-based incentives.

Assumption: Project accounting

The following steps generalize the approach to project accounting:

1. Project identifies stands within forest holdings that align with eligibility requirements of a recognized Common Practice silviculture activity.

2. Project demonstrates alignment with CP silviculture in terms of stand age, stocking, species, management zone, assessment area, etc.

3. Project develops inventory for eligible stands. This may result in some crediting following verification, based on carbon stocking compared to baseline harvest 'triggers'.

4. Project obliged to present inventory (perhaps through modeled/standardized projections) at project harvest and again following harvest. This will result in additional crediting as baseline carbon stocks are compared to project carbon stocks.

5. Project accounting terminates when result of intervention is completed.

6. Stands may be enrolled again when conditions meet CP conditions.

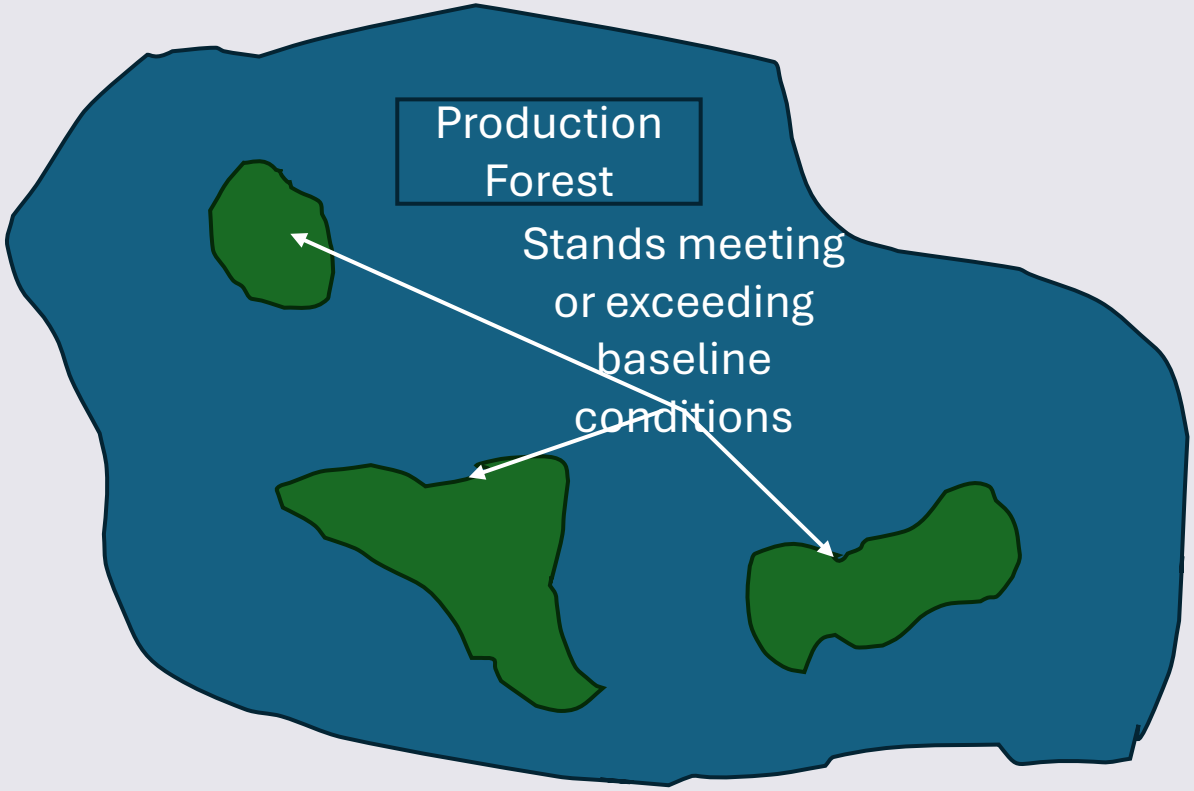
Discrete application of baseline

Forest landscape to be assessed in terms of alignment with baseline conditions at the stand level. Forest Vegetation Community (Assessment Areas)

For example:

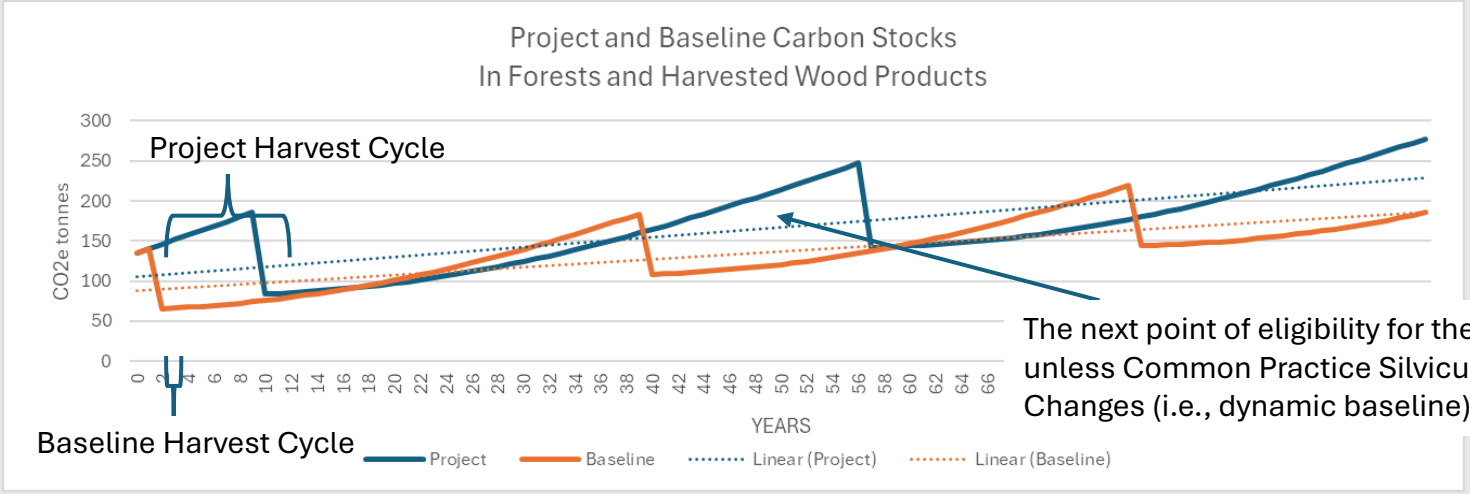
Baseline rotation for even age management = 40 years

Stand	Age (Yrs)	Acres
1	47	35
2	45	80
3	46	60
Sum Eligible Acres		175



The calculation of the additional sequestered carbon would occur when actual rotation occurs, which is at the landowner's discretion.

Example (1 of 2) of variable retention management with increased rotation age (40 years baseline in this case)

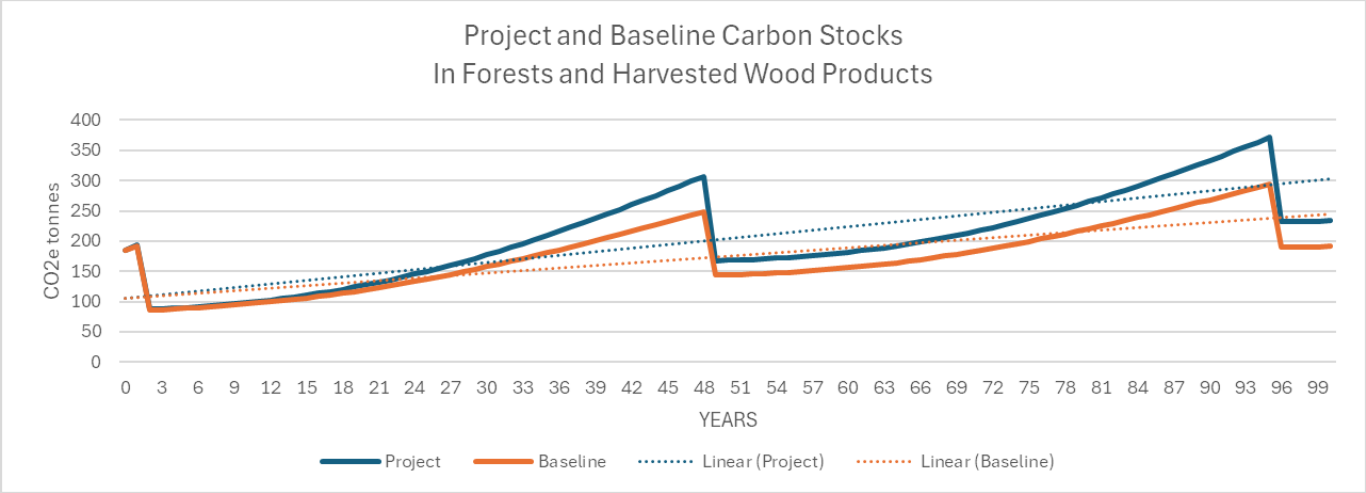


The next point of eligibility for the stand unless Common Practice Silviculture Changes (i.e., dynamic baseline)

Assessment Period	AVG Project (CO2e tonnes)	AVG Baseline (CO2e tonnes)	Difference (CO2e tonnes)	Standardized Difference on a 100-year basis
100 Years	167	137	30	30
40 Years	119	95	24	10
Baseline Harvest Cycle (39 years)	121	88	32	12
Full Complete Project Harvest Cycle, including growth following harvest (56 years)	148	114	35	20
First Project Harvest (9 years?) - following harvest	153	82	71	6
(or 54 years?) - point at which stand is eligible for CP harvest again	which would extend the silviculture benefits until they are 'at risk' again. Would likely require monitoring for the extended time.			38

A decision is needed as to the basis of determining the benefit.

Example (2 of 2) of investments into stocking to improve growth with variable retention harvest



A decision must be determined where to measure the value of the action. More on this in a bit.

Assessment Period	AVG Project (CO2e tonne	AVG Baseline (CO2e tonnes)	Difference (CO2e tonnes)	Standardized Difference on a 100-year basis
100 Years	204	175	29	29
40 Years	123	117	6	2
Baseline/Project Harvest Cycle (45 years)	168	149	19	7

A decision is needed as to the basis of determining the benefit.

Challenges to be addressed

Since the focus of the quantification approach is on discrete activities and not overall forest inventories:

- The monitoring and permanency timeframes must be adjusted. A silviculture intervention is complete once the project harvest has occurred (which will be less than a 40 or 100 year definition of permanence). Does the benefit end following harvest, or does it extend until the stand is once again eligible for Common Practice silviculture?

- Monitoring approaches
  - How to align with silviculture activities
  - Cost-effectiveness – can project benefits use conservative default values?
  - Aggregating at the program scale whereby MRV developed for aggregate population.

- Integration of default leakage assumptions

- Can avoided emissions activities (reduced disturbance or harvest risk) be included with Common Practice silviculture baseline values?