

EIGHT FOREST CARBON MITIGATION STRATEGIES

These strategies are based on research by the Pacific Institute for Climate Solutions' Forest Carbon Management Project.

1. BIOENERGY STRATEGY:

Produce bioenergy with residues that are not currently collected during commercial harvesting (for example, branches, tree tops, and unusable trees), and which would otherwise decay in the forest.

Mitigation benefit: Use of bioenergy instead of fossil fuels (for example, coal, natural gas) whose production and use generate more net greenhouse gas emissions and climate change.

2. HARVEST EFFICIENCY STRATEGY:

Improve harvest efficiency by collecting more wood per hectare harvested commercially and using it for products, thereby reducing the amount of harvest waste that is left on the forest floor to decay or be burned, and reducing the total area harvested while keeping the total harvest volume unchanged.

Mitigation benefit: Reduce greenhouse gas emissions from decay or burning of wood and (2) reduce the area harvested.

3. INCREASED GROWTH RATE STRATEGY:

Increase the growth rate of trees above current levels through various techniques (e.g., planting improved seeds or tree species, fertilization).

Mitigation benefit: Capture carbon from the atmosphere more rapidly because trees grow faster.

4. INCREASED HARVEST STRATEGY:

Increase the forest areas that can be harvested commercially, focusing on areas most likely to be affected by insects and fires.

Mitigation benefit: Increase carbon storage by producing more wood products that can be used in place of products like cement and steel whose production and use generate more greenhouse gas emissions and climate change.

5. LONGER-LIVED WOOD PRODUCTS STRATEGY:

Increase the production of longer-lived wood products like lumber and wood panels for use in construction, and correspondingly decrease the production of shorter-lived products like paper.

Mitigation benefit: (1) Increase the time over which carbon is stored in wood products and (2) use the wood products instead of products like cement and steel whose production and use generate more greenhouse gas emissions and climate change.

6. OLD GROWTH CONSERVATION STRATEGY:

Prevent commercial harvesting in old growth forests.

Mitigation benefit: Protect old growth forests with high quantities of carbon.

7. REDUCED HARVEST STRATEGY:

Reduce the area of forest that can be harvested commercially each year.

Mitigation benefit: Avoid emissions by protecting existing carbon found in managed forests.

8. REHABILITATION STRATEGY:

Plant trees in areas recently affected by insects and fires where trees are growing poorly.

Mitigation benefit: (1) Reduce greenhouse gas emissions from potential decay and wildfires and (2) capture carbon from the atmosphere more rapidly because trees are healthier and grow faster.

Read the journal articles for more information:

- Public perceptions about climate change mitigation in British Columbia's forest sector. *PLOS ONE*.
- A participatory approach to evaluating strategies for forest carbon mitigation in British Columbia. *Forests*.

