



Forest Carbon Community Toolkit

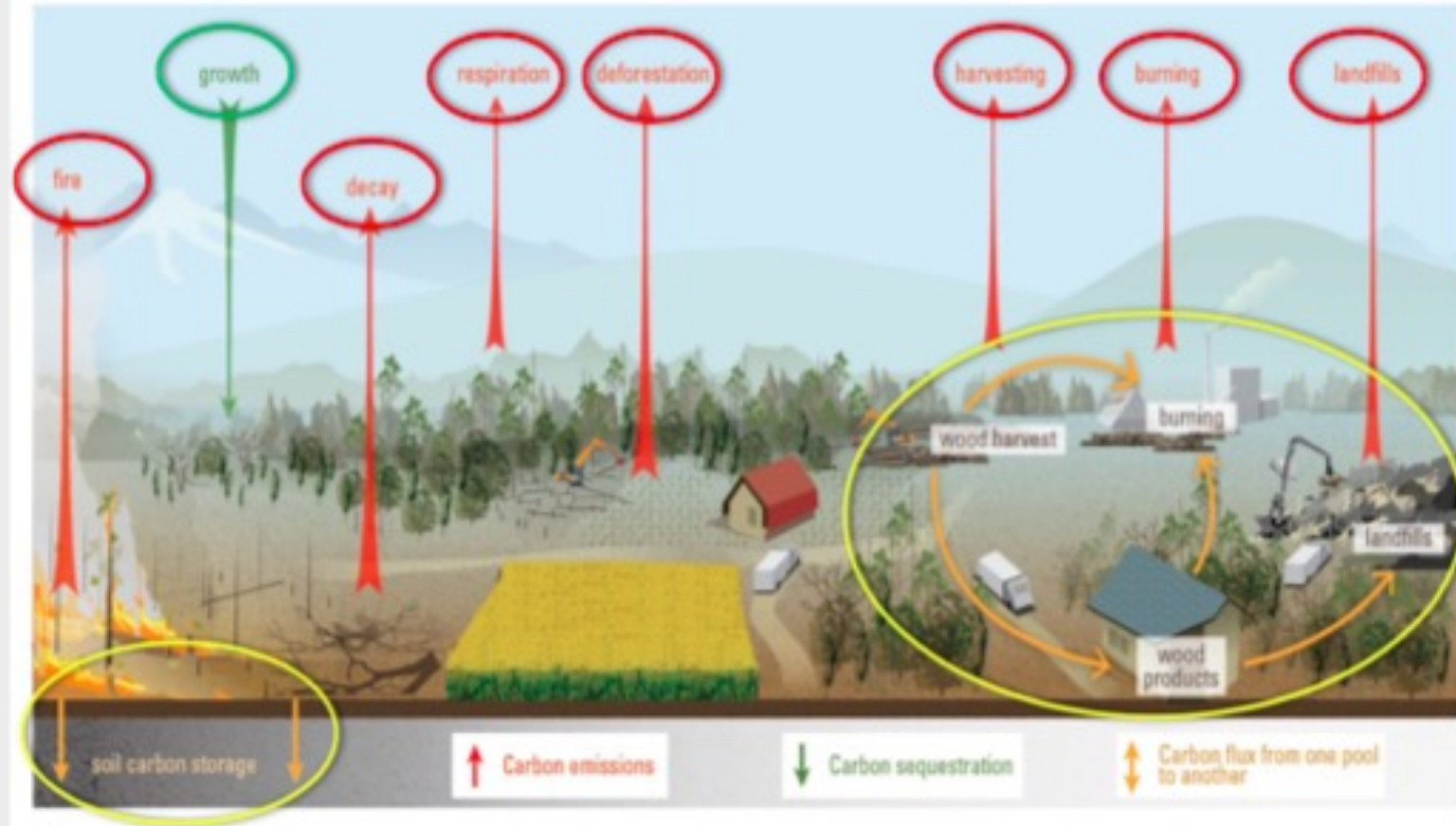
Climate Change and Forests

How does forest management
affect climate benefit?

FORESTS AND CLIMATE

Forest carbon flows

- Forest carbon is stored in live trees, standing dead trees, lying dead trees, the understory, leaf litter, and soil
- Forests interact with the atmosphere in an exchange of nutrient and energy flows.

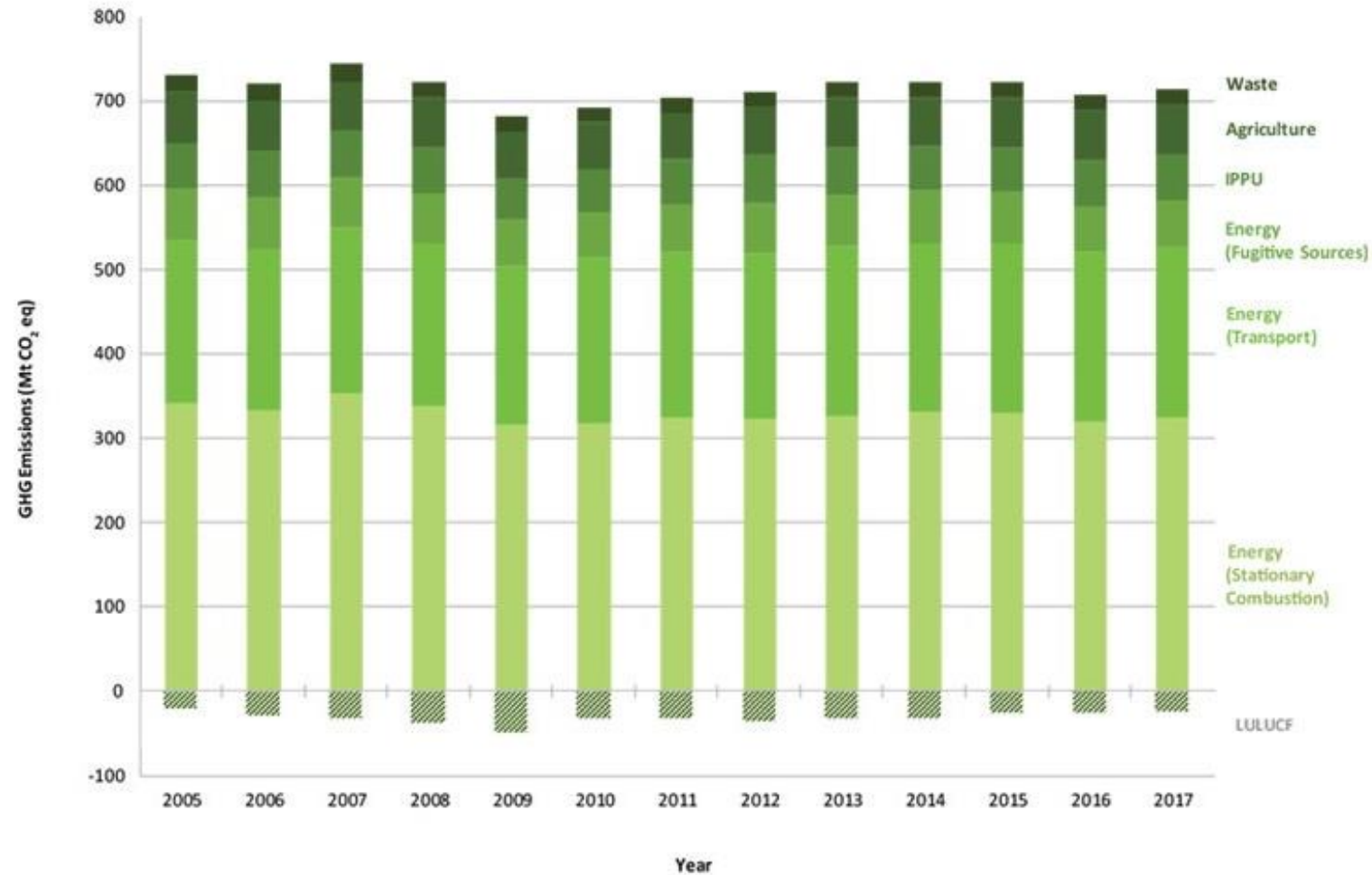


[1]

FORESTS AND CLIMATE

Carbon reductions have decreased

Land use, land use change, and forestry (LULUCF) sector is not offsetting as much carbon as before



All areas **Areas with forestry activity** Areas with natural disturbances

FORESTS AND CLIMATE

Forest carbon flows

Canada's managed forests are not storing as much carbon as before

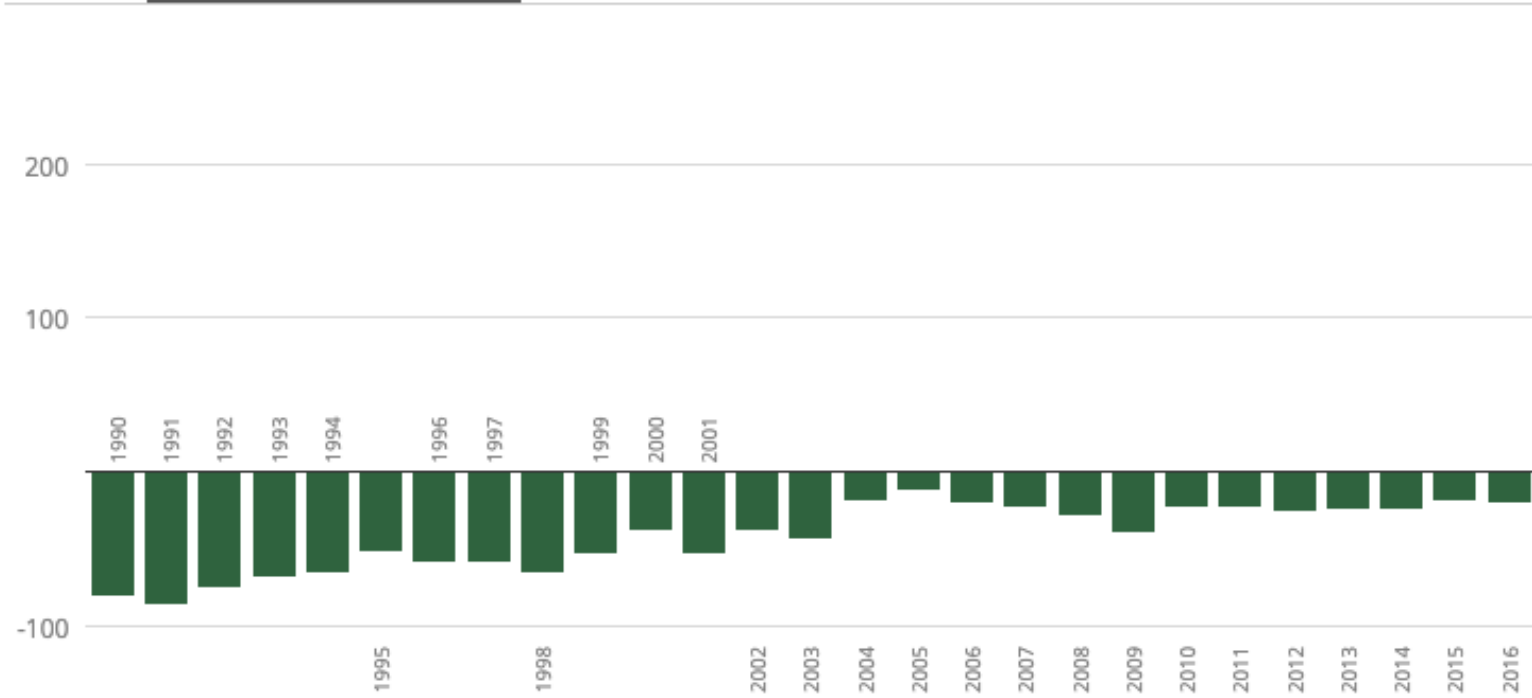


Chart: Robson Fletcher / CBC • Source: [Natural Resources Canada](#)



All areas Areas with forestry activity Areas with natural disturbances

FORESTS AND CLIMATE

Forest carbon flows

All forested areas, including both managed and non-managed forests, are now a net-source of carbon

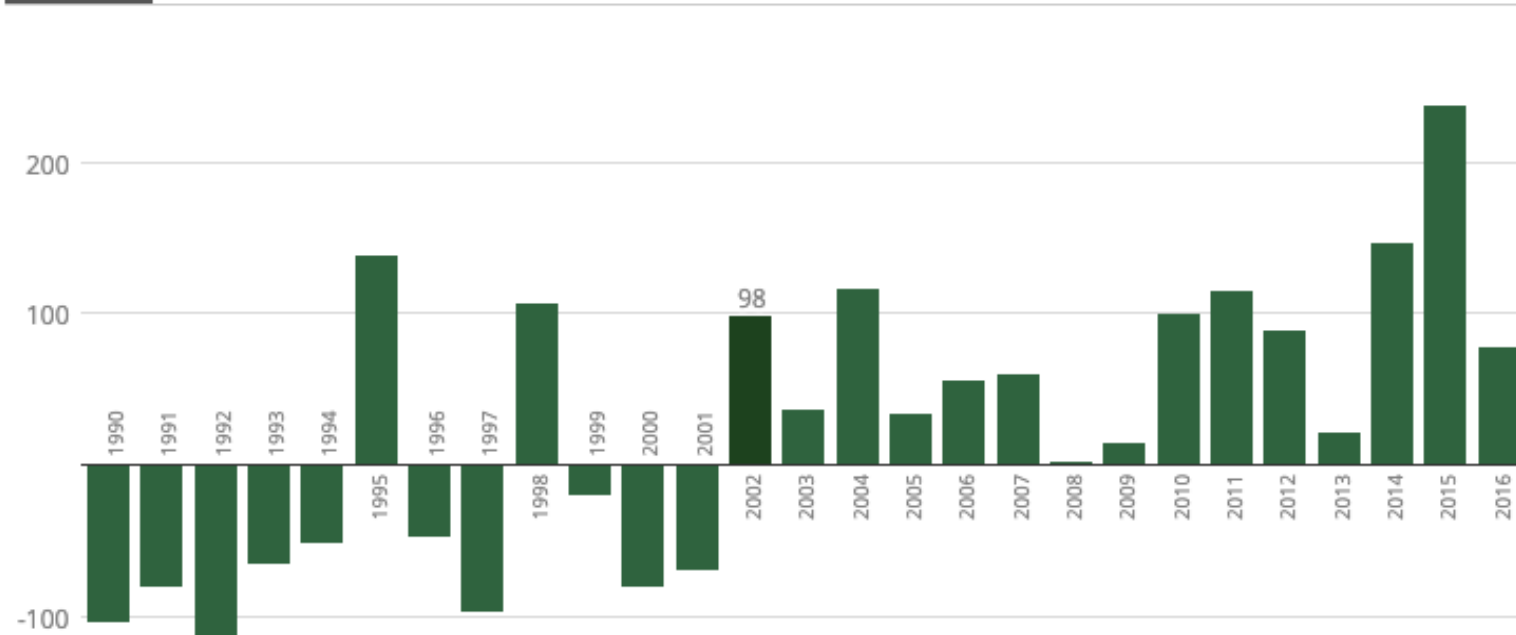


Chart: Robson Fletcher / CBC • Source: [Natural Resources Canada](#)





Forest actions that generate climate benefit

Afforestation: Land has been converted from forest for more than 20 years.

Reforestation: Re-establishment of forests on recently harvested/converted land through planting or seeding

Improved forest management: Involves specific practices for a better way of forest stewardship

Conservation/avoided Deforestation: Avoided human-caused change from forest land to another land-use.

FORESTS AND CLIMATE

Forest actions

Afforestation



FORESTS AND CLIMATE

Forest actions

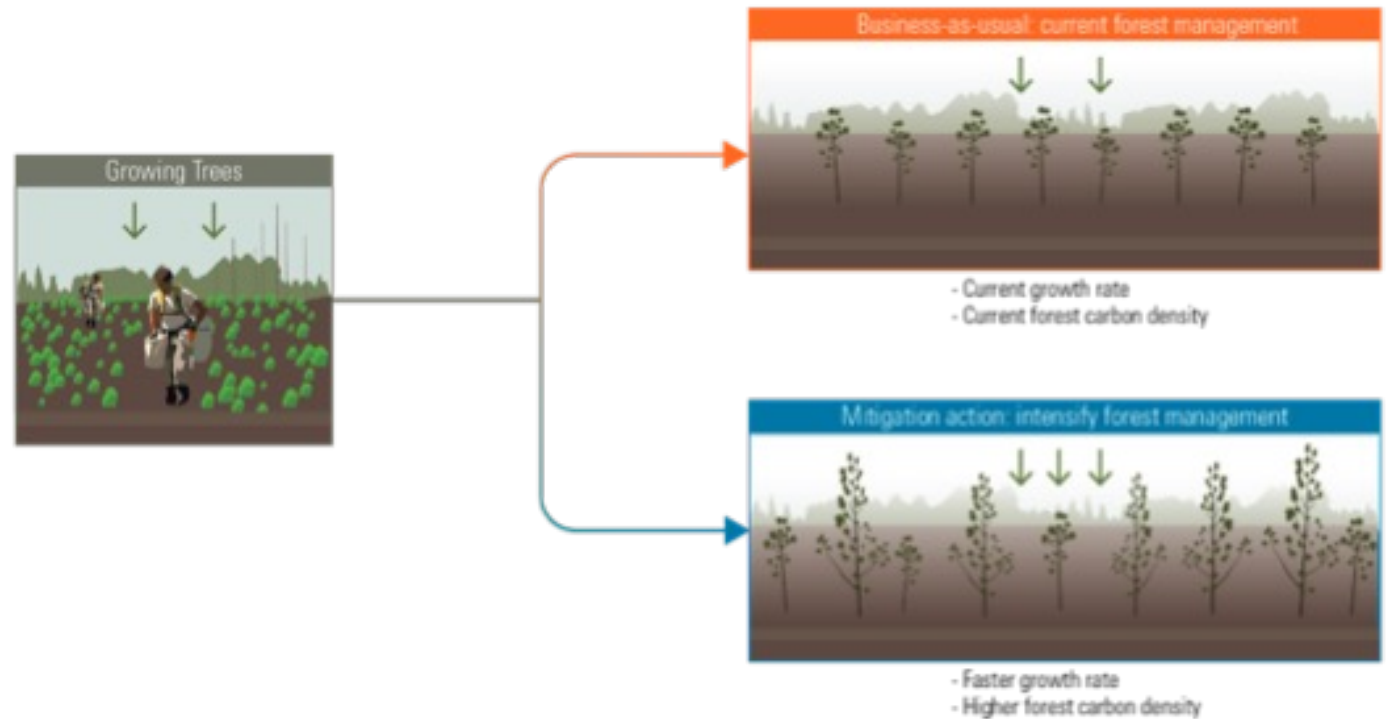
Reforestation



FORESTS AND CLIMATE

Forest actions

Improved Forest Management

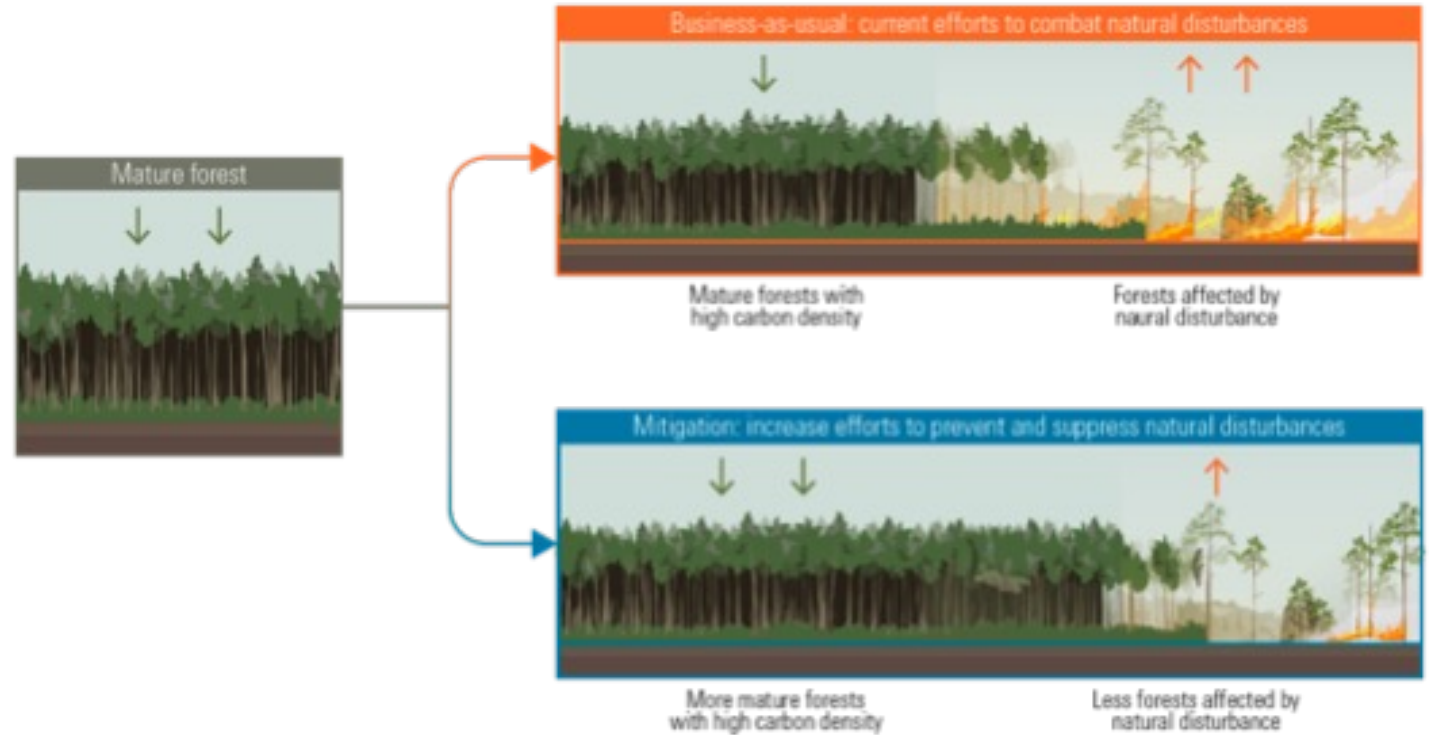


Intensive forest management (seeds selection, harvesting)

FORESTS AND CLIMATE

Forest actions

Improved Forest Management

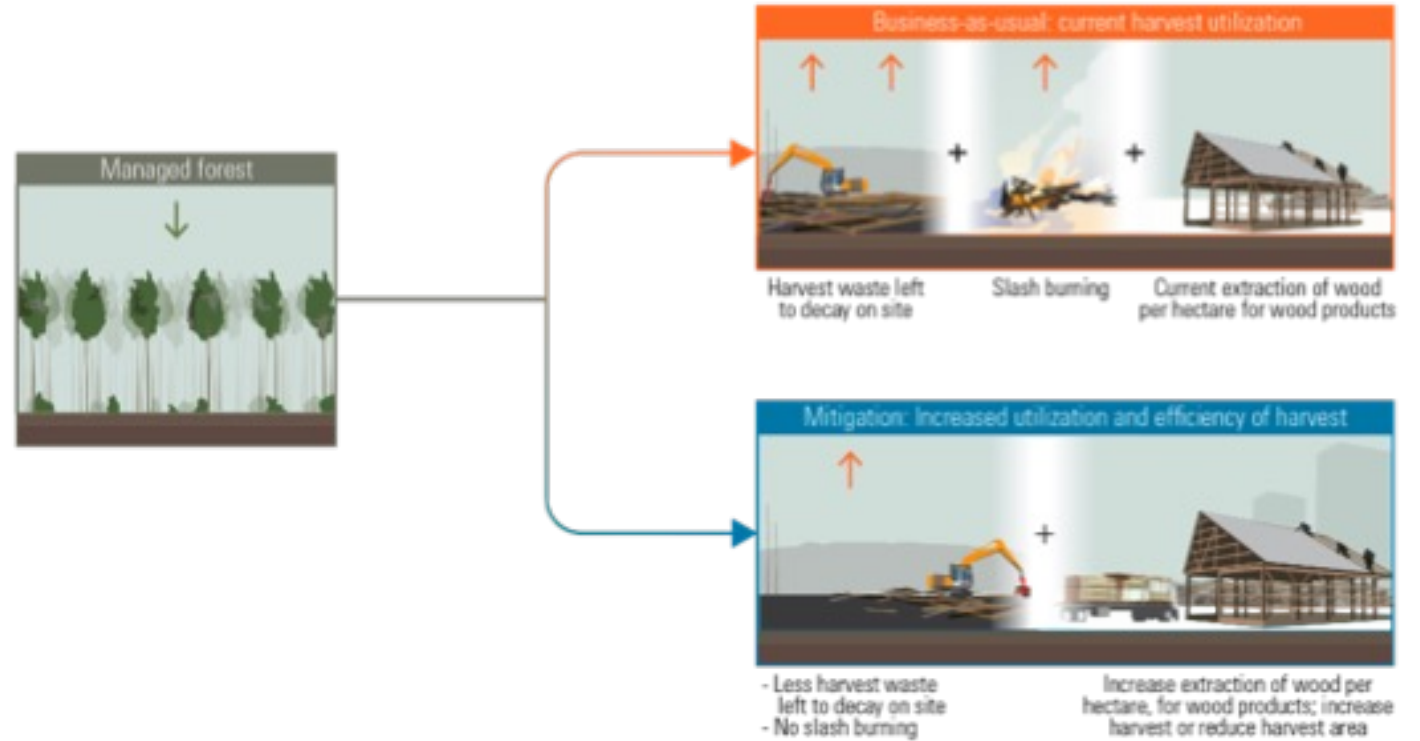


Reduce impacts of natural disturbances

FORESTS AND CLIMATE

Forest actions

Improved Forest Management

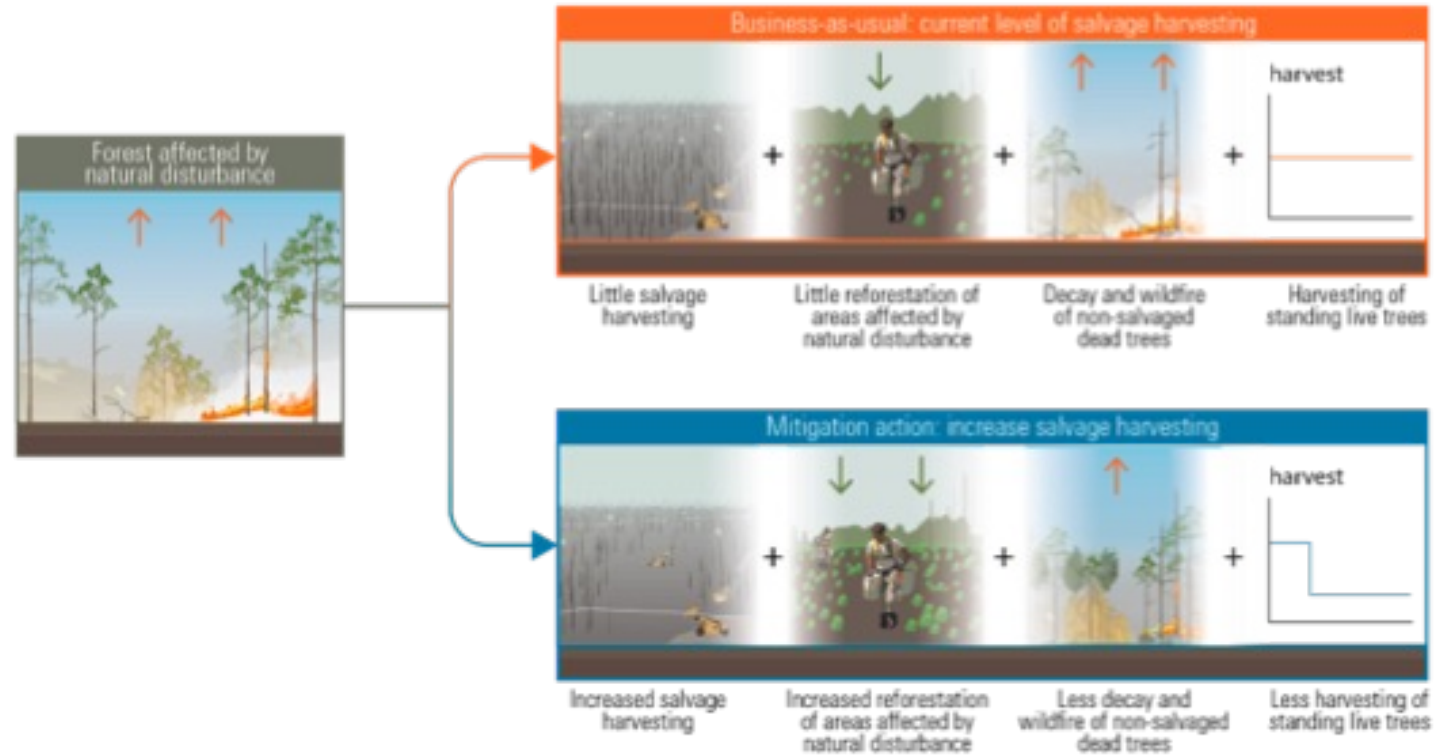


Increase utilization and efficiency at harvest

FORESTS AND CLIMATE

Forest actions

Improved Forest Management



Salvage harvest after a disturbance

FORESTS AND CLIMATE

Forest actions

Improved Forest Management



Carbon storage in long-lived wood products

Materials that are more energy intensive



More carbon storage in long-lived wood products

More substitution = Less use of energy intensive materials

Business as usual

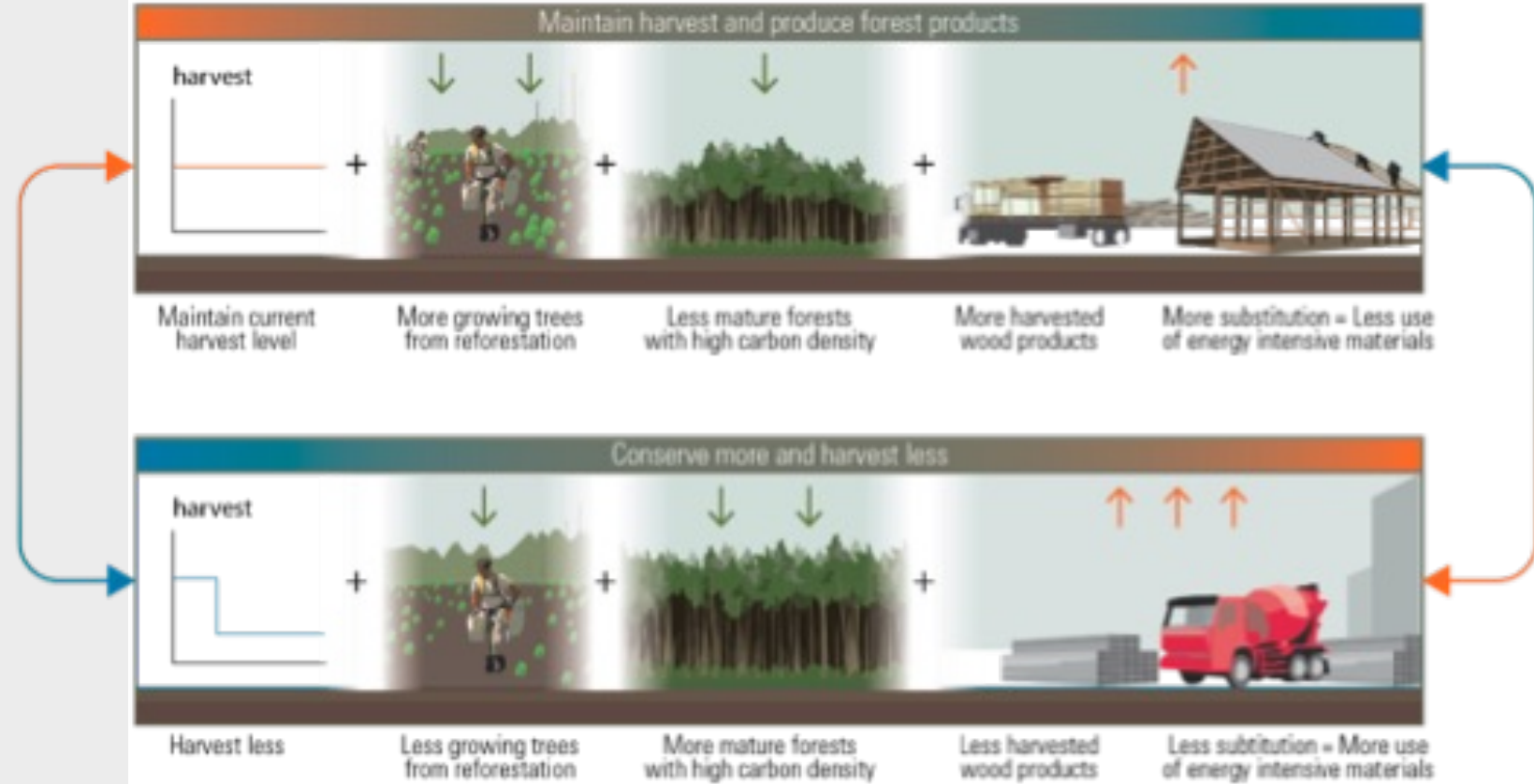


Increased use of long-lasting wood products

FORESTS AND CLIMATE

Forest actions

Conservation and avoided deforestation



FORESTS AND CLIMATE

Level of carbon benefit

Depends on community needs and values

High carbon benefit: extending the rotation age of harvest beyond maximum mean annual increment (MAI) and increased in-block retention such as increased riparian buffers around creeks and lakes, or added wildlife features

Low carbon benefit: increased use of larger planting stock and nutrient loaded stock, and reduction of wildfire impacts. Actions to reduce wildfire involve fuel breaks, buffers, suppression, and controlled fires.



Forest Carbon Community Toolkit

Climate Change and Forests

What is my community's rights and
role in forest management?



Indigenous rights to forest management

Indigenous communities have not benefitted from forest resources to the extent recognized by Indigenous and constitutional rights.

- UNDRIP and the rights to land, territories, and resources – Bill C262 (Canada) and *B.C. Declaration on the Rights of Indigenous Peoples Act, 2019*
- Section 35 *Constitution Act, 1982*: Aboriginal title
- *Delgamuukw (1997)*: Supreme Court clarifies that Aboriginal title is a **non-extinguishable** ancestral right to land and resources
- *Tsilhqot'in (2014)*: Supreme Court decision to recognize Aboriginal title of Tsilhqot'in lands

Provinces and forest tenure

Provincial policy changes are enabling increased proportion of forest tenures by Indigenous communities or corporations

- Ontario: Order in Council 993/95 provides non-competitive forest resource licence process
- BC: Forest Amendment Act, 2019, allows gov to prevent forest tenure transfers

ROLES AND RIGHTS

Indigenous forest tenures increasing

Indigenous
communities can be
the first to experience
climate impacts



ROLES AND RIGHTS

Indigenous communities and forest actions

Indigenous communities are utilizing their rights through forest management and forest carbon

Pacheedaht: acquired land tenure to develop the Pacheedaht Cedar Conservation Strategy, a long-term plan to manage forest resources for cultural purposes such as canoe and totem building.

Cheakamus Community Forest: Community forest tenure for improved forest management actions that generate carbon benefits.



Forest Carbon Community Toolkit

Climate Change and Forests

How do community interests and
climate benefit fit together?



COMMUNITY BENEFITS

Multiple benefits to forest carbon



Environmental: improved riparian ecosystem and habitat for fish

Social: preservation of cultural sites and values

Economic: tourism, recreation, local economic development

COMMUNITY BENEFITS

Aligning interests of community and carbon

Cheakamus
Community Forest and
Chapleau Crown Game
Preserve

- Cheakamus Community Forest promotes tourism, fosters community relationships with local governments, and safeguards water quality for salmon spawning habitat
- Chapleau Crown Game Preserve provides sustainable hunting and trapping for Ojibwa and Cree communities, protecting rights to resources for future generations



FOREST CARBON COMMUNITY TOOLKIT

Workshop

In small groups of 3-4, discuss each of the following questions. We will then collectively discuss each group's responses

- What types of forest management actions does your community value and why?
- How do forests and forest management relate to your community's rights, self-governance and self-determination?
- In what other ways (ecological, social, economic) would your community benefit from forest carbon projects?

References

- [1] Pacific Institute for Climate Solutions (2016) Workshop on forest carbon management in BC
- [2] [4] Government of Canada (2020). Greenhouse gas sources and sinks: executive summary 2019. <https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2019.html>
- [3] CBC News. (2019). Canada's forests actually emit more carbon than they absorb – despite what you've heard on facebook. <https://www.cbc.ca/news/canada/calgary/canada-forests-carbon-sink-or-source-1.5011490>
- [4] Image: Pacific Institute for Climate Solutions (2016) Workshop on forest carbon management in BC