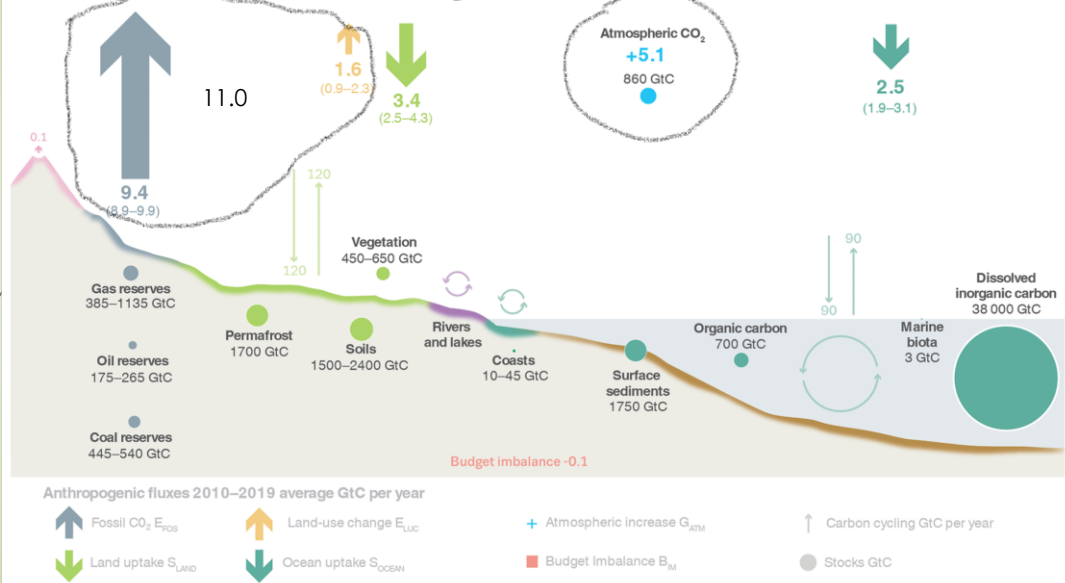


The global carbon cycle



Friedlingstein et al 2020

Increase carbon accumulation by forests

- Altering forest management to let more trees grow would allow global forests to accumulate twice as much carbon
Erb et al 2018
- "...the largest one percent of trees in mature and older forests comprised 50 percent of forest biomass worldwide."
Lutz et al 2018
- The potential for growing forests to accumulate carbon by natural regrowth is better than active management and has been underestimated by 32%
Cook-Patton et al 2020



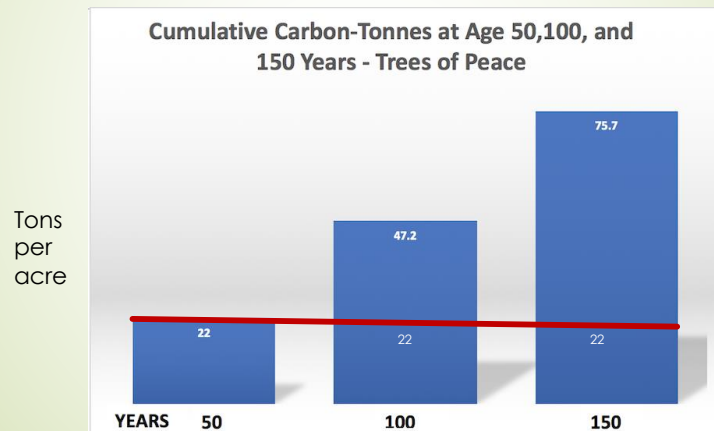
MCNEIL
POWERPLANT
BURLINGTON VT

FOREST
BIOENERGY
ADDS AS MUCH
CARBON
DIOXIDE TO THE
ATMOSPHERE
AS COAL

FORESTS DO
NOT REMOVE IT
FOR A CENTURY



Why “carbon neutral” from sustainable harvests is insufficient to meet the climate emergency





Planting trees is good
Letting them grow is better

Proforestation Management
allows forests to reach their
ecological potential for carbon
storage in trees and soils

Larger trees accumulate the
most atmospheric carbon over
time, and store the carbon in
the wood of their trunk, limbs
roots and soils

Establish two types of forests:



Carbon Reserves and
Ecosystem Services



Industrial production forests

A third structure for forest management

Family scale and land trust owners that are paid by the state to manage their forests to support ecological services

Some might be paid at a different rate to lengthen rotation times to store more carbon and allow for older successional stages

This would be an additional set of criteria for receiving a property tax reduction under Use Value Appraisal that requires management for logging

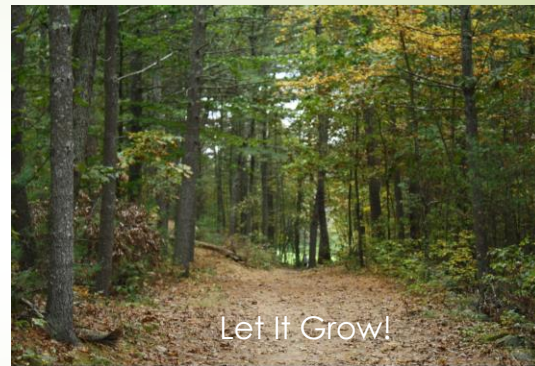
Vermont forester David Brynn has proposed a similar category for family farms



Strategies for closing the sequestration gap

Preventing deforestation, the draining of wetlands and soil loss and restoring them are essential to avoid irreversible and catastrophic climate change

Proforestation management is far more effective than "planting a trillion trees" and is among the least costly options for removing and storing additional atmospheric carbon dioxide



A closing comment from Gifford Pinchot from his autobiography

“For whose benefit shall natural resources be conserved – for the benefit of the many, or the use and profit of the few?” *Char Miller and Alaric Sample Breaking New Ground 1998 edition of 1947autobiographyl.*