

Climate Change



Afforestation



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What is Climate Change?

Climate change is a average in conditions over a long period of time. This could be known as global warming, which refers to a rise in average temperatures on Earth.

Local Weather



Global Climate



Compelling Question(s):

What can cities do to help lower the amount of CO₂ in the air?

Can Afforestation lower carbon dioxide in the atmosphere and lower global temperature?

Proposed Solution: Afforestation

Goal of Afforestation? : To restore area with little to no plantation in an area and reduce erosion and establish a more fertile and stable soil.

Aside: increase the idea planting trees (afforestation) and to decrease the idea of cutting down trees (deforestation).

Some ideas

- Control forest fires
- Increase the percentage of land area used under afforestation (or something relating to)
- Promote afforestation
- Ensure that the trees and plants hold the soil in places where there are sensitive land (by sensitive we mean places where the soil is not firm.)

What is Afforestation

- It is the process of planting trees to create a forest.
- It is a restoration of plants and animals
- The establishment of a forest or stand of trees (forestation) in an area where there was no previous tree cover.



Impact:

- Lower global temperature
- Restore soil
- Lower CO₂
- Woods create new home for animals
- Helps with physical and mental health

Outcome of Afforestation :

Negative

- The more trees that are planted the more likely it is for a forest fire to happen
- If afforestation isn't managed properly it could result in reduced streamflow, lost revenue in agriculture, and reduction of local biodiversity.

Positive.

- Not promoting deforestation (helps save a lot of trees)
- Growing or re-planting trees (takes in CO₂ in the atmosphere.)

No Afforestation:

- Forest loss affects the biodiversity, soil, air, water quality, and the wildlife habitat
- Choosing whether or not to increase in the number of trees influences your key stocks. There are over three trillion trees, but 15.3 billion trees are cut down each year. If this continues the the chance of afforestation rising wouldn't be very likely.
- Life could not exist on Earth without trees because they produce most of the oxygen that humans and wildlife breathe.
- There would also be no rain without trees since trees absorb water from the soil and release it through evaporation..

Why afforestation helps:

- Trees produce Oxygen and take in Carbon from the air. The more trees that are planted down means less carbon in the air.
- Forests store more carbon than any other ecosystems and helps manage climate change
- Because of the increasing demand for wood fuels and building materials, it helps to meet these demands without cutting down the natural forests.
- Planting trees in empty lands can help promote the fast propagation of specific types of trees for the wood industry.

What actions do we want our community to take?

- Start planting gardens
- Plant at least 10 trees on every street
- Stop cutting down trees in the area for new buildings that are not needed.
- Put a limit on the number of trees to cut down for a specific item ex:
paper can be replaced with google docs etc. therefore we don't really need to make a huge amount of paper that we don't need



Data:

- 2020-2050: 22.24-35.94 gigatons of CO2 reduced
- Saves about \$32 billion

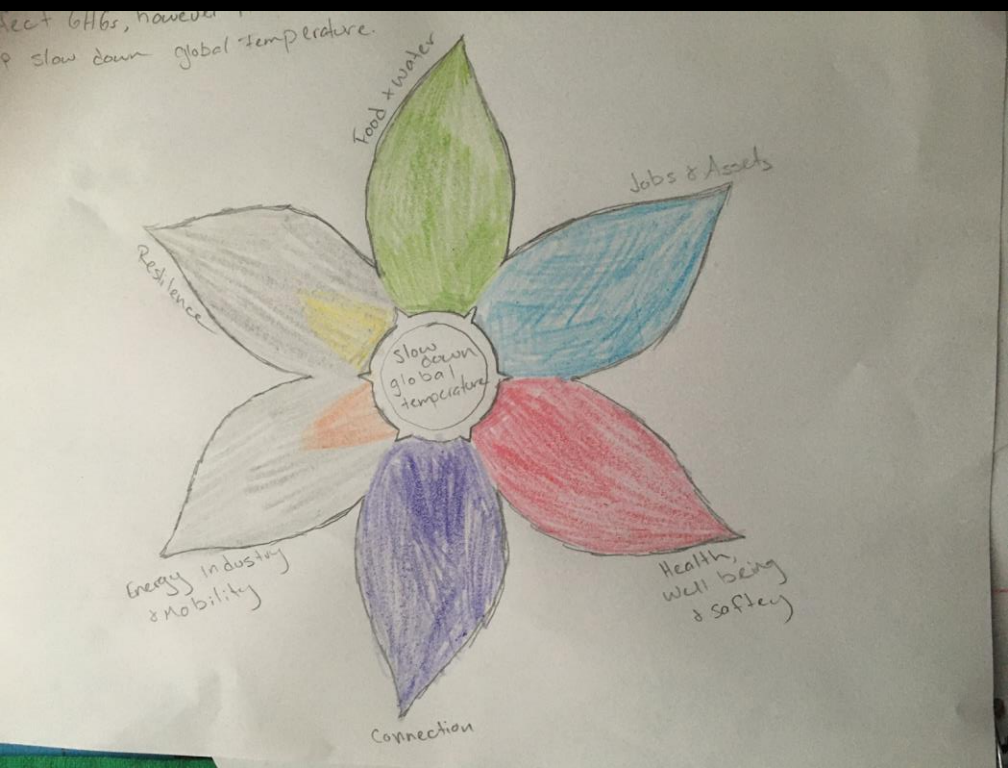
Afforestation would go on until 2050. The peaking season would be in four years (2024) resulting in increasing the amount of trees throughout the environment. After that it most likely would go back to staying at a constant rate.

Connection; Resources; Green Jobs

- Farmers
- Gardeners
- Environmentalist
- Local groceries stores that sells plants and gardening/farming equipments
- Aguritual teacher

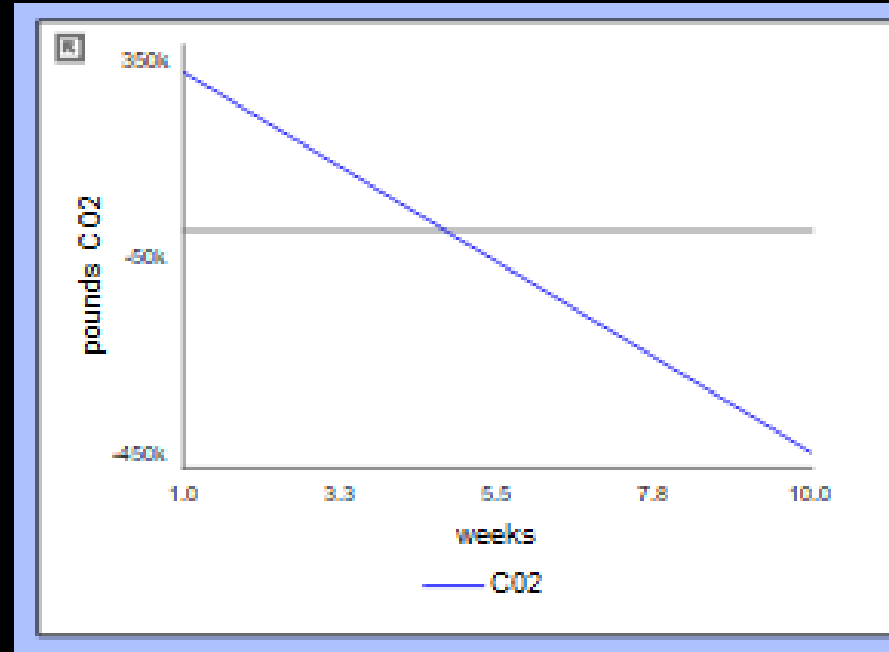
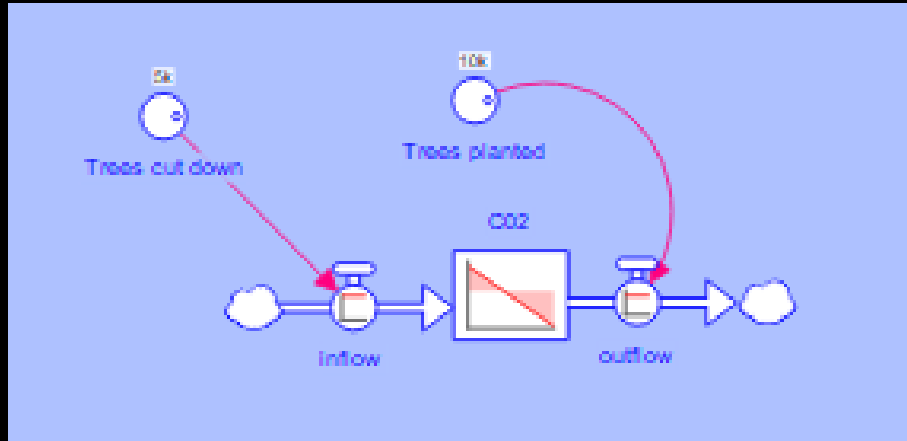


Flower:



- a. Food and Water: Helps food productions and improves water qualities.
- b. Resilience: Helps the soil
- c. Jobs and Assets: Gives people jobs.
- d. Energy Industry and Mobility: N/A
- e. Connection: Yes, because during the time they are planting the trees, workers are able to talk, connect, and share ideas.
- f. Health, Well-Being, and Safety: yes a walk in the woods/forest promotes physical and mental health.

Stock/Flow Diagram



Site

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site

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