WHERE’S ALL THE CARBON?

Carbon moves between three “sinks”: the atmosphere, oceans and land.

THE ATMOSPHERE

About 50% of the CO₂ released over history by human activity is now in the atmosphere. Increasing amounts of atmospheric CO₂ and other gases may be contributing to a stronger “greenhouse effect” and causing Earth to become warmer over time.

THE OCEANS

Roughly a quarter of the CO₂ released by humans is being absorbed into the oceans, which has made the oceans more acidic.

FORESTS AND SOILS

About a quarter of the CO₂ released by humans has been absorbed on land, largely by forests, plants and soils, where it appears to have less harmful effects than in the atmosphere and oceans.

HUMAN ACTIVITY results in the emission of nearly 36 billion tons of CO₂ every year.

Volcanoes

Large amounts of carbon are locked deep underground, in limestone and fossil fuel deposits such as coal, oil and natural gas.

ATMOSPHERIC CO₂

Carbon dioxide has been accumulating in the atmosphere since the beginning of the Industrial Revolution, when humans first started burning fossil fuels. In that time, the concentration of CO₂ has increased from about 280 parts per million to about 400 parts per million.

PHOTOSYNTHESIS

Carbon dioxide is taken up by plants during photosynthesis. When trees take in CO₂ through photosynthesis, they store the carbon as wood and release oxygen as a byproduct. About half of the dry weight of wood is stored carbon.

One way to store or “sequester” carbon is through reforestation. In the Pacific Northwest, new trees must be planted after harvest. It’s the law. As the new forest grows, it will do its work of absorbing CO₂ through photosynthesis.

FORESTS ARE WORKING THEIR TRUNKS OFF

Some carbon is released to the surface through volcanic activity. But at least 100 times more than that is released through fossil-fuel burning and cement production.

HUMAN ACTIVITY results in the emission of nearly 36 billion tons of CO₂ every year.

Volcanoes

Large amounts of carbon are locked deep underground, in limestone and fossil fuel deposits such as coal, oil and natural gas.

ATMOSPHERIC CO₂

Carbon dioxide has been accumulating in the atmosphere since the beginning of the Industrial Revolution, when humans first started burning fossil fuels. In that time, the concentration of CO₂ has increased from about 280 parts per million to about 400 parts per million.

PHOTOSYNTHESIS

Carbon dioxide is taken up by plants during photosynthesis. When trees take in CO₂ through photosynthesis, they store the carbon as wood and release oxygen as a byproduct. About half of the dry weight of wood is stored carbon.

One way to store or “sequester” carbon is through reforestation. In the Pacific Northwest, new trees must be planted after harvest. It’s the law. As the new forest grows, it will do its work of absorbing CO₂ through photosynthesis.

FORESTS ARE WORKING THEIR TRUNKS OFF

Some carbon is released to the surface through volcanic activity. But at least 100 times more than that is released through fossil-fuel burning and cement production.

HUMAN ACTIVITY results in the emission of nearly 36 billion tons of CO₂ every year.