



Do You
Live Near a
Carbon Sink Or
Near a Carbon
Source?



Science
You Can
Use!

Do You Live Near a Carbon Sink Or Near a Carbon Source?

Why Should You Care Whether You Live Near a Carbon Sink or Near a Carbon Source?

Carbon continually cycles between Earth and its atmosphere in the form of carbon dioxide. A carbon source is when more carbon is released to the atmosphere than is produced through photosynthesis. A carbon sink is when more carbon is produced through photosynthesis than is released to the atmosphere. Over the past 100 years, human activities have increased the amount of carbon dioxide released to the atmosphere. Too much atmospheric carbon leads to changes in Earth's climate. Carbon sinks are desirable because they hold carbon on Earth.

Did You Know?

The way land is used contributes to an area's status as a carbon sink or a carbon source. One of the most important features of a carbon sink is a large amount of vegetation, particularly trees, growing in an area. One of the most important features of a carbon source is a large amount of development, such as pavement, buildings, and roads, in an area.

What Are Scientists Doing to Help?

Scientists compare the amount of carbon dioxide absorbed in an area with the amount being released. Any excess amount determines whether an area is a carbon sink or source. Scientists measure the excess quantity over time. This quantity is called net carbon exchange or NCE. A positive NCE value indicates a carbon sink. A negative NCE value indicates a carbon source. By measuring NCE, scientists observe and record changes in carbon storage over time. Understanding NCE helps land planners and managers to make better decisions about land use.

Take Action!

Learn to identify the visual characteristics of carbon sinks and carbon sources by reading "Everything But the Carbon Sink!" in *Natural Inquirer*, <http://www.naturalinquirer.org>, Southern United States Climate Change Edition.

Protect carbon sinks and reduce the impact of carbon sources by planting and caring for native trees and other native vegetation.



November 2013

USDA is an equal opportunity employer.