

FES 100 – Introduction to Forest Biology

Week 2 – Question for September 10, 2007

On a separate sheet of paper, in the upper right corner, write your GROUP NUMBER, **names of all group members**, and today's date.

As you read the following article, make a list of what aspects are scientific and which aren't. Justify your choice.

Full credit is worth 5 points. Depending on the quality of your answers, you may get more, you may get less.

The New Leave No Trace

Carbon offsets: they're not just for celebrities anymore.

by KATHERINE SHARPE • Posted November 1, 2006 01:10 AM

Al Gore claims to offset the pollution caused by his jet-setting from lecture to lecture on his "An Inconvenient Truth" tour by purchasing carbon offsets. In effect, he funds activities that will remove as much carbon dioxide from the air as his heavy travel schedule puts into it.

Online ticketing agency Travelocity is now extending the option of purchasing carbon offsets to ordinary people.

Customers who book vacations packaged through the site have the option of purchasing a tax-deductible carbon offset at checkout: The company suggests a \$10 donation to mitigate round-trip air travel, a one-night hotel stay, and car rental for one person; \$25 for a longer trip for two people; and \$45 for a party of four.

Travelocity then gives these fees to The Conservation Fund, an environmental nonprofit which applies them to its carbon offset program known as Go Zero.

"A cross-country plane flight burns about 100 gallons of fuel per passenger," said Christine Fanning, the executive director of Go Zero. "That's as much as average people use in about four months of driving."

Go Zero exists to help people calculate the size of their "carbon footprint" and cancel it out with offsets. The program, launched about a year ago, is unique in targeting individuals and small companies. The suggested donation amounts are based on the Go Zero carbon calculator, said Jeffrey Glueck, the chief marketing officer of Travelocity. Individuals can calculate "the exact carbon impact of their trip," he added, by visiting The Conservation Fund's Carbon Zero Calculator.

Previous carbon-reduction programs have been aimed at big companies that are interested in establishing recorded carbon offsets in preparation for a future in which carbon emissions may be capped and traded as a commodity.

Carbon offsets work on the principle that carbon dioxide can be stored in organic material. The most popular carbon offset method is the planting of trees, which convert greenhouse gases into sugars and other materials through photosynthesis.

"Approximately 25 percent of the wet weight of a tree is carbon dioxide," said John Rogers, a wildlife biologist and Conservation Fund expert, "and approximately 50 percent of the dry weight."

Donations received through Travelocity's program will finance tree-planting efforts in Louisiana's Bogue Chitto National Wildlife Refuge, 45 miles north of New Orleans. The money from Travelocity customers pays for seedlings, ground preparation, planting, and monitoring of the forest. The cost per tree works out to about \$5, Fanning said.

"In the lower Mississippi, it's primarily bottomland hardwoods," she said, adding that each tree sequesters around 1.3 tons of CO₂ over its lifetime. (Bogue Chitto supports about 300 trees per acre.)

Carbon offsets have the potential to make a significant dent in pollution and the rate of global warming. The U.S. Department of Energy reports that there has been a 30 percent increase in the concentration of CO₂ in the atmosphere since 1880. Forests in the U.S. currently sequester about 200 million kilograms of CO₂ per year. This amount is equivalent to about 10 percent of annual United States emissions of CO₂ from burning fossil fuels.

Experts estimate that with a significant investment in tree-planting and maintenance, U.S. forests could increase carbon sequestration by up to 200 million kilograms per year. Afforestation, or the growing of trees on land once cleared for agriculture, could be an important part of such an effort. The Travelocity groves in Bogue Chitto, Fanning said, will occupy former farmland that has been underused since foreign competition made soybean farming in the area unprofitable.

Ongoing maintenance of existing forests is important because trees don't destroy CO₂—they simply store it. Net sequestration requires a mature forest, where tree deaths are compensated for by growth. Such a forest can sequester 450 tons of CO₂ per acre, said Rogers.

But even in the best-case scenario, trees will only compensate for a fraction of the U.S.'s harmful emissions. Burning fossil fuels releases greenhouse gases in addition to CO₂, including methane and nitrous oxide.

"The planting of trees only deals with the carbon dioxide aspect," said The Conservation Fund's Rogers, who tries to keep the benefits of the carbon offset forests he creates in perspective.

Initiatives like Go Zero are good, he said, but they are no magic bullet.

"Carbon offsets should be part of a larger strategy" in the fight to stop global warming, he said, and the fight will also require alternative fuel sources and reduced consumption. "Nobody's trying to kid anybody that you can now plant enough trees to make global warming go away."

The New Leave No Trace, written by Katherine Sharpe, posted on November 1, 2006 01:10 AM, is in the category Environment & Ecology. 108 blog reactions

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