

Dow Chemical project aims for healthier environment and profits

Company teams up with environmentalists at Freeport complex

By Matthew Tresaugue

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Dow Chemical Co. has decided to pursue an ambitious and unusual project at its sprawling Freeport complex to make environmental costs and benefits part of every business decision.

Dow executives said the selection of the Brazoria County site, the largest chemical complex in North America, as the U.S. pilot for the global project underscores the company's desire for sustainable economic growth.

"Conservation has been about writing a check to buy land" to protect nature for nature's sake, said Neil Hawkins, vice president of sustainability and environment, health and safety at Dow. "This is about how to make business decisions, not just philanthropy."

The five-year, \$10 million project has been developed through an unlikely association of the chemical maker and the Nature Conservancy, an Arlington, Va.-based environmental group.

Scientists from Dow and the conservancy will develop models to assess the company's operations while including the value of "ecosystem services." These benefits, such as clean water, hurricane protection and carbon sequestration, are not part of traditional balance sheets.

The new approach can estimate the worth of, for example, marshes, which act as nature's speed bumps against storm surges, as well as filters for polluted water and nurseries for shrimp, crabs and fish, among other functions.

Such information could lead Dow to build more wetlands instead of levees as protection for its facilities.

"If there is confidence in the (scientific) models, you can move toward green infrastructure from gray," Hawkins said. "Green is usually cheaper."

Value judgments

The idea of ecosystem services gained traction in 1997, when a **University of Maryland** study estimated the value of all the natural capital on the planet at \$33 trillion a year. Since then, a **World Wildlife Fund** study, among others, concluded that the bees that pollinate the coffee crop in Costa Rica and the forests in which they live are worth as much \$60,000 a year to the farmer, more than twice as much as if the trees were removed for cattle grazing.

The Nature Conservancy was among the first to connect the concept to practice, working with Coca-Cola, Pepsi and other beverage makers to improve water quality in areas where they have bottling plants. The group also has helped Dow to restore forest in Brazil as a way to reduce water treatment costs.

At Freeport, where Dow manufactures one-fifth of its global products, the team of scientists will focus primarily on the freshwater supply from the Brazos River. The company, which uses more water at the site than many Texas cities, has reduced consumption by 15 percent and has begun using wastewater from the nearby city of Lake Jackson because of the ongoing drought.

Mitigation models

The scientists also will look at the potential of large-scale tree planting to mitigate smog-forming pollution and building wetlands as hurricane protection. It will be the first time the Nature Conservancy has looked at all of a facility's operations.

"This is a fascinating place to put this idea on the ground," said **Laura Huffman**, the Nature Conservancy's Texas state director. "The Gulf of Mexico, the lower Brazos River and the Columbia Bottomlands are all a short distance from Dow's Freeport facility. So, from the Nature Conservancy's perspective, we care a great deal about what happens at that site."

Observers hopeful

Jennifer Molnar, the Nature Conservancy's chief scientist for the project, said the analytical work should be complete by the end of the year and peer-reviewed before being published for other corporations to see. Dow said the company already has received inquiries from others.

"We want other companies to follow," Molnar said.

Sharron Stewart, a longtime Lake Jackson environmental activist and Dow watcher, said she is hopeful the partnership will produce lasting ecological benefits.

"This would be major if they follow through with it," she said. "It's possible to do, and they could make money at it."

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