

Yale Daily News

Published: Wednesday, November 11, 2009

Yalies to study environment in Hawaii

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While many tourists imagine the island of Hawaii as a tropical paradise, it soon may no longer be able to support residents' current standards of living.

Yale School of Forestry & Environmental Studies professor Marian Chertow was awarded a grant from the National Science Foundation and the U.S. Department of Agriculture Forest Service in October to study ways to help the island of Hawaii achieve food and energy self-reliance. Chertow and her team will work with the Kohala Center, a non-profit research and education organization, to study human impact on the environment over the past 200 years in the cities of Kailua-Kona and Hilo.

"We really want to understand how we can create greater efficiency and recapture resources," Matt Hamabata, director of the Kohala Center, said. "We also want to understand the impact of resource consumption patterns on the health of our environment."

Chertow and a team of eight to 10 students will go to Hawaii in the spring to explore the island's dependence on outside resources. Because it is easy to keep track of everything that comes in or out of an island, islands are perfect locations to study how humans interact with the environment, Hamabata said.

The island, which has a population of 140,000, used to be self-sufficient but is now facing significant sustainability issues, Chertow said.

Hawaii imports 85 percent of its food, Hamabata said. It only holds a 10-day reserve of food supplies and has the most expensive electricity rates in the country, he said. The island, he added, spent \$750 million on fossil fuels in 2007, creating a tremendous burden on the economy.

Issues of energy and food security are important because of the long shipping lines between the state of Hawaii and the U.S. mainland, Hamabata said.

"On the continent, the issues seem so abstract and faraway, but right here it is immediate," Hamabata said.

Hamabata added that the high cost of imported fossil fuels and fertilizers is putting local farms out of business, making it difficult for the island to become self-sufficient in food.

"Just when island communities realize that for their own security food must be produced locally, high energy costs are threatening the very survival of local farms," Hamabata said.

Since 2006, the Environment School has partnered with the Kohala Center to study sustainability issues on Hawaii. In 2007, the Environment School presented a energy sustainability plan that contained recommendations for improving energy efficiency on the island. It also called for investments in geothermal, wind and hydroelectric power.

Much of the plan has already been voted into legislation, including changing business codes and expanding the island's public transportation system, said Betsy Cole, the deputy director of the Kohala Center. Since 2007, the island of Hawaii has gone from having the most antiquated business code in the state of Hawaii to having the most progressive one, Cole added.

Chertow's team will receive \$150,000 per year for two years from the National Science Foundation and the U.S. Department of Agriculture Forest Service.