Hawai'i Demonstration Site

Aligning economic forces with conservation

Hawai'i is a microcosm of important forces at play worldwide. With a rapidly growing population and intensifying development pressure, the future of Hawai'i's forests and agricultural lands is in question. Today, diverse leaders across the public, private, and non-profit sectors in Hawai'i are mobilizing to incorporate the values of natural capital into land use and policy decisions. Under the state's ecosystem services resolution and climate bill, passed in 2006 and 2007 respectively, the Natural Capital Project is designing models that we hope can inform future efforts in the U.S. and across the world.

Landowners looking for new, sustainable business models

Development pressure is leading to rising land prices, and farm, ranch, and forest landowners are looking for new business models that are financially viable and ecologically sustainable so productive lands will be passed on to future generations.

In addition, invasive species continue to disrupt native ecosystems while land managers face escalating control costs. Climate change is sure to affect this island state through sea level rise and other impacts. Addressing these multiple threats will require innovative partnerships to cultivate the ecological, economic, cultural, and institutional knowledge to make meaningful change.

Our goal is a future in which Hawai'i's unique ecosystems support the needs and aspirations of its communities: clean drinking water, productive farming and ranching lands, healthy coral reef and coastal systems, habitat for Hawai'i's unique native plants and animals, forests sequestering carbon to mitigate climate change, and more. Building on our work in Hawai'i, we aim to create a model for integrating ecosystem services into decision-making that can inform future efforts in the United States and around the world.

Launching payment programs for ecosystem services

Creating financial incentives for ecosystem services is key to making conservation economically attractive and commonplace. Building upon Hawai'i's climate legislation, we are bringing together buyers and sellers for a pilot forest carbon offset project. This project will include land-based sequestration as a mitigation measure in Hawai'i's approach to achieving emissions reductions.

Early Results

- **Developed business models for conservation,** focused on win-win opportunities for private ranchers to restore native koa forest, providing an attractive revenue stream as well as benefits for endangered species and ecosystem services.
- **Initiated the design of a carbon sequestration project**, focused on restoration of native forest, by bringing together potential buyers and sellers from across the state in the context of Hawai'i's climate bill.
- **Mapping and valuing ecosystem services,** using InVEST (our tool for Integrated Valuation of Ecosystem Services and Tradeoffs) with the Land Assets Division of Kamehameha Schools, the largest private landowner in Hawai'i.
- **Working with policy-makers on new incentives:** Served as lead members of the steering committee responding to House Concurrent Resolution 200 (calling for ecosystem service payments).
- **House Speaker Calvin Say** participated in our symposium on ecosystem services in Honolulu, and has offered his support of our policy work.

NATURAL CAPITAL PROJECT:
Hawai'i

Hawai'i's Life-Support Systems

- **Carbon Sequestration, Drinking Water, and Biodiversity:** Hawai'i's upland forest store carbon, supply drinking water (ground water recharge and water purification), and harbor more than 10,000 unique species of plants and animals.
- **Recreation and Tourism:** Hawai'i's spectacular natural beauty draws more than 7 million tourists each year
- **Agricultural Crop Production:** Hawaiian farms are leading exporters of pineapple, sugar case, macadamia nuts, and coffee
- **Commodity Production:** Koa wood, conservation beef
- **Flood/Erosion Control**
- **Education and Native Hawaiian Cultural Benefits**
- **Size of Hawaii:** 29, 111 sq km
- **Population Affected:** 1.3 million residents

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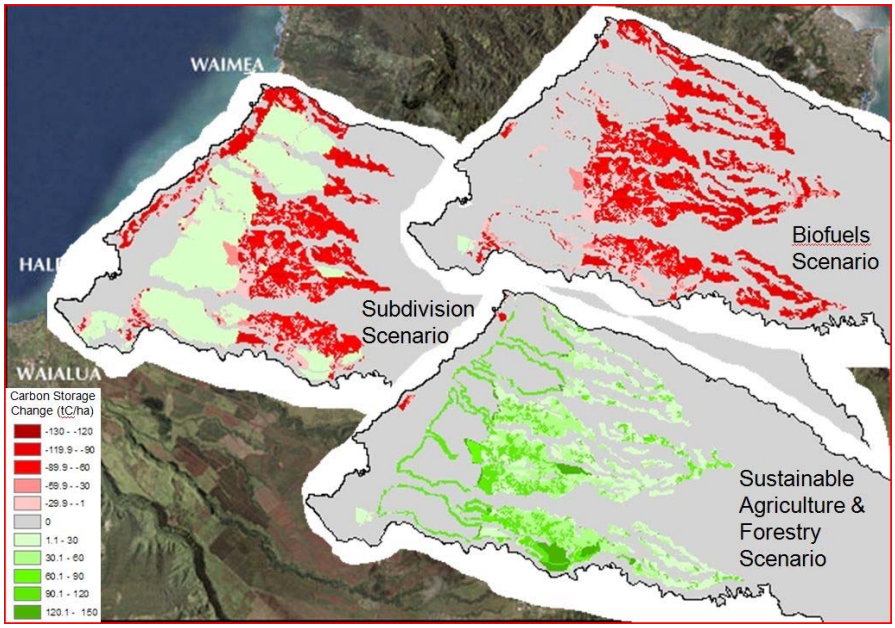

Mapping and valuing ecosystem services in land management

We are collaborating with Kamehameha Schools (KS) to test the InVEST software tool on a key landholding on the north shore of O'ahu. KS is facing important land use decisions in its current community planning effort. Reconnecting people to the land through cultural and educational opportunities is core to KS's mission, and we are developing new models to include these values in InVEST. Building from this pilot, we will work with KS, government agencies, and other major landowners to tailor InVEST to their needs and decision-making.

Advancing scientific frontiers: Koa forest restoration, water-related ecosystem services

We are working with private landowners to develop ecological and economic approaches for protecting and restoring biodiversity and ecosystem services, and in ways that are economically attractive. Our major focus is on opportunities to restore native koa tree cover for its diverse economic, ecological, and cultural benefits. We are also leading efforts to generate new scientific knowledge about the connections between land use and the provision of hydrologic services. This knowledge will be critical to informing the design of institutions and payment programs to protect these services.

Providing input into policy discussions

County and state leaders are increasingly recognizing the importance of ecosystem services and we are working with them and colleagues at The Nature Conservancy's Hawai'i program to build new incentives and institutions that reward landowners for the ecosystem services that their lands provide to the public. Key policy opportunities include House Bill 226 mandating a reduction of the state's greenhouse gas emissions to 1990 levels by 2020.

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