

DEFINING CARBON NEUTRAL LANDSCAPES

HAWAII AS A MODEL SYSTEM FOR UNDERSTANDING CARBON NEUTRALITY DEFICITS AND ATTAINMENT

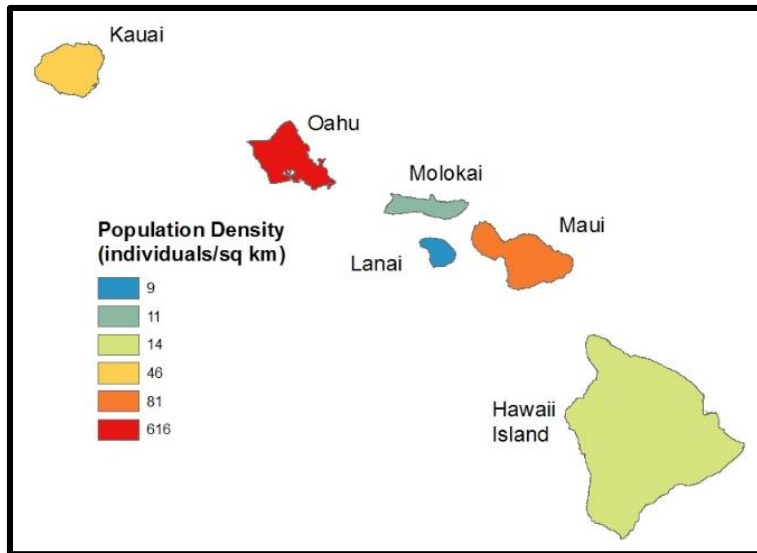
Christian P. Giardina

USDA Forest Service

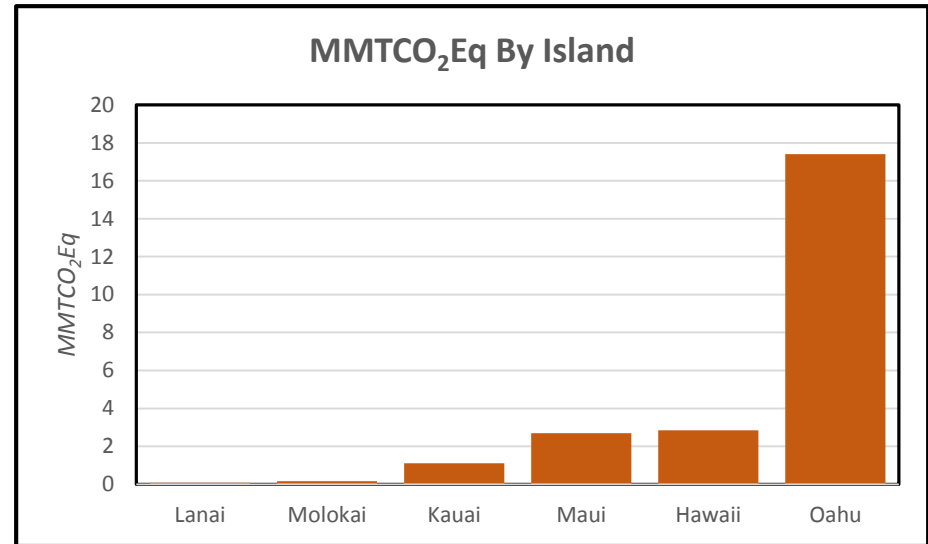
Institute of Pacific Islands Forestry, Hilo, Hawaii



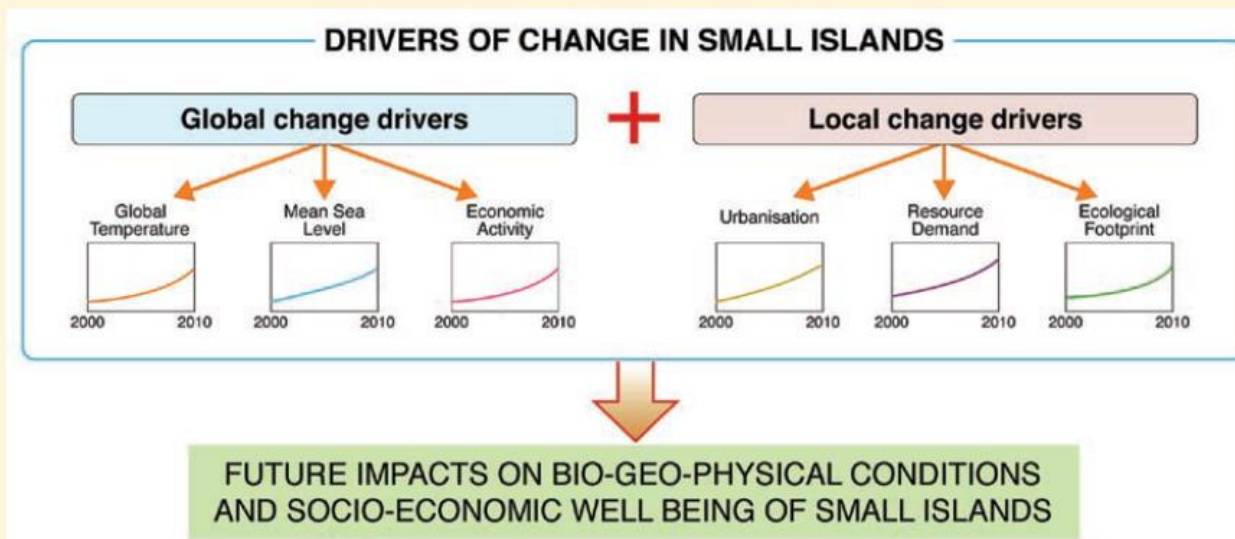
Hawaii as a model system:



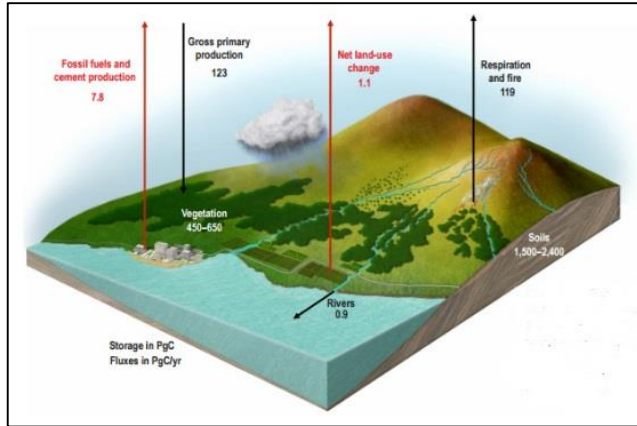
Population Density by Island



CO₂ Emissions by Island

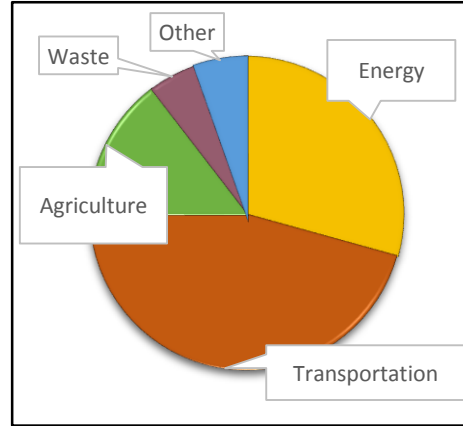


Available Datasets...



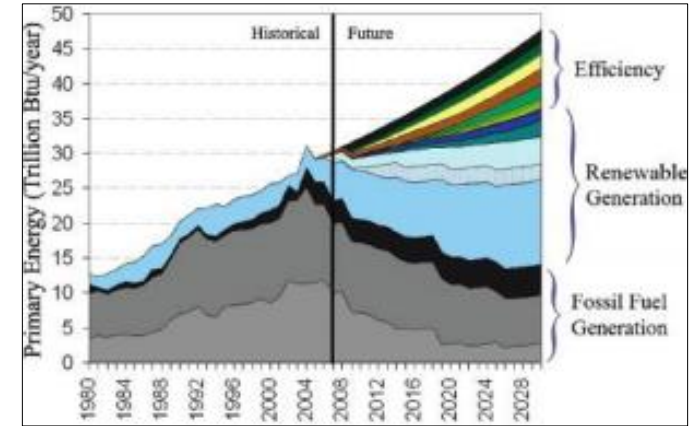
Hawaii Carbon Assessment

[Doi.org/10.3133/pp1834](https://doi.org/10.3133/pp1834)



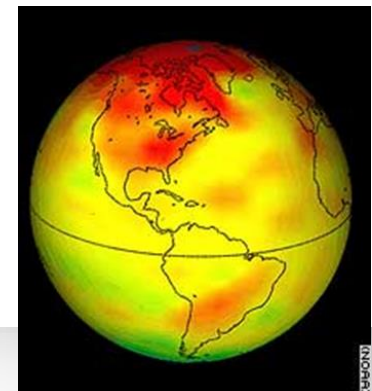
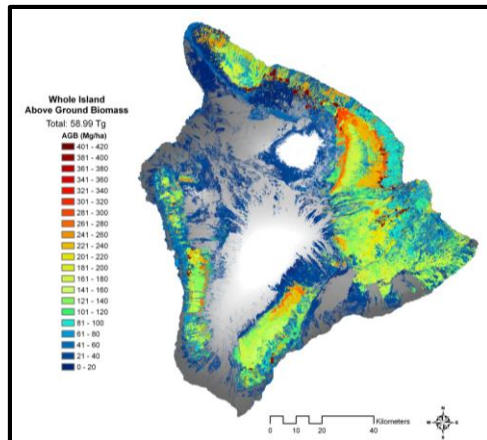
Hawaii Greenhouse Gas Inventory

www.energy.hawaii.gov/wpcontent/uploads/2011/10/ghginventory-20081.pdf



Hawaii Mass Energy Transfer Budgets

www.environment.yale.edu/profile/chertow



Technology by
Sector

Land
Management

Policy and
Finance

Social
Preferences

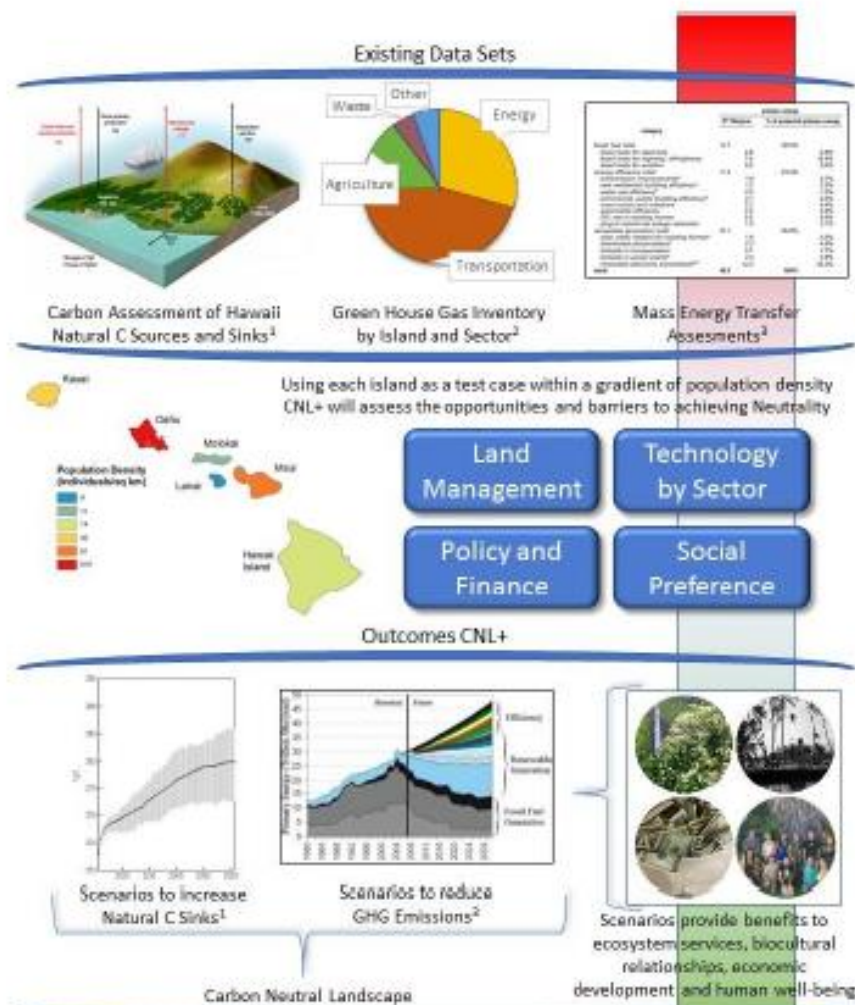


Figure 1. The Carbon Neutral Landscape Plus (CNL+) SNAP proposal will use existing datasets to evaluate the current carbon balance by island. Within the CNL+ framework scenarios will be developed to achieve neutrality while considering other benefits to the ecosystems and people of Hawaii.

1. Beltrami, P.C., Sardine, C.P., Jacobi, J.D., and Zhu, Z.H. (eds.), 2007. Baseline and projected future carbon storage and carbon fluxes in ecosystems of Hawaii 1: U.S. Geological Survey Professional Paper 1324, 124 p.
2. ICF International, 2008. Hawaii greenhouse gas inventory: 1990 and 2007. Hawaii Department of Business, Economic Development & Tourism
3. Johnson, J., & Orentow, M. (2008). Climate stabilization wedges in action: A systems approach to a energy sustainability for Hawaii island.

Transportation

Energy

Waste

Agriculture

Sequestration

Plus

State of Hawaii Law
H.B. 2182

Mahalo

