Islands as microcosms for understanding interplay of ecological, environmental, and social systems

March 29 2016

One way to better understand the complex interactions between humans, biodiversity, and ecosystem services of any particular place—and how various sustainability initiatives or the consequences of impacts such as climate change will affect it—is to develop and run computational models that integrate ecological, environmental, and social system dynamics.

SFI Professor Jennifer Dunne and colleagues recently published a description in *GigaScience* of one such approach—a modeling framework they call the Island Digital Ecosystem Avatars, or IDEA.

Because of their defined and isolated borders, islands like French Polynesia's Mo'orea are ideal places to begin using an IDEA framework to simulate relationships and feedbacks between human activity and local ecosystems, they say.

More information: Neil Davies et al. Simulating social-ecological systems: the Island Digital Ecosystem Avatars (IDEA) consortium, *GigaScience* (2016). DOI: 10.1186/s13742-016-0118-5

Provided by Santa Fe Institute