

A Research Coordination Network on
Sustainable Oceans in a Changing Climate: forecasting increased disease impact and consequences for human well-being

Diseases of marine organisms are forecast to increase significantly with climate change drivers of warming and increased ocean acidification. Despite this increased risk, diagnostic tools, forecasting tools and the capability to model marine diseases lags far behind most terrestrial ecosystems. Large scale capacity building is needed in the form of training and increased communication within the community of marine disease researchers to be able to meet this challenge in ocean ecosystem sustainability. In addition, critical tools such as facilities to study ocean acidification and conduct experiments are not in centralized locations. This RCN will increase training for students and postdocs at the same time as forming a more cohesive, collaborative research network. Training opportunities will include hybrid workshops/meetings on diagnostics, remote sensing and modeling at Friday Harbor Labs, Coconut Island Hawaii and Cornell UNiversity. Through an initial series of annual meetings, workshops, and mediated discussions, the RCN will evaluate infrastructural needs, prioritize a research agenda, and energize new collaborations to expand the effectiveness of the emerging community of researchers. This is a SEES relevant, highly interdisciplinary project that seeks solutions to managing our oceans for sustainability under the pressure of climate change and other anthropogenic threats. The computationally intensive portion will include forecasting disease risk with future climate scenarios. This project will also include a dimension of human change through evaluation of human perception of heightened disease risk with climate and consideration of the economic consequences of heightened disease impact on fisheries and sentinel species.