The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Interventions to Increase the Resilience of Coral Reefs
Workshop Agenda

August 28, 2018

East-West Center's Hawaii Imin International Conference Center
1777 East-West Road, Honolulu, Hawaii 96848 (on University of Hawaii Manoa campus)
Asia Room

Workshop Goal: Discussions at the workshop will explore ways of evaluating the risks and benefits of ecological, genetic, and environmental interventions with the potential to increase the long-term persistence of coral reefs in environmentally degraded scenarios. The workshop is one component of the information-gathering activities that may inform the deliberations of the National Academies' Committee on Interventions to Increase the Resilience of Coral Reefs.

8:00 AM *Breakfast*

8:30 AM **Introduction**
Stephen Palumbi, *Committee Chair*

8:45 AM **Opportunities and challenges for coral restoration in the Pacific--perspectives from science and management**

- What are the current and expected future conditions in the Pacific and the expected effect on coral reefs? What are the uncertainties in predicting the condition of coral reefs in the future?
- What information is needed to weigh the risk and benefit of implementing new coral reef restoration and management approaches?
- What are the regulatory and scientific barriers and needs for permitting research and deployment of new approaches in the water?

Russell Sparks, *Hawaii Division of Aquatic Resources*
Gerry Davis, *National Oceanic and Atmospheric Administration*
Lance Smith, *National Oceanic and Atmospheric Administration*
Fran Castro, *University of Guam*
Dave Wachenfeld, *Great Barrier Reef Marine Park Authority (remote)*

10:30 AM *Break*

10:45 AM **Reef Restoration and Adaptation Program**

Line Bay, *Australian Institute of Marine Science*

11:45 AM **Benefits and risks of interventions to increase thermal tolerance**

Madeleine van Oppen, *Australian Institute of Marine Science and University of Melbourne (remote)*

12:30 PM *Lunch*

1:30 PM **Risks from invasion and disease introduction**

- Under what conditions have invasive species and disease been introduced and intensified in coral reefs? What is the ability to predict the probability of these introductions?
- How may deteriorating environmental conditions, as well as manipulation of a reef community, affect susceptibility to invasive species and disease?
- How may translocation of coral and associated reef species to new areas lead to spread of known invasive and disease, or cause coral themselves to become invasive?

Celia Smith, *University of Hawaii at Manoa*
Joleah Lamb, *Cornell University*
Drew Harvell, *Cornell University (remote)*

2:45 PM **The risk of doing nothing: the value of coral reefs and active intervention**

- Which ecosystem structures and functions are imperative to preserve to maintain coral reefs? How will deteriorating environmental conditions inhibit their maintenance?
- Which ecosystem structures and functions may change when moving toward resilient reefs? How do we evaluate the risks introduced by interventions that alter coral reefs communities?

Kirsten Oleson, *University of Hawaii at Manoa*

3:15 PM *Break*

3:30 PM **Frameworks for evaluating interventions: lessons from other taxa**

3:30 PM Invasion Ecology: Jeb Byers, *University of Georgia (remote)*

4:00 PM Managed Breeding: Robin Waples, *National Oceanic and Atmospheric Administration (remote)*

4:30 PM Managing Disease: Jared Westbrook, *American Chestnut Foundation*

5:00 PM Structured Decision Making and Adaptive Management: Michael Runge, *U.S. Geological Survey*

5:30 PM *Adjourn*