Citizen Science Ocean Climate Change Monitoring



Jan Freiwald, Reef Check Kristy Kroeker, UCSC Yui Takeshita, MBARI Emily Donham, UCSC Kate Vylet, Reef Check Reef Check staff Reef Check Volunteers



5th Ocean Climate Summit April 18th, 2019

Reef Check California

Trains volunteer scuba divers, as citizen scientists, to monitor rocky reefs and kelp forests to:

- Provide data to inform marine management and policy
- Foster an educated constituency supportive of science-based management and ocean stewardship



REEF CHECK

Ocean Acidification and Hypoxia Program

- Co-locate OAH monitoring with long-term ecological monitoring
- Develop standardized citizen science approaches for OAH monitoring
- Create better interpretation of MPA effectiveness and detection of ecological responses to global change

OAH Sensors

- Hobo temperature sensors
- MiniDOT dissolved oxygen sensors
- Durafet based pH sensors developed at MBARI (miniFet)













Reef Check Citizen Science Monitoring Program

- Ecological data inside and outside of MPAs since 2006:
 - 100 sites
 - 75 species
- OAH data since 2018:
 - six locations for pH and O₂
 - 60+ sites for temperature

Temperature Data



pH Data



Thank you!

jfreiwald@reefcheck.org reefcheck.org









