

**The Ocean
Foundation's
International Ocean
Acidification Initiative:**

A cross-cutting program to build capacity of scientists and legislators to understand and address the complex impacts of ocean acidification

Alexis Valauri-Orton, Alexandra Puritz, and Mark J. Spalding

Our work is made possible by our partners



A Web of Effects

Direct Harvest

Shellfish harvesters, fishers, pearl farmers



Ecosystem Services

Physical protection, tourism income, cultural value



Business and Community Services

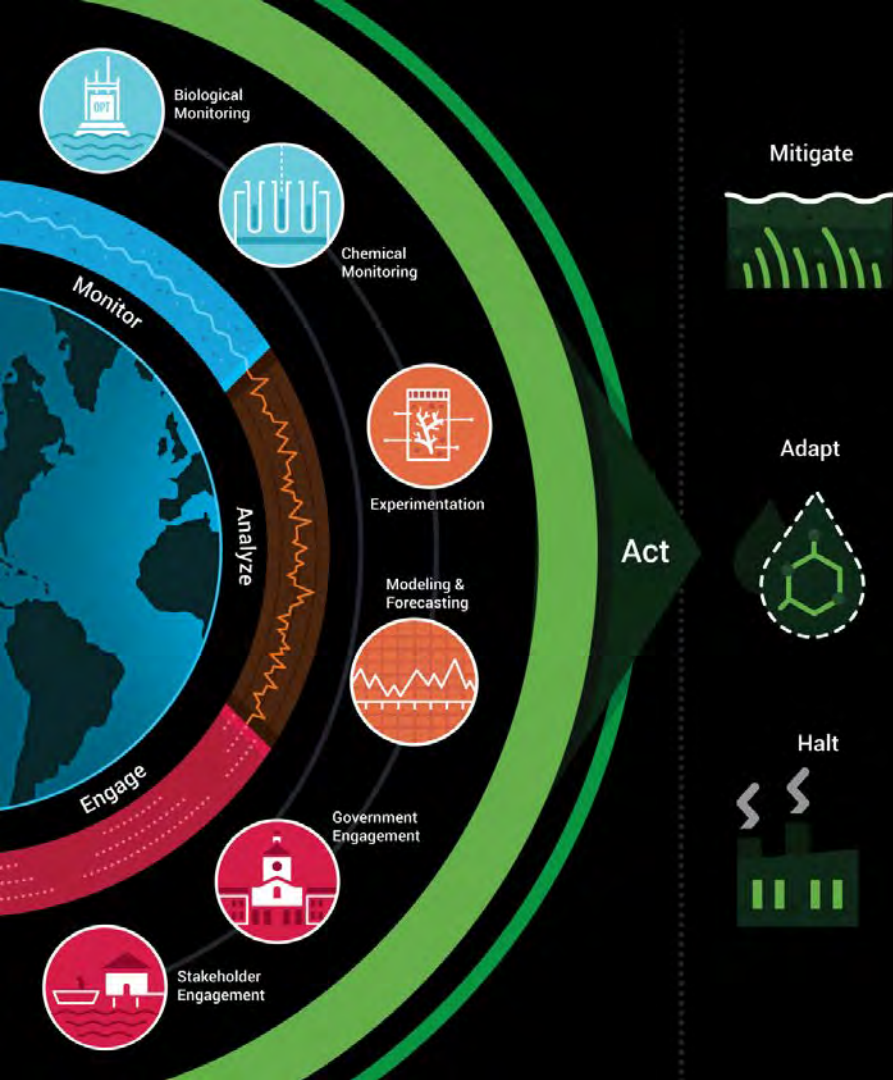
Services and infrastructure built on or made possible by the industry







Food and International Security

Provision of protein, stability through stable food supplies





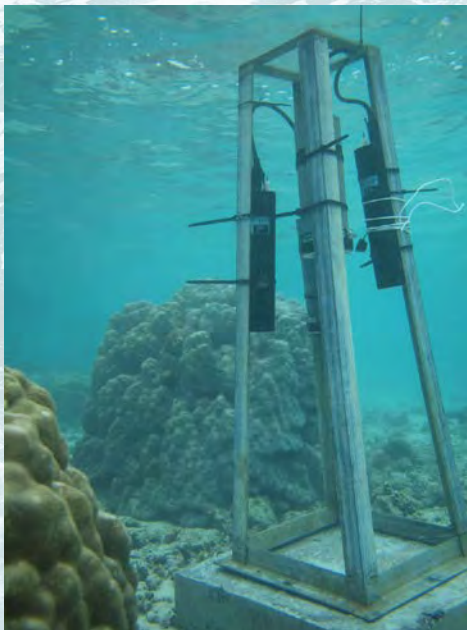
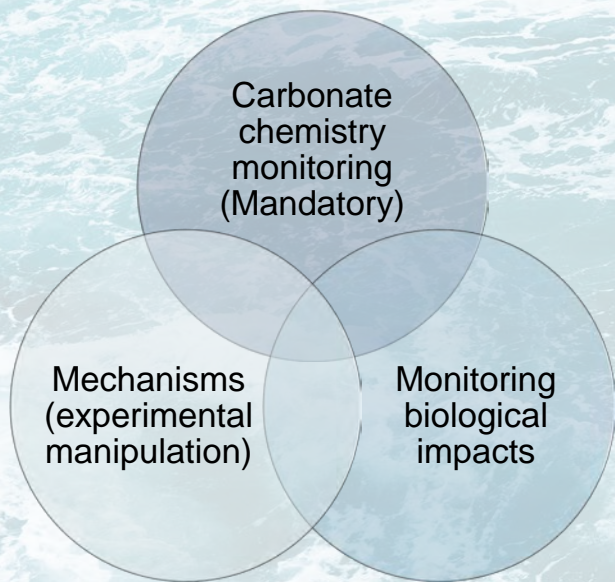
The Ocean Foundation's International Ocean Acidification Initiative

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Monitor Observing how, where, and how quickly is change occurring
- 
Analyze Studying how we are being affected now, and how will we be affected in the future
- 
Engage Building partnerships and coalitions with stakeholders
- 
Act Enacting legislation that mitigates ocean acidification and helps communities adapt

Why Monitor?



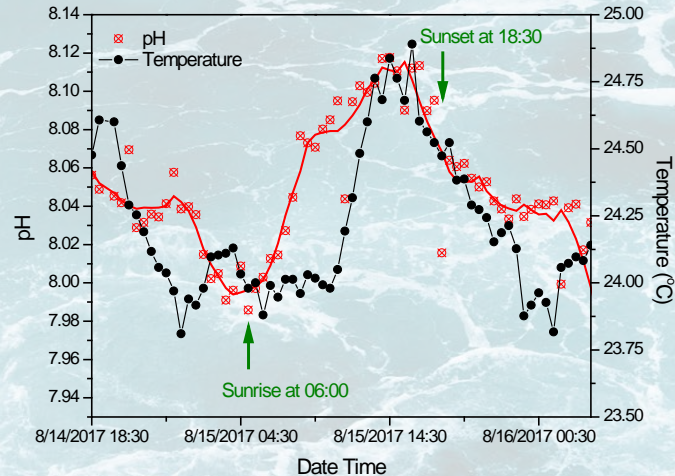
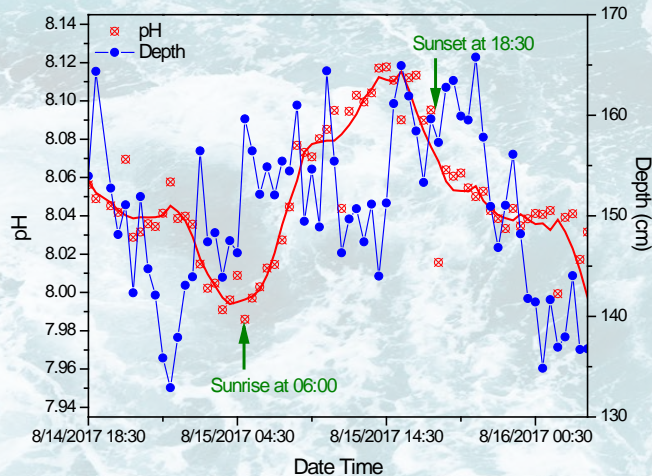
An Accessible Kit to Collect Weather-Quality Data (GOA-ON in a Box)



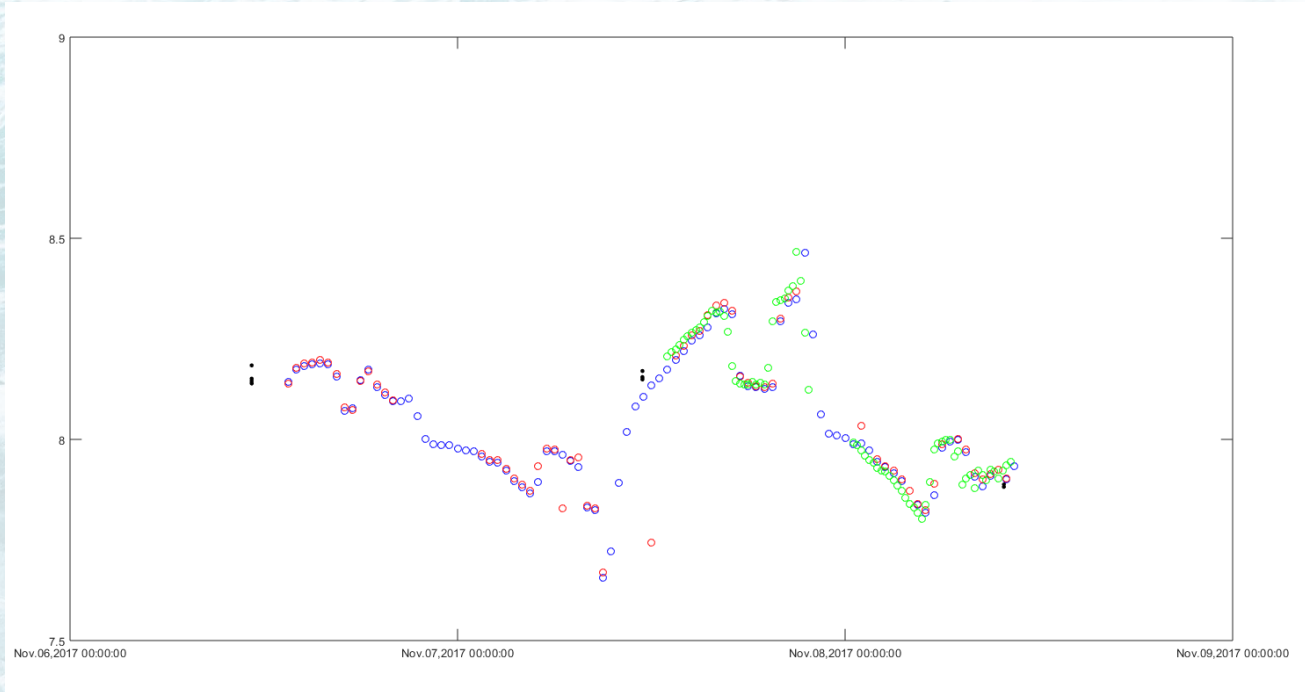
Preliminary data from our kit recipients - 24 hours pH monitoring in the lagoon of Albion, Mauritius

The iSAMi automated pH measuring system was deployed together with a CTD diver in the back reef of Albion to monitor the change in pH for 24 hours.

The lowest pH was measured at around 06:00 in the morning and the highest was measured at 15:00.



Preliminary data from our kit recipients – measurements during training in Fiji



The first ever pH data collected in Suva Harbor, Fiji. The colored dots are from the three iSAMI pH sensors deployed, and the black dots are the pH values participants calculated by analyzing bottle samples in the lab. The close clustering of the data obtained from lab samples with the iSAMI readings show very high quality measurements being made by course participants.



A Toolkit for Policy-Makers



Tab 1: Promoting and Supporting Increased Science and Research Locally

- Formalized research centers.
- Infrastructure for monitoring, data collection and data sharing.
- Temporary commissions or task forces focused on ocean acidification.
*consider inclusion of public/private collaborations

Washington (Executive order and budget appropriation)

Summary: In 2011, the Governor of Washington issued an executive order establishing a Blue Ribbon Panel on Ocean Acidification. The Panel consisted of leading tribal, state, federal and local policy makers; scientific experts; public opinion leaders; and industry representatives. The Panel was focused on documenting the current state of scientific knowledge, ways to advance scientific understanding of the effects of ocean acidification, and recommended

Tab 2: Coordinating Actions Between States/Regions/Nations

- Permanent entities to lead and coordinate action.
- Collaborative groups of stakeholders and policymakers locally and regionally.
*consider inclusion of public/private collaborations

California (legislation and memorandum of understanding between states)

Summary: A permanent Ocean Protection Council was created in 2004 by the California Ocean Protection Act (COPA). The Council was charged with multiple tasks centered around coordinating ocean-related state activities and improving the effectiveness of the state efforts to protect ocean resources. The Council in turn recommended the creation of the West Coast Ocean Acidification & Hypoxia Science Panel to help develop a better understanding of the impacts of ocean acidification.





Reach to date



Over 20 Countries

Scientists and policy makers from more than 20 countries have received training



Over 50 Scientists

More than 50 scientists have been trained and 11 GOA-ON in a Box kits have been deployed



Next Stop: Caribbean

Science and policy trainings will be held in the Caribbean and Latin America in January, 2019





How can you help?

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- Sign up to **be a mentor** through GOA-ON's Pier-2-Peer Program
 - Join the conversation on the **OA Information Exchange** to help improve methods and reach of GOA-ON in a Box kits
 - Help us **deliver more kits** by establishing partnerships with data-poor regions
 - Point scientists in your region towards our **trainings** and **scholarship** opportunities



THE OCEAN FOUNDATION

Thank You

Alexis Valauri-Orton
Program Manager
avalauriorton@oceandfn.org

Alexandra Puritz
Program Associate
apuritz@oceanfdn.org

The Ocean Foundation | 1320 19th Street NW, 5th Floor | Washington, DC 20036 | www.oceanfdn.org

