



Climate Program Office Review

May 24-26, 2022

Pre-Recorded Presentation

Supporting Review Activity Area 2:
Climate and Societal Interactions

International Adaptation Sciences and Partnerships

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International Adaptation Sciences



Presentation Overview



- Overview of CSI international adaptation sciences and partnerships
- Key Accomplishments
- The Path Forward: Challenges and Opportunities

Adaptation Sciences: Program Foci

NOAA-CPO AdSci Program

Mission: To advance the knowledge, methods and frameworks needed to move society beyond incremental adaptation toward more widespread, connected, adaptive pathways, and resilience strategies with clear economic and societal co-benefits.

Lines of Effort: AdSci's current programmatic foci (Adaptation Pathways, Water, Coastal, Fisheries and International) are shown in this graphic, highlighting AdSci's unique research and partnerships.

Ad. Pathways

Focus & Activities: Research designed to advance knowledge about key drivers and conditions that shape and enable adaptation across multiple temporal and spatial scales (e.g., socioeconomic considerations and adaptive behaviors, risk perception, public awareness and education)

Examples of Key Partners: Research community, decision and policy makers in focused sectors

*NOFO Focus in FY22

Water

Focus & Activities: Funding research, leading studies, producing webinar series, and supporting communities of practice focused on the needs of stakeholders within the water resource management sector

Examples of Key Partners: NOAA NESDIS, OAR, and NWS; and major US water, planning and utility NGOs

*NOFO Focus in FY22

Coastal

Focus & Activities: Funding research, engaging in communities of practice, to better understand the interactions, impacts, and vulnerabilities of the coastal built and natural environment in a changing climate

Examples of Key Partners: NOAA, NMFS, Academics, NGOs

*NOFO Focus in FY21

Fisheries

Focus & Activities: Advancing understanding of climate related impacts on fish stocks and fisheries and fishing dependent communities; develop tools and information to promote adaptation and resilience of the nation's fisheries and fishing dependent communities

Examples of Key Partners: NMFS, Academic, and Federal Partners

*NOFO Focus in FY22 & FY23

International

Focus & Activities: Supporting technical collaboration, knowledge development and peer-to-peer learning through internationally-focused partnerships

Examples of Key Partners: State Department, NCEI, NOAA/OAR PSL, NOAA MPA Center, EPA

*Potential NOFO Focus: FY23

International Adaptation Sciences 101

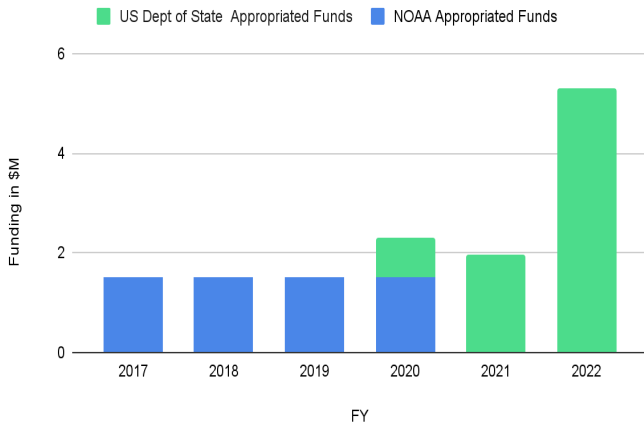


Staff:

Lisa Vaughan (Lead)
Alec Shub ('21-22 SG Fellow)
Andrea Miralles-Barboza ('22-23 SG Fellow)

- CSI spearheads CPO's international climate adaptation research and partnership activities through the AdSci Program
- **Goal: Support adaptation and resilience in key countries and regions through research, engagement and partnerships**
- The roots of this effort date back to the earliest days of NOAA's climate program
- Recent transition from supporting interdisciplinary, international research to the current effort characterized by a (funded) partnership with the U.S. Department of State
 - 2017: Climate resilience, including the development of climate information systems (NOFO)
 - 2018-2020: Climate and health risks and the development of global risk forecasting for infectious disease (NOFO)
 - 2021: 1) Island adaptation & resilience; 2) Blue carbon (funded partnership with U.S. State Department)

International Adaptation Resources 2017-2021



International Adaptation Sciences 101 (con't)



- Renewed U.S. engagement in international climate
 - Executive Order 14008
 - President's Emergency Plan for Adaptation and Response (PREPARE)
- Whole-of-government approach to international adaptation; partners include DoS, USAID, NSF, NIH, USDA/FS, SERC, NASA
- International- provides a platform to integrate across NOAA LOs, building on investments in domestic interdisciplinary research and assessment programs
- Supports CPO, OAR and NOAA missions of Science, Service and Stewardship



EO 14008: Tackling the Climate Crisis at Home and Abroad



"a future where people, communities, and ecosystems prosper and are resilient in the face of change." NOAA NGSP

Examples of Key Accomplishments (FY 17-21): Quality



Research to inform the development of integrated climate services for risk management and adaptation



Knudson, Chris, and Zack Guido. 2019. “**The Missing Middle of Climate Services: Layering Multiway, Two-Way, and One-Way Modes of Communicating Seasonal Climate Forecasts.**” *Climatic Change* 157 (1): 171–87.

Guido, Zack, Chris Knudson, Donovan Campbell, and Jhannel Tomlinson. 2019. “**Climate Information Services for Adaptation: What Does It Mean to Know the Context?**” *Climate and Development*, June, 1–13.

Gerlak, Andrea K., Simon J. Mason, Meaghan Daly, Diana Liverman, Zack Guido, Marta Bruno Soares, Catherine Vaughan, Chris Knudson, Christina Greene, James Buizer, Katharine Jacobs. 2020. “**The Gnat and the Bull: Do Climate Outlook Forums Make a Difference?**” *Bulletin of the American Meteorological Society*.

Gerlak, Andrea K., Zack Guido, Catherine Vaughan, Val Rountree, Christina Greene, Diana Liverman, Adrian R. Trotman, Roché Mahon, Shelly-Ann Cox, Simon J. Mason, Katharine L. Jacobs, James L. Buizer, Cedric J. Van Meerbeeck, and Walter E. Baethgen. 2018. **Building a framework for process-oriented evaluation of Regional Climate Outlook Forums.** *Weather, Climate, and Society*



Innovating Decision Support Services for Coffee Risk Management in Jamaica

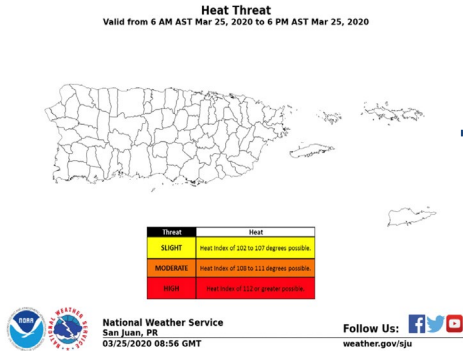
PHOTO: ZACK GUIDO



USAID
FROM THE AMERICAN PEOPLE

Examples of Key Accomplishments (FY17-21): Relevance

NWS Heat Risk Product



Outcomes:

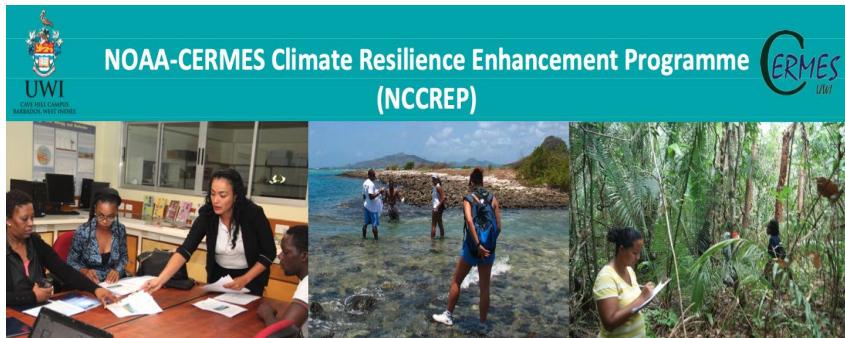
- Understanding of the current use of the NWS product
- Articulation of the need for risk communication training
- Plan to launch a “Heat Awareness Day” in PR
- Stakeholder input for improving NWS product
 - Essential role of public health data for useful thresholds
 - Utilize graphics instead of text, showing the spatial extent of each threshold, including municipalities
 - Connect thresholds to actions people can take to reduce risk
 - Include historical climate context for key thresholds

Partners: U of Arizona, U of Puerto Rico, PR Department of Public Health, NWS PR, Tulane U, U of Colorado/RISA Western Water Assessment, IRI, Caribbean Institute for Meteorology & Hydrology

Key Accomplishments (FY17-21): Relevance



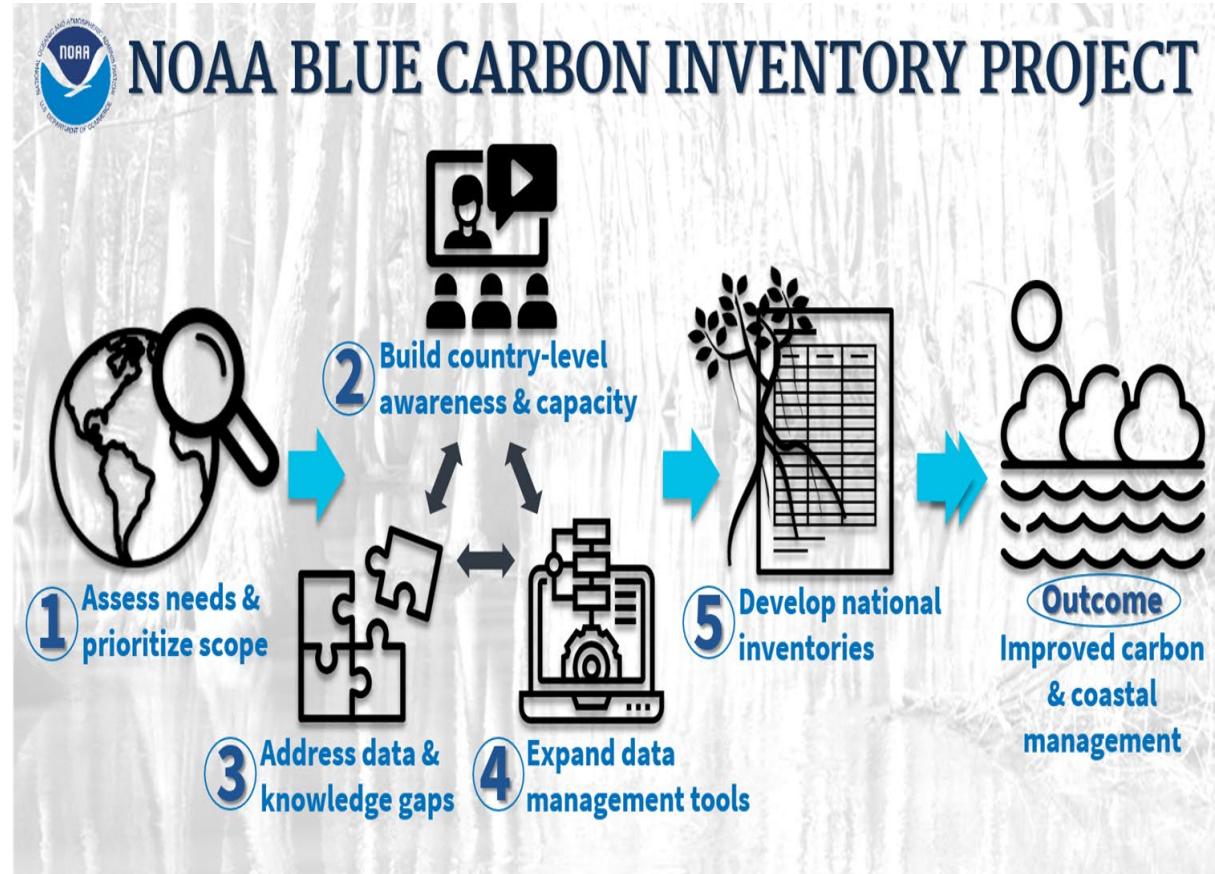
Supporting adaptation and resilience in the Caribbean and Pacific Islands through engagements, technical collaboration and innovative partnerships



Key Accomplishments (FY17-21): Relevance



- Launched a new partnership between NOAA and the U.S. Department of State in 2021 to support an international **NOAA Blue Carbon Inventory Project**
- Advance the development of emissions tracking and mitigation and coastal resilience (co-benefits of blue carbon) in key countries
- Led by CSI's International Adaptation Sciences
- Key Partners include: NOAA's Marine Protected Areas Center, EPA, SERC, CI, TOF, national governments and research institutions in partner countries



Key Accomplishments (FY17-21): Performance



Leveraging funds to achieve program goals, expand partnerships and amplify impact

Since 2020, leveraged Department of State funding to design and implement international adaptation activities that build on, and amplify NOAA's investments in support of U.S. science diplomacy and high level commitments to adaptation support for partner countries



International Collaboration through the Belmont Forum

2020: Collaborative Research Action on Climate, Environmental Health

- Leveraged \$13M with \$1M
- 13 funding agencies from 10 countries
- Researchers from 20 countries throughout the Americas, Africa, Asia, the Arctic and Europe



Strategic Lookahead



- ❖ **Opportunity:** Renewed commitment of U.S to international climate collaboration creates demand for NOAA's climate expertise - adaptation and resilience serves as an integrator across the agency and with our external partners
- ❖ **Challenge:** "Answering the call" using only leveraged resources
- ❖ **Short term**
 - Expand focus on islands
 - Foster learning across island regions (U.S and non-U.S.)
 - Shape and support NOAA's role in PREPARE
 - Expand the NOAA Blue Carbon Inventory Project
 - Continue to engage with the broader federal community through leadership of the USGCRP Int'l Interagency WG - work to engage non-traditional members and enhance adaptation partnerships
- ❖ **Long term**
 - Rebuild NOAA funding for international adaptation research and capacity building for resilience



President Obama and Administrator Spinrad shared the stage with island leaders to express commitments to resilience at COP26's "Partnerships for Island Resilience: Sharing Solutions in the Great Ocean States" event