

# 2023 PRiMO CONFERENCE

EQUITY AND RESILIENCE IN A CHANGING WORLD



HAWAI'I CONVENTION CENTER

April 3 - 6, 2023



**PRiMO**

[WWW.PRIMOHUI.ORG](http://WWW.PRIMOHUI.ORG)

## What Is the Pacific Risk Management 'Ohana (PRiMO)?

The Pacific Islands face many natural and man-made challenges. Only by bringing people and organizations together, and channeling their efforts toward common goals, can communities become more resilient. PRiMO, the Pacific Risk Management 'Ohana, is the platform for this effort. PRiMO's efforts make the Pacific Islands more resilient to the impacts of natural hazards.

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## About the Conference

The PRiMO Annual Conference is a leading venue for emergency, disaster risk reduction, and hazard mitigation professionals to share ideas, strategize, and develop solutions that address the varied challenges facing Pacific Island communities working toward disaster resilience goals. Since PRiMO last met in 2020, the threats of climate change, a global pandemic, and the importance of social and environmental justice have sharpened in focus. The theme of PRiMO 2023, "Equity and Resilience in a Changing World," re-envision fundamental questions of risk, vulnerability, and equity and reconsiders pathways for a more resilient future for all Pacific Island communities. We will reflect on our individual and collective ability to recover from and cope with recent impacts. We will explore solutions to better prepare for future events in ways that leverage advances in science and technology and that reflect the culture and values of the Pacific.

The conference program is strategically designed to facilitate partnerships that transcend geographic boundaries and disciplines, providing unique opportunities for collaboration among attendees. Participants from diverse backgrounds are expected to attend, including representatives from state and federal agencies, non-profit organizations, academic institutions, and businesses. Conference programming is divided into four tracks: Pre-disaster Planning and Preparedness, Housing and Infrastructure Resilience, Food and Water Security, and Nature-based Infrastructure: Planning and Implementation.

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## Mahalo Nui Loa to Our Conference Organizing Committee

Michael Bruno, Leah Keller, Lauren Long, La'akea Phillips, Colby Stanton, Adam Stein, Raymond Tanabe, Jean Tanimoto, Cuong Tran,



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## A NOTE FROM THE CHAIR

Three years ago, this conference was held just days after the first confirmed case of COVID-19 was recorded in the State of Hawai'i. The last three years have been chaotic, filled with anxiety, and agonizing. Many of us still feel the pain of loved ones lost. The last three years have also been refreshing, inspiring, and uplifting in many ways, allowing our natural spaces a chance to recover from overuse, providing more time to focus on our personal health, and showcasing the absolute resiliency of the human spirit. It is with this resiliency in mind that I welcome everyone to the 2023 Pacific Risk Management 'Ohana (PRiMO) Conference and greet you with a heartfelt aloha.

The Pacific Islands faced some of the greatest isolation during the pandemic. Extreme weather, water, and climate events compounded this isolation making recovery even more difficult. From tropical cyclones and drought to explosive volcanic eruptions and tsunamis, we all looked within ourselves and our communities, embraced what PRiMO taught us, gritted our teeth, and ultimately endured. We will hear about some of these events this week and be inspired by the narratives of people and organizations working together to keep the Pacific strong. These narratives are the story of PRiMO for the past 20 years.

Mahalo nui loa for joining us to help celebrate the 20th anniversary of PRiMO. Welcome back, welcome home. I look forward to seeing everyone in person this week and connecting with our 'ohana from across the Pacific and beyond. Let's continue to build upon the outstanding foundation shaped by the original PRiMO navigators.

### Aloha and Mahalo,



**Raymond Tanabe, Pacific Region  
Director  
NOAA National Weather Service  
2023 PRiMO Chair**



# PACIFIC RISK MANAGEMENT 'OHANA LEADERSHIP

PRIMO Executive Director: Adam Stein, NOAA Office for Coastal Management

## Navigators' Council

PRIMO Chair: Raymond Tanabe, NOAA National  
Weather Service

PRIMO Secretary: Jeff Payne, NOAA Office for Coastal  
Management

Michael Bruno, University of Hawai'i at Mānoa

Chris Chiesa, Pacific Disaster Center

David Helweg, U.S. Geological Survey

Kristina Kekuewa, NOAA Office of National Marine  
Sanctuaries

Karl Kim, National Disaster Preparedness Training  
Center

John Marra, NOAA Climatic Data Center

Jim Newberry, Island Insurance

Colby Stanton, Honolulu-Pacific Federal Executive Board

Jean Tanimoto, NOAA Office for Coastal Management  
Pacific Islands

Sally Ziolkowski, FEMA, National Preparedness  
Mitigation Division

## Senior Advisors

Cheryl Anderson, University of Hawai'i at Mānoa,  
Social Science Research Institute

Eddie Bernard, U.S. Army Corps of Engineers

Stanley Boc, U.S. Army Corps of Engineers

Margaret Davidson, NOAA (1950 - 2017)

Victoria Keener, East-West Center, Pacific  
Regional Integrated Science and Assessments

John McCarroll, Environmental Protection Agency

Penehuro Lafale, Joint Center for Disaster  
Research, Massey University, Wellington,  
NZ

Michael Shulters, Retired from U.S. Geological  
Survey

Bill Thomas, NOAA Office for Coastal Management

Ed Young, NOAA National Weather Service

## Hui Steerspersons

### Communications

H. Ginger Porter, University of Hawai'i at Mānoa

### Health Security

Tafaimamao Tua-Tupuola, American Samoa  
Community College

### Indigenous Knowledge and Environment

Kalani Souza, Olohana Foundation  
Ramsay Taum, Life Enhancement Institute of the Pacific

### Information Access and Geospatial Technology

Eric Yamashita, National Disaster Preparedness Training  
Center

### Risk Assessment and Planning

Kitty Courtney, TetraTech

### Training and Education

Micah Fisher, East-West Center

### Resilient Communities

Colby Stanton, FEMA



# Sunday, April 2 PRE-CONFERENCE TRAININGS AND WORKSHOPS

9:30 AM – 11:30 AM	Ala Wai Canal Site Tour and Genki Ball Demonstration (Local2030 Islands Network)
12:00 PM – 7:00 PM	Local2030 Islands Network Community of Practice Gatherings Day 1 (Local2030 Islands Network)



# Monday, April 3 PRE-CONFERENCE TRAININGS AND WORKSHOPS

	ROOM 318 A/B	ROOM 323 A	ROOM 323 B	ROOM 326A
8:00 AM – 12:00 AM	Nature-Based Solutions for Mitigating Hazards (National Disaster Preparedness Training Center)	Sustainable and Regenerative Tourism (Begins at 9 AM) (Local2030 Islands Network)	Data for Climate Resilience (Begins at 9 AM) (Local2030 Islands Network)	Disability and Accessing Emergency Communication in the Pacific Territories (Begins at 9 AM) (Tafaimamao Tupuola)
12:00 PM – 1:00 PM	Break for Lunch			
1:00 PM – 5:00 PM	Planning for Coastal Hazards and Climate Change: A Pilot Plan Evaluation Workshop (National Disaster Preparedness Training Center)	Sustainable and Regenerative Tourism continued (Local2030 Islands Network)	Data for Climate Resilience continued (Local2030 Islands Network)	Disability and Accessing Emergency Communication in the Pacific Territories continued (Tafaimamao Tupuola)



# Tuesday, April 4 CONFERENCE DAY 1

Room 316 A/B/C			
8:00 AM – 9:00 AM	Registration		
9:00 AM – 9:45 AM	Opening Protocol and Welcome Keynote Speaker - President David Panuelo		
9:45 AM – 10:00 AM	Group Photo		
10:00 AM – 10:15 AM	Break		
Room 318 A/B	Room 319 A/B	Room 321 A/B	
10:15 AM – 11:45 AM	Individual Presentations:	Talk Story: A Systems Approach to Food Security (Subhashni Raj)	Panel: Hawai'i Sea Grant's Role in Resilience Planning and Ecosystem Restoration (Amy Wirts)
	Applying the Resilient Children/ Resilient Communities Initiative to the Caribbean: Building child-focused resilience in Dominica (Thalia Balkran)		
	Older Adults' Social Capital for Natural Disaster Resilience (Kiyomi Kawamoto)		
	Climate Change in American Samoa (Sandi Tonumaipea)		
11:45 AM – 1:00 PM	Lunch on Your Own		





# Tuesday, April 4 CONTINUED

	ROOM 318 A/B	ROOM 319 A/B	ROOM 321 A/B
<p>1:00 PM – 2:30 PM</p> <p>Concurrent Sessions</p>	<p>Indigenous Knowledge and Environment Hui Sponsored</p> <p><b>Panel:</b> Rising Voices, Changing Coasts: The National Indigenous and Earth Sciences Convergence Hub (Lesley Iaukea)</p>	<p><b>Panel:</b> Transportation Planning as Resilience Making (Karl Kim)</p>	<p><b>Panel:</b> Innovative Nature-Based Solutions for Adapting to Climate Change (Lauren Long)</p>
<p>2:30 PM – 4:00 PM</p> <p>Concurrent Sessions</p>	<p><b>Panel:</b> Kaua'i's Covid-19 Response: Lessons Learned (Janet Berreman)</p>	<p><b>Talk Story:</b> Identifying and Removing Barriers to Resilience (Kate Judson)</p>	<p><b>Talk Story:</b> Planning and Implementing Nature-Based Solutions in the Commonwealth of the Northern Mariana Islands - Lessons Learned, Opportunities, and the Path Ahead (Erin Derrington)</p>
<p>4:00 PM – 4:15 PM</p>	Break		
ROOM 316 A/B/C			
<p>4:15 PM – 5:15 PM</p>	<p><b>Local2030 Islands Network Sponsored Plenary:</b> The Voluntary National and Local Reviews: Islands taking on the Sustainable Development Goals Challenge (Governor Josh Green, Mayor Richard Bissen, Mayor Rick Blangiardi, Mayor Derek Kawakami, Mayor Mitch Roth invited speakers)</p>		
<p>5:15 PM – 7:00 PM</p>	Networking Reception and Poster Session		



# Wednesday, April 5 CONFERENCE DAY 2

Room 316 A/B/C			
8:00 AM – 9:00 AM	Registration		
Room 318 A/B	Room 319 A/B	Room 321 A/B	
9:00 AM – 10:15 AM  Concurrent Sessions	Individual Presentations:	Panel: Addressing and Operationalizing SVI to Support Social Justice in Disaster Response and Recovery (Karl Kim)	Individual Presentation:
	Community-Based Resilience Hubs on O'ahu (Miku Lenentine)		PacIOOS Launches Wave Flooding Tools for West Maui to Support Community Preparedness and Resilience (Melissa Iwamoto)
	Building Resilience to Complex Emergencies through Community-Based Disaster Risk Management (Robin Fine)		A New Future: Integrating Sea Level Rise and Coastal Threats into Planning for Beach Parks in Maui County (Catherine Courtney)
	Towards Coastal Adaptation in US Island Jurisdictions through Planning Evaluation and Integration (Rob Porro)		CASPER as a Preparedness and Response Tool (Lauren Guest)
10:15 AM – 10:30 AM	Break		
Room 318 A/B	Room 319 A/B	Room 321 A/B	
10:30 AM – 12:00 PM  Concurrent Sessions	Panel: Towards an end-to-end and people-centered early warning system in the Pacific (Viliame Vereivalu)	Panel: Wicked Problem: Marine Debris (Karl Kim)	Talk Story: Pacific Diaspora Responses to Compounding Disaster (Petra Satele)
Room 316 A/B/C			
12:00 PM – 1:30 PM	Awards Lunch Keynote Speaker - Dr. Lilik Kurniawan		



# Wednesday, April 5 CONTINUED

	Room 318 A/B	Room 319 A/B	Room 321 A/B
1:30 PM - 3:00 PM	<p><b>Panel:</b> Sharing Knowledge to Help Close the Equity and Capacity Gap for Coastal Zone Management Programs in Hawai'i and other Pacific Island Nations (Jim Buika)</p>	<p><b>Panel:</b> Local2030 Islands Network: Local-Global Approaches for Equitable and Resilient Island Futures (Jabal Hassanali)</p>	<p><b>Panel:</b> Rapid Integrated Damage Assessment: Leveraging Technology to Support Effective, Equitable Response and Recovery (Karl Kim)</p>
3:00 PM - 3:30 PM	Break		
	Room 318 A/B	Room 319 A/B	Room 321 A/B
3:30 PM - 5:00 PM  Concurrent Sessions  Open to the Public	<p><b>Talk Story:</b> Ko'olauloa Community Resilience Hub (Cody Winchester)</p>	<p><b>Panel:</b> Blue Beacon - Rooted in Resilience: Community-Based Conservation in Hawai'i (Abigail Rodgers)</p>	<p><b>Working Session:</b> Blue Carbon: Understanding Needs in the Pacific Region for Blue Carbon Tracking and Management (Lauren Wenzel)</p>
	Room 316 A/B/C		
5:00 PM - 7:00 PM  Open to the Public	<p>Community Night Keynote Speaker - Kainoa Azama and Mariko Quinn</p>		



# Thursday, April 6 CONFERENCE DAY 3

Room 316 A/B/C	
9:00 AM - 10:10 AM	U.S. Government Panel: Pacific Priorities and Opportunities
10:10 AM - 10:20 AM	Break
10:20 AM - 11:30 AM	Coastal Resilience Funding and Resources Networking Session
11:30 AM - 12:00 PM	Closing Remarks and Closing Protocol



# MEET OUR KEYNOTE SPEAKERS

## Tuesday, April 4, 2023



### MORNING KEYNOTE SPEAKER

#### **His Excellency David Panuelo**

*President of the Federated States of Micronesia*

His Excellency David W. Panuelo is the Ninth President of the Federated States of Micronesia (FSM).

David Panuelo received a bachelor's degree in political science from Eastern Oregon University in 1987. After earning his degree, Panuelo returned home to Pohnpei where he began his career in the FSM Department of Foreign Affairs as a foreign service officer. He served as deputy ambassador for the FSM Embassy in Fiji and later served in the same role at the FSM Mission to the United Nations. In 1996, he returned home and was named director of the Department of Resource Management and Development for the Pohnpei state government. In 2001, he was called back to the Department of Foreign Affairs where he became assistant secretary for the Division of American and European Affairs. In 2003, he entered the private sector and established various businesses including a construction company, a human services company and the nonprofit Care Micronesia Foundation. In 2011, he was elected Pohnpei state senator and served in that office until his election to the at-large seat in March of this year. On May 11th, 2019, Panuelo was elected by the 21st congress of the FSM to serve as the Nation's ninth President.



## MEET OUR KEYNOTE SPEAKERS

### Wednesday, April 5, 2023



#### LUNCHTIME KEYNOTE SPEAKER

##### **Dr. Lilik Kurniawan**

*Prime Secretary of Badan Nasional Penanggulangan Bencana*

Dr. Lilik Kurniawan is the Prime Secretary of BNPB, Indonesia's National Disaster Management Organization. Appointed in April 2021, his role is to coordinate functions of planning, finance, legal & HR in BNPB. He oversees the education and training center, emergency operations center, and interagency coordination with other ministries. Dr. Lilik received his doctoral degree from Universitas Brawijaya and brought a wealth of previous experience in BNPB as Director of Disaster Risk Reduction and Deputy of Prevention.



# MEET OUR KEYNOTE SPEAKERS

## Wednesday, April 5, 2023



### COMMUNITY NIGHT KEYNOTE SPEAKER

#### **Kainoa Azama**

*Intern with Olohana Foundation*

Kainoa Azama, hails from the Ahupua'a of He'eia and Kalihi in the moku of Ko'olaupoko and Kona. Kainoa was instilled with passion and inspiration by the work done by elders in the community to restore and perpetuate traditional practices including restoring traditional food systems such as the fish-ponds, taro patches, and food forests, that now inspire many today. Experiencing the benefits of intergenerational-based decisions, Kainoa followed in the footsteps of kūpuna and became a Board member for the Ko'olaupoko Hawaiian Civic Club, former Hawai'i State President of the Future Farmers of America, and international organizations such as Heirs 2 Our Oceans. Currently, Kainoa is an intern with the Olohana Foundation, integrating an intergenerational approach in governance and healing communities.



#### **Mariko Quinn**

*University of Hawai'i Mānoa Undergraduate Student*

Mariko Quinn is a junior at the University of Hawai'i at Mānoa majoring in Global Environmental Science with a minor in Political Science. Mariko was born and raised in He'eia, and has been working at the Hawai'i Institute of Marine Biology for the last six years assisting with several projects on coral conservation and anthropogenic impacts on invertebrate reproduction. Mariko is interested in how to better connect research, policy and community needs and want to prioritize this in her work and education moving forward.



# MORNING PLENARY PANEL

## Thursday, April 6, 2023

### U.S. GOVERNMENT PANEL: PACIFIC PRIORITIES AND OPPORTUNITIES

The PRiMO 'Ohana comes together to share information and strengthen our collective action around creating more equity and resilience in the Pacific, and beyond. On our final day of the conference, we turn our attention to the future. Hear from senior representatives from the U.S. Government agencies working in the Pacific about priorities and initiatives, as well as opportunities in the region in the coming years.

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**MODERATOR: DR. MICHAEL BRUNO**  
**Provost at University of Hawai'i at Mānoa**

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**DR. RICHARD SPINRAD**  
**Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator, National Oceanic and Atmospheric Administration**





## **WILLIAM WERKHEISER**

**Senior Science Advisor to the Office of the Secretary and Scientific Integrity Officer,  
Department of Interior**

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## **TRIGG TALLEY**

**Senior Advisor to the Special Presidential Envoy for Climate and Director, Climate Negotiations and Programs,  
U.S. Department of State**

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## **JOSEPH MARTIN**

**Director of the Center for Excellence in Disaster Management and Humanitarian Assistance,  
US Indo-Pacific Command**





# Sunday, April 2

## Pre-Conference Trainings and Workshops

9:30 AM - 11:30 AM | Open to the public

ALA WAI CANAL SITE TOUR AND GENKI BALL DEMONSTRATION

### **Local2030 Islands Network**

Join us for an optional pre-conference site tour of the Ala Wai and a look at how Genki Balls are being utilized to clean and revitalize this sacred watershed.

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12:00 PM - 7:00 PM | Open to the public

LOCAL2030 ISLANDS NETWORK COMMUNITY OF PRACTICE GATHERINGS DAY 1

### **Local2030 Islands Network**

The Local2030 Islands Network is delighted to host its inaugural in-person convening of the Data for Climate Resilience Community of Practice and Sustainable & Regenerative Tourism Community of Practice, hosted in partnership with the National Oceanic and Atmospheric Administration (NOAA) and Pacific Risk Management 'Ohana (PRiMO), on April 2-6, 2023 in Honolulu, Hawai'i. These Communities of Practice, launched in 2022, have held a series of virtual meetings – this in-person gathering will mark the first annual convening of technical experts, practitioners, and government leaders from national and subnational islands across the globe. The Communities of Practice gatherings aim to provide space for island leaders, practitioners, and technical experts to share best practices and lessons learned, receive technical training, collaborate, and exchange knowledge and unique island experiences in a collaborative, peer-to-peer forum.

The in-person Community of Practice (CoP) Meeting is timed to coincide with the Pacific Risk Management 'Ohana (PRiMO) Conference. This gives CoP participants the opportunity this year to take advantage of this gathering of hundreds of participants from around the Pacific to network, make connections, hear from subject matter experts on disaster risk management, learn from other islanders, discuss ongoing initiatives, and design action plans.



# Monday, April 3

## Pre-Conference Trainings and Workshops

8:00 AM - 12:00 PM | Open to the public

### NATURE-BASED SOLUTIONS FOR MITIGATING HAZARDS

**Lydia Morikawa, *National Disaster Preparedness Training Center***

This half-day (4-hour) management-level course aims to highlight nature-based solutions as important and effective tools for mitigating hazards and climate impacts. The course provides planners, government officials, and hazard mitigation professionals information on the types, applications, and benefits of nature-based solutions as well as the common barriers for their use. Beyond an overview of nature-based solutions, the course focuses on the planning and implementation mechanisms that can be leveraged to employ these solutions in practice. This includes planning mechanisms related to land use, hazard mitigation, stormwater management, transportation, open space, and disaster recovery. The course will also highlight important planning considerations for utilizing nature-based solutions, including planning quality, alignment among plans, and equity in nature-based solutions; as well as the public and private funding mechanisms for implementing them. As a management-level course, this training is intended to provide decision-makers with the information needed to select and promote applicable nature-based solutions as a complement or alternative to structural mitigation measures to make their communities safer.

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9:00 AM - 4:00 PM | Open to the public

### SUSTAINABLE AND REGENERATIVE TOURISM

**Local2030 Islands Network**

Tourism is a major contributor to many Island economies and livelihoods. Likewise, for many island communities, natural resources both provide and rely on tourism as the basis for their economic development. Climate change and under-managed tourism impacts threaten both the ecosystems that draw tourists and related public infrastructure. Planning for sustainable tourism through a community-oriented, nature-based solutions approach increases the resiliency of both elements. This Technical Exchange session provides an opportunity for the Sustainable and Regenerative Tourism Community of Practice (CoP) led by Local2030 Islands Network, Hawai'i Green Growth, GLISPA and NOAA to engage with others in the CoP and across PRIMO. This session will focus on developing capacity to incorporate island-led, community-based solutions into sustainable tourism planning. This includes how to apply coastal adaptation and resource management planning to realize co-benefits of natural areas, such as mangroves, in supporting both tourism opportunities and coastal resilience. Taking a participatory approach, this session will provide practical tools and relevant case studies for island communities to share regenerative and sustainable tourism strategies and plans. Participants will share lessons learned and best practices, explore practical solutions, and develop a draft implementation strategy for their relevant site(s).



## 9:00 AM - 4:00 PM | Open to the public

### DATA FOR CLIMATE RESILIENCE

#### **Local2030 Islands Network**

Robust and timely climate data are fundamental to climate change adaptation and resilience strategies, and intersect with the monitoring of all seventeen Sustainable Development Goals (SDGs). In advance and in support of PRiMO, the in-person Data for Climate Resilience Community of Practice brings together thirty members of the global Local2030 Islands Network Data for Climate Resilience Community of Practice - island government officials who are responsible for data related to the SDGs and climate- select PRiMO participants, and technical experts. The session will address the landscape of data sources and climate services - local, national, regional and international- and their interlinkages. A special focus will be given to regional efforts including NOAA Regional Climate Services and Climate Adaptation Partnerships (CAP/RISA, PI-CASC). The session will center on how islands determine what climate data best measures what matters to their communities. Experts will lead discussions on critical issues such as uncertainty, timeliness, approaches, and intersections with food, water, health, energy, and migration. The session strongly encourages peer learning, and Community of Practice members will share best practices and discuss approaches unique to their islands. The session will also include several demonstrations of climate data visualizations including Hawaii's Aloha+ Challenge Dashboard and Hawai'i's sea level rise mapping tool.

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## 9:00 AM - 4:00 PM | Open to the public

### DISABILITY AND ACCESSING EMERGENCY COMMUNICATION IN THE PACIFIC TERRITORIES

#### **Tafaimamao Tupuola, American Samoa University Center for Excellence in Developmental Disabilities**

The Pacific Territories are the most remote parts of the U.S. country. The Federal Emergency Management Agency (FEMA) National Advisory Council report on Modernizing the Nation's Public Alert and Warning System stated the lack of Wireless Emergency Alert (WEA) access in the Pacific U.S. territories and other underserved communities (2019, pg. 12). In 2018, the Nationwide Emergency Alert System, also known as the Presidential Alerts, was activated for the first time. The Presidential Alert test did not reach any Pacific Territories. For people with disabilities and lacking access to functional needs, accessing emergency information is essential. How can the pacific islands be a part of the solution to design, execute, and improve equitable emergency communication in our indigenous community?

This training session will bring together the Disability Network from American Samoa, the Commonwealth of the Northern Marianas, and Guam to engage and enhance the capacity of accessible communications for all. Participants will share experiences and exchange solutions of pre and post-disaster messages, toolkits, and traditional knowledge

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## 1:00 PM - 5:00 PM | Open to the public

### PLANNING FOR COASTAL HAZARDS AND CLIMATE CHANGE: A PLAN EVALUATION WORKSHOP

#### **Rob Porro, National Disaster Preparedness Training Center**

The National Disaster Preparedness Training Center (NDPTC) at the University of Hawai'i develops and delivers natural hazards and disaster management training courses for emergency managers, planners, and professionals involved in disaster response and recovery. This 3-hour pilot workshop supports NDPTC's Planning for Coastal Hazards course, currently in development. The learning objective is to provide an overview of planning principles to guide coastal adaptation planning and to increase understanding of the methods to evaluate the quality of plans that address coastal hazards and climate change. Exercises will provide hands-on experience evaluating coastal management and hazard mitigation plans and reviewing the plan quality evaluation principles and methods. The target audience includes planning practitioners and coastal stakeholders interested in hazards and coastal adaptation planning. This includes hazard mitigation planners, urban planners, climate change specialists, coastal managers, government officials, landowners, and developers, as well as planning researchers and academia.



# Tuesday, April 4 Conference Day 1

8:00 AM – 9:00 AM

REGISTRATION

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9:00 AM – 9:45 AM

OPENING PROTOCOL

**Welcome**

KEYNOTE SPEAKER

His Excellency David Panuelo, *President of the Federated States of Micronesia*

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9:45 AM - 10:00AM

GROUP PHOTO

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10:00 AM – 10:15 AM

BREAK

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10:15 AM – 11:45 PM

INDIVIDUAL SESSIONS | ROOM 318A/B

**Applying the Resilient Children/Resilient Communities Initiative to the Caribbean: Building child-focused resilience in Dominica**

Thalia Balkaran, *Columbia University*

**Older Adults' Social Capital for Natural Disaster Resilience**

Kiyomi Kawamoto, *Toyo University*

**Climate Change in American Samoa**

Sandi Tonumaiepa, *Office of Disaster Assistance and Petroleum Management*

Tali longi, *Office of Disaster Assistance and Petroleum Management*



## A SYSTEMS APPROACH TO FOOD SECURITY | ROOM 319 A/B

**Subhashni Raj**, *University of Hawai'i at Mānoa*

**Albie Miles**, *University of Hawai'i West Oahu*

**Matt Lau**, *Ma'o Farms*

Environmental disasters attributed to our changing climate are becoming more frequent, severe, and as the last few years have demonstrated, cascading. Adverse impacts of climate related disasters disproportionately affect marginalized communities as social-economical-ecological (SEE) conditions constrain their adaptation options and opportunities. While there is increasing understanding of community level vulnerability and adaptation in the contiguous United States, island communities have had limited attention. As climate variability causes variation in seasonal rainfall and temperature, it directly affects island community food and water pathways, and indirectly their health and well-being. Recent research also highlights that marginalized communities are less likely to be prioritized in response and recovery efforts. Furthermore, the isolation of island communities means local and state governments are first responders to climate impacts and disasters and as such local policies are critical to allow in-time response and recovery. In this talk story session, we identify various ways and means by which communities across Hawaii adapted during COVID-19 and discuss how these adaptations can be codified as official State and County policies.

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## HAWAI'I SEA GRANT'S ROLE IN RESILIENCE PLANNING AND ECOSYSTEM RESTORATION | ROOM 321 A/B

**Amy Wirts**, *Hawai'i Sea Grant*

**Tara Owens**, *Hawai'i Sea Grant*

**Ruby Pap**, *Hawai'i Sea Grant*

**Bradley Romine**, *Hawai'i Sea Grant*

Hawai'i Sea Grant Extension Agents engage with state and county government agencies to provide scientific and policy development expertise to resilience and adaptation initiatives. Recently, Sea Grant assisted the State Climate Commission to complete a 5-Year Update to the 2017 Hawai'i Sea Level Rise Vulnerability and Adaptation Report. This updated report provides an overview of state and county actions in response to the recommendations of the 2017 Report, many of which were facilitated and assisted by Sea Grant faculty. The 2022 Update also identifies unmet needs to set as a priority for focus in the next five years. Among the recommendations for focus is the integration of equity and justice considerations to vulnerability assessments and adaptation planning and actions. Sea Grant faculty work to incorporate coastal resilience and community co-development in the updating and writing of community plans throughout the islands. Extension Agents also work with government agencies and community organizations in facilitating nature-based projects across the state to help build resilience to sea level rise and restore the shoreline environment. Multiple dune restoration projects on Maui serve as examples of successful community-led ecosystem restoration. Planned projects on Oahu, Maui and Kauai build on the successes achieved there. This panel will feature Extension Agents working on Oahu, Maui, and Kauai to discuss Sea Grant's role in state and county efforts to engage communities and improve resiliency.

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**11:45 AM – 1:00 PM**

LUNCH ON YOUR OWN



## 1:00 PM – 2:30 PM

### INDIGENOUS KNOWLEDGE AND ENVIRONMENT HUI SPONSORED PANEL | ROOM 318 A/B

#### Rising Voices, Changing Coasts: The National Indigenous and Earth Sciences Convergence Hub

Julie Maldonado, *Livelihoods Knowledge Exchange Network (LiKEN)*

Bill Thomas, *NOAA Office for Coastal Management*

Lesley Iaukea, *University of Hawai'i at Mānoa*

Daniel Wildcat, *Haskell University*

Kristina Peterson, *Lowlander Center*

Kalani Souza, *Olohana Foundation*

Paulette Blanchard, *Haskell Foundation*

The Rising Voices: Changing Coasts (RVCC) Hub, is a coastal research project that brings together university-trained scientists and Indigenous knowledge-holders to study the interactions between natural, human-built, and social systems in coastal populated environments. Indigenous knowledge-holders from four coastal regions will address the impacts of a changing climate on their coastal communities by focusing on three topics - storms and weather, flooding and erosion, and ecosystems - with interrelated research questions primarily focused on large-scale climate drivers of multi-decadal coastal change. In a convergent science approach, this diverse team will weave together Indigenous knowledge, climate, geospatial modeling capabilities, archeological records, socio-economic analysis, and hazards research with the goal of co-creating data, analysis, and findings that coastal communities need to form hazard mitigation and adaptation strategies that protect their ways of being.

RVCC is funded by the National Science Foundation's (NSF) Coastlines and People Hubs for Research and Broadening Participation (CoPe) program. Our goals for this hub are to (1) Develop a successful cross-cultural research framework that introduces a paradigm of interdisciplinary collaboration across Indigenous and non-Indigenous groups, intellectually diverse researchers, and knowledge-holders. (2) Improve Earth system modeling and prediction of coastal processes to provide highly-usable and culturally-relevant information. (3) Broaden participation of Indigenous students and researchers in Earth system science by building pathways into the field of Earth system science that provides educational and professional advancement opportunities for undergraduate and graduate students. And, (4) Strengthen infrastructure for future collaborations between academic institutions and Indigenous communities.

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### TRANSPORTATION PLANNING AS RESILIENCE MAKING | ROOM 319 A/B

Karl Kim, *National Disaster Preparedness Training Center*

Pamela Murray-Tuite, *Clemson University*

Anuag Pande, *Calpoly*

Jon Nouchi, *City and County of Honolulu Department of Transportation Services*

Zhong-Ren Peng, *University of Florida*

Transportation systems are a valuable asset for the use of transporting goods, services, and people in today's era of globalization. However, the transportation sector is a leading producer of carbon emissions which results in climate change and increasing disaster and weather events. Thus, significant urban transportation investments must be sought out immediately. This panel brings together leading authorities in the area of resilient transportation systems who published the book "Creating Resilient Transportation Systems: Policy, Planning, and Implementation." The panelists will be posed questions regarding not only how to make transportation more resilient but how to make transportation more equitable, accessible, and affordable to provide a fair distribution of transportation resources, benefits, costs, programs, and services for everyone. The panel will also be challenged to discuss the current Justice40 Initiative to confront and address decades of underinvestment in disadvantaged communities.



**INNOVATIVE NATURE-BASED SOLUTIONS FOR ADAPTING TO CLIMATE CHANGE | ROOM 321 A/B**

**Lauren Long**, *NOAA Office for Coastal Management*

**Doug Harper**, *Mālama Maunalua*

**Makale'a Ane**, *The Nature Conservancy*

**Rob Toonen**, *Hawai'i Institute of Marine Biology*

Natural resources throughout the Pacific Islands from mauka to makai are critical for preserving culture and providing health, safety, recreation, food sources, and protection from coastal hazards. These natural resources are also vulnerable to the impacts of climate change and innovative solutions are needed to preserve ecosystems to ensure future resilience. With changing climate conditions, local practitioners are designing and implementing creative solutions to address various coastal issues. This panel of experts will share their innovative work to promote nature-based and indigenous solutions to climate change that benefit people and nature and amplify resilience and ecosystem services; develop new hybrid coral reef technologies that both reduce wave energy to protect coastal infrastructure from sea level rise and withstand marine heatwaves causing coral reef decline; and enhance the resilience of waterways by reducing anthropogenic impacts and restoring streams to their natural flow. You'll hear from The Nature Conservancy on Maui, Mālama Maunalua on 'Oahu, and the Hawaii Institute of Marine Biology on 'Oahu about their innovative research and strategies to enhance coastal resilience to climate change.

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**2:30 PM – 4:00 PM****KAUAI'S COVID-19 RESPONSE: LESSONS LEARNED | ROOM 318 A/B**

**Janet Berreman**, *Kaua`i District Health Office*

**Lauren Guest**, *Deputy District Health Office*

**Blanca Gil Lopez**, *County of Kaua`i Emergency Management Agency*

**Solomon Kanohe**, *County of Kaua`i Fire Department*

Kaua`i experienced low COVID-19 case and case-fatality rates, while maintaining strong community and leadership cohesion. The panel members will each discuss a successful example from the Kauai response, the factors which contributed to that success, and how others might apply the information to their jurisdictions and/or to other types of disasters. Although the focus is the COVID-19 pandemic response, the lessons learned are broadly applicable. Contributing factors county-wide included strong pre-existing partnerships among county and state agencies, healthcare, and nongovernmental organizations. Practices in the District Health Office that contributed to the county's success include that the office regularly prioritizes agency-wide initiatives; staff have experience using the incident command system; the community health worker team is multicultural, multilingual, and well established; and staff are integral members of the community they serve. Response successes included unified command, coordinated public messaging, early protective measures, effective disease control, addressing secondary impacts of the pandemic, free community testing, mass vaccination, and mobile vaccinations and testing. In a recent survey, Kaua`i's residents rated the pandemic response highly in the areas of (1) policy and regulations, (2) isolation and quarantine, (3) case investigation and contact tracing, (4) testing, (5) vaccinations, and (6) public information. The value of governmental response agencies engaging regularly and authentically with partners and communities cannot be overstated. It has saved lives on Kaua`i.



## IDENTIFYING AND REMOVING BARRIERS TO RESILIENCE | ROOM 319 A/B

**Kate Judson**, *Federal Emergency Management Agency*

FEMA is implementing a new law - the Community Disaster Resilience Zones Act of 2022. This law will designate disadvantaged communities most at-risk to natural hazards as Community Disaster Resilience Zones – CDRZs. Designated zones will be provided technical assistance to identify and apply for resilience funding across a range of federal and private sector partners. FEMA is looking for stakeholder input to inform how it implements this law. This talk session will provide participants an opportunity to identify the specific challenges and needs that U.S. territories face, and to shape the factors FEMA should consider when designating CDRZs.

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## PLANNING AND IMPLEMENTING NATURE-BASED SOLUTIONS IN THE COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS - LESSONS LEARNED, OPPORTUNITIES, AND THE PATH AHEAD | ROOM 321 A/B

**Erin Derrington**, *Office of Planning and Development of the Commonwealth of the Northern Mariana Islands*

The Commonwealth of the Northern Mariana Islands (CNMI) is promoting “Smart, Safe Growth” (SSG) in development and redevelopment planning. This panel session will highlight lessons learned and opportunities that have been identified through the development of this guidance and its implementation through the recent Super Typhoon Yutu disaster and recovery effort. Practitioners from the CNMI’s Hazard Mitigation Grant Program and the Office of Planning and Development will outline the leading practices that have been identified and incorporated into SSG Guidance and the SSG Assessment Tool, as well as challenges and opportunities that relate to furthering risk reduction priorities in our remote region. Contextual updates will highlight how disaster risk reduction is a cross-cutting theme in sustainable growth planning and how interagency collaboration has led to coordinated ecosystem valuation and management projects that aim to enhance the resilience of our natural environment to support risk reduction objectives. Examples of projects that are being implemented will demonstrate how these efforts are resulting in priority actions being supported by FEMA and other federal partners. Time will be reserved for discussion with the audience regarding needs and opportunities to further implementation of nature-based solutions to further risk reduction and resiliency goals.

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## 4:00 PM – 4:15 PM

BREAK

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## 4:15 PM – 5:15 PM

PLENARY | ROOM 316 A/B/C

### The Voluntary National and Local Reviews: Islands taking on the Sustainable Development Goals Challenge

Local2023 Islands Network sponsored event with **Governor Josh Green, Mayor Richard Bissen, Mayor Rick Blangiardi, Mayor Derek Kawakami, and Mayor Mitch Roth** as invited speakers

This Panel Session will host Hawaii's Governor, mayors of the state's four counties, and island representatives from Fiji and Barbados. Panelists will discuss their voluntary local and national reviews (VLR and VNR) regarding their progress and engagement on the Sustainable Development Goals (SDGs). Fiji's VNR dates to 2019. Barbados will present its VNR in July 2023 at the High-Level Political Forum on Sustainable Development convening under the auspices of the UN's Economic and Social Council. Hawaii's VLR was completed in 2020 and was the first U.S. state to present a comprehensive VLR joining other sub-national localities from Los Angeles to New York City, Bristol, Helsinki and others around the world that have reported SDG progress using the VLR process. Panelists will discuss their challenges, experience, the VNR/VLR process, and their aspirations as they work toward island led climate action seeking equity and resilience in a changing world.



## 5:15 PM – 7:00 PM

### NETWORKING RECEPTION AND POSTER SESSION

#### A review of ciguatera impacts on fishers in Hawai'i and implications for the Pacific Islands

Eileen Nalley, Hawaii Sea Grant

#### CASPER Methodology and uses for preparedness and disaster response

Lauren Guest, Hawaii Department of Health

Grayson Kallas, Hawaii State Department of Health

#### Planning and Implementing Nature-based Solutions in the Commonwealth of the Northern Mariana Islands

Erin Derrington, Office of Planning and Development of the Commonwealth of the Northern Mariana Islands

#### Redefining the humanitarian landscape in the Pacific by defining resilience through a Pacific lens and showcasing the responses of Pacific communities in disaster

Petra Satele, Massey University

#### Analyzing Financing Opportunities for Emergency Coral Restoration After Severe Storm Surges

Lara Noren, Hawaii Division of Aquatic Resources

#### Mālama I Ke Kai: Community Action Guide

Manuel Mejia, Coral Reef Alliance

Ekolu Lindsey, Kipuka Olowalu



# Wednesday, April 5 Conference Day 2

8:00 AM – 9:00 AM

REGISTRATION

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9:00 AM – 10:15 AM

INDIVIDUAL PRESENTATIONS | ROOM 318 A/B

**Community-based Resilience Hub Planning on O'ahu: Community-based, Active Learning and Neighborhood Scale**

Miku Lenentine, *Kapiolani Community College*

Robert Franco, *Kapiolani Community College*

**Building Resilience to Complex Emergencies through Community-Based Disaster Risk Management**

Robin Fine, *University of Hawai'i at Mānoa*

**Towards Coastal Adaptation in US Island Jurisdictions through Planning Evaluation and Integration**

Rob Porro, *University of Hawai'i at Mānoa*

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ADDRESSING AND OPERATIONALIZING SVI TO SUPPORT SOCIAL JUSTICE IN DISASTER RESPONSE AND RECOVERY |  
ROOM 319 A/B

Karl Kim, *National Disaster Preparedness Training Center*

Nicole Boothman-Shepard, *AECOM*

Suwan Shen, *University of Hawai'i at Mānoa*

Cuong Tran, *National Disaster Preparedness Training Center*

Lisa Webster, *University of Hawai'i at Mānoa*

Siautu Alefaio, *Massey University*

Zhong-Ren Peng, *University of Florida*

More often than not, the most vulnerable communities face significant disaster recovery challenges. Vulnerable communities are regularly disconnected from their leaders and decision-makers in pre-and-post disaster planning, thus leaving them to recover by themselves ineffectively. Social vulnerability to climate change is increasingly a heavily researched topic, with emerging proposals to measure and manage it. This panel discusses the importance of addressing and operationalizing SVI to push social justice policy and initiatives in disaster response and recovery, especially for vulnerable communities. Examples of Social Vulnerability Indexes (SVIs) include the CDC's SVI, South Carolina's SVI, the FEMA National Risk Index, and others for Pacific Island and coastal communities. SVIs provide a general understanding of a community's vulnerable populations but may be ranked differently based on the SVI being used. Therefore, variables among SVIs should be modified based on the specific area, demographics, and local knowledge to better narrow down communities most vulnerable to disasters.



## INDIVIDUAL PRESENTATIONS | ROOM 321 A/B

### PacIOOS Launches Wave Flooding Tools for West Maui To Support Community Preparedness and Resilience

Melissa Iwamoto, Pacific Islands Ocean Observing System

Tara Owens, Hawaii Sea Grant

Assaf Azouri, University of Hawai'i at Mānoa

### A New Future: Integrating Sea Level Rise and Coastal Threats into Planning for Beach Parks in Maui County

Catherine Courtney, Tetra Tech

David Yamashita, Maui County Department of Parks and Recreation

Jennifer Maydan, Maui County Department of Parks and Recreation

### CASPER as a Preparedness and Response Tool

Lauren Guest, Hawai'i Department of Health

Grayson Kallas, Hawai'i Department of Health

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## 10:15 AM – 10:30 AM

BREAK

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## 10:30 AM – 12:00 PM

### TOWARDS AN END-TO-END AND PEOPLE-CENTERED EARLY WARNING SYSTEM IN THE PACIFIC | ROOM 318 A/B

Viliame Vereivalu, *Fiji Meteorological Service*

Iosefo Cauravouvinaka, *Fiji Meteorological Service*

Laura Kong, *Tsunami Ready*

Paul Kucera, *3D-PAWS*

To save lives, early warning systems for natural hazards not only need to have a sound scientific and technical basis but also require a strong focus on the people exposed to risk, and a systems approach that incorporates all of the relevant factors from the natural hazards to social vulnerabilities. The Weather Ready Nations (WRNs), Tsunami Ready, Flash Flood Guidance System (FFGS), and 3D-Printed Automatic Weather Station (3D-PAWS) initiatives promote an end-to-end system approach to natural hazard as an active collaboration among National Meteorological and Hydrological Services (NMHSs), national to local emergency management agencies, and stakeholders (e.g., public) to provide “people-centered” early warnings for hydrometeorological hazards. These initiatives bring together the four interrelated critical elements of an early warning system (EWS): (1) disaster risk knowledge; (2) detection, monitoring, analysis, and forecasting of the hazards and possible consequences; (3) dissemination and communication; and (4) preparedness at all levels to respond to the warnings received. When coordinated within and across sectors at multiple levels, these four interrelated components allow an end-to-end EWS to work effectively and to include a feedback mechanism for continuous improvement. Challenges encountered in implementing these programs – include bridging the gaps between the four components of effective warnings and building partnerships and knowledge to build community resilience. We propose a session highlighting lessons learned and challenges in implementing end-to-end and people centered EWS from in-country partners.



## WICKED PROBLEM: MARINE DEBRIS | ROOM 319 A/B

Karl Kim, *National Disaster Preparedness Training Center*

Mary Crowley, *Ocean Voyages*

Nikolai Maximenko, *University of Hawai'i at Mānoa*

Ken Ostebo, *Sustainable Ocean Systems*

James Richardson, *University of Hawai'i at Mānoa*

Nicole Boothman-Shepard, *AECOM*

Marine debris is a wicked problem. The global manufacturing and demand for single-use plastics and other material waste continue to be overwhelming and, as a result, cause significant pollution to the world's oceans. Pollution causes harm to marine life, human health, and countries' economies. This panel brings together marine debris experts to characterize and discuss marine debris as a social and environmental issue. While there are worldwide efforts to mitigate and reduce plastic pollution, high-income countries still manufacture and generate more waste per capita. In contrast, low-to-middle-income countries pollute primarily because of their mismanaged waste management systems. The improvement of waste management systems across the world is critical to reducing marine debris. The panel will explore the complexity of governance in the global ocean, identifying challenges with regulating ocean waste for various income countries, offering examples of local and international cleanup efforts, and providing solutions to the marine debris problem.

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## PACIFIC DIASPORA RESPONSES TO COMPOUNDING DISASTERS | ROOM 321 A/B

Petra Satele, *Massey University*

Siautu Alefaio Tugia, *Massey University*

Emeline Afeaki-Mafile'o, *Affirming Works*

Our session draws on Talanoa (Pacific-style "talk story") to engage a HUBBS (Humans United Beyond Borders Symposium) response to the disaster and humanitarian landscape of Oceania. As the most disaster-prone region globally, the Pacific poses significant strengths and complexities for disaster resilience and humanitarian response. For example, Samoa confronted a measles epidemic in 2019, followed by the ongoing global COVID-19 pandemic in 2020. In Tonga, the pandemic was compounded by the Hunga-Tonga Hunga-Ha'apai volcano eruption in 2022. Most recently was the severe flooding in Auckland within the pandemic era. The serious disruption to everyday life overwhelms communities and exposes societal inequities. Pacific-diasporic response to disasters through families and churches of those affected are also as effective and enduring as aid agencies and governments. Especially through regular systems of support such as remittance that are already in place. This TalanoaHUBBS showcases the Pacific diaspora in Aotearoa New Zealand, and their response in three areas: health, church (village-community) and communication by design (15 minutes each). "E sega ni vuka na kaka me biu toka na buina" (a parrot will not fly leaving its tail in its nest) is a Fijian Indigenous proverb that asserts, we cannot build forward better from disasters without adopting cultural context and indigenous worldview. This session provides an opportunity for all to 'talk-story' thereby sharing collective learnings from one's own culture, lived experience and worldview in relation to disaster response and resilience.

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**12:00 PM – 1:30 PM**

AWARDS LUNCH

KEYNOTE SPEAKER

Dr. Lilik Kurniawan, *Prime Secretary of BNPB*



## 1:30 PM – 3:00 PM

### SHARING KNOWLEDGE TO HELP CLOSE THE EQUITY AND CAPACITY GAP FOR COASTAL ZONE MANAGEMENT

#### PROGRAMS IN HAWAII AND OTHER PACIFIC ISLAND NATIONS | ROOM 318 A/B

**Jim Buika**, *County of Maui Department of Planning*

**Justine Nihipali**, *Hawai'i Office of Planning and Sustainable Development*

**Nancy McPherson**, *Department of Hawaiian Home Lands*

The workshop objective is to first, share and collect knowledge from island participants about how to improve coastal zone management programs and second, to identify equity and capacity resource gaps required in order to preserve coastal-ecosystem resilience and protect threatened development from coastal erosion. The presenters will highlight coastal zone successes and challenges in Hawai'i in order to frame the discussion that will be devoted to collecting social data via question prompts, such as:

What island plans, programs, and initiatives are making a difference in the Pacific region that we need to recognize, institutionalize, and augment?

How do we further institutionalize traditional ecological knowledge and nature-based solutions when development is threatened? What are the gaps and how do we close these gaps?

How do we shift to more proactive regional shoreline management? What (paradigm) shifts in planning must be achieved? Who must be involved?

What skill sets and professional fields do local, place-based practitioners need to master? Where will the next generation of coastal zone managers come from and how will they be trained?

Over the next 30 years, how can the "Next Generation" of coastal resource managers take form, become more diverse, and become better educated than its predecessors?

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### LOCAL2030 ISLANDS NETWORK: LOCAL-GLOBAL APPROACHES FOR EQUITABLE AND RESILIENT ISLAND FUTURES

#### | ROOM 319 A/B

**Jabal Hassanali**, *Global Island Partnership (GLISPA)*

**Hon. Joshua Franquez Tenorio**, *Lieutenant Governor of Guam*

**Kate Brown**, *Local2030 Islands Network and Global Island Partnership*

**Trigg Talley**, *U.S. Department of State*

**Chloe Ysiki Yano**, *Palau Visitors Authority*

**Titus Antoine**, *Grenada Ministry of Climate Resilience, the Environment, and Renewable Energy*

The Local2030 Islands Network is an island led network that seeks to support island leadership on locally driven solutions for climate resilience by providing a forum for peer-to-peer exchange driven by technical expertise, knowledge sharing, and committed action. In line with PRIMO's 2023 theme of 'Equity and Resilience in a Changing World', the Local2030's three Communities of Practice on Sustainable and Regenerative Tourism, Data for Climate Resilience, and Renewable and Clean Energy Systems serve as vehicles for these priorities in island contexts and the role that a peer-to-peer forum can play in this effort, especially amidst an increasingly uncertain future.

This panel discussion will be divided into two sections. Our opening panel discussants will provide a broad high level overview of the Local2030 Islands Network and discuss the goals and vision of the Network from their unique vantage points. They will then be joined by two representatives from our ongoing Communities of Practice, and together we will conduct a deep dive on the value add of this unique tool of the Network, and explore their experience to date engaging within the same.



## RAPID INTEGRATED DAMAGE ASSESSMENT: LEVERAGING TECHNOLOGY TO SUPPORT EFFECTIVE, EQUITABLE RESPONSE AND RECOVERY | ROOM 321 A/B

Karl Kim, *National Disaster Preparedness Training Center*

Mike Vorce, *Site Tour 360*

Jaeho Choi, *University of Hawaii at Mānoa*

Kevin White, *Sustainable Ocean Systems*

Mike Elliot, *Drone Services Hawaii*

Eric Yamashita, *National Disaster Preparedness Training Center*

Machine learning has emerged as a tool to assess damages caused by natural disasters more accurately. Through an equity lens, emergency technicians can incorporate machine learning to improve faster recovery for hard-hit Pacific Island communities. This panel will discuss how several image-capturing technologies (satellite, aerial, drone, and street-level 360 imaging) can be used to facilitate more precise risk assessments and identify areas most vulnerable to natural hazards. Using a combination of image capturing technologies and artificial intelligence, this panel describes how the technologies can be used to assess the damage and predict potential damage, thus providing situational awareness for efficient, coordinated response and recovery to regions that are in dire need of assistance.

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## 3:00 PM – 3:30 PM

BREAK

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## 3:30 PM – 5:00 PM

### KO'OLAULOA COMMUNITY RESILIENCE HUB | ROOM 318 A/B

Cody Winchester, *G70*

Dotty Kelly-Paddock, *Hau'ula Community Association*

Illya Azaroff, *PlusLab*

Ko'olauloa is a remote rural region in Northern O'ahu with limited access and no dedicated emergency shelter to harbor residents during disasters. City and State emergency officials have warned that residents could be on their own when disaster strikes. To respond to this need, the Hau'ula Community Association (HCA) has developed plans for a disaster relief shelter and community center called the Ko'olauloa Community Resilience Hub (KCRH) on approximately 5 acres. The KCRH will provide critical services during and after a disaster, including safe rooms capable of sheltering 2,000 people during disasters. This essential facility will provide pre-disaster and capacity-building services to the community on a year-round basis. In 2019, the HCA was awarded the PRIMO Community Resilience Award. Since then, the design of the KCRH has been substantially advanced in its concept with key input of community leaders and residents. The hub's design takes inspiration from traditional Polynesian resilience practices while remaining consistent with FEMA 361 Standards for Safe Rooms. Presenters discuss the steps taken by HCA to date to develop a resilience hub on a community level and provide strategies for building partnerships across sectors. We share this update with the intent to provide insights and discoveries that can empower other vulnerable, frontline island communities across Hawai'i and throughout the Pacific.



**BLUE BEACON - ROOTED IN RESILIENCE: COMMUNITY-BASED CONSERVATION IN HAWAII | ROOM 319 A/B****Shannon Colbert, National Marine Sanctuary Foundation**Kevin K.J. Chang, *Kua'āina Ulu 'Auamo (KUA)*Doug Harper, *Mālama Maunalua*Alika Peleholani Garcia, *Kuleana Coral*Kanoë Morishige, *Nā Maka Onaona*

Community-based conservation in Hawaii is rooted in indigenous knowledge and perspectives. The co-management of resources between the government and Native Hawaiian communities strengthen community resilience and creates long-term stewardship. Through these co-management systems, the government and Native Hawaiian communities can respond faster to disasters and create climate preparedness plans grounded in community partnerships. This session will explore ongoing projects and partnerships to bridge indigenous knowledge with nature-based solutions and discuss what co-management of an area can look like in Hawai'i.

**BLUE CARBON: UNDERSTANDING NEEDS IN THE PACIFIC REGION FOR BLUE CARBON TRACKING AND MANAGEMENT | ROOM 321 A/B**Lauren Wenzel, *NOAA National Marine Protected Areas Center*Lisa Vaughan, *NOAA Climate Program Office*Gabrielle Johnson, *NOAA contractor*Steve Crooks, *Silvestrum Climate Associates*Richard Mackenzie, *U.S. Forest Service*

Blue carbon ecosystems, including mangroves and seagrasses, play a critical role in storing and sequestering carbon, as well as providing biodiversity conservation, coastal protection, and other benefits. NOAA and the USFS are leading an International Blue Carbon Initiative that is working with targeted countries to support them in including mangroves and seagrasses in national greenhouse gas inventories and their nationally determined contributions (NDCs), as well as managing these areas for long-term sustainability. This session will be a facilitated roundtable discussion focused on the needs of Pacific Island States for training, tools and other support on blue carbon accounting, mapping, monitoring, conservation, and management as well as how to participate in carbon markets led by NOAA's Climate Program Office and Marine Protected Areas Center, USFS Blue Carbon Climate Fellow Program, and Silvestrum Climate Associates. Results from this session will help inform a project engagement and support strategy for the Pacific region, supporting local and national efforts to build long term climate and coastal resilience.

**3:00 PM – 5:00 PM | OPEN TO YOUTH****YOUTH RESILIENCY ROUND TABLE**

Round table conversations between middle and high school students and PRiMO resiliency experts about initiatives to protect Pacific Island communities from natural hazards and pathways to career positions in the Pacific.

**5:00 PM – 7:00 PM | OPEN TO THE PUBLIC****COMMUNITY NIGHT**

Browse a photo gallery showcasing youth climate photo contest winners and view youth climate change public service announcements. Hear from Kainoa Azama, the Chair of the Honolulu Youth Commission and Mariko Quinn, about their career journeys. Winners of the climate change public service announcements will be announced.



# Thursday, April 6 Conference Day 3

9:00 AM – 10:10 AM

## U.S. GOVERNMENT PANEL: PACIFIC PRIORITIES AND OPPORTUNITIES

**Moderator:** Dr. Michael Bruno, *Provost at University of Hawai'i at Mānoa*

**Dr. Richard Spinrad**, *Under Secretary of Commerce for Oceans and Atmosphere and NOAA Administrator, National Oceanic and Atmospheric Administration*

**William Werkheiser**, *Senior Science Advisor to the Office of the Secretary and Scientific Integrity Officer, Department of Interior*

**Trigg Talley**, *Senior Advisor to the Special Presidential Envoy for Climate and Director, Climate Negotiations and Programs, U.S. Department of State*

**Joseph Martin**, *Director of the Center for Excellence in Disaster Management and Humanitarian Assistance, US Indo-Pacific Command*

The PRIMO 'Ohana comes together to share information and strengthen our collective action around creating more equity and resilience in the Pacific, and beyond. On our final day of the conference, we turn our attention to the future. Hear from senior representatives from the U.S. Government agencies working in the Pacific about priorities and initiatives, as well as opportunities in the region in the coming years.

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10:10 AM – 10:20 AM

BREAK

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10:20 AM – 11:30 AM

## COASTAL RESILIENCE FUNDING AND RESOURCES NETWORKING SESSION

Connect with colleagues, available funding, and resources to work together as a larger PRIMO to operationalize Pacific priorities and opportunities. Representatives discussing funding and resource opportunities will include the National Oceanic and Atmospheric Administration (NOAA) Office for Coastal Management, Department of Interior (DOI) Office of Native Hawaiian Relations, DOI Office of Insular Affairs, NOAA Office of Habitat Conservation, Pacific Integrated Ocean Observing System (PaIOOS), NOAA Office of Marine Debris, National Disaster Training Preparedness Center, NOAA Pacific Islands Regional Office, and the Federal Emergency Management Agency.

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11:30 AM – 12:00 PM

## CLOSING REMARKS AND CLOSING PROTOCOL



# JOIN US FOR A FREE PUBLIC EVENT



**PRiMO**

PACIFIC RISK MANAGEMENT 'OHANA

### Who is a resiliency expert?

The experts of PRiMO includes heads of state, representatives from business, nonprofits, and environmental groups, and concerned citizens of the Pacific.

WANT TO LEARN MORE ABOUT RISK MANAGEMENT CAREERS IN HAWAI'I?

## ROUND TABLES WITH RESILIENCY EXPERTS

Come join the Pacific Risk Management 'Ohana

**April 5th, 2023**

3:00 pm - 5:00 pm  
Round Tables

5:00 pm - 7:00 pm  
Community Night

Hawai'i Convention Center

**Students in grades 5-12**, have conversations with resiliency experts about:

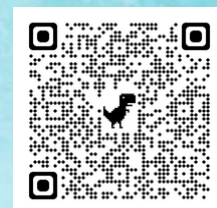
- Initiatives to protect Pacific Island communities from natural hazards
- Career pathways to community resilience positions in the Pacific

### What do resiliency experts focus on?

Resiliency experts focus on topics ranging from water quality to disaster management and economic sustainability.



Scan to Register:



<https://forms.gle/4FuR1cwveNsJDGVLA>



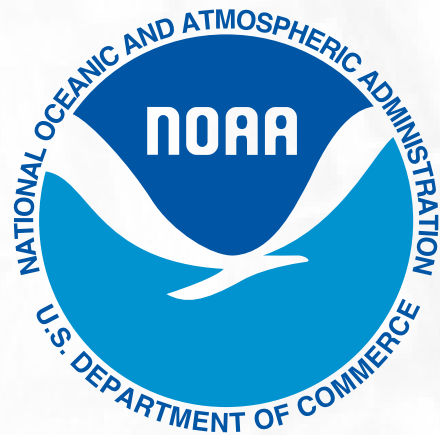
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