

2017 PRiMO CONFERENCE

NAVIGATING TOWARD SECURITY AND SUSTAINABILITY

.....

MARCH 20 - 23, 2017 📍 HONOLULU, HAWAI'I



PRiMO

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.

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. The theme of PRiMO 2017, "Navigating Toward Security and Sustainability," will highlight the transformations communities are making in order to prepare for the next natural disaster.

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-profits, conservation groups, and the business, health, and industry sectors. In addition to 25 informative sessions and professional development training classes, this year's program features a new track showcasing academic papers, presentations, and posters representing the latest research in disaster resiliency, climate adaptation and related topics.

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A NOTE FROM THE CHAIR

Aloha Kākou,

I am honored and pleased to welcome you to our 15th annual meeting of the Pacific Risk Management 'Ohana (PRiMO). Our event would not have been possible without your support. I'd like to thank our sponsors and many hardworking and dedicated individuals for helping us throughout the year. Thank you for being part of our 'ohana.

It is an exciting time for PRiMO. While there are changes in the political landscape with new perspectives on the governance and management of risk, many of the challenges, threats, and opportunities remain just as before. PRiMO provides an opportunity to take stock, to measure our progress and look towards the future of building safe, just, well-functioning and resilient communities. More than ever, we need to bring people together, strengthen our bonds, and find innovative pathways for working together. We have strength in our diversity.

This meeting offers us opportunities to share information, to build and strengthen our capacities to manage change and reduce risks associated with natural and man-made hazards. We are so fortunate to have many partners and stakeholders representing agencies and organizations from all across the world. Our focus this year is on security and sustainability. In addition to examining the evolving threat landscape, we are focused on assessing risks and sustaining a high quality of life in our communities. As in previous years, we have training sessions, an agency-private sector roundtable, opportunities for our working groups (huis) to come together, and many exciting and informative presentations, talks and demonstrations. You will get an opportunity to see new technologies and learn first-hand about the important role of indigenous knowledge in building a culture of preparedness. PRiMO is an opportunity to learn, share, commit, and work together on lasting solutions.

Here are some of the highlights of this year's event. On Tuesday, we'll have a traditional opening and welcome followed by a keynote address from President Hilda Heine of the Republic of the Marshall Islands. That evening, starting at 5:00 PM, there will be an Exhibitors' Showcase & Networking Reception, which will include a keynote address from the Pacific Islands Forum's Deputy Secretary General Cristelle Pratt in addition to poster presentations. Wednesday will start with opening presentations by USAID's Harlan Hale and Sutopo Purwo Nugroho from Indonesia's BNPB (national disaster management agency). At 3:30 PM, sessions will be open to the public and followed by our community night event at 5:00 PM with many demonstrations, exhibits, and talks. Thursday's opening keynote at 9:00 AM will feature the Governor of Guam, Eddie Calvo, followed by sessions addressing experiences and mitigation options for climate-induced migration.

Thank you for attending our conference and sharing your time, knowledge, and experiences with us. Hopefully you'll see some familiar faces, as well as meet new people. You are our greatest asset. Please stay engaged, keep us focused, and help us cultivate and educate the next generation of thinkers, leaders, and doers who'll help us to thrive and flourish in the Anthropocene.

Me ke aloha,

Karl Kim
Chair, PRiMO Navigators' Council

PACIFIC RISK MANAGEMENT 'OHANA LEADERSHIP

PRiMO Executive Director, Adam Stein, NOAA Office for Coastal Management

Navigators' Council

PRiMO Chair: Karl Kim, National Disaster Preparedness Training Center

PRiMO Vice-Chair: Kristina Kekuewa, NOAA Office for Coastal Management

Bill Thomas, NOAA Office for Coastal Management

Cheryl Anderson, University of Hawai'i

Michael Bruno, University of Hawai'i

Chris Chiesa, Pacific Disaster Center

John Marra, NOAA National Climatic Data Center

Ray Tanabe, NOAA National Weather Service

Sally Ziolkowski, Federal Emergency Management Agency

Senior Advisors

Derek Chow, U.S. Army Corps of Engineers Civil and Public Works Branch

Victoria Keener, East-West Center

Eddie Bernard, NOAA (Ret.)

Stanley Boc, U.S. Army Corps of Engineers

Margaret Davidson, NOAA

Richard Ferrero, U.S. Geological Survey, Pacific Region

John McCarroll, Environmental Protection Agency

Penehuro (Pene) Lefale, Joint Center for Disaster Research

Eileen Shea, Partnership for Pacific Resilience

Michael Shulters, U.S. Geological Survey (Ret.)

Ed Young, NOAA National Weather Service

Hui Steerspersons

Communications

Jimmy Lagunero, University of Hawai'i

H. Ginger Porter, University of Hawai'i

Health Security

Gregg Nakano, University of Hawai'i

Indigenous Knowledge and Environment

Jean Tanimoto, NOAA Office for Coastal Management

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

Doug Harper, The Baldwin Group at NOAA

Training and Education

Russell Uyeno, National Disaster Preparedness Training Center



MONDAY, MARCH 20

	304AB	306A	306B	307AB
8:00 AM – 12:00 PM	Community Resilience	AWR-347 Climate Adaptation Planning for Emergency Managers	Natural Disaster Awareness for Caregivers	Wildland Fire Risk and Mitigation Strategies for Pacific Islands
12:00 PM – 1:00 PM	Break for Lunch			
1:00 PM – 5:00 PM	Community Resilience (continued)	AWR-347 Climate Adaptation Planning for Emergency Managers (continued)		

TUESDAY, MARCH 21

8:00AM – 9:00AM	313					
	Registration and Continental Breakfast					
9:00AM – 10:00AM	Opening Protocol					
	Welcome <i>Keynote Speaker: Her Excellency Hilda Heine, President of the Republic of the Marshall Islands</i>					
10:00AM	Group Photo — Steps Fronting Room 313					
10:00AM – 10:30AM	Break					
10:30AM – 12:00PM HUI MEETINGS	304AB	306A	306B	307AB	308AB	313
	Risk Assessment and Planning Hui; Deepening Partnerships in American Samoa to implement Coastal Hazard Mitigation Plans	Indigenous Knowledge and the Environment Hui	Health Security Hui; Pacific Disaster Center's DisasterAWARE for Health Monitoring	Communications Hui; Disaster Risk Information Disclosure and Communication: Dealing with Uncertainties	Information Access and Geospatial Technology	Training and Education Hui; It Takes an Island! Communicating Climate Risk
12:00PM – 1:30PM	Lunch on Your Own					
1:30PM – 3:00PM	304AB	306A	306B	307AB	308AB	313
	Preparing for a Changing Climate: An Examination of Infrastructure Vulnerability	Introduction to ISO 31000 — Risk Management Guidelines	Disaster Resilient Universities: A Collaborative Planning Effort Towards Resiliency Communities	Building Resilience in Coastal Environments by Integrating Community and Landscape Implementation Strategies — Best Practices in the USA and Australia	American Samoa 2009 Tsunami: THEN & NOW	
3:00PM – 3:30PM	Break — Pā Kaloka Courtyard					
3:30PM – 5:00PM	304AB	306A	306B	307AB	308AB	313
	Building Resilience in Tourism Destinations	Challenges and Advances in Early Warning System Communications within the Pacific Islands	Agency and Private Sector Roundtable (By Invitation Only)	Joint Session on Disaster Preparedness and Climate Change Adaptation for Human Health: Lessons Learned from the Pacific Islands and West Africa		
5:00PM – 7:00PM	313					
	Exhibitors' & Networking Reception and Poster Session <i>Keynote Speaker: Cristelle Pratt, Deputy Secretary General, Pacific Island Forum Secretariat</i>					



WEDNESDAY, MARCH 22

8:00AM – 9:00AM	313					
	Registration and Continental Breakfast					
9:00AM – 10:00AM	Plenary <i>Keynote Speakers: Harlan Hale</i> , Regional Advisor, USAID/DCHA/OFDA/EAP; <i>Sutopo Purwo Nugroho</i> , Badan Nasional Penanggulangan Bencana (BNPB), (National Disaster Management Authority), Indonesia					
10:00AM – 10:30AM	Break					
10:30AM – 12:00PM	304AB	306A	306B	307AB	308AB	313
	Pre-Disaster Recovery Planning: Transferring Knowledge to Practice in Hawai'i	Disaster Management Lessons from Indonesia: Challenges and Opportunities	Geospatial Data Collection, Risk Assessment, and Resilience in the Pacific	Mālama Honua Worldwide Voyage's Promise to Pae' Aina o Hawai'i	Energy Futures in the Pacific — One's Trash is Another's Gas	
12:00PM – 1:30PM	313					
	Awards Luncheon <i>Keynote Speaker: Raymond Renfro</i>					
1:30PM – 3:00PM	304AB	306A	306B	307AB	308AB	313
	Environmental Health and Security	Academic Presentations — Climate and Environment	The Role of Conservation Districts Before and After a Disaster: Case Studies from Washington State	Lessons and Innovations in Climate Change Adaptation		
3:00PM – 3:30PM	Break — Pā Kaloka Courtyard					
3:30PM – 5:00PM SESSIONS OPEN TO THE PUBLIC	304AB	306A	306B	307AB	308AB	313
	Improving Resilience to Coastal Hazards and Climate Change Through the Hawai'i Climate Adaptation Initiative and Related Projects	Academic Presentations — Infrastructure and Preparedness	Preparing the Pacific for the Impacts of a Changing Climate: Some Considerations when Preparing for the Year 2100	A Collaborative Discussion on the How and What of UAV Usage for Disaster Preparedness, Response, Recovery and Resilience	Poster Session	Hazard Insurance: What Is It and How Does It Work
5:00PM – 7:00PM OPEN TO THE PUBLIC	313					
	Hawai'i Prepares 2017					

THURSDAY, MARCH 23

	313
8:00AM — 9:00AM	Registration and Continental Breakfast
9:00AM — 10:00AM	Plenary <i>Keynote Speaker: The Honorable Eddie Calvo, Governor of Guam</i>
10:00AM — 10:30AM	Break
10:30AM — 11:15AM	Plenary — Climate Migration Case Studies
11:15AM — 12:00PM	Plenary — Technical Issues Around Climate Migration
12:00PM — 12:15PM	Closing Protocol



MEET OUR KEYNOTE SPEAKERS



Her Excellency **Hilda Heine**, President of the Republic of the Marshall Islands

Dr. Hilda Heine was elected as the eighth President of the Republic of the Marshall Islands (RMI) in 2016 and is the first woman to hold the office. She is also the first female president of any Micronesian country and only the fourth woman to serve as head of government for any independent Pacific nation.

Until her election to the presidency, she was one of only three women serving in the Nitijelā, RMI's legislature. She was the first individual in the Marshall Islands to earn a doctorate degree, and is the founder of the women's rights group, Women United Together Marshall Islands (WUTMI).

Prior to assuming office, she had a long career in education, serving as a classroom teacher and counselor (1975–1980) and Counsellor (1980–1982) at Marshall Islands High School, Majuro. She became the Director of Continuing Education, Community College of Micronesia, Majuro (1982–1986), and then the Director of Continuing Education, Community College of Micronesia. She served as the President of the College of the Marshall Islands (1986–1990). From 1990–1992, Dr. Heine was President, College of the Marshall Islands. Following her college presidency, she served as the Secretary of Education, Ministry of Education in Majuro (1992–1995). Dr. Heine also serves as a Learning Scientist with Pacific Islands Climate Change Education Partnership, a program of the Pacific Resources for Education and Learning. She has also been associated with the Leadership Pacific Advisory Board, the Commission on Education in Micronesia, and the Human Resources Health Task Force.

Dr. Heine attended college in the United States where she earned her undergraduate degree at the University of Oregon in 1970. She earned a master's degree at the University of Hawai'i in 1975, and an educational doctorate at the University of Southern California in 2004.



The Honorable **Eddie Baza Calvo**, Governor of Guam

Eddie Baza Calvo is the eighth elected Governor of Guam. Much of the work of the Calvo-Tenorio administration started in their first term, which began in 2011.

The economy improved, the government's finances were being better managed, and more police officers were hired, among other things — yet, the job isn't done. In 2015, the Governor launched efforts to create a community plan to guide the island's development for the next 50 years. What was dubbed, "Imagine Guam 2065" brought together professionals, entrepreneurs, single parents, middle and high school students — people from all walks of life — together to discuss what life on Guam should look like. The vision of the island created by the hundreds of Guamanians coming together is being discussed now as we go into the planning stage. Guam 2065 also looks to find a balance between allowing economic development, supporting the growth of new industries, and protecting the environment, as well as the cultural practices that rely on the land and the oceans.

Education & Guam's future

It is this focus on children that drives the signature pieces of Governor Calvo's tenure. Looking toward the long-term viability of the island, the Governor saw the disconnect between the standards of the workforce and the performance of students upon graduating, if they graduated at all. He brought the community together to develop a plan for education reform, one which replaces the 100-year-old American education system of inputs with one that values standards and outputs in a classroom culture of collaboration that embraces technology.

Affordable housing

In his first four years in office, Governor Calvo started an affordable housing initiative that would build 30,000 new affordable homes by 2017. This required a strong partnership between the local government, the federal government and the private sector. As of 2015, about 20,000 new homes have been built, are being built or are in the planning stages.

Governor Calvo is a plain-spoken man, who can regularly be seen in the community speaking with the people and helping them. He is a man of deep faith, guided more by Christian values than any rule of politics. He is an avid reader and student of history and a former athlete. He is a huge fan of the Golden State Warriors and has never wavered in his decades-long support for his beloved San Francisco 49ers.



Harlan Hale, Regional Advisor, USAID/Indonesia

Harlan Hale serves as a Regional Advisor on USAID/OFDA's East Asia/Pacific team, and is based in Jakarta, Indonesia. As a Regional Advisor, with over 30 years of experience, Mr. Hale represents USAID/OFDA in matters concerning humanitarian assistance, including disaster response and recovery; risk reduction and capacity-building; and coordination and support to technical assistance provided by other USG agencies and by other donors, specifically for the countries of Malaysia, Singapore, Indonesia, Brunei, East Timor, Australia, and New Zealand.

Mr. Hale served as USAID/OFDA's Principal Regional Advisor for Southern Africa, based in Pretoria, South Africa from 2003–2012 and prior to that served as Senior Program Officer for USAID/OFDA in Indonesia from late 2000 until 2003. Prior to working for USAID/OFDA, Mr. Hale worked with CARE from 1986–2000, serving in complex emergency and natural disaster responses in Somalia, Mozambique, Zimbabwe, Rwanda/Zaire/Tanzania, Georgia, and Macedonia, among others, in a variety of capacities.

Mr. Hale has a BA in History and Political Science (African History and International Relations) from the University of Georgia and an MBA (Transportation and Logistics Management) from the University of Tennessee. Mr. Hale served as a Peace Corps volunteer in Zaire from 1980–1983.



Sutopo Purwo Nugroho,
 Head of Information, Data and Public Relations
 Center, Badan Nasional Penanggulangan
 Bencana (BNPB), (National Disaster
 Management Authority), Indonesia

Dr. Sutopo is the Head of Data Information and Public Relations, Badan Nasional Penanggulangan Bencana (BNPB), Indonesia's Disaster Management Organization. Prior to his current role, he served as BNPB's Director for Disaster Risk Reduction.

Dr. Sutopo earned his PhD degree in the Natural Resources and Environment Management Program from Bogor Agricultural Institute (IPB), by defending a dissertation on "Carbon Flux in the rivers in island of Java." Dr. Sutopo is responsible for technology development, standard establishment, and data, information and public relation implementation in disaster management. During his current assignment at BNPB, some disaster information systems that he has created received awards including: InaSAFE (Rookie of the Year 2012 from Black Duck) and DIBI (Indonesia Disaster Data and Information, Best Disaster Database Systems in Asia from UNDP). Dr. Sutopo has been awarded The Best National Public Relations by the Government of Indonesia.

Dr. Sutopo has built a very close relationship with the media, so that in the case of a disaster in Indonesia, he is requested by nearly every media outlet to give a statement and to represent Indonesia's disaster management authority. Data and evidence-based information are always provided by Dr. Sutopo whenever he appears before the public. His office maintains the highest standard for information reliability.

He is frequently asked to speak on various topics of disaster management. Additionally, he spends time teaching and lecturing at several universities, including: Universitas Pertahanan (Defense University, managed by Ministry of Defense); Universitas Indonesia, Jakarta, as a part time lecturer in Post-Graduate School; Institute Pertanian Bogor (Bogor Agriculture Institute), Bogor as Guest Lecturer; and Military Command School as lecturer. Finally, Dr. Sutopo has prepared 11 international journals, 78 national journals, 11 books and numerous scientific papers and printed publications.



Cristelle Pratt,
Pacific Island Forum Secretariat
Deputy Secretary General for
Strategic Partnerships & Coordination,
Corporate Services Programmes

Ms. Cristelle Pratt has extensive experience in the public and private sectors working for national government in various regional roles with the most senior being that of CEO of SOPAC (the Pacific Applied Science Geoscience Commission), which is now the known as Applied Geoscience and Technology Division of the SPC from 2004 to 2010.

She has also provided policy, technical and strategical advice, in the areas of ocean governance and in climate and disaster risk resilient development to various regional and international organizations, including the World Bank and AusAid.

Ms. Pratt holds tertiary qualifications in marine law and policy and geosciences from Dalhousie University, Canada and the Australian University in Canberra, Australia, respectively.

Ocean governance sustainable use remains a deep passion and commitment for Ms. Pratt, who believes that the ocean that connects us as a region offers many opportunities for us all and deserves increased attention and efforts at all levels.



Raymond Renfro, Lead Economist and Financial Expert

Dr. Raymond Renfro is a senior economist with over 30 years of international development experience in natural resources (water, forestry, and biodiversity), agriculture; food and nutrition security; integrated rural development; economic and financial analysis, cost-benefit analysis; project management, design, implementation and evaluation; value-chains and farmer-agribusiness development; agricultural marketing and institutions; climate change adaptation and mitigation; climate smart agriculture; payment for ecological services; sector analysis and policy reforms; infrastructure development; microfinance, rural banking, and financial sector analysis; private sector development; programming development assistance and proposal writing; agricultural research and extension; and capacity building and training in over 10 countries in Asia and the Middle East.

He has a proven record in divisional and team leadership in the Asian Development Bank (ADB) and the ADB Institute (20 years) and the United States Agency for International Development (USAID) (over 10 years). His private sector experience includes work with ADB, USAID, the Louis Berger Group, the Pioneer Hi-bred Seed Co. and the Ford Foundation.

He has experience in China, Vietnam and Pakistan in designing and administering programs and policies in food and nutritional security, crop diversification and food quality, value chain projects that link food producers and consumers, nutrition-based agriculture that involved training of producers, market businesses, consumers, and rural workers with improved nutrition and productivity. He is experienced in climate smart agriculture and climate change disaster risk management in China and Pakistan, including enabling farmers and agribusinesses to adapt to climate change (mainly droughts and floods) with improved risk management systems, appropriate policies and plans, social safety net programs to help those most vulnerable and at risk, payment for ecosystem services or PES on river and irrigation systems, and improved sector coordination in agriculture, environment, energy, road and water infrastructure, flood control, etc.



MONDAY, MARCH 20

8:00AM – 5:00PM • ROOM 306A

AWR-347: Climate Adaptation Planning for Emergency Managers

Host: National Disaster Preparedness Training Center

This eight-hour awareness-level course will prepare participants to describe the principles of climate adaptation planning for emergency management and first response processes. This course will train participants to be able to discuss the impact of weather hazards on critical infrastructure and key resources, and explain how climate change projects will affect those impacts. The processes of common weather hazards, climate variability, and climate change will be addressed alongside risk assessment paradigms.

8:00AM – 5:00PM • ROOM 304AB

Community Resilience

Hosts: National Disaster Preparedness Training Center

This course equips participants with the knowledge and skills necessary to increase resilience in their communities. The course introduces participants to the concept of resilience and offers them hands-on tools to assess their community's exposure and vulnerabilities to natural hazards. It also includes tools and recommendations for participants to assess the capacity of their community in order to increase resilience and effect positive change. The course uses interactive studies and readily available tools and techniques that allows for participants to turn resilience theory into action.

8:00 AM – 12:00 PM • ROOM 306B

Natural Disaster Awareness for Caregivers

Host: Lyon Associates, Inc.

The objectives of this course are to: (1) Identify the natural hazards that may affect an eldercare facility or home and explain how risks associated with hazards are identified and may be minimized; (2) Describe the constraints and vulnerability factors associated with senior citizens; and, (3) Application of knowledge of material covered in Modules 2 and 3 for at-risk-senior citizens and their caregivers impacted by tsunamis, hurricane or tornado.

8:00 AM – 12:00 PM • ROOM 307AB

Wildland Fire Risk and Mitigation Strategies for Pacific Islands

Host: University of Hawai'i

The proportion of land area affected by wildland fire in Hawai'i and western Pacific Islands such as Yap, Guam, and Palau is equal to, and in some years greatly exceeds, that of states in the Western U.S. The impacts of fires can be particularly acute on Pacific Islands given the proximity and tight linkages among communities, watersheds, and nearshore resources. Understanding the social and environmental factors that drive fire risk and the available strategies to reduce that risk is critical information for planners, community outreach and education efforts, and both marine and terrestrial resource management programs. This half-day training, co-developed by the Pacific Fire Exchange (www.PacificFireExchange.org) and the Hawaii Wildfire Management Organization (www.HawaiiWildfire.org), will first cover the ways in which climate, vegetation, and human activities affect fire occurrence on Pacific Islands and the impacts of fire on cultural and natural resources. The training will then provide an overview of current strategies, informational resources, and funding opportunities available that target fire risk reduction. This will include federally recognized Community Wildfire Protection Plans and public outreach, pre-fire planning and fuels management and risk reduction at both landscape and household scales, as well as mitigating social and ecological impacts after fires have occurred. In addition to these topics, the training organizers will present available informational resources and illustrate the application of these resources using case studies from their extensive work on wildland fire issues throughout the region. The training will conclude with a facilitated discussion with training participants about current needs and potential partnerships between fire-related projects and other natural disaster work in the Pacific.

TUESDAY, MARCH 21

8:00AM – 9:00AM • ROOM 313

Registration and Continental Breakfast

9:00AM – 10:00AM • ROOM 313

Opening Protocol

Welcome

Speaker: Karl Kim, Chair, PRIMO Council of Navigators

Plenary

Keynote Speaker: Her Excellency Hilda Heine, President of the Republic of the Marshall Islands

10:00AM – 10:30AM

Break and Group Photo on Steps Fronting Room 313

10:30AM – 12:00PM

Morning Hui Sessions

Communications Hui • ROOM 307AB

Steerspersons: Jimmy Lagunero, University of Hawai'i; H. Ginger Porter, University of Hawai'i

This hui assists the providers of hazard and warning information in delivering their messages to every jurisdiction in a timely manner that is readily understood by the end users. The following presentation will occur as part of this hui session:

Disaster Risk Information Disclosure and Communication: Dealing with Uncertainties

Speakers: Asthildur Elva Bernhardsdottir, University of Iceland; Allen Clark, East West Center; Ana Maria Cruz, Kyoto University; James Goltz, Kyoto University; Mika Shimizu, Kyoto University

Natural, technological and human induced disasters of today's modern risk society are characterized by increasingly more complex, uncertain and interconnected risks. These risks increasingly impact both within and beyond specific geographic areas and/or infrastructure resulting in cascading disasters with uncertain impacts often catching communities unprepared or even unaware of the risks.

One common issue related to complex disasters is that disaster risk information is often not disclosed to the public because it is (a) not available, (b) incomplete or (c) has a high level of uncertainty. Non-disclosure of risk information and/or inappropriate risk communication often result in tragic disasters consequences such as following Hurricane Katrina and the Fukushima Daiichi nuclear accident, but are also major contributing factors to unintended consequences of small to medium scale disasters. Equally common is that risk information may not be well communicated to stakeholders. Although the reasons vary depending on the disaster, the issue of "uncertainty" of risk is a major barrier to risk information disclosure and communication between government, communities, industry and other stakeholders.

Given the above, this interdisciplinary proposal, bringing together researchers from different disciplines and risk experts will address: 1) The types and causes of (a) non-disclosure of risk information and (b) inappropriate risk communication. How are these issues related to uncertainties? 2) Specific case histories of structures or systems of disaster risk information disclosure and/or communication; 3) How can we foster better risk information disclosure or communication among governments, industrial managers, civil protection authorities and community members?



Health Security Hui • ROOM 306B

Steersperson: Gregg Nakano, University of Hawai'i

This hui supports preparation for, and responses to, public health threats, minimizing the transboundary movement of disease. The following presentation will occur as part of this hui session:

Pacific Disaster Center's DisasterAWARE for Health Monitoring

Speakers: Joseph Green, Pacific Disaster Center; Julie Greenly, Pacific Disaster Center

Outbreaks of emerging infectious disease and related humanitarian emergencies are among the greatest challenges in disaster preparedness and public health. PDC's DisasterAWARE platform helps overcome public health challenges by providing hazard monitoring and bio/medical data services from trusted providers. Information available through DisasterAWARE includes PDC's BioServ (BioSurveillance Information Service), global risk and vulnerability index, infrastructure, and general demographic data.

The actionable health-related information provided by DisasterAWARE increases shared situational awareness; connects professionals; and empowers accelerated collaboration, planning, and response to health emergencies such as Zika, Dengue, Ebola, Influenza, and Chikungunya.

Indigenous Knowledge and the Environment Hui • ROOM 306A

Steerspersons: Jean Tanimoto, NOAA Office for Coastal Management; Ramsay Taum, Life Enhancement Institute of the Pacific

This hui ensures that PRiMO integrates traditional knowledge and modern science in a respectful and purposeful manner throughout the organization and other hui.

Information Access and Geospatial Technology Hui • ROOM 308AB

Steersperson: Eric Yamashita, National Disaster Preparedness Training Center

This hui supports the collection and integration of hazards data, application of data framework and metadata standardization, and improvements in the accessibility and usability of risk management data and products.

Risk Assessment and Planning Hui • ROOM 304AB

Steerspersons: Kitty Courtney, TetraTech; Doug Harper, NOAA Office for Coastal Management

This hui explores methods, strategies, and best practices regarding natural hazard risk and vulnerability assessment, disaster risk reduction, and climate adaptation, as well as their implications for sustainable planning and development practices. The following presentation will occur as part of this hui session:

Deepening Partnerships in American Samoa to implement Coastal Hazard Mitigation Plans

Speakers: Jamie Caplan, Jamie Caplan Consulting; Kevin Doyle, Green Economy; Hideyo Hattori, The Baldwin Group at NOAA Office for Coastal Management; Sandra Lutu, American Samoa Department of Commerce

By participating in this session, participants will learn about an effort in American Samoa to implement coastal hazard mitigation actions based on the approaches of a diverse group of stakeholders, including agencies whose actions are partially driven by the requirements of their U.S. government funding sources. Participants will provide recommendations about overcoming barriers to effective partnerships among entities that share common goals. Background: In 2015, FEMA approved a new update of American Samoa's Territorial Multi-Hazard Mitigation Plan (HMP) for 2015–2020. At the same time, American Samoa Coastal Management Program (ASCMP) identified coastal hazards as a top priority. Sensing an opportunity, ASCMP requested and received "Section 309" funds to bring on a "coastal hazards coordinator" whose work would include deepening relationships with the Hazard Mitigation Council, with an eye toward improving the chances that coastal hazard mitigation projects would be implemented. The project will be in its early stages at the time of PRiMO, offering a chance for ASCMP and its partners to learn from the ideas and recommendations of the PRiMO community of practitioners, and to incorporate them into our 2017–2018 coastal hazard mitigation partnership planning. We anticipate a highly interactive session. Brief panel presentations will be followed by small group table discussions to generate questions, recommendations, and offers of assistance after the PRiMO conference. We hope to update participants about the project's progress at PRiMO 2018.

Training and Education Hui • ROOM 313

Steersperson: Russell Uyeno, National Disaster Preparedness Training Center

This hui improves coordination and encourages collaborative training efforts within agencies and across organizations through partnership development. The following presentation will occur as part of this hui session:

It Takes an Island! Communicating Climate Risk

Speakers: Ariele Baker, CNMI Bureau of Environmental and Coastal Quality; Mallory Muña, Coral Reef Initiative Education and Outreach Coordinator, Bureau of Environmental and Coastal Quality; Richard Salas, Climate Change Project Coordinator, CNMI Office of the Governor

The Pacific Islands are at the forefront of climate change, with visible impacts from sea level rise, coral bleaching, droughts and flooding. This makes communicating information about climate risks more relevant and timely. Communicating these risks can be a challenge given uncertain predictions and a lack of island specific data. It also requires providing information to multiple audiences with a variety of interests, motivations, and concerns both at the family and state level. In order to address this, BECQ has conducted climate outreach to state decision makers through reports, brochures and trainings. We have reached individuals and families through commercials, community activities, and workshops. In this session, we highlight some of our successes and lessons learned.

12:00PM – 1:30PM

Lunch on Your Own

Please grab some friends (old and new) for lunch.

1:30PM – 3:00PM

Concurrent Sessions

American Samoa 2009 Tsunami: Then and Now • ROOM 308AB

Speakers: Faletoa Ulufale, National Tsunami Hazard Mitigation Program; Lancaster Allen, National Tsunami Hazard Mitigation Program; Vinnie Atofau National Tsunami Hazard Mitigation Program

A three-part, 20-minute presentation sharing:

- 1) Community outreach activities, lessons learned, and mitigation actions; THEN AND NOW
- 2) National Tsunami Hazard Mitigation Program challenges and successes; THEN AND NOW
- 3) Emergency Management summary on American Samoa's awareness and preparedness; THEN AND NOW.

Informational sharing with other island and coastal partners through presentation, question and answer session, and suggestion and comments as we move forward.



Building Resilience in Coastal Environments by Integrating Community and Landscape Implementation Strategies – Best Practices in the USA and Australia • ROOM 307AB

Speakers: Greg Fisk, BMT WBM; Ian Johnson, National Environmental Modeling and Analysis Center

This facilitated dialogue will include an overview of two national planning frameworks currently being applied to guide adaptation planning in the U.S. and Australia. Speakers will highlight their experiences integrating community and landscape/ecosystem strategies and host an open discussion with participants to share and build on their experience building resilience in coastal areas. Ian Johnson, Geospatial and Science Communications Specialist from The National Environmental Modeling and Analysis Center (NEMAC), one of the many developers of the U.S. Climate Resilience Toolkit, will introduce this online resource focusing on the “Steps to Resilience” and the recently released regional section for Hawai’i and Pacific Islands. Greg Fisk, National Practice Leader for Environment with BMT WBM Pty Ltd based in Brisbane, Australia will introduce the National Strategy for Disaster Resilience and National Climate Change Adaptation Framework with a focus on CoastAdapt, an online tool being developed by the National Climate Change Adaptation Research Facility (NCCARF) to provide consistent national support for adaptation planning in coastal areas of Australia. Both speakers will present brief case studies of the application of these tools in a range of locations across the U.S. and Australia before engaging participants in an open conversation to explore the group’s experience in identifying and overcoming barriers and exploiting opportunities to build resilience in coastal areas in the Pacific Islands region.

Disaster Resilient Universities: A Collaborative Planning Effort Towards Resiliency Communities • ROOM 306B

Speakers: Bernie Gonzalez, University of Hawai’i, National Disaster Preparedness Training Center; Jimmy Lagunero, University of Hawai’i, Emergency Management Coordinator; Andre Le Duc, University of Oregon; Suwan Shen, University of Hawai’i, Department of Urban and Regional Planning

This session will focus on the challenges that campuses face in integrating collaborative efforts into resiliency planning and implementation. Both informal efforts (working through existing processes and structures) and formal efforts (such as the DRU Network) will be examined, as well as the different contexts of collaboration within individual campuses, among campuses of multicampus systems, and between campuses and various affiliate and stakeholder agencies. Lessons learned and best practices will be offered for further discussion, including findings from the 2016 National Higher Education Emergency Management Program Needs Assessment report.

Introduction to ISO 31000 – Risk Management Guidelines • ROOM 306A

Speaker: Jim Newberry, U.S. Technical Advisory Group for ISO 31000

This session will provide an overview of the ISO 31000 Risk Management Guidelines, which is the first international risk management standard offering a new global and universally accepted standard. The ISO 3100 Standard (adopted in 2011 as ANSI/ASSE Z-690) is intended to replace the many differing standards, which stretch across industries, regions, and subjects. It gives users an understanding of how to develop, implement, and maintain effective risk management within their organization, and provides further recommendations for the framework, process, and implementation of risk management gained from experience and good practice.

This presentation will cover the basics of the three sections of the ISO 31000 packaged standard:

- 1) ANSI/ASSE/ISO Guide 73 (Z690.1-2011) Vocabulary for Risk Management
- 2) ANSI/ASSE/ISO 31000 (Z690.2-2011) Risk Management — Principles and Guidelines
- 3) ANSI/ASSE/IEC/ISO 31010 (Z690.3-2011) Risk Assessment Techniques

Particular attention will be given to the third part of the package of standards, which provides guidance on the selection and application of systematic techniques for risk assessment. Risk assessment carried out in accordance with this section of the standard contributes to other risk management activities. The application of a range of techniques is introduced, with specific references to other national and international standards where the concept and application of techniques are described in greater detail.

Attendees of this presentation will be provided with 20 risk assessment tools that have been collected by the presenter — those who wish to receive these extra materials will need to provide the presenter with a business card (or written note with a non .mil or .gov email) with “risk assessment tools” written on them.

Preparing for a Changing Climate: An Examination of Infrastructure Vulnerability • ROOM 304AB

Speakers: Elise Budd, University of Hawai‘i, Civil and Environmental Engineering;

Oceana Francis, University of Hawai‘i, Civil and Environmental Engineering, Sea Grant College;

Yaprak Onat, University of Hawai‘i; Suwan Shen, University of Hawai‘i, Urban and Regional Planning

Critical infrastructure is essential for the economy and society. Damage or disruptions to critical infrastructures could have cascading effects across communities with immeasurable costs. However, past experience shows that coastal infrastructures are vulnerable to extreme weather events, and this will most likely increase with projected climate change. This session will discuss the factors and conditions that affect infrastructure vulnerability and explore the opportunities to build resilient infrastructure in the face of climate change. Three speakers will examine infrastructure vulnerability across different sectors and scales.

3:00PM – 3:30PM

Break – Pā Kaloka Courtyard



3:30PM – 5:00PM Concurrent Sessions

Agency and Private Sector Roundtable (Attendance by Invitation Only) • ROOM 306B

Building Resilience in Tourism Destinations • ROOM 304AB

Speakers: Kazuo Kikuchi, School of Commerce, Meiji University; Takehiko Kozue, School of Hospitality and Tourism, Meikai University; Ippei Machida, School of Commerce, Meiji University; Ashley Schroeder, School of Travel Industry Management, University of Hawai'i

Tourism accounts for a significant and growing portion of the world's economic activity and employment, and is a particularly important industry for many nations and regions in and around the Pacific. Tourists are, by definition, away from their homes and support systems and thus, like many of the destinations they visit (often located in coastal areas), are vulnerable to natural disasters and disruptions. This session covers key issues relating to tourism, resilience, and recovery in terms of cooperation across sectors and agencies, and useful examples of policies and practice that can be shared and built upon.

Joint Session on Disaster Preparedness and Climate Change Adaptation for Human Health: Lessons Learned from Pacific Islands and West Africa • ROOM 307AB

Speakers: Leroy Harris, HIT Methods; Natasha Kuruppu, International Institute for Global Health, United Nations University

Climate change is an imminent threat to sustainable development and security globally. Geographically, Pacific Island Nations are at the frontlines of complex environmental conditions and increasing threats of disasters pose significant challenges to their survivability. With growing scientific evidence of climate change on disaster risks, disaster preparedness is vital and a critical component of any climate change adaptation program undertaken in the Pacific. Climate change is projected to increase the frequency and severity of extreme weather events, such as tropical cyclones in the Pacific Islands, which has the potential to overwhelm a country's disaster management capacity. Health impacts include direct effects of extreme weather events, threats to food and water security, increasing burden of infectious and chronic disease and flow on mental health consequences from impacts of climate changes on livelihoods. Simultaneously, climate change is placing pressure on the soft infrastructure, such as the human resource capacities and policies that underpin public health systems. Moreover, indigenous communities and ethnic minorities could disproportionately suffer from a changing climate due to existing inequities and vulnerabilities.

Planning for climate change related disasters also strengthens preparedness for a variety of other emergencies to include disease/health outbreaks as in the case of the recent Ebola outbreak in the West African region. Post-Ebola preparedness activities for West Africa have primarily focused on an all-hazards approach to disaster preparedness and risk reduction. Developing regional planning and response mechanisms enables individual nations to strengthen capacities internally while providing opportunities for regional collaboration to support mitigation, adaptation and response to disasters.

This panel session will highlight the role of disaster preparedness in climate change adaptation programs and will cite lessons learned from evidence-based programs in the Pacific Islands and West Africa, with a particular focus on human health. Additionally, it will discuss the types of new knowledge systems, including Indigenous and local knowledge, required if we are to strengthen disaster management and climate adaptation for human health. Participants will engage in an interactive session designed to explore opportunities for collaboration at the regional level while exchanging best practices to improve policies, financing systems and humanitarian actions. The goal is to develop set recommendations towards strengthening climate adaptation, disaster risk mitigation, emergency preparedness and management to reduce current and future vulnerabilities in their respective regions.

Challenges and Advances in Early Warning System Communications within the Pacific Islands • ROOM 306A

Speakers: Carol Baqui, NOAA National Weather Service; Johannes Berdon, NOAA National Weather Service; David Kennard, Hawaii Emergency Management Agency; Maria Ngemaes, NOAA National Weather Service; Cristelle Pratt, Pacific Islands Forum

Members of the PRiMO Communications Hui have been working on communications tools and technologies that support disaster management, meteorological/climate, and tsunami early warning systems, and tele-health communities in the Pacific Islands. Working with diverse user communities, an essential feature is a collaborative approach to training, building capacity, and shared results in meeting the needs of these communities. This 1.5 hour session will focus on the different approaches to shared collaborative efforts, overcoming different obstacles, and collective best practices that have made participating organizations and communities more resilient. Invited speakers will have 10 minutes to highlight and articulate challenges each has faced, and will identify some key best practices that have common and easily identifiable approaches.

Carol M. Baqui is a Forecaster, U.S. NOAA National Weather Service Office, Pago Pago, American Samoa. Carol will discuss the collaborative practices with the American Samoa Department of Homeland Security in working with village officials, school teachers, and church and volunteer groups on Tutuila island. She will describe the challenges of reaching those communities who are on the fringes of commercial and NOAA Weather Radio coverage to prepare for multi-hazard warnings in which residents and tourists can face life-threatening situations with less than 30 minutes to respond.

Johannes Berdon is the Official-in-Charge, FSM Weather Service Office, Weno, Chuuk State, Federated States of Micronesia, and he will give an update on his challenges and successes in sending out early warning messages to the many atolls of Chuuk State, FSM.

Maria Ngemaes, Meteorologist-in-Charge, Palau Weather Service Office, Koror, Palau, will give an update on working with disaster managers, marine officials, and the maritime community to improve early warnings within Palau.

David Kennard, Hawai'i State Mitigation Officer, will speak about Hawai'i's mitigation efforts to improve early warning systems in Hawai'i.

Cristelle Pratt, Pacific Islands Forum Deputy Secretary General for Strategic Partnerships & Coordination, will speak about her work in the Pacific Islands, particularly on the challenges and opportunities in advancing climate and disaster risk reduction.

Communications Hui Member Roundtable and Updates — 40 minutes. PRiMO Communications Hui members will report on challenges and successes since the 2016 PRiMO Communications Hui meeting.



5:00PM – 7:00PM • ROOM 313

Exhibitors' & Networking Reception

Keynote Speaker: Cristelle Pratt, Deputy Secretary General, Pacific Island Forum Secretariat

The Exhibitor and Networking Reception is an annual highlight of the PRIMO conference featuring a keynote speech, informative exhibits and displays from PRIMO sponsors, and an academic poster session. It's a great way to meet and mingle with fellow professionals from a wide range of government, academia, and industry to build relationships and foster collaboration.

Poster Session

Dashti Abdulkarim — The Effects of Dust on Aviation in the Middle East

Ranjeeta Acharya — Vulnerability Assessment of Kemijen, Semarang Indonesia

Chai Blair-Stahn — The Interrelationship Between Environmental Stewardship, Island Sustainability, and Traditional Knowledge of Hula (Hawaiian dance)

Michele Chu — Sensitivity Analysis of Sea-level Rise Induced Groundwater Infiltration in Coastal Sewer Pipes

Bob Freitag — Planning Through Story Telling: a Sea Level Rise Case Study

Jiwnath Ghmire — Integrating GIS and ComMIT to Identify Social and Structural Vulnerabilities to Tsunami in South Central Coast of Vietnam

LeeAnna Kobayashi — Web-Based Training for Resilience: Opportunities and Challenges

Mark Manuel — Monitoring Marine Debris to Reduce Risk to Communities

Luciano Minerbi — Coastal Resilience for Department of Hawaiian Homelands Communities

Tsung-Yi Pan — Evaluating the Impacts of Urban Heat Island Effects on Flood Risk

Shintaro Taniguchi — Integrating UAV, ADCP, GIS and Spatial Data Analyses of Coastal Hazards

Meng-Han Tsai — Real-Time Searcher for Historical Typhoon Events

Nick Turner — UAV's for Hazard Assessment: From Volcanoes to Coastal Issues

Anna Verrill — MarineCadastre.gov: Supporting Regional Ocean Planning with Data and Technical Support

Guohui Zhang — Critical Path Identification for Traffic Infrastructure Resilience Enhancement Impacted by Natural Hazards

Wang Zhe — An HTN Planning Approach for Developing Incident Action Plans in Emergency Logistics Distribution

WEDNESDAY, MARCH 22

8:00AM – 9:00AM • ROOM 313

Registration and Continental Breakfast

9:00AM – 10:00AM • ROOM 313

Plenary

Keynote Speakers: Harlan Hale, Regional Advisor, USAID/Indonesia; Sutopo Purwo Nugroho; Head of Information, Data and Public Relation Center, Badan Nasional Penanggulangan Bencana (BNPB), (National Disaster Management Authority), Indonesia

10:00AM – 10:30AM

Break

10:30AM – 12:00PM

Concurrent Sessions

Disaster Management Lessons from Indonesia: Challenges and Opportunities • ROOM 306A

Made Brunner, Pomodoro University — Local Wisdom and Spatial Analysis of Merapi Volcano

Rudi Febriamansyah, Andalas University — Studies on Climate Change and Natural Resources Management: Findings and Lessons Learned from West Sumatera, Indonesia

Md Riwan Lessy, Khairun University — Climate Change Impacts on Water Resources of a Small Island: Case Study in Ternate Island, Ternate Island, North Maluku — Indonesia

Asrizal Luthfi, University of Hawai'i — Post-Tsunami Case Study of Rehabilitation and Reconstruction of a Community-based Settlement in Rekompak

Rita Padawangi, Asia Research Institute — Navigating Spatial Uncertainties in the Social Production of Urban Floods

Indriati Palupi, Universitas Pembangunan Nasional — Resilience Benefits of Relocating Padang, the Capital City of West Sumatra

Widodo Pawairodikromo, University Islam Indonesia — Achievements and Lessons Learned from the 2010 Merapi Eruption Disaster

Reza Yanti, Universitas Pembangunan Nasional — Resilient Planning and Development near Mount Slamet in Central Java

Energy Futures in the Pacific – One's Trash is Another's Gas • ROOM 308AB

Speakers: Robert Gough, Intertribal Council on Utility Policy; Tom Harvey, Blume Distillation; M. Kalani Souza, Olohana Foundation

As concern about our rapidly changing climate and dependence on fossil fuels grows, the search for renewable energy sources that reduce carbon dioxide emissions has become a matter of widespread attention. Among the more intriguing renewable sources is the use of ethanol as fuel. This panel will discuss the use of alternative fuel sources, specifically how decentralized, community supported ethanol production increases energy & food security, reduces carbon emissions, improves the quality of ecosystem services, and enhances local and economic development, leading to a more resilient and sustainable society.



Geospatial Data Collection, Risk Assessment and Resilience in the Pacific • ROOM 306B

Speakers: Lily Bui, MIT and iSeeChange; Jeff Danielson, U.S. Geological Survey; Jim Lyon, LYON Associates
The Pacific is vulnerable to a host of natural hazards like hurricanes, flooding, rising temperatures and sea levels, among others. As a result, Pacific islands require unique and specific solutions for disaster risk reduction, preparedness, and response.

This session convenes three different perspectives on risk and resilience in the Pacific: The first part of the session will explore geospatial data collection, coordination, and outreach services in the Pacific Region through USGS. Recently, a new Digital Elevation Model was produced for O'ahu and elevation work took place in Majuro. It will discuss data collection plans for the Pacific, what has been accomplished thus far, and how the data will be used. It will also look at improving how to coordinate data collection and how to improve the sharing of data. The second part of the session will look comparatively at U.S. Federal Government agencies, non-profits, and international development agencies and their on-the-ground operations on various islands and atolls in the Pacific Region. A unique video will be shown to summarize key findings. The final part of the session will give a broad overview of digital participatory tools for assessing climate change impacts worldwide, available to researchers and practitioners in the fields of environmental risk. It will include a demonstration of a tool called ISeeChange (www.iseechange.org), a platform for community-driven investigations of weather and climate impacts. A Q&A session will follow at the end.

The Mālama Honua Worldwide Voyage's Promise to Pae' Āina o Hawai'i • ROOM 307AB

Speakers: Kevin Chang, Kua'aina Ulu'auamo; Manuel Mejia, The Nature Conservancy; LorMona Meredith, Polynesian Voyaging Society; Eva Schemmel, Conservation International; Jean Tanimoto, NOAA Office for Coastal Management; Miki Tomita, Polynesian Voyaging Society

Since embarking on the Mālama Honua Worldwide Voyage in May 2014, Hōkūle'a has sailed more than 26,000 nautical miles and made stops in 14 countries and 70 ports, weaving a "Lei of Hope" around the world. The voyage seeks to engage all of Island Earth — practicing how to live sustainably while sharing Polynesian culture, learning from the past and from each other, creating global relationships, and discovering the wonders of this precious place we call home. Along the way, Hōkūle'a's crew and partners have spread the message of Mālama Honua (or taking care of Island Earth) by promoting sustainability and environmental consciousness, as well as exchanging ideas with the countries the canoe has visited.

The Promise to Pae' Āina o Hawai'i (P2P) environmental initiative is a unique collective impact effort inspired by this unprecedented voyage, which brings together individuals and organizations from all sectors to increase the health of Hawai'i's oceans by the time Hōkūle'a makes her return to Hawai'i in June 2017. This extraordinary movement has empowered our P2P partners to work collaboratively and aggressively on five specific commitments: Our Livelihood, Our Island Home, Our Future, Our Responsibility and Our Heritage. These commitments reflect what the ocean means to our Hawaiian Islands and people. As with Hōkūle'a's journey touching many different communities around the world, this session is designed to inspire hope and action within our Pacific Island region, hope to reverse the effects of human activities causing climate change, and action to demonstrate and enhance public and private sector partnership, increase interagency collaboration, build regional capacity and elicit community support and buy-in.

The presentation will include speakers with diverse backgrounds representing various organizations in Hawai'i, all working collectively towards a common goal, to *Mālama Honua*. The speakers will each provide a unique perspective as they share lessons learned while being a part of the Worldwide Voyage and Promise to Pae' Āina, and relay Stories of Hope that reflect the resilience and mitigation efforts of island communities who are most at risk.

Pre-Disaster Recovery Planning: Transferring Knowledge to Practice in Hawai'i • ROOM 304AB

Speakers: James Buika, County of Maui Planning Department; Karl Kim, National Disaster Preparedness Training Center; Tara Owens, University of Hawai'i Sea Grant College Program; Roberto Porro, National Disaster Preparedness Training Center; Brad Romine, University of Hawai'i Sea Grant College Program

Until a disaster strikes, most coastal managers do not realize the enormous post-disaster roles and burdens placed on them and the speed with which they are expected to facilitate a sound recovery. Permitting agencies will face intense scrutiny following an extreme event, and communities will expect immediate direction about the rebuilding process. Through pre-disaster planning, communities can prepare to integrate hazard mitigation and adaptation strategies into the rebuilding effort, the permit process can be streamlined, and environmental impacts to the sensitive coastal zone can be mitigated.

Speakers will provide an overview of coastal management challenges that are already prevalent in Hawai'i. Selected cases will demonstrate the impacts of coastal hazards — and the difficult decisions coastal managers already face on a smaller scale — as a window into the impacts from a larger scale disaster. This will be followed by presentations about unique recovery planning efforts undertaken in Hawai'i.

The first is a project by Maui County to develop post-disaster rebuilding guidelines and protocols. Products of the process include community-based guidelines based on 10 levels of damage to homes, condos, and businesses. Meant to build back safer, stronger, smarter and faster, these guidelines include public messages to be available on the first day following a disaster. This place-based data collection process was achieved using a decision-matrix “gameboard” that can be shared and used in other communities.

Secondly, the session will report on the results of the Waikiki Pre-Disaster Recovery Planning Project, a project conducted through a partnership between the National Disaster Preparedness Training Center and the Waikiki Business Improvement District Association to identify recommendations for pre-disaster recovery planning for this important district. This session will describe the efforts to identify planning recommendations and share the processes and lessons learned from this project to inform other efforts in Hawai'i and other tourist destinations. Topics such as the authorization to plan, recovery organizational structure, and best practices for increasing the safety, security, and sustainability of visitor destinations will be covered. Representatives from the project team and recovery stakeholders will share their perspectives.

Lastly, the session will include a presentation on a NOAA-funded project by the University of Hawai'i Sea Grant College Program to expand on the outcomes from the Maui County and Waikiki projects to develop post-disaster rebuilding guidelines statewide to streamline recovery and improve resilience to future disasters.

12:00PM – 1:30PM • ROOM 313

Awards Luncheon

Keynote Speaker: Raymond Renfro

Food Security for Hawai'i and Beyond

This talk will cover issues relating to Hawai'i's remote location with recommended actions to provide for food safety, increased food self-sufficiency, improved food availability and access with improved nutrition, workforce training, research and extension services, increased private sector activities, and governmental policy and organizational support. Important factors towards the successful implementation of a comprehensive food security plan and strategy will be building partnerships with the increasing number of organizations involved in food self-sufficiency and food security.



1:30PM – 3:00PM

Concurrent Sessions

Academic Presentations – Climate Change and Environment • ROOM 306A

Ngo Chinh, Asian Management and Development Institute — Development of Sustainable Rice-Shrimp Farming in Coastal Communities in the Mekong River Delta

Mike Douglass and Marcel Bandur, National University of Singapore — Environmental Disasters, Planetary Urbanization and Population Mobility

Chandra Hada — Building Back Greener for Sustainable Reconstruction in Nepal

Yekang Ko, University of Oregon — Landscape Planning Framework for Disaster Management

Xia Liping, Tongji University in Shanghai — Climate Change, China and the Sustainable Reconstruction in Nepal

Michelle Miller, National University of Singapore — Navigating Futurity through Disaster Dislocation

Connie Ozawa, Portland State University — Tsunami Preparedness Planning on the Oregon Coast

Yih-Chi Tan, National Taiwan University — Cooperation between local government and universities to promote community resilience in Taiwan

Robert Wasson, National University of Singapore — Disaster Risk Reduction, Modern Science and Local Knowledge: Perspectives from Timor Leste

Environmental Health and Security • ROOM 304AB

Speaker: Gerald Heuett, USDOJ/ICITAP Country Director for Indonesia Program; Jason Krause, Louisiana State University (LSU); Richard Miller, New Mexico Tech; Van Romero, New Mexico Tech

Exploring the Role of the Security Sector in Global Health

This session will cover two broad topics. The first is the role of security in global health and the second is how to counter illegal, unregulated, and unreported fishing activities. In discussing global health and its role in security, the session will explore the role of law enforcement and other security services during naturally occurring outbreaks and the critical need for the security sector to work with the health sector in recognizing and interdicting on potential intentional biological incidents. The U.S. is currently a leading participant in the Global Health Security Agenda (GHSA), but practical experience has shown a critical disconnect between the health and security sectors. The NCBRT's initial Ebola Virus Disease (EVD) work will provide an example of how law enforcement sustained operations during the EVD outbreak. The discussion will also explore issues related to health security in the Pacific Islands, including the immediate concern of regions that have emerging diseases, especially those that could potentially be exploited by terrorists to conduct clandestine production, storage and/or transport of pathogens.

The second part of the session will discuss the problem of Illegal, Unregulated, and Unreported (IUU) fishing activities worldwide and the adverse impact to the marine environment, fish stocks, food security and nutrition sufficiency, and global economic costs. The research initiative between the Indonesian Government, U.S. Department of Justice, NOAA, and New Mexico Tech will highlight how to utilize satellite technology for the detection of illegal fishing vessels and effective deployment of enforcement assets to combat IUU fishing.

Lessons and Innovations in Climate Change Adaption • ROOM 307AB

Speaker: Danielle Spirandelli, Sea Grant College, University of Hawai'i

As coastal towns and communities move forward in their efforts to address climate change, there are a number of challenges. These challenges include incorporating climate science into adaptation plans, engaging communities in a meaningful way, and identifying appropriate adaptation strategies. This panel convenes practitioners and researchers to discuss best practices, innovations and successes in climate adaptation. Four speakers will present with the following tentative presentation titles:

Ko, Y., University of Oregon, Department of Landscape Architecture — Landscape Assessment and Planning Framework for Disaster Management

Francis, O., University of Hawai'i, College of Engineering — Success of adaptation measures in coastal communities

Pap, R., County of Kauai and Sea Grant College — Where do we go from Here? Lesson's Learned from Kauai's General Plan Update

Bettinger, K., USAID Adapt-Asia — Community Vulnerability Assessments for Disaster Risk Reduction & Climate Change Adaptation: Lessons Learned from USAID's Adapt Asia-Pacific Program

The Role of Conservation Districts Before and After a Disaster: Case Studies from Washington State • ROOM 306B

Speaker: Bill Eller, Washington State Conservation Commission

Conservation Districts (CDs) are divisions of local government primarily responsible for conservation of natural resources on private lands. During and after a disaster, CDs can play an important role in coordinating governmental entities as they respond to private landowner needs. CDs in Washington State have fulfilled that role during a variety of disasters, from man-made (TaylorBridge Fire 2012) to natural (Lewis County Floods 2007, Howard Hansen Dam 2009–2010, Wenatchee Area Fires 2012, Douglas County Fire 2012, Oso Landslide 2014, Carlton Complex Fire in July–September 2014). Focusing on the needs of local private landowners during and after a disaster is an area of public service best met by CDs in their own local area affected by the disaster. Participants will improve their understanding of the use of CDs as a division of local government; their mission, vision, and role in their local community; the unique relationship that CDs have with local landowners and how that relationship matters during and after a disaster; and how a CD can assist with response and recovery efforts and provide services to their local communities.

3:00PM – 3:30PM

Break – Pā Kaloka Courtyard



3:30PM – 5:00PM

Concurrent Sessions – Open To The Public

A Collaborative Discussion on the How and What of UAV Usage for Disaster Preparedness, Response, Recovery and Resilience • ROOM 307AB

Speakers: Ted Ralston, Applied Research Laboratory, University of Hawai'i; Eric Yamashita, National Disaster Preparedness Training Center

In this day and age of higher costs and increasing disasters, but growing opportunities to collaborate, this session will bring together individuals, groups and organizations involved in the use of UAVs for disaster preparedness, response and recovery to identify improved and cost effective ways to partner and collaborate to identify best practices on technology (i.e., UAV types, sensors, and equipment), methods, approaches and requirements to conduct disaster operations. This session will begin by creating a compilation and discussion of information on how UAVs are being used in the HADR arena, which will include equipment type, methods, approaches, what works (best practices) and what does not, as well as establishing a knowledge base of what type of people we need at the table for disaster operations, damage assessments, and search and rescue. The outcome is a white paper on a set of recommendations, requirements, and best practices, and an action plan on how to proceed collaboratively such that this industry becomes a more sustainable means to assist communities to be more resilient to disasters.

Academic Presentations – Infrastructure and Preparedness • ROOM 306A

Elise Budd, University of Hawai'i — Sensitivity Analysis of Sea Level Rise Induced Groundwater Infiltration on O'ahu

Gary Chock, The ASCE 7-16 Tsunami Loads and Effects Chapter

Melia Iwamoto, University of Hawai'i — Landslide Warning System for Two Soil Slopes on O'ahu

Gao Lan, Fudan University — China's Nuclear Doctrine: National Security and Humanitarianism

Xi Song, University of Hawai'i — Calculating Wind Loads for Solar Collector Mounting Systems

Renee Walmsley, University of Hawai'i — Unmanned Aerial Systems for Coastal Mapping and Change Detection

Haizhong Wang, Oregon State University — Infrastructure Network Robustness: The Effects of Lifeline Networks on the Structural Behavior of Connected Networks

Hazard Insurance: What Is It and How Does It Work • ROOM 313

Experts from Hawai'i-based insurance providers First Insurance Company of Hawaii and Island Insurance will cover the basics of how hazard policies work, what is covered, and how risk is managed in the midst of a changing climate. Panelists will provide important information about the FEMA National Flood Insurance Program (NFIP), explore the potential damages caused by various types of disasters including hurricanes, tsunami, and sea level rise, and discuss strategies for minimizing risk.

Improving Resilience to Coastal Hazards and Climate Change through the Hawai'i Climate Adaptation Initiative and Related Projects • ROOM 304AB

Speakers: Kitty Courtney, Tetra Tech, Inc.; Chip Fletcher, University of Hawai'i School of Ocean and Earth Science and Technology; Sam Lemmo, Hawai'i Department of Land and Natural Resources, Office of Conservation and Coastal Lands; Brad Romine, University of Hawai'i Sea Grant College Program, Hawai'i Department of Land and Natural Resources, Office of Conservation and Coastal Lands

In 2014, the Hawai'i State government declared that "climate change is the paramount challenge of this century" with the adoption of the Hawai'i Climate Adaptation Initiative. As directed by the Initiative, the State is nearing completion of a Hawai'i Sea Level Rise Vulnerability and Adaptation Report (due December, 2017) with guidance from an Interagency Climate Adaptation Committee. This session will provide a series of presentations updating attendees on the progress of the Report and related projects, including modeling projected coastal hazard exposure with sea level hazard, assessment of vulnerabilities to sea level rise hazards, improving resilience through pre-disaster recovering planning, development of recommendations and guidance for improved resilience, and dissemination of data and results. This panel session provides a progress update following a session at the 2016 PRiMO Conference and will include time for a Q&A and discussion among the panel and audience.

Preparing the Pacific for the Impacts of a Changing Climate: Some Considerations When Preparing for 2100 • ROOM 306B

Speakers: Michael Bilney, CARDNO; Maxine Burkett, University of Hawai'i; David Helweg, Department of the Interior; James Orbock, U.S. Army

The International Panel on Climate Change is a group of scientists who have provided a consensus on what we might expect over the next few decades as the planet warms. While the range and timing of impacts are extensive, there are fundamental issues that will have to be addressed or considered with expected changes in sea level, ocean productivity, demographic shift, population distribution, weather pattern shifts, resource availability and the like. This panel of experts will be provided a discrete climate scenario for the year 2100 and asked from their perspectives to highlight some of the most critical challenges they see coming. They will look at physical changes, like sea level rise, and provide perspectives in areas ranging from infrastructure to migration and national security, which will potentially arise from environmental changes. The group will collectively offer the audience insight on what we, mankind, need to put in place today to help ease the potential impacts and spur the interdisciplinary dialogue necessary for planning over the next several decades.



Poster Sessions • ROOM 308AB

Dashti Abdulkarim — The Effects of Dust on Aviation in the Middle East

Ranjeeta Acharya — Vulnerability Assessment of Kemijen, Semarang Indonesia

Chai Blair-Stahn — The Interrelationship Between Environmental Stewardship, Island Sustainability, and Traditional Knowledge of Hula (Hawaiian dance)

Michele Chu — Sensitivity Analysis of Sea-level Rise Induced Groundwater Infiltration in Coastal Sewer Pipes

Bob Freitag — Planning Through Story Telling: a Sea Level Rise Case Study

Jiwnath Ghmire — Integrating GIS and ComMIT to Identify Social and Structural Vulnerabilities to Tsunami in South Central Coast of Vietnam

LeeAnna Kobayashi — Web-Based Training for Resilience: Opportunities and Challenges

Mark Manuel — Monitoring Marine Debris to Reduce Risk to Communities

Luciano Minerbi — Coastal Resilience for Department of Hawaiian Homelands Communities

Tsung-Yi Pan — Evaluating the Impacts of Urban Heat Island Effects on Flood Risk

Shintaro Taniguchi — Integrating UAV, ADCP, GIS and Spatial Data Analyses of Coastal Hazards

Meng-Han Tsai — Real-Time Searcher for Historical Typhoon Events

Nick Turner — UAV's for Hazard Assessment: From Volcanoes to Coastal Issues

Anna Verrill — MarineCadastre.gov: Supporting Regional Ocean Planning with Data and Technical Support

Guohui Zhang — Critical Path Identification for Traffic Infrastructure Resilience Enhancement Impacted by Natural Hazards

Wang Zhe — An HTN Planning Approach for Developing Incident Action Plans in Emergency Logistics Distribution

5:00PM – 7:00PM • ROOM 313

Hawai'i Prepares 2017

Building on the success of last year's free, public "community night" event, this year's PRIMO conference will once again feature a special night of exhibits and information designed to provide the general public with important resources for building disaster awareness and improving resiliency. "Hawai'i Prepares 2017" will be featuring displays, demonstrations, guest speakers and prize giveaways.

Schedule of Events:

3:30 PM — Free PRIMO Sessions/Exhibit Hall Opens

5:30 PM — Welcome by The Honorable David Ige, Governor of Hawai'i

5:45 PM — Mel Kaku, City & County of Honolulu — Department of Emergency Management

6:15 PM — Cooking Demonstration by Executive Chef Kevin Nakata, Hawai'i Convention Center

6:45 PM — Ulu Cooking Demonstration

THURSDAY, MARCH 23

8:00AM – 9:00AM • ROOM 313

Registration and Continental Breakfast

9:00AM – 10:00AM • ROOM 313

Plenary

Keynote Speaker: The Honorable Eddie Calvo, Governor of Guam

10:00AM – 10:30AM

Break

10:30AM – 11:15AM • ROOM 313

Climate Migration Case Studies

11:15AM – 12:00PM • ROOM 313

Technical Issues Around Climate Migration

12:00PM – 12:15PM • ROOM 313

Closing Protocol

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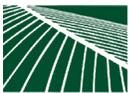
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