

Workshop Report

Learning Exchange on Watershed Management between Hawaii and Palau 2011



Mark White, Maui Nui Program Director, led TNC staff, the Palau delegation and partners from Haleakalā National Park, on an informational hike into the Waikamoi Preserve. © The Nature Conservancy

**The Nature Conservancy
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Background

The purpose of this learning exchange was to increase the awareness of and communication between resource managers and community leaders from Hawai'i and Palau on issues regarding watershed management. Palau's natural resources and coastal marine areas have been increasingly faced with the threat of land-based sedimentation caused by growing development and urbanization. Few regions in Micronesia offer examples of these watershed issues and therefore Hawaii provided an excellent opportunity to share their experiences and lessons learned that can be used by Palauan community and policy makers in management planning and policymaking.

The first part of the Palau-Hawai'i Exchange took place in the main Hawaiian Islands from June 15-23, 2011. This week-long session of the Learning Exchange was developed for Resource Managers from Hawaii and Palau to discuss common watershed problems and relate lessons learned in each location for management strategies, while also fostering open communication and relationships. The second part will take place in Palau early 2012.

The Exchange is part of the larger NOAA Coral Reef Conservation Program partnership with TNC, and is the first of two that will be hosted regionally each year until 2013. The topics of each Learning Exchange will vary, according to the needs and specific objectives of each jurisdiction or geography.

The Conservancy facilitated the exchange, which included hosting a delegation of Palauan fishermen, community leaders, and decision-makers to Hawaii. The group included Noah Idechong (Speaker House of Delegates), Allen Kangichi (State Legislator from Ngarchelong State), Blas A. Lawrence (State Legislator from Ngeremlengui State), Elbuchel Sadang (Executive Director for the Palau Conservation Society), Katshushi Skang (Traditional Chief from Ngarchelong State), Maireng Malsol (State employee of Ngeremlengui State and community leader), Steven Victor (The Nature Conservancy Palau), and Swenny Ongidobel, (House of Delegates).

Objectives of the Workshop

This first meeting of the Learning Exchange was designed to showcase how:

- 1) Rapid unplanned development has led to the degradation of terrestrial and marine ecosystems;
- 2) Hawaii's land use system was developed and implemented to protect natural resources;
- 3) Watershed managers are working to improve ecosystem health and rehabilitate ecosystem function; and
- 4) Local communities are reviving traditional Hawaiian fisheries management approaches.

Expected Results of the Workshop

Participants were expected to leave the workshop with a clear understanding of the threats facing Hawaiian marine resources due to various problems within the management of uphill watersheds, and the solutions set forth by Hawaiian governments and communities in response to these issues. Palauan delegates were expected to return home with an understanding of successful strategies for implementing watershed management at various

levels, both directly and with preventative policy measures. It was expected that participants from each region begin forming a relationship of open-air discussion for the next portion of the Learning Exchange, which is to occur in Palau in 2012.

Methodology

The Learning Exchange agenda was designed to promote an open conversation of lessons learned and effective management strategies used in Hawaii that Palauans could utilize within their own country.

Day 1 started with an introductory meeting with the TNC Hawai'i staff and the delegation from Palau at the TNC office to discuss the purpose and goals of the learning exchange. Gerry Davis from NOAA gave an overview of Hawaii's steep watersheds and the results of precipitation with channelized streams and roads in both Hawai'i and Palau. After his talk, the group went on a boat cruise in Maunalua Bay to show them the highly developed hillsides and valleys and how these "plumbed" valleys all drained into the bay.

Day 2 was in Kona on the Island of Hawai'i, with snorkeling in Kalaemanō in Ka'ūpūlehu. In the afternoon, there was a dialogue and exchange of information between the Palau delegation and the Ka'ūpūlehu members, which included a discussion about resort developers and the Ka'ūpūlehu community working together. The Palauan delegation visited a watershed that was being restored through an ARRA (American Recovery and Reinvestment Act) project. They saw firsthand the devastating effects of poor land management and feral ungulates on a landscape.

On the third day was again in O'ahu, and the delegation was taken to see the wetland restoration project in He'eia in Kāne'ohe Bay. Kanekoa Kukea-Shultz showed them the lo'i where taro is grown and the paddies serve as a sediment catchment area that helps mitigate land-based pollution into Kāne'ohe Bay. The Palauans were very interested in salt tolerant species of taro as they are facing saltwater intrusion in their taro gardens in Palau. A very rich exchange occurred between the kupuna of He'eia and the Palau delegation. In the afternoon, delegates were taken snorkeling in Kāne'ohe Bay and later dinner included the attendance of 50 influential community members and decision makers, including William Aila, Chair of the DLNR.

By Day 4, before leaving for Maui, a last watershed tour was taken in Kalihi Valley to look at the streams in this forest preserve, which has many immigrant groups caring for the valley, including Micronesians. Noah and Blas took a helicopter tour over Molokai's watersheds to see the damage caused by goats. This was very powerful as there has been talk in Palau about introducing goats. They filmed this flight and are making a video to show on public TV back in Palau.

Day 5, the group went on a hike into TNC's Waikamoi Preserve, followed by a drive to the summit of Haleakalā. Mark White of TNC and Steven Anderson of the National Park Service led the hike. Mark discussed the many threats to the watershed and the vital importance of partnerships with various landowners when working at the watershed level to preserve the ecosystem functions (i.e. water storage and filtration) for the rest of Maui. The Palauan delegates had dinner with fishers and other community members from Maui. The dinner also included a presentation by Noah Idechong, speaker of Palau House of Delegates, at the University of Hawai'i Maui College, which was well by over 100 people. Noah shared the

story of Palau's unique environment, their marine conservation successes and challenges, and a success story of meaningful engagement between the government and the local village chiefs and fishermen.

On day 6, the group met with the County Planning Department and the Mayor of Maui, who shared their policies, best practices and the history and transition of agricultural lands to various uses today. The Mayor emphasized the importance of retaining ecosystems services such as wetlands for flood control and sediment retention. Palau does not currently have a department of planning, so it was helpful to see the role of various decision makers in watershed management and some of the strengths and weaknesses of Hawaii's government structure. Wesley Nohara of the West Maui Soil and Water Conservation District then led the group on a tour of Maui Land and Pineapple Company's fallow pineapple fields and discussed agricultural soil retention practices. The fieldtrip showed some of the problems related to large-scale farming, soil disruption and the effects on coral reefs. The group was then taken on a tour of the Kahekili Herbivore Fisheries Management Area and briefed on its history by Division of Aquatic Resources staff. Finally, Lindsey 'Ohana and partners from the Maui Nui Marine Resources Council led the group on a tour of the cultural and native plant restoration site in Honokowai Valley.

On Day 7, the Palau delegation met to discuss capacity building programs and met with Palauan students studying in Hawai'i.

Results, Conclusions, Recommendations and Lessons Learned

- Excellent advice was provided by Hawaiian government officials, including Maui's mayor regarding the island's loss of wetlands and the resulting disastrous flooding: "If you have the opportunity, do *not* build on the wetland areas. The natural filtration that the wetlands provide in keeping the silt and debris out of the ocean is a tremendous asset for a community. If you abuse that, as we have done, you end up with emergency situations where you flood the houses that have been built where they shouldn't have been built..."
- Throughout the Maui visit, Hawaiian and Palauan cultural exchange enriched the experience for all participants. The exchange also provided an opportunity to bring together and connect Maui partners who would benefit by working together.
- The Hawaiian participants were particularly inspired by the integration of traditional and modern governance in Palau, knowing that a system that honors the contributions of both would be appropriate for Hawai'i as well.
- Palau's Protected Area Network was of particular interest to the Hawaii Maui partners and will be the topic of much discussion and collaboration in the second half of the Learning Exchange, in which Hawaiian delegates will travel to Palau to learn about their best practices.
- The Palau delegation was keenly interested in how resort developers worked with the community in Ka'ūpūlehu to ensure that the cultural and biological importance of this coastline were continued and protected for current and future use. The Palauans were very impressed and took this example home with them for sharing with their communities back home.

- The Palau delegation was especially keen to learn about how the He'eia community halted development pressures in the area in the 1970s, as unsustainable development is becoming a prime threat to the environment in Palau.
- Palauan delegates shared that they will implement and adopt many strategies upon return to Palau in some areas. One example includes sediment mitigation measures taken to protect the reef from run-off, after the delegation traveled to Pelekane to view an active watershed restoration project and their technologies for reducing sedimentation.
- Palau took home key lessons in managing invasive species, including lessons that it is much easier to stop introduction than having to eradicate and control an established invasive species, watershed restoration by community groups, managing water for future generations, small site improvement, and importance of protecting wetlands for floodwater control.

Follow-up Action Plan

- Second portion of exchange to be held in Palau—regarding MPA design and management?
- Follow-up with Palau delegates on measures taken to implement controls on various watershed management systems
- Follow up on future correspondences between Palauan delegates and Hawaiian participants

Key Lessons Learned from Palauan Delegates

1. Learned from the partnership between developers and the KMLAC with their efforts to integrate Hawaiian practices and management of marine resources in their development efforts. This is a particular problem in Palau, as conservation and development have been working in opposition.
2. Found it interesting that watershed restoration efforts are being taken on by a community group. They are using very low-tech methods for controlling soil erosion and revegetation, which are also applicable to Palau where there are areas which are not yet vegetated.
3. Learned key lessons about managing invasive species, in that it is much easier to stop the introduction of an invasive species than to eradicate and control an already established invasive species.
4. Palauan delegates were introduced to many site improvement technologies, including the establishment of a simple boardwalk that can support eco-tourism but minimize human impacts to protected areas.
5. Delegates saw first-hand the reasons for managing water sheds for future developments, including the importance of maintaining forest lands to help filter water and reduce evaporation. The delegation saw examples of ranchers working with conservation practitioners to ensure that there is enough water to recharge groundwater to support not only their cattle but for entire community.
6. The delegation learned about the importance of protecting wetlands for floodwater control. The mayor of Maui emphasized the need to ensure that wetlands remain a functional ecosystem because of its importance in maintaining flood control, and

emphasized that it is more economical to have a wetland control floods than for the government to implement engineered flooding control mechanisms.

7. Of utmost important to the Palau delegates, they were interested in the Hawaiian thrive to re-establish lost cultural traditions and practices that was seen in Kona, Oahu, was also demonstrated in every visits in Maui. The Palau participants noted their appreciation of their continued cultural and traditional practices in Palau. The respect for Chief Rteruich Katsushhi Skang, who participated in the exchange and provided some of the traditional knowledge and practices in the exchange, was enhanced within the Palauan participant group even more.

Testimonials

- The Exchange provided key opportunities to have valuable conversations with community leaders about resource management, partnerships, policy and traditional knowledge.
- By making personal and professional connections with the Palau contingent, our Maui partners were empowered both by sharing their stories gains and losses, and by learning some of the ways Palau has engaged in coral reef conservation at the local level.
- Our Maui community partners are very excited about the opportunity to travel to Palau and experience the people, their culture, and the place first hand. They see the benefits in learning about the tools and models applied as well by realizing they are not alone in the challenges we face to conserve coral reefs throughout the Pacific and the world.
- The Palau participants realized that we don't get to appreciate what have until it is lost. This gave a sense of renewed commitment from the participants to try and work harder to protect the cultural and traditional practices and wisdoms that are still being practiced in Palau.

Annexes

Annex A – Agenda

Annex B – List of Participant

Annex A: Agenda

Wednesday

6/15 555P Arrive in Honolulu
O'ahu - Honolulu 700P Check in to Pagoda

Thursday 6/16

O'ahu - Honolulu 1215P Elbuchel to Blaisdell for National Ocean Policy
1230P listening session
100P Delegates to TNC office
130P Lunch at TNC office
130P Intro meeting - discuss purpose and goals
230P Meetings with Honolulu officials
500P Sunset dinner cruise

Friday 6/17

Hawai'i - 600A Delegates to airport
Ka'ūpūlehu 731A Flight to Kona
900A Kalaemano - Welcome and snorkel
1100A Coastal hike
1230P Lunch and information exchange
200P Vans to Pelekane
245P Pelekane Watershed restoration project
500P Dinner at Kalaemano
545P Presentation
833P Flight to O'ahu

Saturday 6/18

O'ahu - Kāne'ōhe 830A Delegates to He'eia
900A He'eia wetlands
1130A Lunch
1230P He'eia fishpond
145P Snorkel Kāne'ōhe Bay - Depart from He'eia Pier
430P Pagoda - Shower and change for dinner
600P Cocktails at Thompson's home
630P Presentation - Noah Idechong
700P Dinner

Sunday 6/19

O'ahu - 815A Delegates to Maunalua - check out of hotel
Maunalua 900A Paikō
1100A Stream field trip and lunch
200P Depart for airport
325P Flight to Maui
600P Dinner and debrief

Monday 6/20	700A	Depart hotel
Maui - Waikamoi	730A	Breakfast
	900A	Waikamoi Preserve hike
	1230P	Haleakala Summit
	200P	Depart for hotel
	330P	Shower and change
	430P	Depart hotel
	500P	Dinner
	700P	Noah presentation in MPR
Tuesday 6/21	700A	Breakfast at hotel
Maui - Lahaina	800A	Depart hotel
	830A	County Planning Department meetings
	1015A	Depart for Honokowai
	1045A	West Maui Mountains
	1200P	Lunch
	1230P	Depart for Lindsey home for snorkel
	300P	Debrief and Palau problem-solving discussion
	530P	Talk story about Maui/Palau community projects
	600P	Dinner
Wednesday		
6/22	700A	Depart for airport - check out of hotel
O'ahu - Honolulu	839A	Flight to Honolulu
	1030A	Wrap up meetings at TNC office
	1200P	Lunch
	100P	Meetings with NOAA - Fellowship Program
	300P	Meetings with Palau students (?)
	500P	Depart for hotel
Thursday 6/23	1200P	Depart for airport - check out of hotel
	215P	Flight

Annex B: List of Participants

- Noah Idechong, Palau House of Delegates
- Allen Kangichi, Ngarchelong State Legislature
- Blas A. Lawrence, Ngeremlengui State Legislature
- Elbuchel Sadang, Palau Conservation Society
- Katshushi Skang, Traditional Chief from Ngarchelong State
- Maireng Malsol, Ngermelngui State and community leader
- Steven Victor, The Nature Conservancy
- Swenny Ongidobel, Palau House of Delegates

- Need list of Hawaiian participants

Found within LX report:

- Gerry Davis, NOAA
- William Aila, Hawaii DLNR
- Mark White, The Nature Conservancy
- Steven Anderson, National Park Service
- Alan Arakawa, Mayor of Maui
- Wesley Nohara, West Maui Soil and Water Conservation District

List of contacts found in Agenda for LX:

- Caitlyn Toropova, The Nature Conservancy
- Manuel Mejia, The Nature Conservancy
- Sean Marrs, The Nature Conservancy
- Jan Eber, The Nature Conservancy
- Chad Wiggins, The Nature Conservancy
- Kanekoa Kukea-Shultz, The Nature Conservancy
- Emily Fielding, The Nature Conservancy
- Roxie Sylva, The Nature Conservancy
- Mark Fox, The Nature Conservancy