

Man, Land, & Sea

A publication by Guam Coastal Management Program

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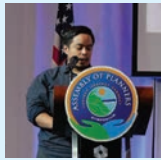
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*Protecting Guam
from Ridge to Reef*



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*Highlights
from the 9th
Assembly of
Planners
Symposium*



9TH ASSEMBLY OF PLANNERS OVERVIEW



The 9th Assembly of Planners Symposium, hosted by the Bureau of Statistics and Plans, Guam Coastal Management Program was held on August 8, 2024, at the Hyatt Regency Guam Resort. The symposium was attended by over 200 participants and planners from network GovGuam agencies, private sector organizations, and federal agency partners.



Governor Lou Leon Guerrero delivers opening remarks for the 9th Assembly of Planners Symposium.

The purpose of the Assembly of Planners Symposium is to address meaningful land and natural coastal resource issues or problems that could be resolved through the collective focus of Guam's planning, resource, and policy communities through a forum that:

- Works to improve management systems and advance effective policy;
- Discusses issues through the use of science, data,

and research that serves as the foundation for decisions;

- Provides professionals with the opportunity for face-to-face discussion and sharing of information that is useful in identifying solutions, improving services, and avoiding or mitigating the adverse effects of poor planning, development, and natural hazards;
- Works to optimize and coordinate comprehensive planning.

The theme of the symposium was: "Forging Guam's Sustainable Future: Collaborative Planning for Resilient Communities."

Topics and sessions included:

Land Use Planning Session: Exploring strategies for a practical approach for updating Guam's Comprehensive Land Use Plan and ensuring its harmonization with the Guåhan 2050 Sustainability Plan.

The session provided a brief overview of the importance of land use planning and its role in serving as a key pillar of the Guåhan 2050 Sustainability Plan including:

- The benefits of effective land use planning for Guam (e.g., infrastructure efficiency, environmental protection, economic growth).
- Challenges faced in implementing land use plans, particularly in balancing priorities.
- Reduction in costs associated with compliance and public support.
- Government strategies to translate the sustainability goals of Guåhan 2050 into land



use regulations and development guidelines.

- Private Sector: Practical considerations for developers in aligning projects with sustainability principles within the land use framework.
- Community: Ensuring public participation and addressing community concerns regarding development within the plan.

Affordable Housing Strategies Session:

Identified challenges and opportunities for affordable housing projects on Guam, including innovative construction methods, financial strategies, and regulatory considerations.

This session explored the challenges and opportunities for affordable housing on Guam, including innovative construction methods and financial strategies. Heard from experts on the demand for housing to meet the needs of prospective homebuyers and renters on the island. Participants were presented with issues that affect the housing industry as well as strategies to address affordable housing.

Marine Planning Session:

- Discussed marine projects, aquaculture, and fishing regulations to ensure the sustainable use of marine resources.
- This session also covered various projects and planning activities related to marine planning. Topics included marine aquaculture opportunities, site suitability findings for cable landings on Guam, and an overview of various marine data captured throughout Guam's waters. This session also featured DOAG's plans to update Guam's Fishing regulations.

Public Access Enhancement Session:

- Addressed the importance of protecting and providing public access to Guam's natural resources, guided by current statutes and future agency plans.
- This session provided information about protecting, enhancing, and providing public access. It has been understood and recognized by the people of Guam that the ability to access the island's natural resources is a fundamental right. For many years, the ability to gain access to the island's resources has served both the ability for its citizens to enjoy and utilize the island's beautiful landscape and lush natural environments. In addition, the Legislature of Guam has concurred over the years through adopted statutes that protecting and providing public access is paramount to guaranteeing the public the ability to access the ocean shore and public lands for hiking, hunting, and any other recreational purpose.



Edwin Reyes, Administrator, Guam Coastal Management Program delivers remarks for the Land Use Planning Session.

Enhancing Guam's Resilience: Public-Private Partnerships in GIS Data Integration Session:

- Discussed how Geographic Information System (GIS) data can be utilized to promote sustainable development, inform risk assessments, enhance disaster preparedness, and foster economic resilience in Guam.
- By aligning GIS data with the needs of the economic and residential sectors, stakeholders can develop targeted strategies to mitigate vulnerabilities, improve response capabilities, and promote sustainable development.

Presentation: Guam Zero Waste Working Group Updates. Charting a Sustainable Maritime Future: The Port Authority of Guam's Zero Emissions and Zero Waste Strategies.

- Aligned with Executive Order No. 2019-19 which created the Climate Change Resiliency Commission (CCRC) and Executive Order 2019 - 28 which created the Zero Waste Working Group (ZWWG), and Governor Lou Leon Guerrero's vision for preserving Guam's natural resources, the Port Authority of Guam (PAG) is charting a sustainable course through the introduction of the "Charting a Course Towards Zero Emissions: Guam's Maritime Climate Strategy" and "PAG: Navigating Towards a Zero Waste Future" strategic initiatives. These efforts have been laid upon the groundwork set by the successful Zero Waste Guam Forum organized by the Leon Guerrero-Tenorio Administration and the Zero Waste Working Group (ZWWG), which bolstered the sustainable transformation of Guam's waste management systems.



Land Use Planning



Land Use Planning session panelists take a question from an audience member at the 9th Assembly of Planner's Symposium.

The session highlighted the critical importance of land use planning in ensuring Guam's sustainable future. The panel session began with a presentation from Renato Martinez, President of AIA Marianas, in which he highlighted guiding principles in AIA's Framework for Design Excellence, which architects incorporate into their practice, and presented how by adhering to these principles, we are able to play a vital role in creating, sustainable, resilient, and equitable communities for Guam.

Panelists discussed the challenges and opportunities facing the island and proposed solutions for a more sustainable approach to development. They highlighted the need for a comprehensive plan that addresses the island's unique challenges, including limited land resources, rapid development, and the preservation of natural ecosystems.

Matthew Santos, BSP Deputy Director, provided his perspective on the challenges in fully executing the Bureau's comprehensive planning mandate. "Practical is kind of a really difficult thing for Guam. Even trying to plan or set a baseline to where you are is extremely difficult," stated Santos, stressing the urgency of the Guahan 2050 Sustainability Plan and a land use plan for, "putting into perspective the limited amount of space that we have left to use." The panelists also identified challenges with outdated policies and regulations, exploring the opportunities for improving and streamlining regulatory processes.

Jeffrey Quitugua, Guam Department of Agriculture, Division of Aquatic Wildlife Resources, emphasized the need to update policies stating, "What makes

it very hard and difficult for regulatory agencies, as ourselves, at the Department of Agriculture, is that we're really making decisions based on policies that were developed 20 years ago, and that hasn't been updated, and it hasn't really addressed current ways and demands of development here on the island, and not just development, but other activities as well." Quitugua spoke about their efforts in updating the Endangered Species Act which is integral to their conservation efforts, alongside the development of conservation plans such as the Habitat Conservation Plan (HCP).

Referring to the HCP, Santos added, "It's actually a way to make permitting more efficient, in providing a mechanism for us to actually grow, at least maintain our endemic species populations and develop," further stating that, "the permitting agencies have been all working together to make sure that we have what the process is going to be. These things included concurrent review, leveraging unique assets that everybody would access, and having all those resources to make those decisions on permitting, whether it's, zoning regulations, real property, tax verifications, business licensing, having all that information and really kind of streamlining those things. "

Edwin Reyes, Guam Coastal Management Program Administrator, pointed out, "Planning is certainly a very multidimensional facet in terms of bridging the aspiration to the compliance side," as he shifted the discussions to engage the audience in the conversation.

One member of the audience shared his perspectives as a local farmer, suggesting that more support is needed to assist farmers and promote local agricultural producers. "I think that's a great point," remarked Reyes, "because what that does is it speaks to the points earlier about the need to diversify the economy and what better way to diversify the economy than in food securities."

Other topics that were discussed within the Q&A portion includes the revitalization of the aquaculture industry, the process of plan formulation, and how it works with the current zoning law.

Overall, the panel session discussions would serve to provide valuable insights to inform the necessary work ahead in terms of land use planning for Guam. The Bureau intends to use the information gathered from the discussion to be incorporated into the proceedings document that will result from the entire symposium.



Public Access Enhancement



James Pangelinan, Planner, Guam Coastal Management Program introduces the panel members for the Public Access Enhancement session at the 9th Assembly of Planners Symposium.

The second session discussed different endeavors from local and federal agencies to enhance public access on the island. From the opening remarks made by James Pangelinan, Planner for the Bureau of Statistics and Plans - Guam Coastal Management Program, “This session will address the importance of protecting and providing public access to Guam’s natural resources,

guided by current statutes and future agency plans.” It has been understood and recognized by the people of Guam that the ability to access the island’s natural resources is a fundamental right. For many years, the ability to gain access to the island’s resources has served both the ability for its citizens to enjoy and utilize the island’s beautiful landscape and lush natural environments.

The panel members from the public access session offered various insights into their initiatives to protect, provide, and enhance public access.

James Pangelinan began the panel by emphasizing the importance of including the historical context of public access on the island. As Guam’s society has changed since the mid-20th century, its needs have evolved in terms of amenities and infrastructure necessary within and around public access points to the shore. The Public Access Management Plan (Draft) which outlines the short-term, mid-term, and long-term goals for protecting and enhancing public access to the shore was created to help alleviate current and future issues and needs regarding public access to the ocean shore by leveraging local partnerships and resources together with potential federal funding.

Shayna Lopez, Public Access Plan Program Coordinator for Naval Facilities Marianas, discussed the Public Access Program which provides access capability to 35 culturally important and historical sites within military installations on Guam. In her beginning remarks, Shayna did a verbal poll to those in attendance to quickly find out if people were aware of the Public Access Program, to which a few hands were raised. “I’m gonna look to you to spread the word because at the end of the day, it’s the community members who will benefit from the program,” she quickly remarked. After Shayna discussed some of the historically important sites within the different military installations,

she provided the procedure on how the citizens of Guam can avail of these public access services, which was well received by attendees.

Megan Volsteadt, Biologist for the Department of Agriculture’s Division of Aquatic and Wildlife Resources, discussed the importance of partnering with private landowners for access agreements/covenants as it relates to her work on game management throughout the island. In her discussion, she highlighted her work within the Department of Agriculture’s Game Management Division to provide safe and public access for hunters on island in public hunting areas. “However, we don’t have public hunting areas or zones on Guam...And for a lot of new people (hunters), they don’t know what’s private land and what’s public [land]. And so we work to better provide that information to community members,” Megan asserted. Megan and her division are looking toward future plans to connect local hunters with private citizens and farmers to control invasive ungulates and deer on the island. All in all, Megan and her division’s future plans will help to create covenants from which the entire community can mutually benefit from.



The Public Access Enhancement session at the Assembly of Planners Symposium. Moderated by Joseph Borja, Director, Department of Land Management.

Celine Cruz, Chief Planner for the Department of Land Management, discussed beach access through tourist districts/hotels and public/beach access through private property stipulated in statute. In her discussion, she stated the importance of balancing private development with public beach rights. Celine stated, “Hotels and tourism are significant to Guam’s economy, but they must also provide public beach access”. To reinforce her remark, she highlighted important local statutes protecting beach access to the shore, i.e., “Public Access to the Ocean Shore Act”, and provisions within local law providing public access within different types of development, i.e., “Subdivision Law”, “Guam Territorial Seashore Protection Act”, etc.

Camille Quichocho, Biologist for the Bureau of Statistics and Plans - Guam Coastal Management Program, discussed the Seashore Reserve Plan, which is mandated under the “Guam Territorial Seashore Protection Act.” The Seashore Reserve Plan, when rendered and adopted, will be the legal and enforceable mechanism that will protect public access, minimize user conflicts, and work toward the long-term management of Guam’s marine and nearshore resources.



Housing Strategies for Residential Real Estate

The 9th Assembly of Planners Symposium united an exceptional team of professionals, inspiring a collaborative effort to explore the challenges and opportunities for housing in Guam. They delved into innovative construction methods and strategic solutions, addressing the pressing issues in the housing market and paving the way for a brighter future.



Deputy Director Fernando Esteves of the Guam Housing and Urban Renewal Authority delivered an eye-opening presentation titled “Not Affordable Housing,” where he shed light on the crucial distinction between affordable and attainable housing. He emphasized that affordable housing means spending 30% or less of one’s gross income on total housing costs, including utilities. In contrast, attainable housing is reasonably priced and unsubsidized, making it accessible to a broader range of people.

Mr. Esteves provided a thorough overview of Guam’s housing situation, emphasizing the urgent need for housing assistance due to increased demand and limited supply. This imbalance results in housing insecurity for many in Guam’s community. He pointed out that factors such as construction costs, limited housing inventory, population growth, and inflation driven by income source discrimination contribute to this issue. Mr. Esteves also expanded the discussion to address the challenges faced by middle-income groups in securing housing, noting that home construction costs range between \$250.00 to \$341.00 per square foot, and highlighting that housing attainment is a nationwide concern.

Through his presentation, Mr. Esteves called for a collective effort to address these housing challenges, and action towards a future where everyone has a place to call home.

Real estate expert, Siska Hutapea, President of Cornerstone Valuation presented statistics on residential real estate and provided solutions to Guam’s housing needs. In a span of nearly 10 years the median home price of a single-family residential house went from \$195,000 in 2014 to \$420,000 in 2024. With low-interest mortgage rates in 2021, the residential real estate sales total was \$449.9 million compared to \$186 million in 2014. Last year real estate activities slowed down after interest rate hikes and the median home price was

\$375,000. Based on a study by Demographia, a company that conducts real estate studies on housing affordability worldwide, the price of homes in Honolulu, Hawaii and San Jose, California were ranked as impossibly unaffordable. If a median home price is three times the household income, then the area is affordable; if it is three to four times higher, it’s seriously unaffordable, or severely unaffordable; and with rising home costs, they established the newest category that is impossibly unaffordable. According to Ms. Hutapea, a study showed that the average worker in Guam makes about \$41,600. With an income of \$41,600 a year at \$420,000 housing price, that makes Guam impossibly unaffordable.

Ms. Hutapea proposed several solutions to address this crisis. She emphasized the need to expand infrastructure, highlighting New Zealand’s high affordability index and the accessibility of housing there. She suggested a similar initiative for Guam, where a house lot is estimated at \$90,000. By purchasing and developing these lots, especially in areas like Inarajan and Talofofo, locals can build their homes. Enhancing infrastructure, including the addition of sewer lines and streamlining the permitting process, will further support this development.

Anne Dela Cruz, the visionary founder of Starsand Technologies, introduced an innovative solution to the housing industry: additive construction, specifically 3D concrete printing. She associated it with a small-scale home office printer, which typically prints plastics, metals, or resin for various small items. Now, imagine scaling up that concept to a printer designed to construct houses using concrete material. This groundbreaking technology enables faster project delivery, which is crucial for addressing urgent housing needs. It also offers significant savings on labor and materials, including a remarkable reduction in concrete costs, making housing more affordable.

Ms. Dela Cruz assured that this technology complies with Guam’s stringent building codes. The precise ratio of raw ingredients—cement, lime, and aggregate—is calibrated to meet the 3,000-psi requirement. This formula is programmed into the batch plant, which mixes the concrete accordingly. Equipped with sensors, the batch plant ensures the production of concrete that meets the specific demands of Guam’s building standards, delivering the right type of concrete on demand.

Roy Gamboa, Deputy Director of Department of Agriculture and the founder of GY671, is joining forces with Ms. Dela Cruz at Starsand Technologies to tackle homelessness among Guam’s veterans. This notable initiative to build tiny homes using 3D printing, not only provides shelter but also rekindles a sense of camaraderie and belonging, reminiscent of their days in the barracks. Beyond housing, this partnership aims to empower veterans by offering training in cutting-edge skills like 3D printing for construction, opening doors to new opportunities and brighter futures. Together, they are not just building homes, but also rebuilding lives and fostering hope through this pilot project.

The panelists engaged in insightful discussions about Guam’s housing situation, presenting valuable strategies and leveraging modern technology to create affordable and attainable housing solutions.



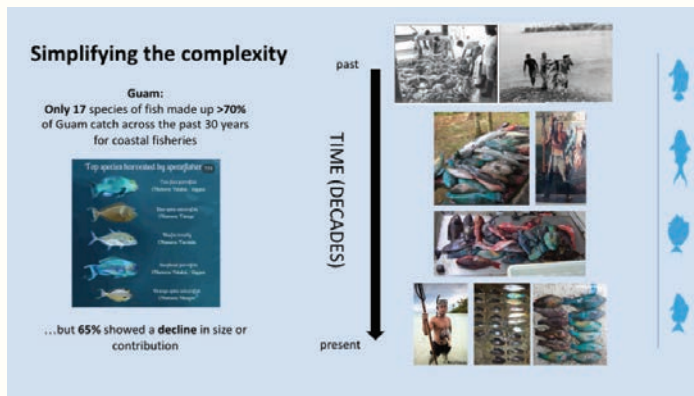
Marine Planning

The Marine Planning session featured speakers who emphasized the importance of collaboration. Those working in the marine or terrestrial environment know that our roles can differ vastly. Still, we are all working towards a common goal: protecting and conserving our natural, aquatic, and wildlife resources.

Our speakers were Dr. Brett Taylor from the University of Guam Marine Lab (UOGML), Brent Tibbatts from the Guam Department of Agriculture - Division of Aquatic and Wildlife Resources (DOAG-DAWR), and Olivia Bañez from the Guam Coral Reef Initiative (GCRI). From them, we heard about Guam's marine resources, fisheries, coral reefs, and the overall effect that humans have on these finite resources.

Dr. Taylor co-authored a population assessment of Guam's target coral reef fishes. The study aims to provide valuable insights for biologists, natural resource managers, and fishermen, among others, regarding the most effective fisheries management interventions in alignment with the Guam Fisheries Management Plan (FMP). Dr. Taylor sent us home with a message that "managing fisheries is managing people." Plans like the FMP are designed to benefit the community, ensuring that future generations can enjoy these resources.

The FMP development is led by the DOAG-DAWR. Brent Tibbatts, a biologist at DAWR, highlighted the diverse aquatic resources on Guam and the threats they face, many of which are caused by people, such as overfishing. The decreasing numbers of important food fish, fewer herbivores, and reduced population of top predators have prompted DAWR to devise a plan to tackle this issue. The FMP will



Dr. Brett Taylor, University of Guam, Marine Lab presents the population assessment of Guam's target coral reef fishes.

Olivia Bañez, Guam Coral Reef Initiative discusses the program's initiatives.

encompass fisheries management strategies and involve input from DAWR, UOGML, and the fishing community.

The FMP will have beneficial effects on more than Guam's fisheries. Balanced fish populations can significantly benefit the health of corals because herbivorous fish help control algae blooms, which often smother and stress out corals. Olivia Bañez from GCRI, shared about the importance of Guam's coral reefs, which provide seafood, protect the coast, contribute to tourism, and have cultural and recreational value. Guam's corals have been a victim of bleaching for years. Warming waters, sediment runoff, pollution, and extreme low tides are some of the major stressors that cause coral bleaching. Some of the ways that GCRI has taken action is by collaborating with other agencies and organizations to plan for bleaching events. During the bleaching season, they recommend limiting all other stressors, such as using reef-safe sunblock, anchoring boats away from the reef, and not touching or stepping on corals. We can also help reduce stress on corals by promoting projects that reduce erosion, such as planting trees, and planning marine projects around the bleaching season.

The overall message for the Marine Planning Session was that we, the community, are stewards of the environment. Planning matters, and each decision we make impacts our resources as they are all connected, from Ridge to Reef.



**Man, Land, and Sea
Newsletter
September 20, 2024**

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<https://bsp.guam.gov/guam-coastal-management-program/>

**Organizing
a Beach
Cleanup?
We can help!**

Contact the Guam Coastal Management Program and get connected with other volunteers and supplies.

Call 671-475-9647

or email

gcmp@bsp.guam.gov
for more information.

*limited supplies available per cleanup event.



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