



Improving Reef-Safe Marine Tourism on Guam: A Brief Strategy Document

Outcomes from the Tourism for Tasi Workshop series 2019



Introduction

Guam received a record number of tourists in 2019 with 1.67 million visitors, a ratio of 10 visitors to every one resident [Guam Visitors Bureau (GVB) 2020; US Census Bureau]. Over 30% of these visitors cite the marine environment as a top reason for visiting Guam (GVB 2018). Meanwhile, Guam lost 32% of living coral cover on the shallow seaward slopes between 2013 and 2017 (Burdick 2019). As tourism continues to grow, so will pressure on Guam's coral reefs. Effective and collaborative management is needed to reduce negative impacts from tourism and recreational use.

Guam's coral reefs support coastal infrastructure, recreational opportunities, subsistence and commercial fisheries, cultural heritage, and the local economy. Reef-related tourism on Guam's coral reefs is estimated to generate \$323 million annually to the local economy (Mapping Ocean Wealth Portal, The Nature Conservancy 2016). Unfortunately, Guam's coral reefs and the benefits they provide are under threat from global and local stressors such as climate change, overfishing, land-based sources of pollution, irresponsible land use practices, and tourism and recreational use.

Considering the benefits derived from coral reefs and marine tourism on Guam, the Bureau of Statistics and Plans hosted a series of six reef-safe marine tourism workshops throughout 2019. The initiative was branded 'Tourism for Tasi', a reference to the tourism sector's ability to act as a positive force in protecting Guam's ocean, or tasi in Chamorro. For purposes of the workshops, reef-safe marine tourism was defined as "marine tourism that includes actions or behaviors that minimize reef damage and protect the health of the reef."

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In May 2019, three workshops were convened over an eight-day period and included 127 participants representing 25 businesses, 11 government agencies, 9 community/nonprofit/academia groups, and 6 elected officials. Collectively, the workshops aimed to: 1) provide up to date information on the status and threats to Guam's coral reefs; 2) develop a shared vision for the future of reef-safe marine tourism; 3) identify the most common threats and key barriers to reef-safe tourism; and 4) develop priority strategies to foster reef-safe marine tourism on Guam.

The initial May workshops built a foundation for engaging the marine tourism industry from which to build on. In October 2019, an Eyes of the Reefs Marianas training workshop was hosted specifically for divers and marine tour operators wishing to learn more and deepen their understanding of coral reef impacts.

Language barriers are a common challenge for coral managers on Guam attempting to effectively educate a large subset of marine tour operators. Eighty nine percent of Guam’s visitors are from South Korea (47%) and Japan (42%), so many businesses are Korean or Japanese owned and operated. To increase participation and ensure input from these demographics, additional workshops were organized and hosted in these languages in November 2019.

Each of the workshops are described below.

Workshop 1: Stakeholders Forum – May 17, 2019 at the Guam Museum

The first workshop in the series brought together a diversity of voices across the private, public, and nonprofit sectors. There were 65 participants representing 11 government agencies, 15 businesses, 8 nonprofit organizations, and 6 elected officials. The goal of this first workshop was to ensure input from different perspectives while illuminating the competing interests and multitude of concerns requiring attention. Presentations described current threats to Guam’s reefs, a status update on the current condition of Guam’s reefs, information about various existing management initiatives, and an overview of rules and regulations relevant to the marine tourism industry. Time was also spent in small groups to discuss and identify the key barriers to reef-safe tourism from different stakeholder perspectives. The top barriers identified were 1) a lack of enforcement, 2) unlicensed vendors and lack of incentive for following reef-safe practices when others don’t, and 3) lack of effective communications about reef-safe behavior.

Workshop 2: Staff Education Workshop - May 22, 2019 at the Marianas Yacht Club

The second workshop was designed specifically for staff level workers such as boat captains, dive instructors, dive and snorkel guides, and office staff. This session was attended by 41 representatives from 14 businesses and 4 government agencies. The goal of this workshop was to educate staff about coral reef ecology, review impacts from marine tourism, and provide strategies for businesses to reduce their impact. This included a



presentation with case studies on reef-safe tourism from around the world. Marine tour operator staff were also engaged in discussions to identify 1) the most common threats observed from marine tourism activities, 2) opportunities for sharing information with guests to reduce threats, and 3) communications products and approaches they believe will be most effective for conveying key messages. Thirty-one participants signed a pledge committing to practice a variety of reef-safe practices such as offering reef-safe sunscreen to guests, displaying more reef-safe guidance on their website and in the shop, and establishing a no-contact policy for staff and guests. Attendees were provided with resources to help address recreational impacts such as a guidebook of best management practices for marine tour operators, a self-assessment checklist for managing impacts, and Green Fins briefing cards and posters to communicate reef-safe behavior in English, Japanese, Chinese, and Korean.

Workshop 3: Business Owners & Managers Workshop – May 23, 2019 at the Marianas Yacht Club

The third workshop was targeted towards business owners and managers. There were 21 attendees representing 12 businesses and 4 government agencies. The goal of this workshop was to develop strategies to support reef-safe tourism on Guam. To do this, case studies were shared to exemplify how other places around the region and the world address some of the key threats and barriers to reef-safe tourism identified in the prior workshops. Small groups then developed priority strategies that could help overcome these threats and barriers on Guam including short term, medium term, and long-term strategies. These included strategies to overcome barriers around lack of enforcement, unlicensed and illegal operations, and lack of communications to address common threats.

Workshop 4: Eyes of the Reef Marianas Training for Divers, Snorkelers, and Marine Tour Operators – October 29, 2019 at the Hilton

Building off preliminary knowledge gained in the May series, marine tour operators were invited to deepen their understanding and familiarity with common reef impacts found on Guam. Eyes of the Reef Marianas is a volunteer program that trains community members on identifying impacts to coral reefs and techniques for reporting impacts to coral managers. Impacts such as coral bleaching, crown-of-thorns sea star outbreaks, coral disease, and marine debris were thoroughly covered. There were 33 participants and seven businesses in attendance.

Workshops 5 and 6: Reef-safe Marine Tourism Industry Night for Korean Speakers (November 5, 2020) and Japanese Speakers (November 6, 2020) at the Hilton

Professional translators and interpreters were hired to work closely alongside workshop organizers to ensure training sessions were thoroughly implemented in Korean and Japanese, including all written and spoken communications. Translated invitations were produced and phone calls were made directly to businesses by the interpreters to solicit participation. To incentivize attendance, a local professional underwater photographer with deep experience throughout the Marianas Islands was commissioned to give a special presentation with exclusive underwater photography and a question and answer session.

Unfortunately there were no attendees for the Korean session, despite significant effort ahead of time to ensure awareness and understanding of the workshops. However, there were 17 participants representing 12 businesses that attended the Japanese session. This customized method proved to be a success because seven of the businesses in attendance were new engagements that did not attend the May sessions.

Workshop Activities

The Tourism for Tasi workshops included presentations from guest speakers, small break out discussions, a mapping exercise, and facilitated open-floor style discussions. Japanese and Korean interpreters were provided. A visioning exercise was initiated at the first workshop and refined in the third workshop. Together, participants produced the following Guam Marine Tour Operators Vision Statement:

Vision Statement: As marine tour operators, we envision Guam's coral reefs providing plentiful fish, food, and income into the future. We envision our industry comprised only of operators who are proud of our resources, practice sustainability, and share these values with our guests to instill respect for our coral reefs. Our guests will leave their experience impressed and appreciative of the beauty of Guam's marine environment. To move toward this future vision, we will continue to protect our marine environment by participating in cleanups, monitoring, and being mindful of how our activities impact our reefs. Looking to the future, we see increased collaboration with our government, communities, and visitors to lead policy, enforcement, and strategic communications to ensure all marine tourism on Guam is reef-safe.

Mapping Exercise

1. In order to reduce anchor damage to the reef, we asked “where do you think mooring buoys are needed to prevent anchoring on the reef?”

Responses: Asan Cut, East Agana Bay, Hospital Point, Tumon Bay, Gun Beach, Apra Harbor, Blue and White Reef, Toguan Bay (Merizo)

2. In order to understand perceptions of damage from within the industry, we asked “where do you see the most damage from recreational use and impacts of marine tourism?”

Responses: Tumon Bay, Piti Bomb Holes Marine Preserve, Sharks Pit, the Crevice, Asan, Apra Harbor (Outhouse and Family Beach), Cocos Lagoon

3. In order to understand which coral reefs marine tour operators prioritized, we asked “where would you like to see the health of coral reefs improved?”

Responses: Piti Bomb Holes Marine Preserve, Asan Cut, East Agana Bay, Tumon Bay

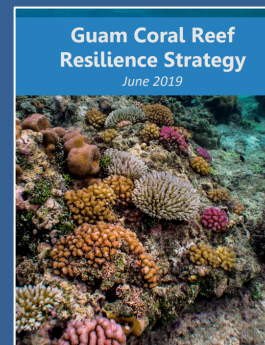
4. To visualize potential concentrated impacts of marine tourism on Guam, we asked “where do you currently take your customers?”

Responses: Piti Bomb Holes Marine Preserve, Tumon Bay



Guam Reef Resilience Strategy

The Guam Reef Resilience Strategy (Guam Coral Reef Initiative 2019) identifies actions to reduce impacts of climate change and local stressors on Guam’s coral reefs. Sustainable recreational use and tourism is identified as one of the five priority outcomes of the GRRS. Many of the outcomes prioritized in the workshops are also listed in the strategy. These recommendations are identified in the strategy list of this document by **[GRRS Action RU #]**. You can view the GRRS online at www.bsp.guam.gov/coral-reef-initiatives.



Strategies for Improving Reef-Safe Marine Tourism

Marine tourism business owners and other stakeholders on Guam collectively identified and prioritized the following strategies. These strategies are critical for the reduction of the most common threats to reefs from marine tourism, and to overcome barriers to reef-safe tourism on Guam. The proposed actions under each strategy are the most suitable options identified by workshop participants. They do not appear in order of a step-wise approach, nor represent the entire list of actions discussed, but include the actions with highest priority and attention during the workshop series.

The Guam Coral Reef Initiative will continue to coordinate these efforts and work together with marine tour operators, Guam Visitors Bureau, Guam Hotel and Restaurant Association, and Guam’s natural resource agencies to seek support in implementation of these strategies. However, it is important to note that many of these issues require high-level political direction and interagency cooperation. There is a sincere interest to strengthen the voice of marine tour operators and collaboration with decision makers to further design and implement these strategies.

STRATEGY 1: IMPROVED ENFORCEMENT

STRATEGY 2: ADDRESS UNLICENSED AND ILLEGAL OPERATIONS

STRATEGY 3: EXPAND STRATEGIC COMMUNICATIONS

STRATEGY 4: INCREASE FUNDING FOR CONSERVATION AND ENFORCEMENT

Strategy One: Improve enforcement capacity through better collaboration among government agencies, marine tour operators, and other stakeholders

Lack of enforcement capacity was identified as one of the key barriers to reef-safe tourism on Guam. This includes a wide range of issues including a lack of manpower and response to enforce existing rules and regulations, a lack of enforcement of illegal or unlicensed marine tour operators, and a lack of consequences or prosecutions through the court systems when violators are caught. The lack of enforcement threatens to undermine the existing rules and regulations in place, and frustrates those marine tourism operators who adhere to rules and follow reef-safe practices. Permit violations at beach parks are also observed, such as businesses leaving trash behind and occupying public parking. Marine tour operators are calling for more collaborative and elevated enforcement capacity, recognizing that this would not only help address threats from marine tourism but also other key threats to Guam's reefs such as poaching and sedimentation caused by illegal fires.

- ***Strengthen Conservation Officer program:*** A stronger conservation officer program is needed through increased funding for more officers and necessary equipment. We recommend the development of a small fee or tax that is directed toward conservation enforcement efforts (see Strategy 3 below).
- ***Improve reporting system and implement an enforcement hotline:*** The current reporting system should be evaluated and improved. Marine tour operators identified a disconnect with the current system for reporting violations. Participants noted they do not receive responses to reports and cannot reach the correct point of contact. A clear and functioning reporting pathway or enforcement hotline is needed. This not only includes a telephone hotline, but a database should also be established, monitored, and maintained to submit photos and videos of violations. Warnings for repeat offenders should not be allowed. Once improved, the updated system should be advertised and monitored.
- ***Create a volunteer enforcement program:*** Volunteer or community enforcement programs should be explored, such as the state of Hawaii's Molokai Watch. The Civilian Volunteer Conservation Officer Reserve Program, launching in Guam late 2019, should be monitored for success and expanded if the program is effective.
- ***Create conservation enforcement task force:*** Improved on-the-ground enforcement capacity is proposed through the development of an enforcement task force. The task force should include representatives from various government agencies that can share and coordinate resources, information, and personnel. This would consist of natural resource agencies, Guam Police Department, Guam Visitors Bureau, and other stakeholders. Citizen watch programs could also be incorporated.
- ***Develop a functional flow chart for regulatory mandates:*** Both marine tour operators and government agencies noted confusion and misunderstanding over responsibilities. There is also uncertainty over which laws do or do not exist. A regulatory map with clear points-of-contact should be developed and shared to 1) clarify who has the enforcement mandate for various types of violations, and 2) list the complete rules and regulations applicable to marine tourism.

- Deputize local government staff: Learning from other Pacific Islands such as Hawaii and Kosrae, we also advocate for increased enforcement capacity by deputizing staff from various natural resource agencies. These staff would be empowered to issue citations for basic violations such as operating without a proper license.
- Environmental court days: At least one day a year, or month, should be reserved in the Guam Court System to litigate environmental offenses. This will provide due diligence to environmental cases, which typically do not receive equal attention as other crimes. This may help reduce violations over the long term by setting an example and prosecuting violators. Judges and prosecutors should receive environmental training on reef ecology, threats, and impacts. This includes social, economic, and ecological dynamics of ecosystems.
- Create Local Marine Tour Operator Network: Associations and networks are used around the world across many sectors to amplify stakeholder voices, communicate unique needs on behalf of a local industry, facilitate training, secure collective funding, and improve collaboration and participation from members. This can also be an effective mechanism for establishing a basic, agreed upon set of industry practices directly from within. For example, the Association of Marine Park Tourism Operators (AMPTO) is a network of marine tour operators throughout Queensland, Australia established in 1985. They are politically active to lobby for industry needs and benefits, such as fuel excise rebates and funding opportunities. AMPTO was also influential in the Great Barrier Reef Research Foundation. A similar model on Guam is the Guam Hotel and Restaurant Association.

Strategy Two: Address unlicensed and illegal operations through incentivized programs for reef-safe vendors and mandatory industry standards

Marine tour operators identified unlicensed and/or illegal operations as a main barrier to reef-safe tourism. These unregulated tour operators do not follow appropriate safety protocols nor industry standards established by international licensing agencies such as PADI, NAUI, etc. This includes guides who work on tourist visas and “fly by night” operators who financially undermine long-standing legal businesses by offering cheap marine tourism activities without the proper licenses, permits, or insurance. Not only do these operators harm the reef through activities such as disturbing marine life for entertainment, but they may also create a safety hazard for guests (e.g. by exceeding recommended limits of customers to guide ratios). To reduce social and economic conflicts, it was noted collaboration with the Department of Homeland Security is needed to ensure only legal workers and legitimate businesses are conducting tours.

- Require a license to operate as a Guam Marine Tour Operator: Many places such as Palau and the Commonwealth of the Northern Mariana Islands require a specific license for any person to work as a marine tour operator. This is an ideal way to track businesses, streamline permits, require training, and ensure quality control. Legal working visas

should also be checked and enforced. This would contribute to the local economy by reducing the number of off-island businesses who conduct tours on Guam and send profits back to the home country, as well as increase revenue for conservation generated by the license fee

- Require annual training: Update Guam Public Law 23-126 to include marine tour operators in the Guam Visitor Bureau’s Tour Guide Accreditation Course [GRRS Action RU 3.3]. Annual staff training will also increase effective communications to guests, simultaneously addressing Strategy 3.
- Incentivize good practice: A green business label, such as Green Fins, should be implemented to recognize ecofriendly and sustainable businesses. The Green Fins program conducts annual assessments to ensure participating businesses are continuously improving towards reef-safe operations, while providing incentives such as international marketing for participating businesses. The program also provides communications products translated in many languages. Hotels, Guam Visitors Bureau, and businesses within the marine tourism industry should promote and recommend only those businesses vetted to be safe, sustainable, and adequately trained.
- Establish minimum training standards requirements: Strengthen Guam laws to require all marine tour operators to follow a thorough set of training standards such as those established by the World Recreational Scuba Training Council. This would also reduce hotels’ liability of using unsafe operators.
- Update or create rules and regulations for existing laws: Many public laws already exist to address some of the identified challenges, but the rules and regulations were never codified (e.g. the Marine Preserve Eco-permit law PL 27-87, the Guam Seashore Reserve Plan 12-108). A legal review should be done to ensure existing laws have the rules and regulations established to support them. [GRRS Action RU 1].

Strategy Three: Foster reef-safe behavior through strategic communications

The most common threats from marine tourism and recreational use include grabbing, standing on, and kicking corals; anchoring on reefs; touching marine life; use of toxic sunscreen; trash; and fish feeding. These impacts are primarily due to ignorance or a lack of awareness among residents and visitors. Education can be used to not only increase guest safety and increase protection of the reef, but also improve guest satisfaction. Research shows guests have a much stronger preference (71%) for the educational components of an underwater interpretive snorkel trail as compared to the diving itself (5%) (Berchez et al. 2005).



Strategic communications that reach users throughout every point of their stay and/or before they enter the water are necessary. Simple, visually-compelling, and multilingual communication materials with instruction on reef- safe behavior should be installed at the baggage claim, hotel lobbies, tour buses and shuttles, and popular recreational sites. Communications should convey that reefs are alive, they are an animal not a rock, and they can be damaged by touch. The group prioritized digital advertising such as mobile phone apps, social media networks, and travel websites [*GRRS Action RU 2.2 and RU 3.4*]. Communications are needed not only for visitors, but local residents who visit the ocean as well.

- *Require education on incoming passenger vessels such as airplanes, cruise ships, etc.*
Many places such as Palau require environmental and cultural education to visitors on arrival. Messaging should be repeated throughout various points in a visitor’s stay on island. Messages may be video, print, or other methods. Various opportunities exist to display reef-safe guidance such as airplanes, customs lines, baggage claim, cruise ships, hotels, restaurants, rental car companies, etc.
- *Increase signage at beaches and parks:* Research shows environmental reminders are an effective tool for reducing physical contact with the reef. Research also finds tourists aware of their presence within a marine protected area are more likely to adopt behaviors that would reduce their impact (Petrosillo et al. 2007). Signage at parks should be improved to remind visitors to help us take care of Guam’s coral reefs. Existing signage is worn down, overgrown, outdated, and ineffective. Signage should be updated to be engaging, simple, and translated.
- *Increase partnerships with tour agencies and other tourism stakeholders outside of Guam to provide reef-safe communications:* New partnerships should be established to ensure visitors receive reef-safe guidance prior to arriving to Guam. Potential partners include Veltra, Line, Japan Travel Association, rental car companies, Guam Visitors Bureau, dive networks, and PADI.
- *Integrate education and communications in the permitting process for commercial businesses:* Education should be required to obtain permit or license for marine tour operators. A simple video, online curriculum, or training module should be developed and required for each permitted guide or staff.

Strategy Four: Increase funding to support enforcement and other natural resource management activities

All strategies in this document require funding, and in many cases, need ongoing funding to be effective in the long term. A willingness to pay study conducted in 2013 found divers on Guam were willing to pay up to \$35 per dive for increased fish biomass, increased fish diversity, and the presence of megafauna such as sharks and turtles (Grafeld et al 2016). Marine tour operators and stakeholders provided verbal support throughout the workshop series for the implementation of a modest visitors’ fee that would directly support conservation, enforcement, and other resource management strategies [*GRRS Action RU 1.5 and RU 3.5*]. These fees should be moderate enough to ensure it does not discourage tourism to Guam. This type of fee would

not only help address impacts from tourism activities but other, more significant threats such as land-based sources of pollution. This approach is only effective when the funds collected are guaranteed to be directed towards management activities that help protect Guam’s natural resources. Diligent design of the law and rules and regulations is critical. One barrier already identified is U.S. Code Title 49 § 47133, which prevents funds collected at the Guam Airport to be used for anything other than airport uses. Other mechanisms for collection outside of the airport such as *Reef Support* should be explored.

- ***Implement a Green Fee:*** A study should be conducted to determine the correct amount that should be charged to all incoming visitors to Guam. Funds should be used to support environmental conservation and enforcement of the protection of our marine resources.

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Photos:

The Ocean Agency (Cover); Sonia Siliang (pp. 3, 4, 8)