

National Fish and Wildlife Foundation

Coral Reef Conservation Fund 2014 - Submit Final Programmatic Report (New Metrics)

Grantee Organization: The Coral Reef Alliance

Project Title: Outreach and Adaptive Management for the West Maui Fishery Management Area (HI)

**Project Period** 7/15/2014 - 6/30/2015

**Project Location** The Kahekili Herbivore Fisheries Management Area is located off north Ka'anapali on Maui, Hawaii.

**Description**

**(from Proposal)**

**Project**

**Summary (from Proposal)**

Provide outreach and training to increase compliance with coral reef management regulations in the Kahekili Herbivore Fisheries Management Area. Project will assess and communicate outcomes to date to the local community, while also ramping up engagement with stakeholders to ensure continued and increased compliance.

**Summary of**

**Accomplishments**

Over this grant period, with support from the National Fish and Wildlife Foundation, CORAL promoted effective management of the Kahekili Herbivore Fisheries Management Area (KHFMA) through targeted education and outreach. Specifically, grant outcomes were to: a) Facilitate exchange among management entities and the community by bringing together the most relevant information to share and assess the overarching goals and management of the KHFMA, and b) Build support and legitimacy of the KHFMA by ensuring that science and monitoring of the reserve are clearly communicated to local stakeholders and the broader public, including a significant stakeholder group: fishers.

In order to achieve these outcomes, CORAL developed a KHFMA poster that compiled all the science behind and efforts around the KHFMA, and used it to educate ocean users and local stakeholders at numerous events. Through this outreach CORAL connected with 198 Maui fishers and around 1,000 individuals county-wide at the KHFMA annual birthday bash, a workshop for educators to learn about watershed concepts, the Coral Reef Task Force meeting, and several fishing related events.

**Lessons Learned**

This project underscored the importance of reaching out to a number of different audiences when it comes to improving the buy-in and compliance for management measures such as the KHFMA. Traditionally CORAL has engaged recreational ocean users, including the tourism sector and active community members such as Makai Watch volunteers. This project gave us the opportunity to engage a very important stakeholder group that is frequently under-represented: fishers. Hiring Chana Ane, a native Hawaiian with a strong relationship with the local community, we were able to connect with this population in an appropriate and effective way. We learned that when communicating with this audience, messaging needs to be simple, straightforward, and appealing. We also recognize the importance of coordinating our outreach efforts with the Division of Aquatic Resources (DAR) and other conservation partners to ensure concise and effective messaging to the target stakeholders. We look forward to continuing to engage this diverse group to ensure we are able to meet our conservation goals.

## Activities and Outcomes

Funding Strategy: Capacity, Outreach, Incentives

Activity / Outcome: Coral - Outreach/ Education/ Technical Assistance - # people reached

Description: Enter the number of people reached by outreach, training, or technical assistance activities

Required: Recommended

# people reached - Current: 1000.00

# people reached - Grant Completion: 1198.00

Notes:

Funding Strategy: Habitat Management

Activity / Outcome: Coral - improved management practices - Miles under improved management

Description: Enter the number of miles under improved management

Required: Recommended

Miles under improved management - Current: 1.90

Miles under improved management - Grant Completion: 1.90

Notes: The 1.9 miles of the KHFMA is already under management. This project seeks to build support and legitimacy by increasing awareness, buy-in, and compliance. Therefore, there will be no additional area under improved management, however the KHFMA will benefit from improved management by this project.

Funding Strategy: Planning, Research, Monitoring

Activity / Outcome: Coral - Tool development for decision-making - # tools developed

Description: Enter the number of tools developed

Required: Recommended

# tools developed - Current: 2.00

# tools developed - Grant Completion: 3.00

Notes: At least 3 new tools developed

Funding Strategy: Planning, Research, Monitoring

Activity / Outcome: Coral - Management or Governance Planning - # plan activities implemented

Description: Enter the number of management plan activities being implemented

Required: Recommended

# plan activities implemented - Current: 6.00

# plan activities implemented - Grant Completion: 4.00

Notes: Implement at least 4 new activities or outputs in support of the Wahikuli-Honokowai Coastal Conservation Action Plan (Objectives 1.1b, 1.1c, 1.3, 2.3, and 2.4)

The following pages contain the uploaded documents, in the order shown below, as provided by the grantee:

Photos - Jpeg  
Photos - Jpeg  
Photos - Jpeg  
Photos - Jpeg  
Photos - Jpeg  
Other Documents  
Photos - Jpeg  
Other Documents  
Final Report Narrative - Marine

The following uploads do not have the same headers and footers as the previous sections of this document in order to preserve the integrity of the actual files uploaded.



## Final Programmatic Report Narrative

**Instructions:** Save this document on your computer and complete the narrative in the format provided. The final narrative should not exceed ten (10) pages; do not delete the text provided below. Once complete, upload this document into the online final programmatic report task as instructed. **Please note** that this narrative will be made available on NFWF's Grants Library and therefore should provide brief context for the need of your project and should not contain unexplained terms or acronyms.

### 1. Summary of Accomplishments

*In four to five sentences, provide a brief summary of the project's key accomplishments and outcomes that were observed or measured. This can be duplicative to the summary provided in the reporting 'field' or you can provide more detail here.*

Over this grant period, with support from the National Fish and Wildlife Foundation, the Coral Reef Alliance (CORAL) promoted effective management of the Kahekili Herbivore Fisheries Management Area (KHFMA) through targeted education and outreach. Specifically, grant outcomes were to: 1. Facilitate exchange among management entities and the community by bringing together the most relevant information to share and assess the overarching goals and management of the KHFMA, and 2. Build support and legitimacy of the KHFMA by ensuring that science and monitoring of the reserve are clearly communicated to local stakeholders and the broader public, including a significant stakeholder group: fishers.

In order to achieve these outcomes CORAL developed a KHFMA poster that compiled all the science behind and efforts around the KHFMA, and used it to educate ocean users and local stakeholders at numerous events. Through this outreach CORAL connected with 198 Maui fishers and around 1,000 individuals county-wide through online communications, and in person at the KHFMA annual birthday bash, a workshop for educators to learn about watershed concepts, the Coral Reef Task Force meeting, and several fishing related events.

### 2. Project Activities & Outcomes

#### Activities

*Describe the primary activities conducted during this grant and explain any discrepancies between the activities conducted from those that were proposed.*

1. Facilitate exchange among management entities and the community by bringing together the most relevant information to share and assess the overarching goals and management of the KHFMA.

To achieve this outcome CORAL met with the Hawai'i Division of Aquatic Resources (DAR), West Maui Ridge to Reef Initiative (R2R), NOAA Fisheries, Pacific Islands Fisheries Center (Coral Reef Ecosystem Division), Hawaiian Islands Humpback Whale National Marine Sanctuary, and the Hawai'i Department of Health (DOH) to compile the background information, most recent data, and resources necessary to develop a KHFMA summary document, culminating in the production of the KHFMA poster.

At the five-year anniversary of the management area, we reviewed all the existing monitoring material to evaluate its success thus far and identified additional necessary efforts, all of which were documented and communicated in the KHFMA poster.

The poster highlighted the science and reasoning behind the ecosystem-based management strategy, the regulations it institutes, and the land-based efforts that are crucial for the long-term effectiveness of the management measure. The poster itself was designed to be attractive and easily understood by a lay audience, allowing them to judge the area's effectiveness thus far. To ensure a useful product we consulted with conservation partners, communications experts, and designers.

The activities surrounding this outcome were consistent with what we originally proposed, although the end product looked different from what we initially envisioned. Due to feedback from our consultations with partners we determined that a single communications piece, rather than a suite of "report cards" would be most useful for the majority of our audiences. We are confident we achieved our goal of compiling information on the status of the KHFMA at this interval and communicating it to the public.

2. Build support and legitimacy of the KHFMA by ensuring that science and monitoring of the reserve are clearly communicated to local stakeholders and the broader public, including a significant stakeholder group: fishers.

**2014 KHFMA Birthday Bash:** Since its inception in 2009, we have worked with partners to help celebrate the KHFMA's "birthday." This annual event is a way to bring together supporters, share information, and promote fisheries management. This past year's fifth annual KHFMA birthday bash celebration brought together approximately 100 people, including representatives from the Westin Ka'anapali Ocean Resort (who also sponsored recycling containers for the event), the Honua Kai, the Ritz-Carlton Kapalua, the Sheraton, and the Ka'anapali Beach Hotel. Several conservation groups and agencies were on hand to share with the public, including Surfrider Foundation, the West Maui

Watershed Partnership, Malama Maui Nui, Scripps Institution of Oceanography, Maui Nui Marine Mammal Response Network, the Fish Identification Network, Kahikai, Ambassadors of the Environment program, the Hawaiian Islands Humpback Whale National Marine Sanctuary, and the Turbidity Task Force volunteer team. The event included water quality monitoring, a reef tour, plankton and limu investigations with digital microscopes, limu pressings, a culinary contest, kids crafts, a keiki art contest, and a seaweed-eating contest. Leading up to the July 27, 2014 event, we coordinated promotion, including distributing fliers and information via social media. We also communicated the event with our partner resorts and solicited prize donations from hotels and local businesses. In total, we received more than \$1,990 worth of in-kind donations for the KHFMA birthday bash from more than 25 businesses. Prize donations included items such as gift certificates for restaurants and hotel stays and merchandise such as hats and t-shirts.

**KHFMA Poster:** We shared the poster during the KHFMA birthday bash, on Facebook, and via our West Maui Watershed E-Newsletter that is sent out to a group of more than 150 hotels, community members, and policy-makers in West Maui. The e-newsletter is a general tool for promoting local efforts and covers local watershed topics, upcoming events, and reviews and summaries of watershed plans. We also shared the poster during a Coral Reef Task Force meeting in September. Additionally, we presented it to 25 participants at a Kahekili reef snorkel tour, and displayed it at key locations throughout the five days of meetings, workshops, and events. We also presented it at meetings in September and October with teachers attending a watershed education training workshop.

**Virtual Reef:** To enhance our KHFMA science outreach, we partnered with the organization ReefQuest to develop a “virtual reef.” Focusing on the KHFMA and additional sites on Maui for comparison, the virtual reef is an online tool that uses underwater photographs to present a virtual “3-D” tour of the reef. This tool allows stakeholders—from children to government officials—to see the reef in an interactive way, without having to get in the water. The importance of making the reef ecosystems and their challenges accessible to non-swimmers/snorkelers was evident during an event we sponsored in which Hawai‘i’s State Senator, Roz Baker, was able to view the reefs at Kahekili virtually, and gain an understanding of their management challenges. She said that it was great for a “non-water person” to be able to see what is going on just below the surface. Through the poster, the virtual KHFMA reef, and our West Maui Watershed e-newsletters, we have been able to successfully communicate information about the KHFMA, its history, and recent progress to stakeholders, as well as provide updates on volunteer opportunities and upcoming events.

**Communicating Science Through K-12 Outreach:** In the fall of 2014, we trained a group of 13 educators—a group that would reach upwards of 400 students in just one year with additional students benefitting for years to come—in water quality and watershed management. Educators who attended this workshop visited the KHFMA, learned about the principles behind its creation, and received an

update on its effectiveness thus far. We used the KHFMA poster and virtual reef as teaching tools for this particular section of the workshop.

**Fisher Engagement:** In close collaboration with Russell Sparks and Adam Wong from DAR, we formulated an effective campaign to target fishers who generally fish within the boundaries of the KHFMA. Through that collaboration we developed additional outreach materials that would appeal to that audience. The goal was to succinctly explain the reasoning behind the KHFMA regulations within the context of ecosystem-based management in order to engage this important stakeholder group and increase buy-in and compliance with regulations. According to Adam Wong, DAR's fisher outreach coordinator, in his experience t-shirts were the most accepted and popular way of conveying the message to fishers, and black was the most popular color.

We therefore produced t-shirts with a simple and straightforward message and passed them out along with a handout version of the KHFMA poster. The handout also included a tide chart for West Maui intended to ensure maximum retention of the information presented by including a useful and practical component.

The shirt had small *manini* (convict tang) on it as they are one of the most recognized and commonly caught herbivorous reef fish on Maui. The shirt indicated that more small reef fish lead to more large predator fish, which was displayed by the *ulua* (trevally jack), which is one of the most recognized and sought after game fish in Maui. (Ulua images are seen all over Maui on bumper stickers, hats, patches, and even sandals. This is the fish that gets a fishers pulse up). The message was simple; the more herbivores, the healthier the reef, and the healthier the reef the more big fish there are out there for fishers to catch.

**“More herbivores Mo’ Bettah”** was the slogan we used to convey this message.

We ensured appropriate usage of “Mo’ Bettah,” a commonly used Hawaiian Pidgin slang expression, by consulting with a Hawaiian pigeon language expert, Douglas Simonson, and by utilizing his book on the subject; *Peppo’s Pidgin To Da Max*.

We conducted outreach in a non-confrontational or accusatory manner, and generally followed the format of “talking story” about fishing in general, historic trends in fish numbers, and fisher observations over the years, and then explaining the management efforts and the reasoning behind them.

We chose the following locations and events for outreach:

1. **Mala Wharf, Lahaina** (Engaged 53 fishers): This is a boat launch site that is popular with fishers coming and going. We set up a table at a prominent location here.
2. **All About Fish Event** (Engaged 55 fishers): All About Fish is a fishing tackle store located in Lahaina. They sponsored a “Roi Roundup” tournament. Roi (peacock grouper) are a potentially invasive fish, and the purpose of this event was to ‘roundup’ as many as possible to remove them from the reefs. At this event we targeted spearfishers. Representatives from University of Hawai‘i, Manoa, as well as DAR, were present.
3. **Polanui Hiu** (Engaged 30 fishers): This was a Coral Forensics and fish abundance survey event. Polanui Hiu is a Community Managed Makai (ocean) Area (CMMA) in Lahaina—it is a grassroots organization that is encouraging *pono* (responsible) fishing practices and implementing water quality and reef health monitoring as well as threat abatement strategies. Through this event they hoped to identify the causes of coral death within the CMMA. Representatives from UH Manoa, DAR, Maui Cultural Lands, Maui Nui Marine Resource Council, and the Hawai‘i Association for Marine Education and Research were in attendance.
4. **Ridge to Reef Rendezvous** (Engaged 60 fishers and 40 community members - 100 people total): The Ridge to Reef Rendezvous was held at Kahekili Beach Park on July 25, 2015. We engaged with fishers through a catch and release *papio* fishing tournament, and provided our outreach materials and t-shirts to participants. We also had a table set up with the KHFMA poster to engage with the public at large.

Through these events, we engaged 198 fishers. The majority of fishers we connected with had a positive reaction to the management efforts and demonstrated a genuine interest in the science behind them. Many fishers offered observations of their own that often corresponded with scientific reporting.

### **Outcomes**

*Describe progress towards achieving the project outcomes as proposed and briefly explain any discrepancies between your results compared to what was anticipated.*

Through the activities described above, we achieved our desired outcomes of compiling and concisely communicating the KHFMA purpose and goals to our target audiences. Although we originally had planned for a different style of communications material in our initial proposal, we learned through this process that the quick and easy to understand tools were going to be the most effective in helping us reach our project outcomes.



*Provide any further information (such as unexpected outcomes) important for understanding project activities and outcome results.*

Engaging with the fisher community was a very valuable component of this project. Through the conversations with fishers we learned their impressions of the management area and also their concerns and questions. The following are questions we received from fishers and also quotes from their feedback:

- Which fish are the herbivores?
- What are the KHFMA boundaries?
- Is it working?
- If you can't fish herbivores at Kahekili, then what other fish are there to harvest?
- What kind of surveys are we doing to monitor progress?
- Isn't the reef overgrazed by the turtles?
- Is the algae that the uhu eat the same as the limu we eat?
- Is the water that is being discharged clean or safe to swim in?
- Does commercial recreational use have an impact on fish aggregation patterns?
- Is this pono (responsible)?

“There’s actually a whole lot less limu (algae) than there used to be. We don’t gather it from here any more!”

“I never see no big uhu (parrotfish) these days”

“Algae used to be prevalent on the coast. There was so much of it we could smell it. You could walk out and easily and pick limu, now you can hardly find it!”

From a long-time fisherman: “There used to be so much wana (sea urchins) on this side of the warf [east] but nothing on that side [west].

One fisherman from Lahaina (outside the KHFMA) said: “Thanks for explaining to me about the herbivores. I’m going to throw them back now.”

### **3. Lessons Learned**

*Describe the key lessons learned from this project, such as the least and most effective conservation practices or notable aspects of the project’s methods, monitoring, or results. How could other conservation organizations adapt similar strategies to build upon some of these key lessons about what worked best and what did not?*

This project underscored the importance of reaching out to a number of different audiences when it comes to improving the buy-in and compliance for management measures such as the KHFMA. Traditionally, we have engaged recreational ocean users, including the tourism sector and active community members such as Makai Watch volunteers. This project gave us the opportunity to engage a very important stakeholder group that is frequently under-utilized: fishers. Hiring Chana Ane, a native Hawaiian with a strong relationship with the local community, allowed us to connect with this population in an appropriate and effective way. We learned that when communicating with this audience, messaging needs to be simple, straightforward, and appealing. We look forward to continuing to engage this diverse group to ensure we are able to meet our conservation goals.

#### **4. Dissemination**

*Briefly identify any dissemination of project results and/or lessons learned to external audiences, such as the public or other conservation organizations. Specifically outline any management uptake and/or actions resulting from the project and describe the direct impacts of any capacity building activities.*

Outcome two for this project was focused on information dissemination and communication in order to increase buy-in and compliance for the KFHMA. Based on the results described above, we were able to reach hundreds of people in our desired audiences. Since we were advocating for compliance of an already established management measure, we didn't expect any management changes from our work; though we do feel that by equipping our audience and partners with an easily digestible communications tool on the KHFMA at this five year interval, we have increased the knowledge, understanding, and capacity of those who engage with this important management area.

#### **5. Project Documents**

Include in your final programmatic report, via the Uploads section of this task, the following:

- 2-10 representative photos from the project. Photos need to have a minimum resolution of 300 dpi. For each uploaded photo, provide a photo credit and brief description below;
  1. Image of teacher workshop
    - i. Photo credit: Tova Callender
    - ii. Description: Workshop where teachers were taught watershed management principles to build into their curriculum. KHFMA poster and site visit were included.
  2. Image of fisher engagement event
    - i. Photo credit: CORAL Staff
    - ii. Description: CORAL staff, Chana Ane, speaking with some young fishers at Mala Warf
  3. Image of fisher engagement event
    - i. Photo credit: Skippy Hau

- ii. Description: Image of fisher measuring her catch during the All About Fish “roi roundup” event
- 4. Image of fisher engagement event
  - i. Photo credit: Lisa Agdeppa
  - ii. Description: CORAL staff, Chana Ane, fishers, and conservation professionals participate in a Coral Forensics and fish abundance survey event in Polanui Hiu.
- 5. Image of KHFMA birthday bash
  - i. Photo credit: Ananda Stone
  - ii. Description: Image of the entire group at the birthday bash event, July 2014
- 6. Image of T-shirt design
  - i. Photo credit: Maui Custom T-shirts
  - ii. Description: Proof of herbivores t-shirt that was handed out at fisher engagement events
- Report publications, Power Point (or other) presentations, GIS data, brochures, videos, outreach tools, press releases, media coverage.
  - 1. See image of t-shirt design
  - 2. See KHFMA poster PDF
- Any project deliverables per the terms of your grant agreement.
  - 1. KHFMA Poster PDF

***POSTING OF FINAL REPORT:*** *This report and attached project documents may be shared by the Foundation and any Funding Source for the Project via their respective websites. In the event that the Recipient intends to claim that its final report or project documents contains material that does not have to be posted on such websites because it is protected from disclosure by statutory or regulatory provisions, the Recipient shall clearly mark all such potentially protected materials as “PROTECTED” and provide an explanation and complete citation to the statutory or regulatory source for such protection.*