

# **2008–2010 NOAA Coral Management Fellowship: Guam Statement of Work**

## ***Project Location***

The host agency for the 2008–2010 Coral Management Fellowship in Guam is the Division of Aquatic and Wildlife Resources (DAWR) within the Guam Department of Agriculture located at 163 Dairy Road, Mangilao, Guam.

Guam is an island located in the western Pacific Ocean with a rich cultural legacy and spectacular natural beauty. It is the largest island in Micronesia and the southernmost island in the Marianas chain, with a land mass of 212 square miles and a population of approximately 161,000 people. The island has a wide range of unique flora and fauna. Guam is surrounded by fringing coral reefs, mangroves, and sea grasses, and more than 11 percent of the coast is protected as marine preserves. Guam's economy is based on tourism, which depends on its beautiful beaches and clean, 80-degree ocean waters.

## ***Program/Agency Background***

The mission of Division of Aquatic and Wildlife Resources (DAWR) is to manage our natural resources through conservation, restoration, and law enforcement for the people of Guam. The DAWR works with many local and federal agencies on the Guam Coral Reef Initiative Coordinating Committee (GCRICC) to effectively manage and protect Guam's valuable coastal and marine resources. The importance of the island's surrounding coral reef ecosystem (more than 400 species of corals) is an integral part of most projects. The work completed by the coral management fellow will directly relate to coral reef and fisheries management within the guidelines specified by DAWR.

Like other Pacific Island communities, the people of Guam depend on coral reefs and the waters surrounding their island for many reasons, including food, recreation, income, and protection from storms. Recognizing the importance of these resources, the GCRICC has identified five priority focus areas for coral reef conservation: land-based sources of impacts, fisheries management, public outreach and education, recreational misuse and overuse, and climate change and coral bleaching. In collaboration with additional federal partners and other stakeholders, Guam developed three-year strategic plans for these focus areas.

## ***Project Goals***

The goals of this assistantship project are the following:

1. To assist DAWR with biological monitoring, surveys, or assessments of Guam's marine preserves.
2. To assist in the development of scopes of work related to biological monitoring, surveys, or assessments of Guam's marine preserves.

**2008–2010 NOAA Coral Management Fellowship:  
Guam  
Statement of Work**

3. To assist in the development of management plans for Guam's marine preserves.
4. To build community support for Guam's MPAs.
5. To assist DAWR in the development of public outreach material for the Local Action Strategy (LAS) addressing fisheries management.
6. To assist DAWR in coordinating public outreach activities including working with local communities, schools, or other groups in integrating outreach events.

***Project Description***

As a participating member of the DAWR staff, the fellow will network with partner organizations and agencies to complete this multifaceted project. Some of these tasks will be accomplished concurrently.

***Orientation (3 months)***

The fellow will be introduced to staff and management of DAWR and partner agencies, and will review background information regarding Guam's coral reef initiative, fisheries management, and coral reef management issues. The fellow also will participate with program staff members in field visits, interagency meetings, and outreach activities. After participating in these activities, the fellow, with input from the mentor, will write a project work plan that will be reviewed and revised after the first year of the fellowship.

Outcomes:

- Familiarity with staff, operations, and resources of island fisheries and coral reef resource management programs
- Integration into DAWR and clarification of role in project
- Development of a project work plan

***Biological Surveys, Monitoring, and Assessments***

DAWR conducts biological monitoring within Guam's marine preserves. The fellow will assist DAWR's marine preserve coordinator on the marine preserve monitoring program. The fellow will assist in or coordinate the procurement of other biological monitoring, surveys, or assessments of Guam's marine preserves (e.g., carrying capacity study, sedimentation study). The fellow, using snorkel and scuba gear and at times on a boat, will assist in the collection of biological information within the marine preserves. The fellow will assist in the input and analysis of data and report writing of Guam's marine preserves.

The fellow will assist the DAWR's marine preserve coordinator in the development of scopes of work related to future studies involving Guam's marine preserves. The fellow will complete the scope of work by the deadline. The fellow will assist with conducting the study or coordinate the procurement of the study.

**2008–2010 NOAA Coral Management Fellowship:  
Guam  
Statement of Work**

The fellow will assist the DAWR's marine preserve coordinator in the development of management plans for Guam's marine preserves. The management plans will follow an ecosystem-based approach to management. The fellow will assist in any scope of work or other documents needed to develop the plan. The fellow will also assist in coordinating meetings with stakeholders.

Outcomes:

- Biological monitoring, data input and analysis, and report writing of Guam's marine preserves.
- Future studies conducted in house or procured to a contractor.
- Site specific ecosystem based management plan for Guam's marine preserves.

***Public Outreach Development***

DAWR's outreach and education program has accomplished many things. However, over the past few years, materials have not been developed that showcase our successes. Furthermore, it is imperative that we build community support for the existing MPAs and the marine goals and strategies outlined in Guam's Micronesia Challenge Plan. The fellow will assist with the DAWR's existing public outreach program and coordinate with DAWR's educational and resource information officer. The fellow will assist in production of printed and other materials, such as PSAs, for distribution at but not limited to meetings, outreach events, schools, television, and radio.

Working with a contractor and DAWR's educational and resource information officer, the fellow will assist in coordinating a survey of the effectiveness of the existing public outreach programs that have been developed during the last 5-10 years. The fellow will assist in the responsibility of working with the contractor on the appropriate questions and review and report on the results. The survey results will assist the DAWR in determining what products work and improve the general education of the importance of marine preserves/fisheries management/coral reef management to Guam. Furthermore, working with a contractor and DAWR's educational and resource information officer, the fellow will assist in developing an outreach marketing plan and strategy that addresses the gaps in the existing outreach efforts and to reach various stakeholders. A public outreach program will be produced that addresses the gaps to reach stakeholders.

Outcomes:

- Public outreach material
- Marketing strategies to address lack of public awareness, with respect to Guam's MPAs.
- Utilization of survey results to develop and implement a public outreach plan.
- Increased community support for Guam's MPAs.

**2008–2010 NOAA Coral Management Fellowship:  
Guam  
Statement of Work**

***Fellow Mentoring***

Mr. Jay Gutierrez, DAWR Assistant Chief (Acting) will mentor the fellow. Mr. Gutierrez and the fellow will communicate regularly to review timelines and evaluate progress. The fellow will be considered part of the staff of DAWR although not officially a Government of Guam employee and will be expected to attend staff meetings and participate in program discussions. He or she will be provided opportunities to join staff on field visits and in internal and external meetings. The fellow will have ample opportunities to meet with partners in both local and federal government and in the community. This project will provide an opportunity to learn about aspects of a natural resource management program and a wide range of island management issues. The fellow will receive assistance in identifying key individuals he or she should meet as well as important sources of background information. The fellow will be provided with the necessary resources to carry out the project.

Contact Information:

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***Project Partners***

The DAWR is a networking program that works actively with other department staff, community organizations, government agencies, and academic institutions on coral reef conservation issues. Potential partners include the following:

- Bureau of Statistics and Plans, Guam Coastal Management Program
- Department of Agriculture
- Department of Parks and Recreation
- Department of Public Works
- Division of Aquatic and Wildlife Resources, Law Enforcement Section (LES)
- Division of Forestry and Soil Resources (DFSR)
- Guam Divers Association
- Guam Environmental Protection Agency (GEPA)
- Guam Fishermen's Co-op
- Guam Hotel and Restaurant Association (GHRA)
- Guam Marine Awareness Foundation
- Guam Watershed Planning Committee
- Guam Visitors Bureau (GVB)

**2008–2010 NOAA Coral Management Fellowship:  
Guam  
Statement of Work**

- Marine Mania
- National Marine Fisheries Service (NMFS)
- National Oceanic and Atmospheric Administration (NOAA)
- National Park Service
- Soil and Water Conservation Districts
- The Nature Conservancy (TNC)
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS)
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- University of Guam
- Western Pacific Regional Fishery Management Council

***In-Kind Support***

The fellow will be housed at the Department of Agriculture's Division of Aquatic and Wildlife Resources (DAWR). The fellow will have access to all of the amenities and services of agency staff members, including office space and equipment, personal computer, telephone, fax, and e-mail access. In addition, DAWR will provide funds for administrative support and purchases of supplies and software, as well as printing, photocopying, mailing, and incidental costs for project products.

***Eligibility Requirements***

- Bachelor's in biology, natural resource management, natural and applied science, or environmental-related field with two years of experience OR a master's in biology, natural resource management, natural and applied science, or environmental-related field with one year of experience
- Valid driver's license
- Skills in graphics design using graphic software
- Open-water scuba certification
- Skills in coral reef fish identification

***Desired Background and Skill Sets***

- Demonstrated oral, written, and interpersonal communication skills
- A proven ability to be well organized and able to manage and prioritize multiple tasks

**2008–2010 NOAA Coral Management Fellowship:  
Guam  
Statement of Work**

- Experience, through an internship, fellowship, or part-time job, in tropical habitats and coral reefs
- Public speaking, events planning, and meeting facilitation experience
- Ability to work independently
- Creative, flexible, adaptable
- Experience living and working in another culture or in an island community
- Experience working with different user groups
- Experience in natural resource planning and policy implementation
- Project management experience
- Graphic design
- Knowledge of Photoshop or other graphic software programs
- Development of websites
- Knowledge and skill in the use of geographic information system (GIS)