

## Florida-based marine scientist embraces people and ecosystems of Caribbean region

Improving the understanding of science to support decision making is a top priority for Pamela Fletcher, Extension Assistant Scientist with the Florida Sea Grant College Program at the University of Florida Institute for Food and Agricultural Sciences', Fort Lauderdale Research and Education Center.

Fletcher works to develop extension and educational programs to build platforms for information sharing among researchers, decisions makers and targeted public to promote the understanding of marine ecosystems and sea-level resilience. She has been involved in translating science for educational and management purposes.

“To me it’s about having people understand the ecosystem and to recognize that humans are a part of that ecosystem for informed decision making,” Fletcher said.

Fletcher serves in a multi-institution position as a regional liaison for the office of National Oceanic and Atmospheric Administration (NOAA) Sea Grant College Program and NOAA’s Atlantic Oceanographic and Meteorological Laboratory in Miami, Florida.



Fletcher’s passion to improve the understanding of ecosystems has stretched beyond South Florida and into the international community, focusing specifically in the Caribbean region.

In Nicaragua, Fletcher has developed conservation and educational activities to create reforestation and sea turtle conservation programs in an effort to build capacity among the people of the Isla Juan Venado community. Fletcher began

coordinating the marine life conservation project in 2012 by leading a Florida Alternative Break Program (FAB) for UF students. The student volunteers plant mangroves, maintain sea turtle hatcheries and participate in educational programs during the FAB marine life conservation trip. Through her leadership, UF volunteers and the indigenous community have assisted in mangrove restoration through the planting of more than 33,500 mangroves in the Isla Juan Venado Nature Reserve. Sea turtle conservation efforts have contributed to the development of a sea turtle hatchery and increased education and awareness of sea turtle biology and habitat among local communities in Nicaragua.

In addition to her work in Nicaragua, Fletcher provides technical advice to address environmental impacts of climate in the Caribbean region. With the Climate Change Adaptation Program (CCAP) funded by the United States Agency for International Development (USAID), Fletcher is assisting in the collection of oceanic and atmospheric data from Caribbean islands with her NOAA colleagues and regional partners.

Fletcher's work with CCAP focuses on her interest in coral reefs and contributing to the development of NOAA's Coral Reef Early Warning Systems (CREWS). To build more resilient communities in the Caribbean, Fletcher is conducting a regional needs assessment for CREWS expansion and is working with stakeholders to characterize and evaluate marine and terrestrial ecosystems and provide results in a useable format for decision making.



“As the technical advisory project team for the USAID-CCAP, the Florida Sea Grant College Program, NOAA, and our regional partners need to think about food security and ecosystems in a changing environment. We need to work closely with end users to identify and determine the type of information needed and the most efficient way to collect and deliver the information to support decision making,” said Fletcher.

Because of her research and extension expertise, Fletcher has been invited to participate in the United Nations Environment Programme's workshop *Marine Spatial Planning and Decision Support Systems and Marine Protected Areas in the Wider Caribbean* in November 2017 in Mexico. She will be presenting on the CREWS system expansion in the Caribbean and participating in workshops and a focus group session with Caribbean partners. The UNEP workshop presents an opportunity to meet and share ideas, success stories, lessons learned, and the platform to collaborate to identify alternatives and solutions to regional issues.

In April 2017, Fletcher was invited to participate in the UF-led Feed the Future Haiti Appui à la Recherche et au Développement Agricole project (AREA) project ) in Haiti, a USAID funded project. Fletcher spoke to members of the Caribbean Council of Higher Education in Agriculture about her research and extension activities in water quality, climate, and coastal restoration as they relate to adaptation strategies and using NOAA data and information. As a result, Fletcher has maintained contact with partner countries and is exploring opportunities to develop extension materials and research related to the CREWS project.

Beyond her research and international work, one of Fletcher's passions is to mentor students and engage with fellow educators. She currently is exploring opportunities to increase STEM education with students in Fort Lauderdale. She hopes to launch a pilot program called "Adopt-A-Reef" that will be designed to improve STEM skills among student participants. Students would analyze data collected from reefs studies along the coast of Florida in STEM related classes. This would promote science-based discussion about climate change and coral reef systems that are so important to Florida and the world.

In South Florida, Fletcher is currently working with a sea-level resilience faculty team to integrate biophysical, governance, and human dimensions science into research, Extension and teaching at the UF/IFAS campuses in Fort Lauderdale and Homestead. Fletcher's Extension activities focus on improving the understanding of sea level impacts to increase public awareness of the challenges that South Florida communities are facing at the local level in the coming century. The multi-disciplinary group is working together to develop solutions to address three challenges: sea level impacts, access to higher education, and public awareness.

Representing UF/IFAS in her unique roles with the Florida Sea Grant College Program gives Fletcher the ability to have lasting local, state and global impact. Through her work in Florida and internationally, Fletcher provide students and professionals with opportunities to learn, discover and engage with coastal communities in an effort to promote scientifically informed, decision making.

**The Florida Sea Grant College Program is a university-based program supporting research, education and extension to conserve coastal resources and enhance economic opportunities for Floridians. Florida Sea Grant College Program is part of UF/IFAS Extension and partners with Florida Board of Education and the National Oceanic and Atmospheric Administration. The University of Florida Institute of Food and Agricultural Sciences (UF/IFAS) takes pride in supporting international education, research and Extension/outreach programs through UF/IFAS global. UF IFAS Global prioritizes learning, discovering and engaging.**