



# Momentum:

## Research & Innovation



COVER STORY

### NEW FRONTIERS IN ARCHAEOLOGY

*featured inside*

WHAT DO ARTISTS DO?

HELPING CHILDREN  
OVERCOME ANXIETY

LIVES IN THE BALANCE:  
PROTECTING OUR PLANET'S  
COASTAL COMMUNITIES

Spring | 2015

# What's inside



Welcome to the latest edition of *Momentum: Research and Innovation*, the magazine covering advances in scholarly activity and research at the University of Rhode Island. We are pleased to offer this platform to you to explore the activities of University of Rhode Island faculty, staff and students to expand knowledge in diverse areas of study. The magazine is meant to include stories about work and people involved in all the disciplines of study at the University over time. We are also including stories about how applied research can enhance the economic development of Rhode Island, the United States and the world. We hope that you will enjoy this issue and also come back to examine future editions. Thanks for sharing these adventures with us.

Sincerely,

Gerald Sonnenfeld, Ph.D.  
Vice President for Research  
and Economic Development



# Momentum:

Research & Innovation

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## ACKNOWLEDGEMENTS

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*Momentum: Research & Innovation* is published by the Vice President for Research and Economic Development, with editorial assistance, graphic design, and production by the Office of University Research External Relations.

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Ghana fishing community, nets and boats

# Lives in the Balance: Protecting Our Planet's Coastal Communities

by Bruce Mason

Half of the world's population lives within 50 miles of the sea and more than three-quarters of the world's major cities sit along the coasts. This translates to more than one billion people who depend on the oceans' fish as their major food source. However, due to overfishing, pollution and other unsustainable practices, this source of food security lies on the verge of collapse. With the global economic value of our oceans estimated at more than \$20 billion per year, the damage to the world's oceans not only affects ecosystems, but also the social and economic well-being of the coastal communities that depend on fish as a way of life.

For 40 years, the Coastal Resources Center (CRC) at the University of Rhode Island's (URI) Graduate School of Oceanography has worked to protect the livelihoods our oceans

provide. Coastal communities, economies and ecosystems are critically important to the welfare of our nation and planet, and the CRC — which overlooks Rhode Island's Narragansett Bay — is committed to advancing coastal management and protection worldwide.

Last October, the United States Agency for International Development (USAID) awarded a \$24 million grant — the largest in URI's history — to the CRC to lead a five-year sustainable fisheries project in Ghana, West Africa. The objective of the USAID/Ghana Sustainable Fisheries Management Project is to rebuild key marine fisheries stocks through responsible fishing practices. The project aims to set up a legal framework to protect the fisheries, develop more effective management plans and educate policymakers and the public.

Coastal communities, economies and ecosystems are critically important to the welfare of our nation and planet, and CRC — which overlooks Rhode Island's Narragansett Bay.



Ghana Shoreline

"This will be a very challenging and ambitious project," says Brian Crawford, URI Senior Coastal Resources Manager who joined the CRC in 1988 and is the project director for the USAID/Ghana Sustainable Fisheries Management Project. "If successful, our work with the Ghana Ministry of Fisheries and Aquaculture Development will reverse the trend in declining fish catches."

Crawford, who moved to Accra, Ghana, this past January, has more than three decades of experience working in international development in Africa, Asia and Latin America in the fields of marine conservation, sustainable fisheries and integrated coastal management.

Explaining why Ghana was chosen for this initiative, Crawford says a good opportunity existed to make progress quickly — there are many talented individuals who understand the issues at stake and officials in senior levels of government and stakeholders are ready to turn the fishery around.

"The marine fisheries here are on the verge of collapse, where 10 years ago they were harvesting 130,000 metric tons of fish per year and now they are catching only about 30,000 metric tons per year," says Crawford. "In Ghana, fish play an important role in food security. More than 60 percent of the animal protein in the diet comes from fish."

"A substantial portion of this fish food supply comes from

continues on next page



**Brian Crawford**

Senior Coastal Resources Manager  
Graduate School of Oceanography



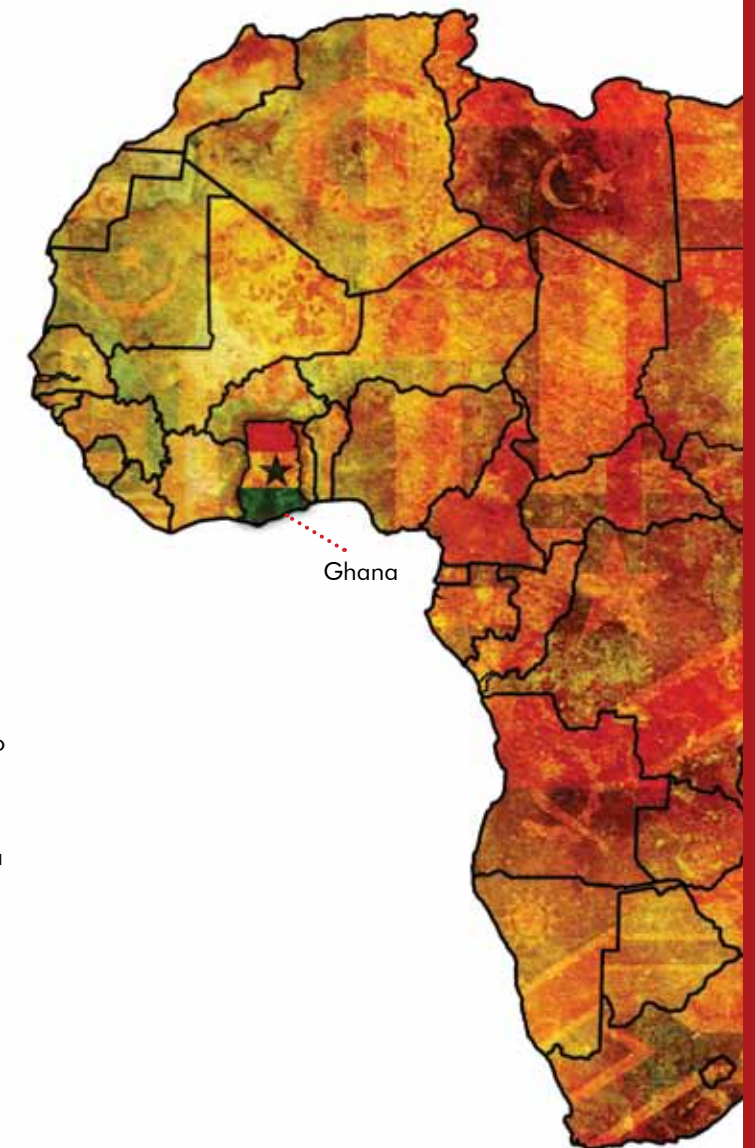
Ghana fishing community



sector in the Central Region of Ghana. The grant also provides a university strengthening component with the University of Cape Coast (UCC) to improve its applied research and extension services in coastal and fisheries management.

Crawford is enthusiastic about the partnership between URI and UCC. He notes that both universities are working together to help build capacity to benefit coastal communities and assist government in making more informed policy choices regarding the fishery and coastal development.

“We have already had several faculty visit URI to learn about our Land and Sea Grant models of applied research and extension and how they might be adapted in a Ghana context,” Crawford says. “Over the life of the project we expect that there will be faculty and student exchanges, both UCC faculty and students visiting Rhode Island to learn from our experiences locally, and URI faculty and students visiting Ghana as well.”



the small pelagic fisheries—herring, sardines, anchovy. These fish have excellent nutritional qualities in terms of protein, micronutrients and omega3 fatty acids. It is also a relatively cheap food source. These fish are caught, smoked and dried and travel long distances in the food supply chain, including into the northern part of Ghana and other Sahel countries where poverty and low nutrition rates among the population are high.”

A former Peace Corps volunteer who served in Malaysia and the Philippines, Crawford has focused on small-scale fisheries in West Africa, where he oversaw the implementation of several USAID initiatives such as empowering women

through improvements in the fisheries value chain and establishing collective use rights for women oyster harvesters in Gambia.

“Many of these women are angry that poor management of the fishery is now impacting their businesses due to reduced fish supply,” he explains. “Many believe that some of the illegal practices employed in harvesting also lands poorer quality fish, further impacting their business. In other parts of Africa, such as in Senegal, we have seen women refuse to buy illegally caught fish or juvenile fish, forcing fishers to adopt better practices that will help return the fishery to a healthier state. We hope that by

working with the women to improve their businesses, we will also empower them as advocates of sustainable fishing practices as well.”

Part of President Barack Obama’s Feed the Future initiative, a federal government effort to boost food resources in developing countries, the USAID/Ghana Sustainable Fisheries Management Project aims to benefit more than 100,000 people involved in the local Ghanaian fishing industry. The project’s goals include helping to secure the jobs of tens of thousands of women involved in the processing and marketing of smoked fish and, efforts to reduce child labor and trafficking in the fisheries

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