



2013 AWARD Fellow
Blessing Chidinma Okogbue

Position	Lecturer II
Institution	Federal Polytechnic, Ekowe, Nigeria
Country	Nigeria
MSc	Animal and Environmental Biology University of Port Harcourt, Nigeria, 2008
Mentor	Dr. Ansa Joseph Ebinimi, Chief Research Officer Nigerian Institute for Oceanography and Marine Research

Research area: Imparting African rural women and young agriculturists with fish-production skills and creating awareness on the dangers of aquatic pollution to ensure environmental protection, and improving product shelf life via modern postharvest techniques for food security and sustainable fisheries management.

Blessing Chidinma Okogbue has been an aspiring cook since she was a young girl. So it is not surprising that she has applied her training in Animal and Environmental Biology to focus on fish—a main staple food and source of income in her native Nigeria.

“My current research activities cover the use of tilapia and prawn as bio indicator organisms in aquatic pollution studies such as pesticides, fertilizers, and crude oil,” says Okogbue. These pollutants threaten aquatic stocks and biodiversity.”

Nigeria is a large consumer of fish and fish products in Africa. The country is well watered by the Benue and Niger rivers, intricate networks of creeks and tributaries, the Niger Delta, and a long coastline. Fish are the cheapest and most plentiful source of dietary protein, and small-scale fishing is a critical and subsistent source of food and employment. Women are highly involved in fish production, processing, and marketing. The work is labor intensive, and it is vulnerable to low productivity and high post harvest losses.

Okogbue is very motivated to improve productivity for the women and families who depend on fishing for their nutrition and livelihoods. In her research work, she focuses on both ends of the spectrum: from the health and hazards facing aquatic organisms that people are fishing to the ways they can be processed and preserved postharvest to reduce waste and improve returns.

Currently, she is conducting toxicology tests on *Sarotherodon melanotheron*, a brackish water tilapiine fish known as black chin tilapia, and *Macrobrachium macrobrachion*, a freshwater prawn. Both species are indigenous to the Niger Delta region. She is testing the effects of their exposure to common agro-chemicals—pesticides, fertilizers, and oil spills remediators.

“Fertilizers and liming agents also are used for oil spill remediation,” explains Okogbue. We look at their toxicity and cumulative tendencies to see what effects they have on the aquatic organisms and to what extent they are stored in the tissues of the fish and prawns. The aim of Okogbue’s research is to generate

baseline reference data, and build a better understanding of thresholds to promote safer practices and dosage levels.

Once the fish is caught, Okogbue is concerned about the high losses most fishermen experience because of the lack of technologies to keep them fresh. “We need to optimize the use of fish and reduce postharvest losses,” she says. “Traditionally, what isn’t sold fresh is dried or smoked. But that’s not enough. We need to find more ways to process, preserve, and package these catches. Using nobbed, fileted, canned, or powdered fish, for example, could expand products and marketing potential.”

Okogbue would like to form extension networks and develop training workshops to reach women fish processors and introduce them to better preservation techniques and technologies. “I also want to help women work on a bigger, more industrial scale,” she adds. “By subsidizing material and equipment to provide access to large-scale production, we can increase incomes and empower women financially.”

In terms of her own advancement, Okogbue is completing a PhD in Fisheries and Hydrobiology at the University of Port Harcourt, Nigeria. She is also a lecturer at the Federal Polytechnic, Ekowe, and wants to hone her teaching and writing skills, join professional bodies, and build a list of publications.

Okogbue sees AWARD as offering her the exposure and challenge she needs. “AWARD has pushed me to develop the road map that I need to achieve my purpose as an agricultural scientist,” she says. “It is helping me see where I want to go, what I need to get there, and how to acquire it.”

Okogbue also values the leadership development components of AWARD. The institution where she teaches is the youngest polytechnic in Nigeria. “We are pioneers,” she says. “As the head of a department, I want to set the pace. I know that I need leadership skills to carry my team members along—and I must be creative and innovative in the process.”

She sees the research connections, trainings, and mentoring from AWARD as offering her opportunities that she could not obtain on her own. “I’m on the right course,” she asserts. “I’m doing what I love—teaching, researching, and talking about food and agriculture.” And, yes, she still loves to cook.

Okogbue is one of a growing number of African women agricultural scientists who have won an AWARD Fellowship. AWARD is a career-development program that equips top women agricultural scientists across sub-Saharan Africa to accelerate agricultural gains by strengthening their research and leadership skills through tailored fellowships. AWARD is a catalyst for innovations with high potential to contribute to the prosperity and well-being of African smallholder farmers, most of whom are women.

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