



2013 AWARD Fellow
Nina Nawanjaya Wambiji

Position	Research Officer I
Institution	Kenya Marine and Fisheries Research Institute
Country	Kenya
PhD	Fisheries, University of the Ryukyus, Japan, 2011
Mentor	Dr. Santie de Villiers, Senior Lecturer, Pwani University, Kenya

Research area: Use of molecular techniques to explore using fish physiology and genetics to increase production for coastal people.

Nina Nawanjaya Wambiji grew up in Njoro, Kenya, inspired by her father, a lecturer in agronomy at Egerton University, and by her mother, the chief nursing officer of the university's sanatorium, who told her daughter that her firm handshake made her well-suited to become a veterinary officer or a farmer. For her post-secondary education, Wambiji traveled to India for studies in zoology and limnology, then to Japan for her doctorate in Marine and Environmental Sciences (Fisheries Science).

Wambiji is particularly passionate about the potential of rabbitfish, or *tafi*, as Kenya's coastal fisherfolk call this popular species. "Since it has neither scales nor bones, it is easy to prepare and eat, making it a preferred fish for women in particular," says Wambiji. "However, the dorsal fin needs to be carefully handled because it has a venomous spine."

Data on rabbitfish—especially the molecular aspects—are not fully understood, Wambiji reports. She is interested in pertinent questions, such as how much is being caught, where it goes, the measurable effect on the fish population, and the influence of climate change.

Wambiji is an expert in fish physiology/genetics, which she is pursuing in order to improve the lives of coastal people, especially women. Her research takes a holistic approach: understanding fish movement and interrelationships within the Indian Ocean is critical to improving the prospects for fish populations. By understanding the issue of dwindling fish populations, fisherfolk can be encouraged to use more environmentally friendly fishing methods. For instance, the depletion of young marine fish can be avoided by influencing fishing methods, fishing areas, and gear used.

Currently, Wambiji is a team leader in Research sub-component (Component 1- Sustainable Management of Fisheries Resources) under the Kenya Coastal Development Project at the Kenya Marine and Fisheries Research Institute (KMFRI). This World Bank-funded project aims to improve coastal fisheries' productivity by promoting sustainable exploitation of fisheries resources and achieving greater economic benefits for

fisherfolk. This project requires a quota of 35 percent women, who must be directly involved in project activities, such as planning, data collection, tool development, training, and marketing.

Wambiji enjoys working closely with communities, “getting out of the lab and talking to the fisherfolk,” inspiring and providing new ideas that end up becoming research questions. “I love to take off my scientist’s hat, and learn from the community,” she says. “I have learned to understand and respect their religion and customs. I sit down among them—there is no head table in the community meetings that I hold.”

Recognizing traditional roles—men fish, and women sell the catch—Wambiji sensitizes communities and her fellow researchers about how women can contribute to the research process. She works with beach management units, where men hold the chair positions and women are secretaries or treasurers. However, women can now participate in data collection. Wambiji and her team also train these groups on fish conservation issues, market preparation, and cash management.

Returning from Japan equipped with the new knowledge and skills, Wambiji hopes to set up a molecular lab for fish genetics at KMFRI, which would be a first in Kenya. She aspires to raise the funds for this effort and build up a team of fish biologists, who will engage molecular techniques, and who share her interest in gender responsiveness and coastal livelihoods. “My AWARD Fellowship and my mentor—with her excellent network around molecular lab techniques—will be crucial to my reaching my goals,” she says. “I also plan to compete for AWARD-sponsored advanced science training at Biosciences east and central Africa (BecA).”

Seeing fellow scientists becoming interested in her work, and junior colleagues asking her for advice and assistance gives Wambiji great satisfaction and joy. “I am looking forward to increasing my leadership skills and visibility, and sharing forward what I will learn during the fellowship. I have always wanted to inspire more girls and boys to become fisheries scientists.”

Wambiji 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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