



2011 AWARD Fellow  
**Mary Makhokha**

<b>Position</b>	Lecturer, Water and environmental engineering
<b>Institution</b>	Kenyatta University
<b>Country</b>	Kenya
<b>PhD</b>	Agriculture (Groundwater resource management) Kyoto University, Japan, 2008
<b>Mentor</b>	Joy Obando, Professor, Geography department Kenyatta University

*Research area: Managing water resources effectively for both human consumption and agricultural production, focusing on the effect of climate change on water resources, and looking at the vulnerability of local communities.*

Mary Makokha believes that in agriculture, water is life, and she is committed to doing what she can as a scientist to ensure that Kenyans, especially those in rural areas, have access to it. “Most of the population lives in rural areas, 80 percent of which are semi-arid,” she says. “This means that 10 million people out of a total population of 37 million are living without enough water.”

Makokha says there are many water issues to grapple with in Kenya. “Children are dying because they are drinking dirty water. People are eating frogs, and wild leaves that are poisonous.” In 2009 the country suffered from a severe drought. “When the rains finally came, the government didn’t have an emergency flood plan, so people drowned,” she says. “We had droughts and drowning at the same time—and today there is still water rationing in Kenya.”

Makokha asserts that rainwater reservoirs are needed throughout the country, and is also very interested in groundwater monitoring in Nairobi, the capital. “For example, we now have nine bore holes [wells] at Kenyatta University, but there are no standards in place to ensure the quality of the water. And private property owners in the city are digging their own wells.” Makokha is hoping to get funds to establish a groundwater monitoring center, which, among other things, would enable water to be collected and reused for irrigation. She would also like to develop affordable water filters for household use in rural communities.

Right now Makokha is working with students and undergraduates at Kenyatta University. “In the short term, I expect to supervise master’s students, PhD students, and to continue collecting data on groundwater levels in Nairobi. Eventually, I hope to become a senior lecturer and then a professor of water resource management, and later I’d like to establish my own NGO.”

As a lecturer and mother of two young children, Makokha struggles to find a good work-life balance. “I cannot travel to do research in the U.S. because I have to take care of my family.”

Makokha anticipates gaining leadership skills as an AWARD Fellow, along with enhanced opportunities for networking. “You can’t do research without networking,” she stresses. She also looks forward to learning

to write research proposals. "I have tried to write proposals in the past with no success. AWARD is like a goldmine, giving me what I need now."

*Makokha is one of a growing number of African women agricultural scientists who have won an AWARD Fellowship. AWARD is a professional development program that strengthens the research and leadership skills of African women in agricultural science, empowering them to contribute more effectively to poverty alleviation and food security in sub-Saharan Africa. AWARD is generously supported by the Bill & Melinda Gates Foundation and the United States Agency for International Development. For more information, visit [www.awardfellowships.org](http://www.awardfellowships.org)*

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