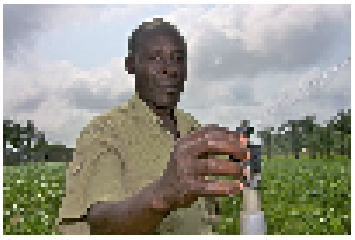
Emerging Priorities

A food secure world; how Australia can help

Water for wealth and food security

August 2012



Ghanaian farmer Edward Ahiabor has transformed 8 hectares of unpromising beachside land into a thriving commercial farm using motorised pumps. (Photo: Joe Ronzio)

The International Water Management Institute, headed by Australian Dr Colin Chartes, was awarded the Stockholm Water Prize at last year's Stockholm World Water Week. For this year's event, being held from 26 August, IWMI have released research that finds that smallscale irrigation schemes can protect millions of farmers from food insecurity and climate change in sub-Saharan Africa and South Asia. A summary of the report follows and more information and the report can be found here.

As food prices escalate globally due to the failed monsoon season in Asia and the "super drought" in the US, the International Water Management Institute (IWMI), a CGIAR consortium research center, released a paper for Stockholm World Water Week titled "Water for wealth and food security: Supporting farmer-driven investments in agricultural water management" that find expanding the use of smallholder water management techniques could increase yields up to 300 percent in some cases, and add tens of billions of US dollars to household revenues across sub-Saharan Africa and South Asia.

"We've witnessed again and again what happens to the world's poor—the majority of whom depend on agriculture for their livelihoods and already suffer from water scarcity—when they are at the mercy of our fragile global food system," said Dr. Colin Chartres, director general of IWMI. "However, farmers across the developing world are increasingly relying on and benefitting from small-scale, locally-relevant water solutions."

The assessment quantified the potential reach and possible additional household revenue for a number of different on-farm and local community water solutions.

The three-year AgWater Solutions Research Initiative unearthed for the first time the scale at which enterprising smallholder farmers themselves are driving this revolution by using their own resources innovatively rather than waiting for water to be delivered.

Groundwater can be used for agriculture even during dry periods (Photo: IWMI)

"We were amazed at the scale of what is going on," said IWMI's Meredith Giordano, who coordinated the initiative. "Despite constraints, such as high upfront costs and poorly developed supply chains, small-scale farmers across Africa and Asia have moved ahead using their own resources to finance and install irrigation technologies. It's clear that farmers themselves are driving this trend."

Partners in the AgWater collaboration believe the implications of the work could be profound, especially for donors and private investors committed to boosting incomes and livelihoods in the world's poorest countries by improving farmer access to water resources.

The research—a collaborative effort involving several international and national partners and funded by the Bill & Melinda Gates Foundation—provides the best evidence to-date on the scale and potential economic benefits of smallholder water management in sub-Saharan Africa and South Asia.

Water is a major constraint on food production for millions of smallholder farmers. While water resources are often sufficient, farmers lack the means to harvest it, which limits crop production to the rainy season and diminishes income opportunities.

Of sub-Saharan Africa's abundant renewable water resources, the UN Food and Agriculture Organization reported that only 3 percent are withdrawn for agriculture. Approximately 4 percent of arable land is equipped for irrigation, of which less than 6 percent is serviced by groundwater.

Experts believe that improving water management capabilities could unleash smallholder farming and it could become a major driver of economic growth, poverty reduction and food security.

"The technologies for smallholder water management are already with us," says Giordano. "Cheap