

Demand for water threatens small farmers in Botswana and Sub Sahara



by The Telegraph Reporter
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Increasing demand for water continues to threaten the livelihood of millions of small-scale farmers who depend on water for their crops in the Sub Saharan region, including countries like Botswana, Worldwatch Institute, the global environmental research organisation, said.

The institute's Nourishing the Planet Project points to low-cost, small-scale innovations to better manage the resource. Worldwatch's recently released State of the World 2011: Innovations that Nourish the Planet report showcases initiatives to increase the availability of water for crops that can help farmers improve crop productivity and become more food-secure.

"In sub-Saharan Africa, for example, only 4 percent of the cultivated land is currently equipped for irrigation, compared with 18 percent in the rest of the world. But there is great potential to expand irrigation with small-scale solutions," Danielle Nierenberg, Nourishing the Planet co-project director said.

It has been found out that 70 percent of the world's freshwater is used for irrigation, and global water resources are drying up as climate change takes hold and population growth continues.

About 60 percent of the world's hungry people live in South Asia and sub-Saharan Africa—most of them on small farms—where they do not have a reliable source of water to produce sufficient yields.

"As global food markets become increasingly volatile, efficient water management on farmers' fields can help strengthen food self-sufficiency in the long-term," added Nierenberg.

Over the past 15 months, the Nourishing the Planet team conducted on-the-ground research in 25 countries in sub-Saharan Africa. Researchers met with over 250 farmers' groups, scientists, NGOs, and government agencies that are working to alleviate hunger and poverty while also protecting the environment.

In sub-Saharan Africa, 95 percent of cropland depends on rain, and climate scientists predict that rainfall on the continent will decline in the coming decades.

Nourishing the Planet recommends three models for effective water management that can be replicated and scaled-up around the world. These recommendations are for the use of human-powered pump as the foot-operated treadle pump enables 2.3 million farmers in the developing world—some 250,000 in sub-Saharan Africa—to boost crop productivity, improve harvest reliability, and raise incomes.

It also recommends the affordable micro-irrigation, which will include a suite of low-cost drip irrigation technologies, to help farmers use limited water supplies more efficiently, often doubling water productivity.

One study found that after a year of using these systems, villagers in Benin had higher incomes and protein in their diets. Nourishing the Planet also advised countries on more effective use of rainfall. It said that conservation tillage method that leave the soil intact, timely weeding and mulching, and planting vegetative barriers all help to maximise green water, or rainwater stored in the soil and plants as moisture.

Worldwatch Institute's latest study has shown that in sub-Saharan Africa, just 4 percent of the cultivated land is equipped for irrigation while in Africa, 14 million people migrate to cities each year because they have given up on agriculture.

The research also found out that 9 African countries allocate at least 10 percent of their national budgets to agriculture, despite the crucial role it plays.