



PHOTO DAVID BRAZIER

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5 WATER SMART AGRICULTURE

IMPORTANCE

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In Africa, only about 5 percent of all arable land is irrigated. In Asia, a little more than a third. Research shows there is huge potential to improve livelihoods and agriculture productivity using better methods to capture, store, and conserve rainfall, and use groundwater and river flows to irrigate land. Smallholder farmers account for about 80 percent of all agricultural production in Africa and Asia. They are the key to a global agricultural boom.

PROBLEM

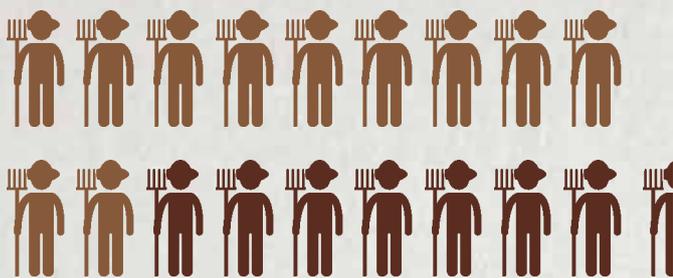
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Farmers in developing countries often struggle to produce enough food, not because water is scarce, but because they lack access to water or lack the means to get water to their crops. Despite ample groundwater resources in many parts of the world, smallholders, and especially women smallholders, don't have physical access to water or face economic and institutional constraints.

“ Sound agricultural water management has the potential to lift hundreds of millions of people out of extreme poverty, providing food security for families that otherwise face chronic hunger. ”

CHARLOTTE DE FRAITURE, WLE STEERING COMMITTEE MEMBER AND PROFESSOR
OF WATER & LAND DEVELOPMENT AT UNESCO-IHE INSTITUTE FOR WATER EDUCATION

Small motor pumps are a promising technology to expand irrigated areas in sub-Saharan Africa. The disadvantages are the cost, maintenance and greenhouse gas emissions. If there was 100 percent adoption of motor pumps, tens of millions of \$1.50 a day farmers would be lifted out of poverty.



Rural population reached: 185.5 million including 111 million poor people
 (\$1.50 a day farmers)  = 10 million people

Estimated crop yield increases
Tomatoes 269%, Maize 209%

WHAT WLE IS DOING

The technologies and knowledge are there to make major gains in soil and water productivity for small holder farmers. USD 50 million in newly targeted investments in land and water management could raise the incomes of over a million farmers in SSA. WLE will work with governments, donors and investors to make this a reality. WLE researchers design and promote small-scale irrigation systems, groundwater pumps, and ‘green water’ solutions such as rainwater harvesting and watershed management. Building on previous work from IWMI, IFPRI, FAO and Stockholm Environment Institute, WLE’s continuous engagement with local authorities and donors has:

- ◆ Helped persuade the government of West Bengal, India, to remove constraints to buying and operating small electric pumps.
- ◆ Generated funding for programs to benefit smallholders in Africa, such as a USAID Feed the Future component that focuses on small-scale irrigation expansion.
- ◆ Encouraged the Nigerian government to work with WLE on water-management solutions for dry-season farming and to ‘flood-proof’ areas.

- ◆ Supported decision makers who want to improve soil fertility in degraded areas using soil-testing laboratories in Africa.

Expected Outcomes

By 2017

- ◆ WLE recommendations for investing in smallholder land and water management incorporated into national and state policies, initiatives or programs in South Asia and Sub-Saharan Africa.
- ◆ Support efforts to improve soil productivity in sub-Saharan Africa through laboratories and soil-information systems at the national and farm level.

By 2025

- ◆ Encourage targeted investments in land and water management, with the goal of doubling the incomes of at least 1 million smallholder farmers in South Asia and sub-Saharan Africa from USD 50 million of new investments informed by WLE research.

Sources AgWater Solutions Project, FAO, International Food Policy Research Institute

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