



Solar powered irrigation, Ethiopia
Photo: IWMI

Feed the Future Innovation Laboratory for Small Scale Irrigation (ILSSI)

Expanding small scale irrigation (SSI) has the potential to vastly increase areas under irrigation and provide direct benefits to millions of farmers in sub-Saharan Africa. The Feed the Future Innovation Laboratory for Small Scale Irrigation (ILSSI) aims to contribute to an increase in profitable, sustainable and gender-sensitive irrigation to support inclusive agricultural growth, resilient food systems, and nutrition and health outcomes, particularly for vulnerable populations.

Benefits from small scale irrigation

ILSSI research shows that farmer-led small scale irrigation is a key contributor towards meeting food production needs into the future, while multiple pathways link SSI with improved nutrition and food security. Our research also indicates that SSI can be sustainable using appropriate technologies and practices, such as conservation agriculture methods and tools that enhance on-farm water management. SSI is profitable for farmers, generating agricultural-led economic growth and enhancing household nutritional security. The potential for farmer-led irrigation to benefit millions of smallholder farmers is increasingly recognized and mainstreamed into agricultural policy and investment.

Refining scaling approaches through research and partnerships

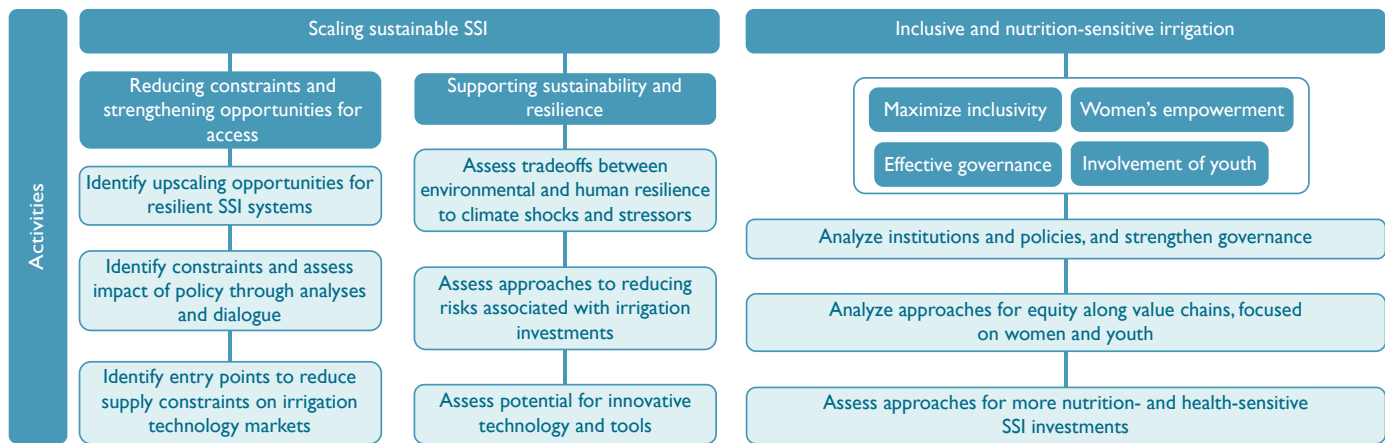
The challenge that remains is how best to inclusively expand the use of small scale irrigation within environmentally sustainable limits. Building on both research findings and experiences of stakeholder engagement, while also drawing on its established network of partnerships, ILSSI (2019-2023) will focus on addressing three questions:

- » How to scale SSI through reducing constraints and strengthening opportunities for access?
- » How to scale SSI to be sustainable and support resilience?
- » How to support maximization of inclusive and equitable benefits and gender, youth, and nutrition sensitive SSI investments?

To answer these questions, ILSSI's research activities will emphasize scaling opportunities. Our work will continue to be centred on partnerships: national universities; research institutes; international non-profits; and private sector technology innovators.

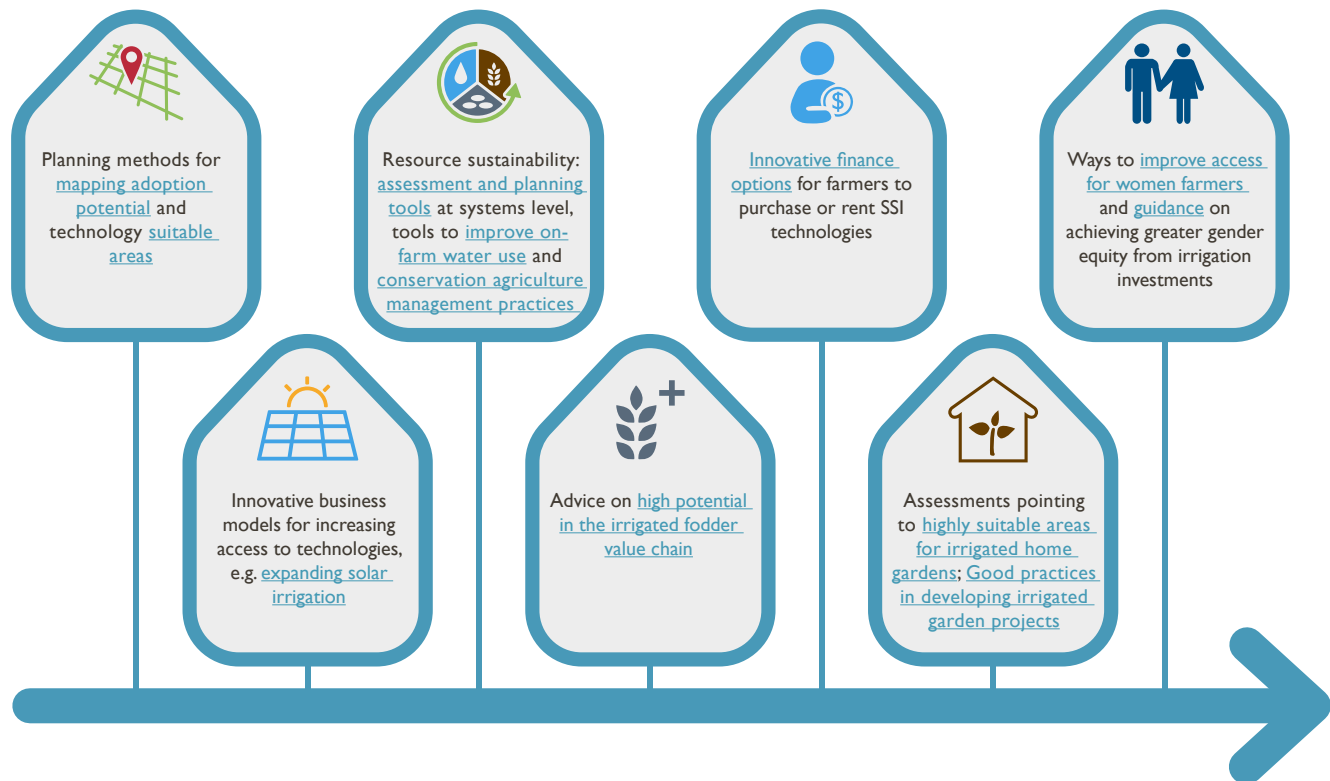
ILSSI will focus on Sub-Saharan Africa (e.g. Ghana, Ethiopia, and West African region), while identifying knowledge gaps in other regions. SSI will be tested in 'real world' conditions alongside surveys and qualitative studies. ILSSI will also apply systems level analysis using the Integrated Decision Support System (IDSS) and agent-based modelling.

ILSSI research areas (2019-2023)



Emerging evidence on entry points for expanding farmer-led irrigation

Systems level analysis under ILSSI identified areas where SSI can be feasibly and sustainably expanded in Ethiopia, Ghana and Tanzania, based on suitable land and water resources, as well as market factors. However, research also points to trade-offs, which requires better targeting of activities toward specific programmatic goals. Positive entry points to support scaling are also emerging.



Reaping the benefits through further research

Continued research can contribute to addressing the constraints that are currently preventing farmer led irrigation from expanding in an equitable way. Improving the rate of expansion along inclusive and sustainable pathways will be key to ensuring more farmers reap the benefits.

The *Feed the Future Innovation Laboratory for Small Scale Irrigation (ILSSI)* is led by *Texas A&M University* with partners including the *International Water Management Institute (IWMI)*, the *International Food Policy Research Institute (IFPRI)*, and the *International Livestock Research Institute (ILRI)*. For more information, visit: ilssi.tamu.edu.

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