

SEIFU TILAHUN & NICOLE LEFORE

ENSURING THE CAPACITY

to sustain water for
agriculture & resilience

Sub-Saharan Africa Knowledge Exchange:

Investing in Farmer-led Irrigation Development in Sub-Saharan Africa: Business, Development, and Research Practices


26-27 April 2023, Accra, Ghana



INITIATIVE ON
West and Central African
Food Systems Transformation

IWMI
International Water
Management Institute

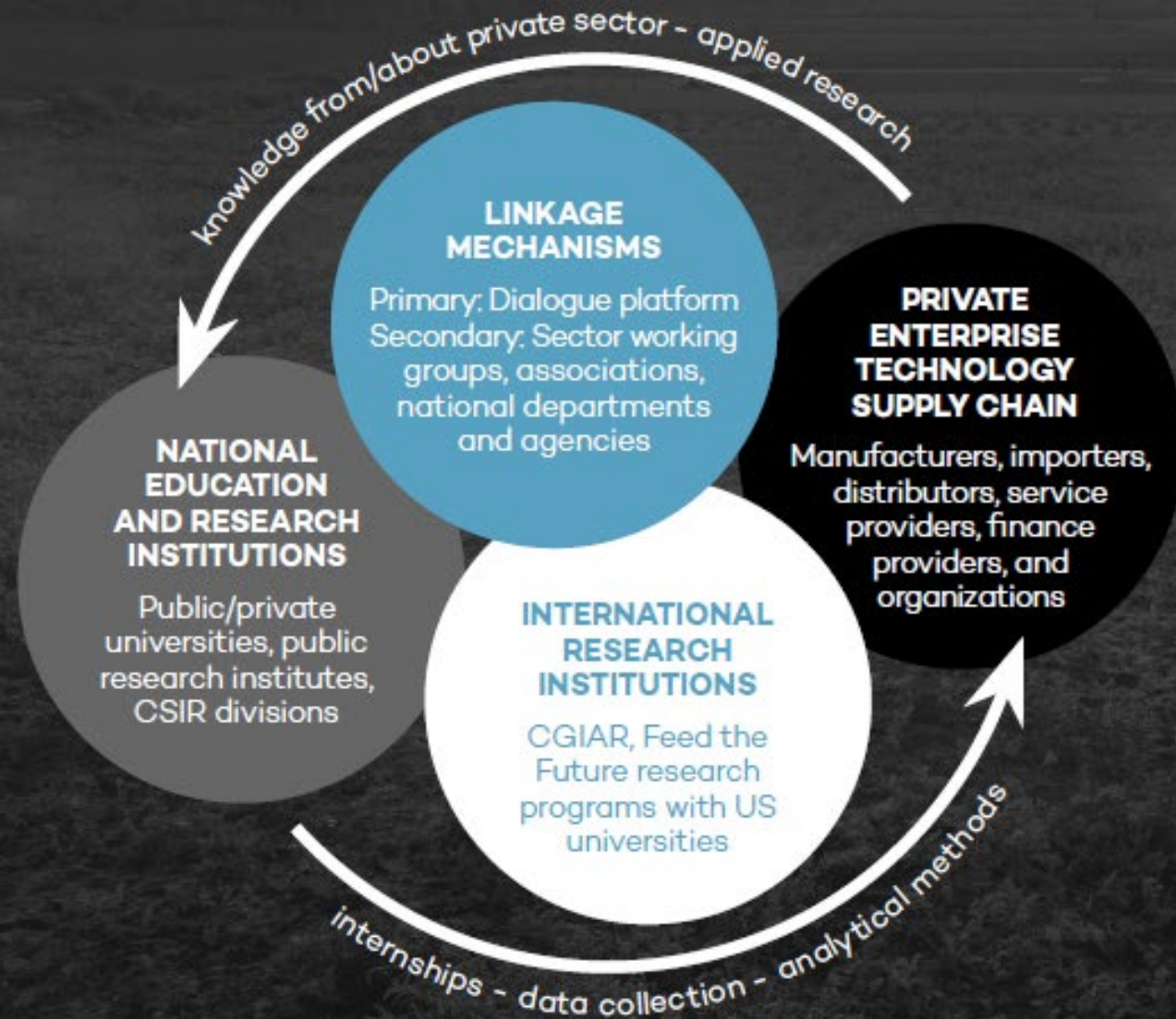


A high-angle photograph of a rural landscape. In the foreground, a person in a blue shirt is crouching on a corrugated metal roof, working on several large, blue solar panels. The roof is part of a building with a concrete wall. The background shows a vast, flat area with patches of green vegetation, brown soil, and small water bodies under a clear blue sky. The text is overlaid on the left side of the image.

Understand demand for science and INFORMATION, then strengthen supply of relevant SKILLS.

CASE 1

Facilitate linkages, enhance trust, and co-create knowledge across sectors and actors.



IMPROVING THE
INNOVATION
ECOSYSTEM AT

BiT MAKERSPACE

A common space where
ideas, equipment, and
knowledge are shared

- building scientific skills and application in the private and public sectors
- supporting entrepreneurship
- developing relevant skills for industry

AgriTech Hackathon

2021, 2022, & 2023



HACKATHON OUTCOMES

➤ Rensys Engineering posed six challenges

- HCD training and pitching: >75 students
- Internship: 13 students

➤ Developed ICT systems for Rensys to expand sales of solar pump

- Client assessment tool
- Digital marketing and sales application
- Market linkage and cold room management system



BIT MAKERSPACE OUTCOMES

6

IP Applied



8

Startup
Business
Plan



1

International
Recognition



5

National
Awards



3

International
Competition
Awards





CASE 2

Support sustained capacity for decision-makers, scientists, and other information users to analyze, plan, monitor water resources.



SUPPORTING THE SCIENTIFIC TRAINING OF GRAD STUDENTS

LONG-TERM TRAINING

- Irrigation management & engineering program
- Graduate students:
4 PhD,
>24 MSc



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METHODS FOR RESEARCH, ANALYSIS, AND PLANNING

- IDSS
SWAT, APEX,
FARMSIM
Decision support tools and analysis:
6 academic staff
- Surveys
- Field/action research
- Data collection



SUPPORTING THE SCIENTIFIC TRAINING OF GRAD STUDENTS

LONG-TERM TRAINING	METHODS FOR RESEARCH, ANALYSIS, AND PLANNING	THEMATIC TRAINING
<ul style="list-style-type: none">→ Irrigation management & engineering program→ Graduate students: 4 PhD, >24 MSc	<ul style="list-style-type: none">→ IDSS SWAT, APEX, FARMSIM Decision support tools and analysis: 6 academic staff→ Surveys→ Field/action research→ Data collection	<ul style="list-style-type: none">→ Agricultural Water Management→ Water quality assessment→ Conservation agriculture→ Shallow groundwater assessment for SSI



SUPPORTING THE SCIENTIFIC TRAINING OF GRAD STUDENTS

FARMERS, RESEARCHERS, & OTHERS

LONG-TERM TRAINING	METHODS FOR RESEARCH, ANALYSIS, AND PLANNING	THEMATIC TRAINING	MULTIPLE LEVELS IN-FIELD
<ul style="list-style-type: none"> → Irrigation management & engineering program → Graduate students: 4 PhD, >24 MSc 	<ul style="list-style-type: none"> → IDSS SWAT, APEX, FARMSIM Decision support tools and analysis: 6 academic staff → Surveys → Field/action research → Data collection 	<ul style="list-style-type: none"> → Agricultural Water Management → Water quality assessment → Conservation agriculture → Shallow groundwater assessment for SSI 	<ul style="list-style-type: none"> → Farm/ Local: >120 HH farmers → National research institutes, university, government

KEY POINT

Smallholders are investing in irrigation with resilience and food security benefits. Policy, planning, and monitoring need to keep pace.

KEY MESSAGE

Scientific trainings and engagements in innovation centers are both filling needs for different types of skills that support national goals for irrigation and water management.

A person is standing in a field, possibly a farmer or a worker, holding a long pipe or hose. In the background, there are solar panels and some structures, suggesting an agricultural or irrigation setting. The entire image has a blue tint.



Thank You

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Management Institute



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The U.S. Government's Global Hunger & Food Security Initiative



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WATER and
ENERGY
for FOOD



WORLD BANK GROUP
Water



GWSP
GLOBAL WATER
SECURITY & SANITATION
PARTNERSHIP