



**SEIFU TILAHUN**

**ENSURING THE  
CAPACITY**

**to sustain water for  
agriculture & resilience**

MARCH 1, 2023, WASHINGTON, DC

SESSION 4

INNOVATION LAB FOR SMALL SCALE IRRIGATION SYMPOSIUM



**SEIFU TILAHUN**

**ENSURING THE  
CAPACITY**

**to sustain water for  
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# Supporting the scientific training of graduate students





# SUPPORTING THE SCIENTIFIC TRAINING OF GRAD STUDENTS

## LONG-TERM TRAINING

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- 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"><li>→ Irrigation management &amp; engineering program</li><li>→ Graduate students: 4 PhD, &gt;24 MSc</li></ul>	<ul style="list-style-type: none"><li>→ IDSS SWAT, APEX, FARMSIM Decision support tools and analysis: 6 academic staff</li><li>→ Surveys</li><li>→ Field/action research</li><li>→ Data collection</li></ul>	<ul style="list-style-type: none"><li>→ Agricultural Water Management</li><li>→ Water quality assessment</li><li>→ Conservation agriculture</li><li>→ Shallow groundwater assessment for SSI</li></ul>





# SUPPORTING THE SCIENTIFIC TRAINING OF GRAD STUDENTS

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



## **GRAD STUDENT OUTCOMES**

- 5 ILSSI students continued doing their PhD**
- Over 25 peer reviewed OA journal publications increasing individual and institutional visibility and knowledge transfer**



- Story of Nigus**
  - Employed at Irrigation and Low Land Development Bureau**
  - Project coordinator for Seqota declaration project**
  - Study and design of small and medium scale irrigation**
  - Installation of solar power irrigation and drip system**



**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







**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.**





**USAID**  
FROM THE AMERICAN PEOPLE



**FEED THE FUTURE**  
The U.S. Government's Global Hunger & Food Security Initiative



TEXAS A&M  
**AGRILIFE**

**IWMI**  
International Water  
Management Institute



**ILRI**  
INTERNATIONAL  
LIVESTOCK RESEARCH  
INSTITUTE



FEED THE FUTURE INNOVATION LAB FOR SMALL SCALE IRRIGATION

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