



INNOVATION LAB FOR  
Small Scale Irrigation



# FARMER-LED IRRIGATION MULTI-STAKEHOLDER DIALOGUES:

## *Inclusive and Sustainable Scaling of Farmer-Led Irrigation*



Submitted to:

The Feed the Future Innovation Lab for Small Scale Irrigation (ILSSI)

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## Introduction

The Feed the Future Innovation Lab for Small Scale Irrigation (ILSSI) has facilitated a series of multi-stakeholder engagement, dialogues and initiatives to address small-scale irrigation (SSI) challenges. ILSSI’s approach to facilitating Small Scale Irrigation Multi-Stakeholder dialogues (SSI-MSD) is to engage and interact with relevant, existing platforms to include, where feasible, sustainable SSI scaling and agricultural water management (AWM) agendas.

Four SSI-MSDs have been co-hosted in Ethiopia by the Agriculture Water Management Task Force at the Ministry of Agriculture (MoA) and IWMI/ILSSI since 2020. The 2030 Water Resources Group (2030WRG) hosted at the World Bank has also been involved in co-organizing the series after the third round of dialogues.

The need to ensure food and nutrition security, improve livelihoods as well as the risks from a changing climate continue to make SSI among top national priorities. The Ethiopian Ten Years Perspective Development Plan (2021-2030) places emphasis on freeing agricultural production from rain dependency, facilitating agricultural mechanization and irrigation technology, and enhancing private sector engagement, innovative financing and capacity development.

Unlike public-driven SSI development, Farmer led Irrigation Development (FLID) can be defined as a process where farmers take the driver’s seat to improve their agricultural water use, and bring in or develop new ideas and technologies, change investment patterns, and create new knowledge – with involvement of key actors.<sup>1</sup> Recently, FLID has gained interest from government and development actors in Ethiopia as a key approach to facilitate SSI development, achieve food and nutrition security and improve lives of farmers. However, a number of barriers are known to limit the inclusive and sustainable expansion of FLID in Ethiopia. Top constraints include limited access to financial services and to productive resources (especially water and land), weak technology supply chains, unsupportive policy and legal framework, and weak input and output markets.

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<sup>1</sup> Woodhouse, P., G. J. Veldwisch, J. P. Venot, D. Brockington, H. Komakech, and A. Manjichi. 2017. “African Farmer-Led Irrigation Development: Re-framing Agricultural Policy and Investment?” *The Journal of Peasant Studies* 44 (1): 213–33

With the aim of looking deeper into overcoming constraints to accelerate scaling of FLID, the 5<sup>th</sup> round of SSI-MSD was held on May 12, 2022 with the theme ‘Scaling Sustainable and Inclusive Farmer Led Irrigation’. The dialogue had the following main objectives:

- To understand the current status of scaling FLID in Ethiopia, including the potentials that could be tapped and key constraints that need to be addressed
- To identify key interventions needed to catalyze FLID at scale in Ethiopia in a sustainable and inclusive manner

The event took place at Capital Hotel Addis Ababa in a hybrid format with options for participants to join in-person or virtually. The session provided a platform for key stakeholders and actors across irrigated agricultural value chains to learn about AWM TFs activities, about the status of FLID in Ethiopia and how certain principles apply to a new Food System Resilience Program. The session also aimed to facilitate stakeholder discussions on the challenges to scaling FLID and identify measures to address them.

This round of dialogues brought together a total of 41 individuals (18% women). The participants joined from over 30 different stakeholder organizations ([Annex II](#)). The participants represented a diverse group of stakeholders including government agencies, local and international research and academia, development partners, private sector enterprises and market actors (including irrigation technology and service providers, and MFIs). Highest proportion of the participants came from local and international research and academic institutions (33%), followed by government institutions (28%), development partners (24%), and private sector (15 %) as summarized in Figure 1.

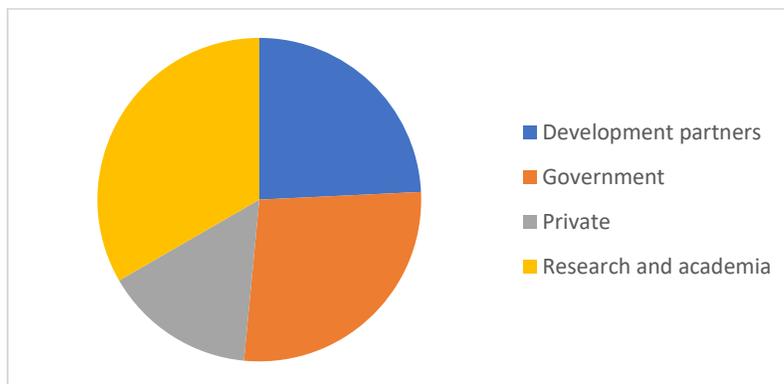


Figure 1. Participant stakeholder groups

The dialogue started with an opening and welcome speech by Abdulkarim Seid (IWMI Country and Regional Representative) where he highlighted the importance of scaling SSI and the interactive learning and collaboration between irrigated value chain actors and other stakeholders by sharing their experiences, their insights, and potential solutions. Zeleke Belay, a Senior Irrigation Specialist at the Ministry of Agriculture then provided an update on recent activities of the AWM-TF. This was followed by Minh Thai, a Senior Researcher at IWMI who set the scene by highlighting the current status of FLID in Ethiopia. Zeleke held another session on the application of FLID concepts and principles in the upcoming ‘Ethiopia Food System Resilience Program’. The first session ended with a regional experience shared by Ollando Allan - a senior engineer at Ugandan Ministry of Agriculture, Animals, Industry and Fisheries. He presented on ‘FLID interventions under the Microscale Irrigation Program in Uganda’ and shared important experiences and lessons learned during implementation.

In session 2, separate breakout discussions were held for in-person and virtual participants. In-person participants formed three groups and virtual participants formed one group to discuss and validate the key scaling constraints in terms of:

- *Land and water resources related challenges with focus on shallow groundwater development*
- *Farmer access to finance with a focus on opportunities to leverage private and public finance*
- *Farmer access to the technology*
- *Policy and regulatory aspects with focus on tax exemption regulation and its implementation*
- *Markets with focus on access to input and output markets for irrigated agriculture*

The key takeaways from the breakout groups were summarized and reported back to the plenary. The 3<sup>rd</sup> session followed with focus on interventions to address the constraints validated in session 2. The aim of the session was to identify suitable interventions to scale FLID. During the reporting back of each group, participants were asked to reflect/agree/disagree and come up with top selected activities per constraint topic.

The final session was a panel discussion led by two representatives from MoA (SSI and Mechanization Directorates) and a private irrigation technology supplier (Rensys Engineering Plc.). The aim of the panel discussion was to prioritize on actions/interventions suggested in session 3, to obtain concurrence among participants, and to identify roles of actors (government, private sector, development partners, financial institutions). To achieve this, the discussion was guided by the questions: (1) *From the interventions suggested by the groups, what would be the top 3 interventions that new programs should tackle first to unlock the potential for FLID in a sustainable and inclusive manner?* (2) *What role could your organization/company play in these activities?* (3) *What is the key resource needed and how should it be mobilized to implement the top 3 activities?*

Joy Busolo (Senior Water Resources Specialist at the 2030 Water Resources Group hosted at the World Bank) gave closing remarks, recapping the importance of continued dialogue in scaling FLID in an inclusive and sustainable manner and summarizing the valuable inputs shared during the sessions.

## Highlights

### Updates from Agriculture Water Management Taskforce

The AWM TF has been involved in providing technical support in different areas which are key to small scale irrigation development and scaling FLID<sup>2</sup>. These include provision of technical support for the development of proposal and modalities for National Standard of Irrigation Efficiency Parameters for smallholder irrigation schemes. This development is critical to address the long-standing challenges of underperformance of SSI schemes, sub-standard design and construction related issues, and lack of technical specifications for technologies.

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<sup>2</sup> Presentation by Zeleke Belay on 'Updates on Agricultural Water Management Task Force'. 5<sup>th</sup> Multi-Stakeholder Dialogue on 'Inclusive and Sustainable Scaling of FLID'. May 12, 2022. Addis Ababa, Ethiopia.

Another key development relates to strengthening Public Private Partnerships (PPP) in the irrigation sector. The AWM TF is giving technical support to develop an implementation strategy for PPP in farmer led irrigation development.

The AWM TF has also continued its role in supporting and following up with the set up and implementation of the Irrigation Management Information System of Ethiopia (IMISSET) <sup>3</sup> which is supported by FAO. The objective of IMISSET is to enable informed decision-making in irrigated agriculture development. In addition, the task force is actively contributing to the planning and design of the Micro-Scale Irrigation Technology (MSIT) component of the upcoming Food System Resilience Program funded by the World Bank.

### FLID – status, learnings and applications in FSRP

FLID is recognized as central to the transformation of Ethiopian agriculture, and it contributes to commercialization and productivity, food and nutrition security, inclusion of women and youth and reduction of poverty.

In Ethiopia, FLID involves different groups of farmers and has the potential for socially inclusive irrigation development (Figure 2).

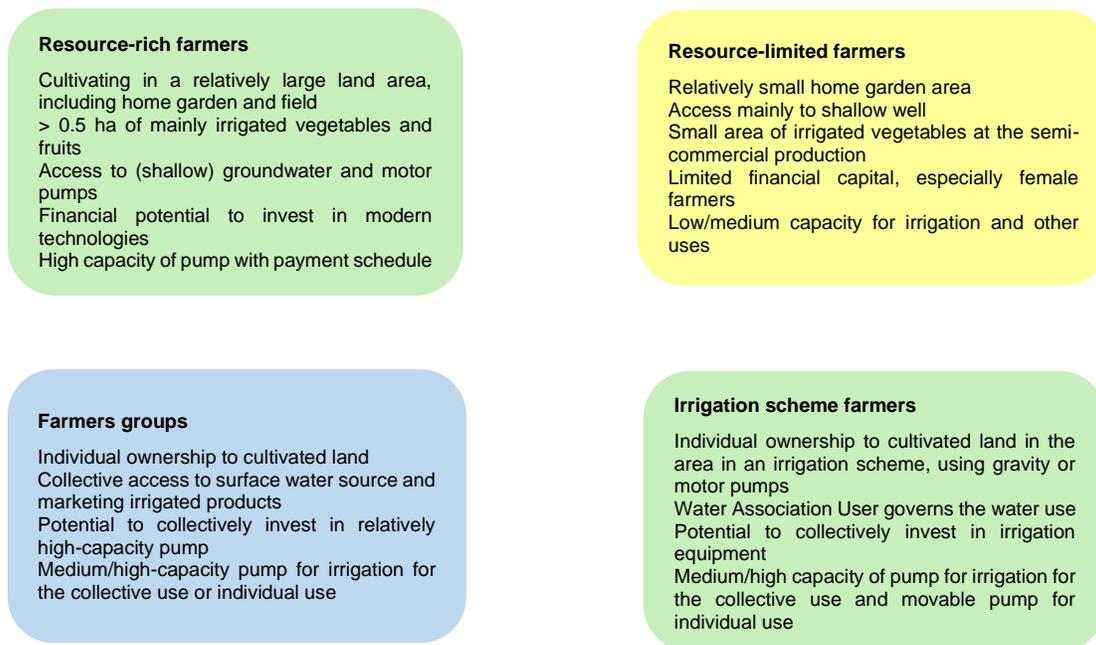


Figure 2. FLID involvement of different groups of farmers. Source: Presentation by Minh Thai<sup>4</sup>

There are existing pathways to scale FLID in Ethiopia including, investments by farmers and the private sector, improving and creating the enabling environment, irrigation and water financing and promoting technologies.<sup>5</sup> These approaches and concepts are being applied in different interventions. There are

<sup>3</sup> <https://imiset.netlify.app/>

<sup>4</sup> Presentation by Minh Thai 'Status of FLID in Ethiopia'. 5<sup>th</sup> Multi-Stakeholder Dialogue on 'Inclusive and Sustainable Scaling of FLID'. May 12, 2022. Addis Ababa, Ethiopia.

<sup>5</sup> Presentation by Minh Thai 'Status of FLID in Ethiopia'. 5<sup>th</sup> Multi-Stakeholder Dialogue on 'Inclusive and Sustainable Scaling of FLID'. May 12, 2022. Addis Ababa, Ethiopia.



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ongoing efforts to address main constraints in FLID in terms of enhancing the policy environment and the development of strategies and programs<sup>6</sup>. Irrigation financing, agriculture water management investment and water management policy, shallow groundwater resource mapping, and rural finance development are among the focus areas in the policy improvement. There are ambitious targets set for FLID (also referred as Micro/Household irrigation) in the recently adopted 10 Years Development Plan of Ethiopia, which plans for 400,000 ha under micro/household irrigation development by 2030.

Regional learnings and experiences from similar interventions, particularly from Uganda, are instrumental in implementing FLID and the envisioned micro/household irrigation interventions in Ethiopia. The objective of Uganda's Micro-Scale Irrigation Program 2020 is to support individual farmers to acquire and utilize microscale irrigation equipment through promotion of appropriate technologies and active involvement of farmers and stakeholders. Farmers can join the scheme if they plan to irrigate up to 2.5 acres, have access to land and water, are able to cover between 25%-75% of the cost, and are willing to grow high value horticultural crops (Figure 3). Diesel and solar pumps are provided along with hose pipe, sprinkler and drip technologies in collaboration and partnerships with financial institutions, equipment suppliers, other value chain actors and the local government.

To overcome financial constraints, a subsidy is used where government covers 25% - 75% of the cost from an established budget line at local government structures, and farmers match the remaining payment by themselves or through loans from MFIs. Capacity building is part of the program where different methods are employed to address awareness gaps of farmers and implementers, as well as to get buy-in from key stakeholders. Mobilization and capacitation of federal and local staff, in person and virtual trainings, technical guidelines, brochures for financial institutions and farmers, mass media campaigns, and demonstrations are implemented. In the first year of the program, over 46,000 people have attended awareness creation events, while 5,952 farmers are approved for procurement and 1000+ farmers are in the process of procuring equipment.

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<sup>6</sup> Presentation by Zeleke Belay 'Application of the FLID Concepts and Principles in the Upcoming Ethiopia Food System Resilience Program (EFSRP)'. 5<sup>th</sup> Multi-Stakeholder Dialogue on 'Inclusive and Sustainable Scaling of FLID'. May 12, 2022. Addis Ababa, Ethiopia.



# Uganda Microscale Irrigation Program



A farmer can join the Micro-scale Irrigation Program if:

 He/she wants to irrigate a small plot of land, up to **2.5 acres**.  
He/she has access to land for **one year or more**.

 He/she can pay for **part of the cost** of the irrigation equipment.

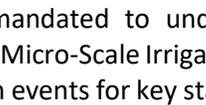
 He/she wants to **grow and sell high-value crops** like horticulture crops and coffee.

 He/she has access to **water** near his/her land.

**Program Objective**

- To support individual farmers to acquire and utilize microscale irrigation equipment

**Technologies**

- Solar pump**  
 **HOSE PIPE**  
 **SPRINKLER**  
 **Petrol/Diesel pump**  
 **DRIP**  


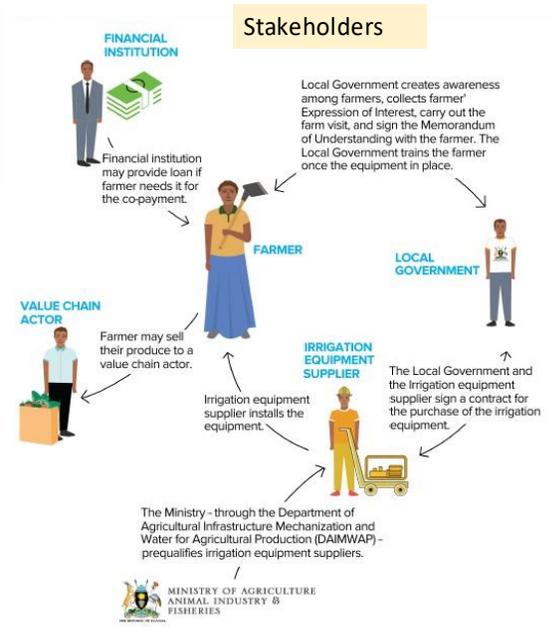


Figure 3. Overview of Uganda Microscale Irrigation Program. Source: presentation by Ollando Allan<sup>7</sup>.

In Ethiopia, MoA is mandated to undertake Smallholder Irrigation Development (SHID), irrigation extension, and support Micro-Scale Irrigation Technology component of the upcoming FSRP. The ministry is planning sensitization events for key stakeholders regarding the tax exemption directive for agricultural machineries including irrigation technologies and parts. In addition, MoA is promoting solar irrigation packages through a subsidy program. It will provide about 120 solar pumps through a co-financing mechanism where farmers pay 40% of the cost in a five-year time span while the other 60% is covered by MoA. There are also considerations to include irrigation technologies and services in a lease financing model in collaboration with the GIZ mechanization program and Development Bank of Ethiopia. For this, technology supplier companies have been selected and implementation of packaged approaches is planned to covers inputs, machineries, and processing facilities. For successful FLI/SHI development, MoA has prioritized strategic issues including: resource mapping for rain water harvesting, surface water, groundwater and spate-flood irrigation; supply chain for water lifting and saving technologies; leveraging the multiplier effects of irrigation (benefit + sustainability); strengthening PPP; irrigation business strategies; linking irrigation with livestock strategies; irrigation technology packages for agriculture commercialization clusters and high value chains; and FLID scheme management.

Under the 'Resilient Small-scale Irrigation Development and Management' component of the FSRP, there are planned interventions on Micro-Scale Irrigation (MSI) or Micro and Household Irrigation (MHI). The objective is to scale FLI by incentivizing farmers to purchase and use micro-scale irrigation equipment for efficient use of irrigation water. The interventions target farm sizes between 0.2 ha (for individuals) and up to 20 ha (for groups of farmers) to utilize easily available water sources (rivers, streams, springs, ponds,

<sup>7</sup> Presentation by Ollando Allan 'Propelling Farmer-led irrigation in Uganda: Experience from the Microscale Irrigation Program'.

wells) using simple technologies<sup>8</sup>. There are government subsidy and co-financing mechanisms for farmers to access such technologies. As part of that, MoA is engaged in the designing of suitable Micro Scale Irrigation Technologies (MSIT), including on farm technologies for water lifting and conveyance, application, and soil moisture management (Figure 4).

## Micro-Scale Irrigation Technologies

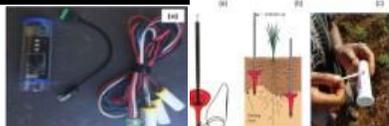
- On-Farm Water Conveyance Technologies**
  - Open Canal (lined)
  - Pipeline (if have slope)
  - Manual Pumps
  - Hydraulic Ram Pump
  - Engine Pumps
  - Solar Pumps
- On-farm Water Application Technologies**
  - Surface irrigation systems
  - Watering can/bucket
  - Hose pipe
  - Lay-flat hose
  - Portable HDPE pipe
  - Perforated spray tube
  - Portable sprinklers
  - Drip
- Soil-moisture Management Technologies**
  - Wetting front detector
  - Soil moisture sensor
  - Water Measuring Devices

Figure 4. Targeted MSIT irrigation technologies. Source: Presentation by Zeleke Belay.

Uganda’s Micro-Scale Irrigation Program has provided valuable insights for adopting and developing implementation guidelines for the FSRP’s micro/household irrigation interventions in Ethiopia. The guidelines will be used to provide uniform procedures for the management of the interventions at national, regional and local levels. The implementation of MSIT and the promotion and dissemination of targeted technologies in Ethiopia will take place in three phases shown in Figure 5 below. The process will be assisted with the use of ICT and a mobile software (similar to) *IrriTrack* for data collection and management based on Ugandan experience.

Some of the key lessons learned from Uganda include need for continued awareness raising and stakeholder engagement focusing on the subsidy, criteria for selection and farmer co-funding obligations; equipping local government for data collection and technology operation and maintenance; and building capacity on irrigated agriculture.

<sup>8</sup> Presentation by Zeleke Belay ‘Application of the FLID Concepts and Principles in the Upcoming Ethiopia Food System Resilience Program (EFSRP)’. 5<sup>th</sup> Multi-Stakeholder Dialogue on ‘Inclusive and Sustainable Scaling of FLID’. May 12, 2022. Addis Ababa, Ethiopia.

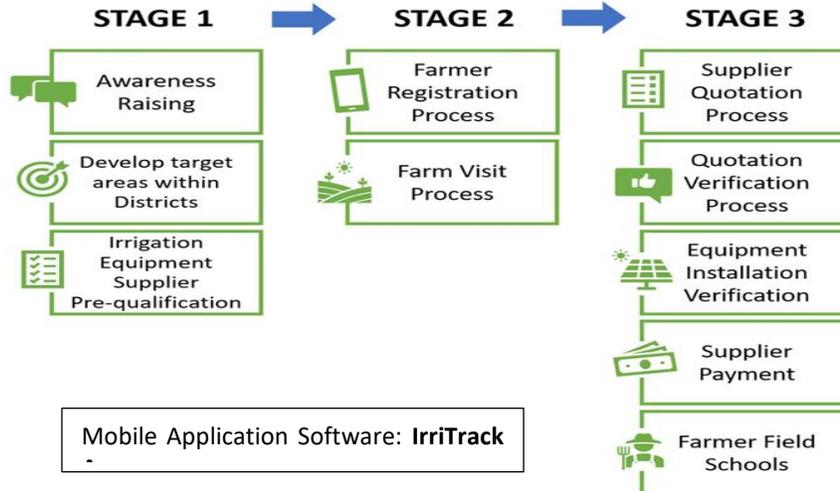


Figure 5. Implementation phases for MSIT. Source: Presentation by Zeleke Belay.

### Validated constraints

In order to expand FLID in a sustainable and inclusive manner, a number of constraints need to be addressed. Based on previous experiences and learnings, five factors/areas were identified for participants to explore in the first breakout session and to come up with a validated set of key constraints. The five factors/areas were:

1. **Land and water resources** related challenges: with focus on shallow groundwater development and related services
2. **Access to finance:** with focus on innovative financing mechanisms and subsidies for farmers to access irrigation technologies
3. **Irrigation technology:** with focus on supply chain
4. **Policy and regulatory issues:** with focus on tax exemption for irrigation equipment and parts, and its implementation
5. **Markets:** with focus on access to input and output markets in irrigated agriculture value chains

Accordingly, the validated challenges with respect to the above areas is highlighted in Figure 6. Under the **land and water resources** area, the constraints include limited knowledge and awareness by farmers and district/woreda officers on the development and exploitation of shallow groundwater including drilling services and technology options. Various types of drilling equipment and accessories are in use with inadequate performance and after sales services with limited understanding of the context of variable geology and different type of water sources. Limited availability and access to data and information on groundwater resources and on sustainable use of groundwater is another constraint where farmers, district/woreda officers and drillers have limited access to such information. As a result, users, decision makers and service providers face uncertainties in groundwater exploitation. Also, shallow groundwater drilling and use is not managed for sustainable use (e.g. spacing between boreholes, sustainable extraction limits) and there are gaps in the regulatory framework for groundwater management and its implementation.

When it comes to smallholder **access to finance**, the constraints are viewed from supply and demand sides. From the supply side, most constraints have to do with the business models and financial products and services of rural financial institutions (RFIs). These include high interest rates, collateral-based lending, bureaucratic and complex processes, and documentation requirements by financial institutions.



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Financial services and products are generally input-focused and usually do not cover purchase of equipment, infrastructure development and services like groundwater drilling. Most RFI services are deemed to be inadequately tailored in the context of smallholders (including women) and the rigid payment modalities and schedules do not match with the needs of farmers. On the other hand, agricultural lending for smallholders is considered ‘high risk’ and RFIs may face risks of loan defaulting as a result of climate variability/change, crop failures, and the unpredictable market for irrigated products. In addition, limited finance is made available to RFIs and they prioritize the resources they have to less risky service areas. Poorly developed infrastructure including ICT and mobile network coverage in remote areas, lack of adequate socioeconomic database on farmers, technologies, income, crops, yields, etc. are additional challenges. From the demand side, the seasonal nature of smallholder incomes (usually limited to harvesting seasons) does not match the repayment schedules of RFIs. A key constraint limiting different groups of smallholders (including women and youth) from accessing financial services and products is the lack of collateral. The complicated and highly formal procedures and documentation requirements also discourages farmers from engaging with RFIs. The risks from climate, crop failure, and input and output markets in irrigated value chains also pose uncertainties for smallholders and their expected return on investment.

With regards to **technology supply chain**, the main issues mentioned are limitations in the quality and availability of suitable irrigation technologies and aftersales services. Inadequate technologies and service providers for exploiting groundwater resources including that of improved manual drilling technologies and services are observed as key constraints in groundwater access for smallholders. Manual tube well drilling technologies are time and labour intensive and need to be modified. Suppliers of irrigation technologies and related equipment face severe lack of forex, affecting their business operations and the availability of technologies in local input markets. Lack of electricity and low development of off-grid energy solutions influence cold chain facilities. The support and incentives for local manufacture and assembly of irrigation technologies and spare parts are also not well recognized.

Constraints related to **input and output markets** in irrigated value chains include limited access and insufficient penetration in rural remote areas, shortage of forex for bulk purchase and supply of agronomic inputs, and limited linkages between value chain actors including producers, private sector and RFIs. While cooperatives have significant roles in facilitating access to input and output markets for smallholders, their capacity is underdeveloped and inefficient.

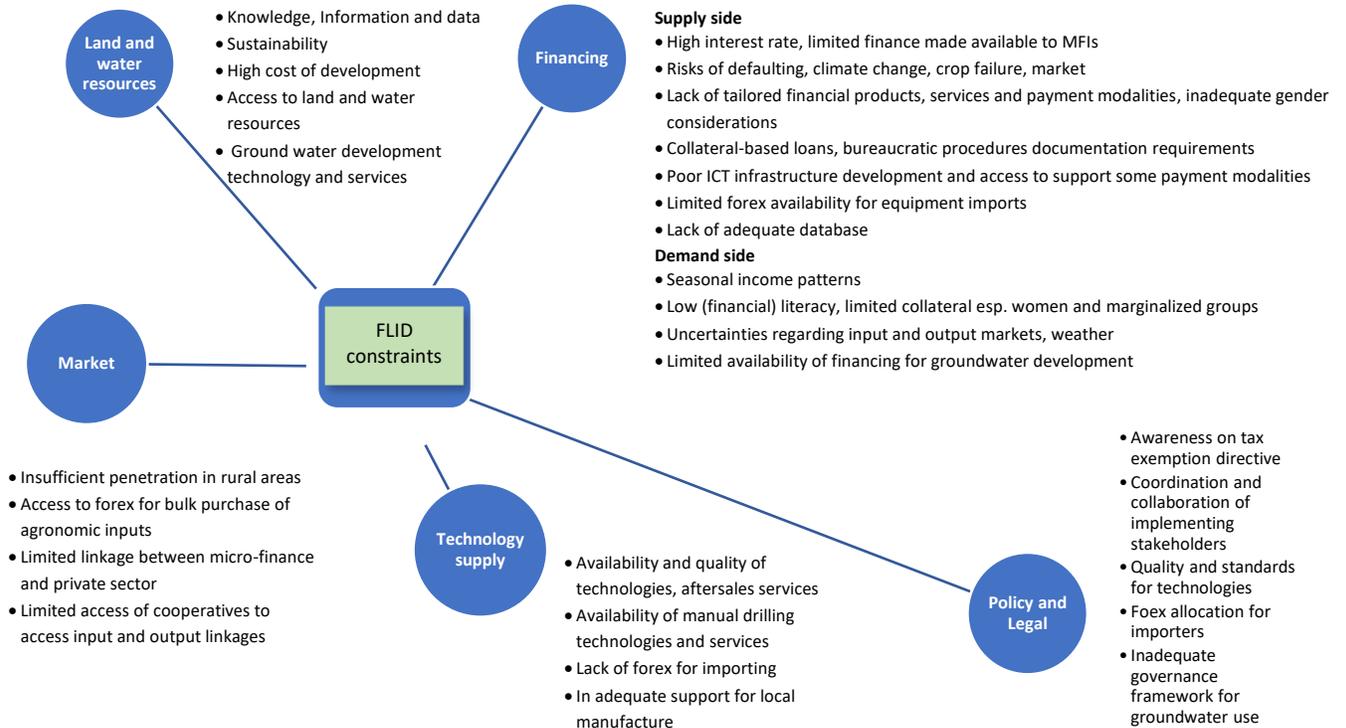


Figure 6. Highlight of validated constraints in scaling FLID

In the **policy and regulatory framework** for tax exemption, key constraints include awareness gaps about the incentive and its purpose, inclusion and exclusion of items for exemption, and its implementation. This is observed across technology importers, development partners, and implementing public institutions and their staff (including MoA, MoWE, Revenues and Customs Authority) at federal and regional levels. Also, coordination and collaboration among these implementers has not been very effective. Implementation of the tax exemption directive is also challenged indirectly by forex shortage.

### Prioritized interventions and roles of actors

In order to address the validated constraints that hinder scaling of FLID, the group sessions and panel discussions identified a set of actionable intervention areas together with roles of actors. The details of actions and respective actors are presented in Table 1.

Table 1. Top priority responses and roles of actors

Area/ factors	Priority responses (in the order of priority)	Leading actors
<b>Land and water resources</b>		
	<p>Develop and implement a consolidated or bundled package of awareness raising and capacity building activities of FLID operations to all stakeholders (farmers, drillers, technology providers, financiers/ creditors, district/woreda officers...).</p>	<p>This activity to be led by trained district/woreda level project staff together with FSRP staff of MoA supported by demonstration sites.</p>
	<p>Extend shallow groundwater mapping to cover potential areas of country not yet included in earlier surveys; make information accessible to potential users, particularly at district/woreda levels including drillers.</p>	<p>Activity to be led by MoA/ATI.</p>
	<p>In order to ensure sustainable development and abstraction of shallow groundwater, implement recommended exploitation/management guidelines – to be prepared as part of resource surveys (e.g. well spacing, abstraction limits, recharge opportunities, and resource monitoring)</p>	<p>To be undertaken by trained district/woreda officers, supported by MoA/ATI.</p>
<b>Access to finance</b>		
	<p>Testing and scaling various innovative financing mechanisms (e.g. lease financing for equipment purchase such as pumps, Pay-as You-Go services, revolving funds at community level, value-chain of groundwater drilling, pumping and on-farm water distribution). This activity will support in minimizing risks and avoid the need for collaterals</p>	<p>MoA to coordinate; private MFIs and equipment/service providers (e.g Rensys Engineering, Sun Culture) to take part.</p>
	<p>Organize small holder farmers, youth and women into farmer groups/producer cooperatives to facilitate access to finance supported by group collateral.</p>	<p>Zonal or district/woreda cooperative offices to lead.</p>
	<p>Maintain centralized database on small holder farmers (livelihood, economic background, farm sizes, crops, yields, type of equipment in use, etc);</p>	<p>MoA to lead in collaboration with district/woreda offices and make the information available to potential users including MFIs and technology providers.</p>
	<p>Oversee availability of soft loans for the sub sector Oversee and report the implementation of duty-free import, sales and impact.</p>	<p>Ministry of Finance, National Bank of Ethiopia MoA in collaboration with Ethiopian Revenues and Customs Admin (ERCA)</p>

## Policy and technology supply



Enhance digitalization of the tax exemption system not only for communication purposes but also on its service delivery to relevant companies. The digitalization should be able to track delivery of the tax exemption as well as impact assessment on price reduction and equipment access.

MoA to lead. (One such program is already under preparation by MoA in collaboration with FAO).

Continue awareness raising and strengthen on-going efforts through for sensitization of the tax exemption rollout. These are useful not only for awareness purposes but also to obtain feedback from stakeholders and companies that are using the tax exemption on their experiences.

MoA to lead and involve relevant stakeholders

Improve policy on prioritizing forex availability for technology imports. In parallel, encourage local manufacture and assembly of equipment such as pumps together with related spare parts with duty free access.

MoA to lead and coordinate with Ministry of Finance and National Bank of Ethiopia

Recast procurement provisions in order to transfer responsibility for quality assurance and standards of irrigation equipment to importers who should also provide performance guarantees.

MoA to lead and coordinate with Ministry of Finance

## Market



Enhance the input and output market linkages not only for seeds and fertilizers but also agricultural mechanization. Concrete activity is the use of digitalization to support the linkages. For instance, the on-going digital platform Lersha<sup>9</sup> promoted by MoA in collaboration with Ethio Telecom, should be strengthened for extension services for input and output market information (type of products, prices and on-ground practices), hiring farm machinery etc.

MoA will be lead through collaboration with Ethio Telecom as well as district/woreda offices

Undertake internal capacity/skill building such as developing business models and enhancing irrigation extension services, introducing specific digital platform for irrigation and capacity to conduct technology demonstrations.

MoA

<sup>9</sup> <https://www.lersha.com/>



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## Reflection and closing

The 5<sup>th</sup> round of SSI-MSD brought together key stakeholders to learn about the status and application of FLID in Ethiopia, including in the upcoming Food System Resilience Program. Important regional experiences and lessons learned on FLID implementation were shared from Uganda by presenters from the Ministry of Agriculture, Animals, Industry and Fisheries.

The two breakout sessions discussed and validated constraints to scaling FLID in Ethiopia and came up with a recommended list of interventions to address them. The constraints mainly relate to access and development of water resources and limitations in technology, services and management/regulatory framework for shallow groundwater development, particularly in areas with proximity to lakes. Farmer access to financial services is constrained by several factors including farmer income patterns, the risks from climate variability/change and market of irrigated products, the types of financial services and products offered by financial institutions and their business models and processes for lending to farmers. Lack of forex, availability and quality of appropriate technologies and aftersales services, and inadequate support for local manufacture and assembly of irrigation technologies are among challenges related to supply chain. The tax exemption policy implementation is challenged by significant gaps in awareness, coordination and collaboration among users, implementing institutions and technology importers.

The subsequent panel discussion led by representatives from MoA (SSI and Agriculture Mechanization Directorates) and private sector aimed at prioritizing the suggested interventions and gaining consensus from participants. The panel discussion also identified key actors and respective roles in implementing the priority interventions. Capacity building on FLID, groundwater resource mapping, testing and scaling innovative financing mechanisms, organizing farmers and developing a socio-economic database on farmers (and their livelihoods) are recommended to improve access to water resources and financial services. MoA, ATI, financial institutions and technology suppliers will have central role in implementing these. Digitization and stakeholder sensitization are prioritized for improving tax exemption implementation, while prioritizing forex allocation for irrigation sub sector is also recommended policy action to be undertaken by MoA with support from development partners like FAO. Use of digital technology to facilitate linkages of input and output markets with farmers are critical for accessing information, and inputs including farm machineries and technologies are recommended for market development of irrigated value chains. There is also a need for enhancing actor capacities to develop irrigation business models and improve SSI/FLID extension.

Compared to previous rounds of SSI-MSDs, the attendance was slightly lower with a higher proportion of online attendants than those who participated in person (26 joined online while 15 joined in person). Continuing the hybrid format for upcoming dialogues is necessary to provide participants with options for joining. The next round of SSI-MSD will be held in the 4<sup>th</sup> quarter of 2022 and the topic will be selected by the organizers and through consulting key stakeholders.

## Annex I Dialogue Agenda

### Agenda/Program

**Farmer-led irrigation Multi-Stakeholder Dialogues: Ethiopia**  
**Inclusive and Sustainable Expansion of Farmer-led Irrigation**  
**At Capital hotel/Virtual**  
**May 12, 2022**

#### Objectives:

- Understand the current status of scaling SSI/FLI in Ethiopia, including the potentials that could be tapped and key constraints that need to be addressed.
- Identify key interventions needed to catalyze FLID at scale in Ethiopia in a sustainable and inclusive manner

Time	Sessions and Speakers	Remark/notes
8.30 – 9.00	Registration	
9.00 – 9.05	<b>Opening</b> - Welcome remarks and introductions	IWMI (Abdulkarim Seid)
9.05 – 9.15	<b>Updates on AWM-TF's</b> ongoing activities	MoA (Zelege Belay)
9.15– 9.50	<b>Session 1: Setting the scene</b> and what we know 1. Learning from FLID interventions under the Microscale Irrigation Program – Uganda 2. Application of the FLID Concepts and Principles in the upcoming Ethiopia Food System Resilience Program 3. Status of SSI/FLI in Ethiopia (Potentials, constraints)	Presentations: 1. Ollando Allan – MAAIF 2. Elias Awol - MoA 3. Minh Thai - IWMI
9.50 – 10.45	<b>Session 2: Group discussion</b> <b>Discussing and validating the key constraints in terms of:</b> 1. <b>Land and water resources</b> related challenges (focus/linked with shallow groundwater development) 2. Farmer access to <b>finance</b> and subsidy for farmers 3. Farmer access to the <b>technology supply chain</b> 4. <b>Policy and Legal</b> (focus on tax exemption and its implementation) 5. <b>Markets:</b> access to input and output markets	<b>Moderator</b> 30 mins for discussion and 25 minutes for reporting back  8-10 people per group, 4 groups, each group focuses on one topic. Online group discussed the 4 <sup>th</sup> and 5 <sup>th</sup> topics while the rest were discussed by in-person attendants

		Report to plenary	
10.45 11.00	–	<b>Coffee Break</b>	
11.00 11.55	–	<p><b>Session 3: Identifying and prioritizing suitable interventions to address key constraints and scale FLID in terms of;</b></p> <ol style="list-style-type: none"> <li>1. Water access</li> <li>2. Financing and subsidies</li> <li>3. Technology supply chain challenges</li> <li>4. Policy and legal</li> <li>5. Market</li> </ol> <p>Report to plenary</p>	<p><b>Note to Moderator</b></p> <p>Select interventions to address the key challenges identified in session 2</p> <p>30 mins for discussion and 25 minutes for reporting back</p> <p>Participants will stay in the same group as in Session 2</p>
12.00 12:50	–	<p><b>Session 4: Panel Discussion (4 members)</b> on key interventions to support scaling sustainable FLI</p> <p>Panelists - One from representative each stakeholder          (Government (MoA SSI dept and Mechanization dept),          Private sector (solar village)          Development partner (IDE)          and Financial Institution (Peace MFI/ other)</p> <p><b>Guiding questions to the panellists:</b></p> <ol style="list-style-type: none"> <li>1) From the interventions suggested by the groups what would be the top 3 interventions that new programs should tackle first to unlock the potential for FLID in a sustainable and inclusive manner?</li> <li>2) What role could your organization/company play in these activities?</li> <li>3) What is the key resource needed and how should it be mobilized to implement the top 3 activities?</li> </ol>	<p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>- Prioritize on actions/interventions suggested in session 3 and obtain concurrence among all participants</li> <li>-Identify roles of actors (govt, private sector, development partners, financial institutions,)</li> </ul> <p><b>Note to Moderator:</b></p> <ul style="list-style-type: none"> <li>- Use the set of activities identified in Session 3</li> <li>- Address each question guiding for each panelist first and then ask for concurrence/input among the participants before moving to the next question</li> <li>-During the discussion ask all participants to reflect/ agree/disagree and do a final prioritization</li> </ul>
12.50 13.00	–	Closing remarks, 2030 WRG	Joy Busolo
13.00 14.00	–	Lunch provided with take away option	

## Annex II List of Participating Institutions

No	Organization
1	Agricultural Transformation Institute (ATI)
2	Melaku Mekonnen Water Works
3	International Food Policy Research Institute
4	Ministry of Agriculture
5	Ministry of Agriculture / Agriculture Growth Program
6	Water and Land Research Centre
7	Association of Microfinance Institutions
8	2030 Water Resources Group
9	Rensys Plc
10	International Water Management Institute
11	Ministry of Water and Energy
17	World Bank
19	Texas A&M University
22	Ministry of Agriculture, Animals, Industry and Fisheries (Uganda)
23	Ethiopian Institute of Agricultural Research
25	Metaferia Consulting Eng PLC
27	Small-Scale and Micro Irrigation Support Project (SMIS)
28	International Potato Center
29	International Fund for Agricultural Development
32	Nisir Micro Finance Institute
34	Makerere University, Uganda
35	Lwengo District Local government, Uganda