

# Feed the Future Innovation Lab for Small Scale Irrigation

## SMALL SCALE IRRIGATION DIALOGUE SPACE: CONCEPT AND KICK START Summary

### 1. INTRODUCTION

The Feed the Future Innovation Laboratory for Small scale Irrigation (ILSSI) is a United States Agency for International Development (USAID) sponsored project led by Texas A&M University (TAMU) in collaboration with the International Food Policy Research Institute (IFPRI), the International Livestock Research institute (ILRI), the World Vegetable Centre and the International Water Management Institute (IWMI).

ILSSI addresses small scale irrigation (SSI) challenges through engaging in important multi-stakeholder initiatives. One initiative is the **research and learning partnerships**, which involves private sector actors, research institutions, investors, and other actors in identifying scaling pathways, demonstrating commercial potential, and reducing constraints to SSI scaling that generate market enablers. Another related initiative is **multi-stakeholder dialogues (MSD)**, which targets stakeholders across sectors. MSDs seek to institutionalize inclusive scaling pathways based on evidence from the research and learning partnerships.

ILSSI's collaborative partners have led and supported several multi-stakeholder processes and dialogues. Multiple lessons have been documented in leading and facilitating the multi-stakeholder dialogues across these and similar initiatives. ILSSI's approach to facilitating multi-stakeholder dialogues is to interact with existing and relevant platforms and processes through developing a small scale irrigation Dialogue Space (SSI Dialogue Space) at the national level.

#### 1.1 Objective, Activities and Participants

Against this backdrop, the Kick Start Meeting was organized at [IWMI Accra Office](#), Ghana on October 24<sup>th</sup>, 2019. The meeting consisted four sections: 1) introduction of ILSSI project and Small scale irrigation focus, 2) reflection on collaboration and 'win-win' innovation in irrigation sector, 3) framing of Small scale Irrigation Dialogue Space, and 4) moving forward plan and networking. It assembled 49 participants from 38 organizations, representing different stakeholders and sectors such as irrigation technology and equipment supply, value chain actors, government agencies and departments, universities and research organizations, development partners and donors, NGOs and relevant professional associations.

#### 1.2 Methodology

Participatory approach methods were used to achieve the workshop objectives and to encourage active engagement; this included a keynote address, plenary presentations and breakout group discussion. The MSD process kicked off with a keynote by Mr. Kwabena Opagya Amoateng, CEO of AGRO-AFRICA. He highlighted AGROAFRICA as a leader in SSI scaling due to their innovative process of collaboration with farmers. The first breakout session asked participants from the same sector/actor to discuss their vision and engagement in innovation scaling. This group discussion resulted in a "picture" analysis of the various

actor groups and their uni-sectoral view on collaboration and innovation scaling. These results raised awareness of participants regarding different working cultures and mentalities across sectors, as well as constraints that may need to be addressed to enable collaboration in innovation processes. The second breakout group discussion randomized participants resulting in multi-sectoral and interdisciplinary representation to visualize the SSI Dialogue Space. They were asked to brainstorm (1) common interests, goals, and agenda, (2) how the Dialogue Space around SSI needs to be run, and (3) reflect on the dialogue space's success and failure.

This report provides a consolidated view of SSI scaling solutions based on information collected from welcome speeches, keynote, presentations, and results from breakout group discussions. The report covers key messages on (1) scaling of small-scale irrigation, (2) collaboration for win-win innovation in SSI, (3) the framing of SSI Dialogue Space, and (4) closing remarks.

## 2. SCALING OF SMALL-SCALE IRRIGATION

The welcome speeches, as well as brief introduction to ILSSI and SSI Dialogue Space, revealed several key messages on the background, context, and vision of the SSI Dialogue Space; these messages are presented in the next sub-sections.

### 2.1 SSI scaling: going beyond technological innovation and supply

*SSI dynamics and diversification.* The '[small scale irrigation](#)' or 'farmer-led irrigation' refers to irrigation practices where farmers either solely or through support from private sector, NGOs, in collaboration with other neighbour farmers, make investments to irrigate their agricultural land with a size between one to ten hectares. As it is led by individual farmers, SSI offers more flexibility and requires dynamic types of investment and governance systems.

*Potential for SSI.* [Evidence](#) from ILSSI research conducted during 2013-2018 shows that the majority of farmers investing in irrigation fall within the higher income range. For Ghana specifically, evidence suggested [the potential for another 690,000 farmers](#) to adopt and invest in small scale irrigation with a potential net profit to the producers of about 290 million. Furthermore, the cost benefit analysis and the development of innovative finance modalities for SSI technologies show ways to reduce high upfront cost, which could increase technology access for smallholder farmers. The research shows that more farmers in Ghana could benefit from small scale irrigation if they can gain access.

*Smallholder farmers as private sector entrepreneurs and investors.* In the ILSSI project, smallholder farmers are not seen as beneficiaries of aid, but are considered private sector entrepreneurs. This distinction is made because most irrigators in Africa support their own investments. More opportunities exist for irrigation in Ghana, which is a guiding principle for ILSSI and its partners when identifying ways to support smallholder farmers.

*SSI scaling beyond supplying of technology and equipment.* To reach the potential of SSI as well as leveraging entrepreneurship of smallholder irrigators, SSI scaling must be seen as a continuous process in which multi-stakeholders work together to overcome key constraints hindering SSI expansion. These constraints encompass technology supply chain, affordable finance and credit, and linking smallholder farmer irrigators with agricultural markets and produce buyers. SSI scaling should be driven by the private sector – including smallholder farmers.

### 2.2 Partnering with private sector: The way forward in ILSSI scaling

*Partnership with diverse stakeholders and especially private sector is required to overcome the challenges.* Partners in ILSSI have extensive experience in partnering with private sector.

*Pro-acting in partnering with private sector in SSI scaling:* ILSSI continually recognises the essential role of private sector in driving the development in Ghana and other countries in Africa. ILSSI is promoting SSI innovations led by the private sector and will be providing funding to incentivize private sector engagement. ILSSI has recently launched its '[Request for Application](#)' to encourage profitable companies to come together to bridge gaps in areas of (1) irrigation technology supply chain, (2) finance products and services provided directly to producers, (3) value chain and market development to introduce or improve irrigation for crops, and (4) business and learning partnership enhancing the feasibility and expansion of SSI.

### **2.3 Multi-stakeholder dialogue: bridging gaps and devices in SSI scaling**

*Partnering and dialogue for SSI innovation.* Up to 2023, ILSSI will, in focal countries, work with private sector actors, national universities and agricultural research institutes, government agencies and departments, development partners, NGOs, farmers and related producer associations. Working collectively to address constraints will bolster the prominence of SSI as a development issue.

*The dialogue space is a unique strategy to bring all stakeholders together to support SSI scaling.* [Experiences](#) with initiated dialogue and multi-stakeholder processes in different themes have been shown to yield outcomes and tangible solutions that different stakeholders can use either in terms of policy making or in practice, which lead to more sustainable development. In the SSI sector, the dialogue space can open up and encourage collective thinking to reflect on how to partner across multi sectors to bring out ideas and come up with solutions to move forward with SSI in Ghana.

The dialogue space is a physical and institutional setting where conversations among diverse stakeholders allow for inherently collective actions to evolve and deepen over time to materialize the share vision. ILSSI plans to begin initiating and facilitating collective action.

## **3. COLLABORATION FOR WIN-WIN INNOVATION IN SMALL SCALE IRRIGATION**

The keynotes and results from the first breakout group discussion on collaboration and innovation emphasized that collaboration for win-win innovation in SSI is requires "*doing right things in different ways and jointly develop new ways*".

### **3.1 Agro-Africa business model: Collaborating directly with smallholder farmers to increase its business**

Agro-Africa is a Ghanaian company started in 2010. At the beginning, the company focused on doing big projects with farm machinery, combining harvesters, tractors, irrigation, poultry and piggery. Since 2017, the company has shifted its focus to SSI using a '[complex but flexible](#)' business model.

*SSI is both a challenge and an opportunity for business.* Most of the smallholder farmers have multiple problems when investing in irrigation, including limited access to water and irrigation technologies, high investment cost, poor links to output market, and low recover investment. Collaboration with financial institutions (e.g. banks) and government agencies is not easy, as conflict of interests exist between the banks and farmers due to a mismatch of needs between the government agencies and farmers. Potential of SSI business will only materialize by having a new strategy of the 'irrigation for one acre to ten hectares' in order to be in the fore front of SSI scaling for and with smallholder farmers. In this new strategy, Agro-Africa defines SSI as farmer-led investment to irrigation, starting from one acre to 10 ha irrigated.

*The Agro-Africa business model satisfies farmers who have from one acre to ten hectares. The model is based on principle of providing the continuum package of irrigation equipment and services, as well as credits to farmer groups in order to ensure:*

- (1) the irrigation system provided to individual farmer works efficiently,
- (2) each farmer can pay back after the third harvest and with the guarantee of members in the group, and
- (3) farmers are capable of expanding their irrigated farming area.

With these strategies, Agro-Africa is expanding its reach to 350 farmers in 2019, mainly in *Techiman* upward and expanding to *Sogakope, Adaklu, Jasikan* and *Afram* plains. Agro-Africa focuses on promoting irrigated vegetable farming as the fastest and the most efficient in generating cash-flow for farmers. The company also provides assistance to farmers' marketing their produces.

### **3.2 Collaborative innovation process: Diverse actors, challenges and successes**

*Diverse innovations in irrigation sector.* Experiences with collaboration for innovation has shown that there are many innovations in irrigation sector that can be helpful for farmers, including technical innovations, utilizing a combination of irrigation and agronomy techniques, and a combination of technical, business, and social innovation.

*Critical role of value chain actors to adoption and adaptation of new technologies.* Collaborative innovation processes involve a wide range of actors; each actor undertakes different roles:

- Irrigation technology suppliers (manufacturers, distributors): supplying technologies and equipment and providing business solutions for supplying irrigation equipment
- Input and services providers (finance institutions, insurers, extension services, information providers, technicians, software developers and mappers): providing supplement inputs and services for the adoption of irrigation innovation
- Value chain businesses (traders, processors, market distributors): driving the adoption of irrigation innovations through creating demands and/or connecting demand and supply
- Irrigation innovation adopters (farmer-based organizations, cooperatives, groups and commodity association, seed producers): adopting irrigation innovation and promoting the adoption of these innovations through collective actions and organization
- Enablers (government agencies, donors, NGOs, development partners, universities and research organizations): creating financial, institutional, and technological environment enabling the innovation processes, as well as connecting other actors in the innovation processes.

An essential driver for adoption of innovation is stable output markets for farmers' produce. This highlights importance of connecting the producers (individuals and collective), output market actors, seed producers and finance institutions in the innovation processes. First, *linkages among partners* should be established by identifying ideal partners and linking them together. When each partner focus on their core strength, it helps negate weaknesses in the value chain. Second, *systemic planning* is needed in order to enhance livelihood of success of innovation. Third, *during implementation, focus* should emphasize the establishing of enterprise-like, business-minded system by changing farmers' subsistence to agri-business mind-set, as well as ensuring quality and sustainability as drivers for success. Fourth, *management of the collaboration* should focus on building trust and managing information. Finally, *adaptability* should be applied as the fundamental principle guiding the collaboration. For whatever technology, collaboration for win-win innovation must consider context, ensuring the adaptability to context dynamics, cultural, environmental, and other peculiarities by utilizing core competencies and adapting technologies to the context.

Overcoming challenges requires comprehensive approaches to support win-win innovation. The enabling roles of government need to be enhanced, the leading roles of private sector need to be ensured, the right incentive structures for producers and value chain actors need to be in place, and the inclusive innovation scaling need to go beyond female gender participation.

### 3. SMALL SCALE IRRIGATION DIALOGUE SPACE

#### 3.1 Why Small Scale Irrigation Dialogue Space?

Mapping stakeholders' interests was conducted in the second breakout group discussion and the results are presented below. From the basis of analysis and assessment, justifications for the establishment of the SSI Dialogue Space include:

- *Potential vis-a-vis challenges with SSI scaling.* High potential of irrigation to change agricultural landscape has been identified. However, the challenges are numerous and individual actors might not have adequate resources and expertise to handle them efficiently.
- *Availability of irrigation technologies vis-a-vis limited adoption of farmers.* SSI technologies exist but adoption remains limited. It is partly due to smallholder farmers' limited access to technology and output markets for their irrigated products.
- *Pre-perception and prejudice against collaboration.* Private sector is often seen as focusing on profits with limited interest or accountability towards smallholder farmers. Government agencies, research organization, and development actors are seen as lacking actions.
- *Enabling vis-a-vis hindering private sector's SSI scaling initiatives.* There are evidences on private sector initiatives leading SSI scale. However, partnering with private sector is not yet in place. Private sector is often informed last and/or considered less in the partnership.
- *Win-win vis-a-vis win-lose collaboration.* Different stakeholders have different interests. There is a large gap inhibiting stakeholders working together.

The SSI Dialogue Space is about bridging gaps, identifying different perspectives, co-designing the way to work better together, and believing in collaboration for learning, sharing and gaining together.

#### 3.2 Shared visualization of small scale Irrigation Dialogue Space

The second breakout group discussion centered around a shared vision of the SSI Dialogue Space. The Dialogue Space is based on common interests and shared vision which consequently inform membership, participation and activities of the platform.

#### Objectives of SSI Dialogue Space

Core objectives of the SSI Dialogue Space are described below.

- *Raise awareness and interest in SSI scaling* through providing and sharing SSI scaling knowledge and experiences, and discussing SSI potential positive and negative impacts
- *Facilitate SSI scaling agenda* by identifying and testing sustainable SSI scaling pathways and engaging with relevant stakeholders
- *Foster interactive learning to enhance inclusion in SSI scaling by inspiring* specific entities to be inclusive in their approaches as to enhance benefits for and participation of women, youth, and geographically marginalized through specific entry points within the irrigation value.
- *Support irrigation policy and planning processes* through sharing experience and insights which includes evidence to improve planning of water and other natural resources, and to open dialogues on policy agenda and instruments
- *Capitalize SSI 'good practices' for resource mobilization* through integrating the actors and their practices into scaling proposals and promoting SSI to relevant stakeholders

- *Drive innovation for SSI scaling* through employing 'do-reflect-adapt-do' loops to develop SSI scaling ideas to feasible solutions.
- *Enhance SSI-related institutional memories*, through stored SSI knowledge within the organizations and the ongoing knowledge transmission between organizational members, to strengthen the sustainability of the SSI scaling contributing towards sustainable agricultural water management.
- *Build human and institutional capacity*, to independently coordinate, facilitate and disseminate pertinent information on sustainable agricultural water management innovation and activities along the entire value chain. This will accelerate the delivery of research outputs to end users.

### Successful indicators

Results from the second breakout group discussion indicated that a successful SSI Dialogue Space should be measured with Integrity, Governance, Action, Engagement, Collaboration, Learning, Growth, and Tangible impacts.

- *Integrity*: Shared vision by and sustained interests of all stakeholders as well as complementary efforts and collective supports towards SSI
- *Governance*: Reliable and effective governance in place for running the Dialogue Space, building trust and commitment, and managing conflict of interests amongst stakeholders
- *Action*: Having diverse and serious actions, including regular, strategic and issue-based activities in order to achieve the set of objectives
- *Engagement*: Active participation and commitment of individual and organizational participants to the Dialogue Space
- *Collaboration*: Having bilateral and multi-lateral partnership and collaboration among members towards promoting SSI as well as sustainable agricultural water management
- *Learning*: Adaptive learning to be able to learn from mistakes, reflect upon the weaknesses, leverage on others' strengths, and avoid walking in silos
- *Growth*: Increasing participation and membership, expanding the scope towards a wider spectrum of agricultural water management, and institutionalizing the Dialogue Space by stakeholders
- *Tangible impacts*: Increasing SSI productivity and production efficiency, mobilizing private sector's investments to SSI, influencing government policies towards supporting SSI

### Governing the SSI Dialogue Space

Governing such SSI Dialogue Space is about having six arrangements, structures, and processes in place, including physical space, institutional arrangement, distributed leadership, coordination and facilitation, community of interests, and planning and implementation.

The **physical space** where participants come together to engage in dialogue processes need to be available. At the beginning, IWMI Ghana, as an implementing partner of ILSSI, can provide the physical place at its office in the CSIR campus, Airport Residential Area, Accra. Depending on its evolution, multiple physical spaces can be identified and provided to be aligned with its dynamic growth and its members' interests.

The **distributed leadership** needs to be developed as the culture and mechanism which guarantees the sustainability and integrity of the Dialogue Space. Such leadership is a process taking place among the members of the Dialogue Space performing shared, collective and extended leadership practices and that build the Dialogue Space's capability for growth and improvement.

The **institutional arrangement** is established with forming a facilitation team consisting out of different actor representatives. The team members are voluntarily working to identify strategic directions and organize the implementation of SSI Dialogue Space activities. They also facilitate stakeholder's interaction



and collaboration around enhancing inclusive pathways for SSI scaling. Throughout the co-developing process, the institutional arrangement will evolve, engaging more voluntary individual and organizational members with the relevant expertise and mandates in the facilitation team.

The **coordination and facilitation** is another hard-core function of the Dialogue Space. At the beginning, IWMI will together with a team of volunteering interested individuals of actors to co-design the Dialogue Space. Depending on an increase of the Dialogue Space's activities and on an emergence of need, a coordinating and facilitating bureau can be established with clear guidelines for planning, implementing, monitoring, evaluating the Dialogue Space's activities and success. An individual and/or a group of leading coordinating and hosting organizations can to be formed along the co-developing process in order to enhance the Dialogue Space's institutionalization and sustainability. Link between the institutional arrangement and the coordinating and facilitating bureau needs to be regulated to ensure the integrity.

The **community of interests** is established to fulfil the stakeholders' dynamic interests, their engagement, and their potential contributions to the Dialogue Space's institutional and structural growth. Working and task-force groups gathering community of members who share a common interest or passion can be formed spontaneously for these members to exchange ideas and thoughts about the given passion, and to collaborate and partner to walk the ideas and thoughts.

The **planning and implementation** are other hard-core functions of the SSI Dialogue Space and these need to be done collectively, proactively and strategically. The strategic planning need to be done at the very beginning and along the co-developing process in order to identify, reflect, and adjust the strategic directions of the SSI Dialogue Space, especially when the scope is expanding towards a wider spectrum of agricultural water management. The proactive planning and implementation need to be done periodically in order to develop and carry out action plans and financing plan.

## 4. CLOSING REMARKS

### Acknowledgement

- Grateful thanks to all participants and their active engagement and enthusiasm. These are initial achievements in terms of setting a promising beginning, opening up a collaborative and discourse culture, and creating a noble spirit for the Dialogue Space to be kicked start.
- Special thanks to Dr. Cofie Olufunke for allowing us to use the space and facilitating throughout the whole process. Many thanks and high appreciation are given to the IWMI Ghana team for the valuable supports and assistances to the successful organization of the meeting.
- High appreciation to the provocativeness, self-criticism and corrections, and collaborative spirit of researcher facilitators from Texas A&M University and IWMI in the conceptualization, preparation and carrying out the meeting.

### Announcement

- The 'Request For Application' has been posted, questions and classification will be continued for a couple of weeks. The review process will be in December, and the announcement of the granted proposal will be made in January.
- ILSSI has a plan for innovation scholarships. Students will be brought in for networking and internships to compete for research funds to work with private sector actors. Part of it is to build that trust and change the thinking. Also, it is beneficial to the private sector.
- There is solar irrigation map that will be coming up. It indicates where solar irrigations are suitable. It also includes a broad climate change analysis, water management, irrigation, food security, and



nutrition. These data and findings will be shared with the Dialogue Space and its members when these are available.