

Capacitating water lifting service providers reduce risks of crop failure and increase producer confidence in adopting irrigation: LIVES experiences

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Outline presentation

1. Introduction
2. WLS services intervention approaches
 - 2.1 Diagnosis of gaps in WLS services
 - 2.2 Intervention approaches in WLS services
3. Results: output, outcome and impact
4. Lessons for scaling out



1. Introduction

- Considerable efforts has been invested to bring changes in **SS and household** based irrigation development (ADLI, PASDEP, GTP1)
- 2 million ha could be irrigated in GTP2
- Investment in **water conservation and harvesting**
- Water for irrigation lifted from low lying spots
- More than **1.2 million pumps imported and distributed** 2005-2013 (MoA, 2015).



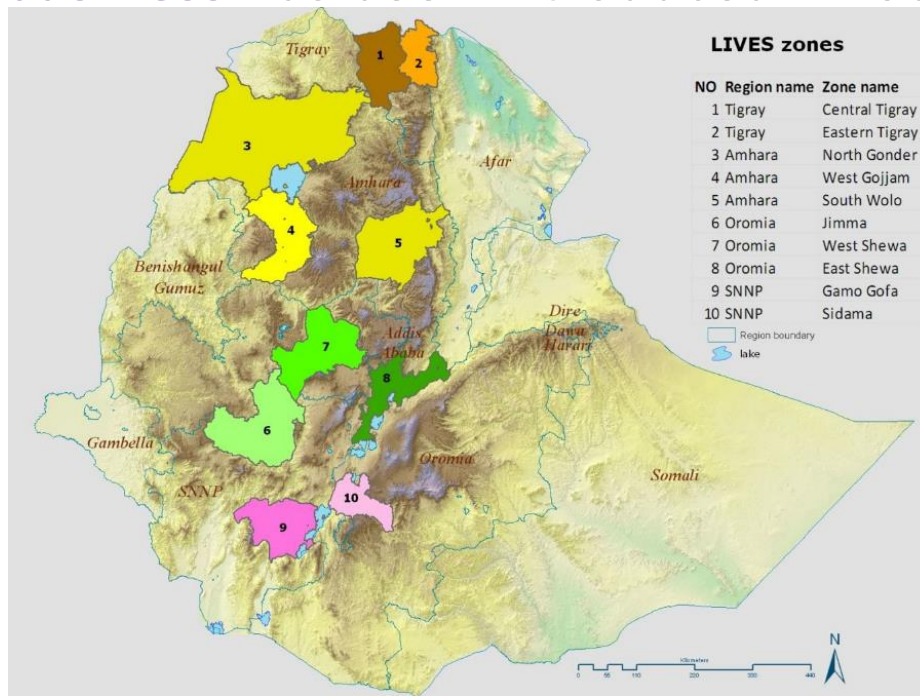
1. Introduction...

Water lifting technologies have made significant contribution to the expansion of high value irrigated crops (vegetables, fruits & green fodder).



1. Introduction...

- Limited skills and knowledge on WLS services
 - high frequency of seasonal pump failure
 - extended duration of downtime
 - Reduced confidence and reliability pump users
 - loss of marketable high value products and income
- **Interventions:** Frontline private water lifting support (WLS) services **as a business** has been introduced in four regions.

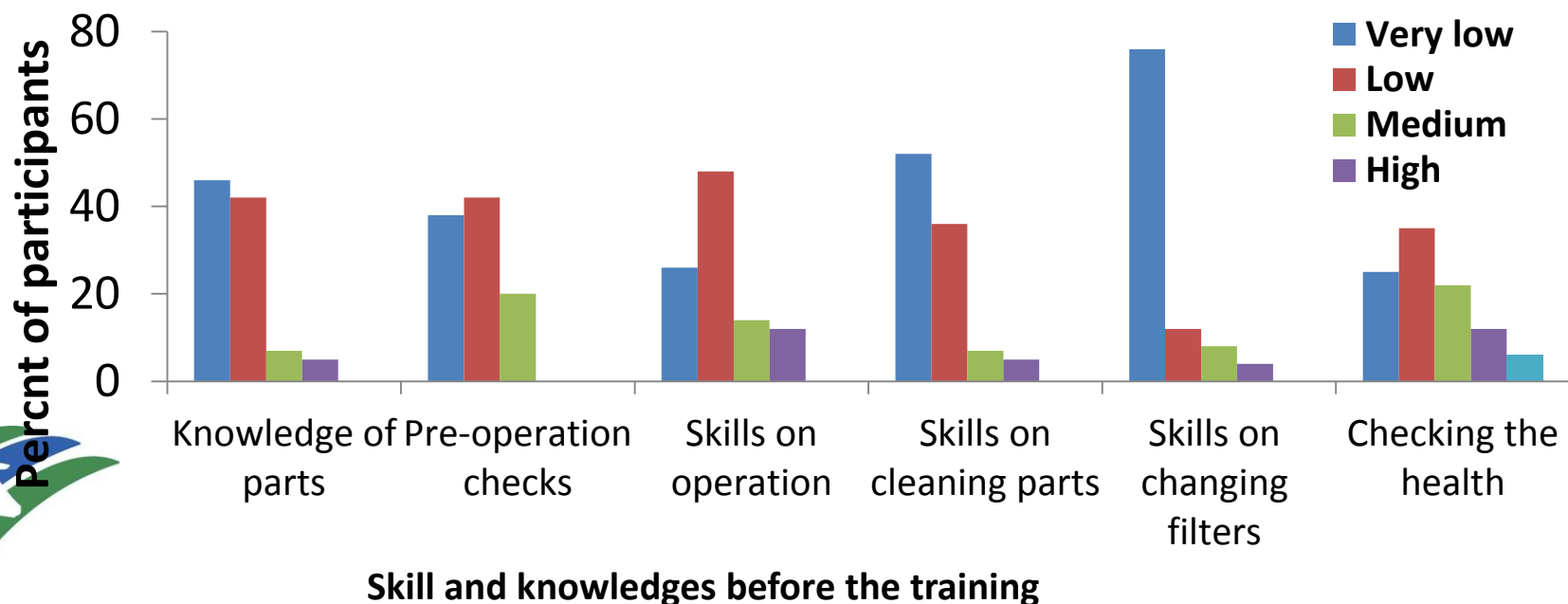


2. WLS service intervention approaches

2.1 Diagnosis of gaps in WLS services

Irrigated crops innovation platform (VCA and SP)

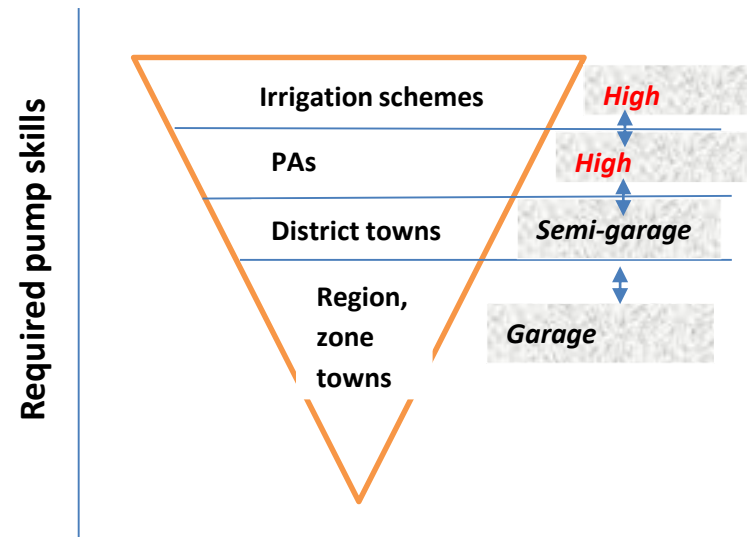
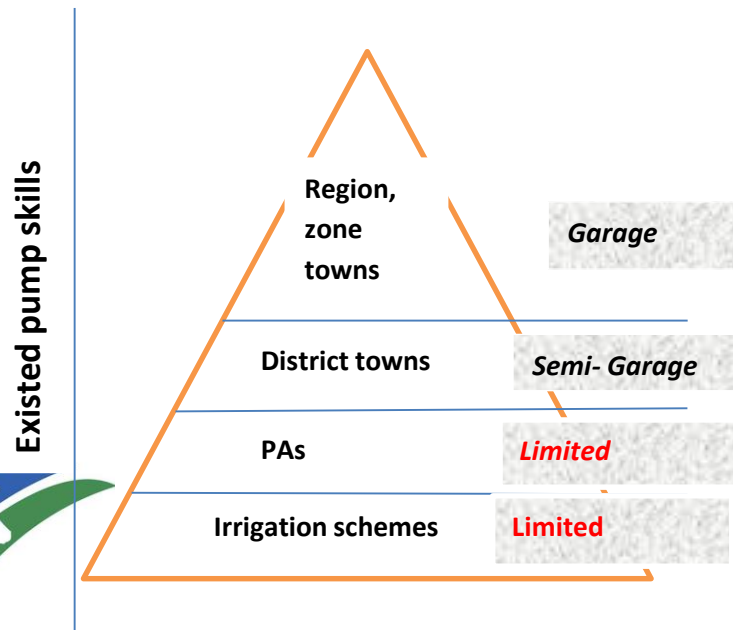
- Lack of **WLS services** as leveraging point for pumped irrigation schemes
- Lack of **skill and knowledge** on OMR services among pump owners



2.1 Diagnosis of gaps in WLS services...

Assessment of the spread of WLS service providers

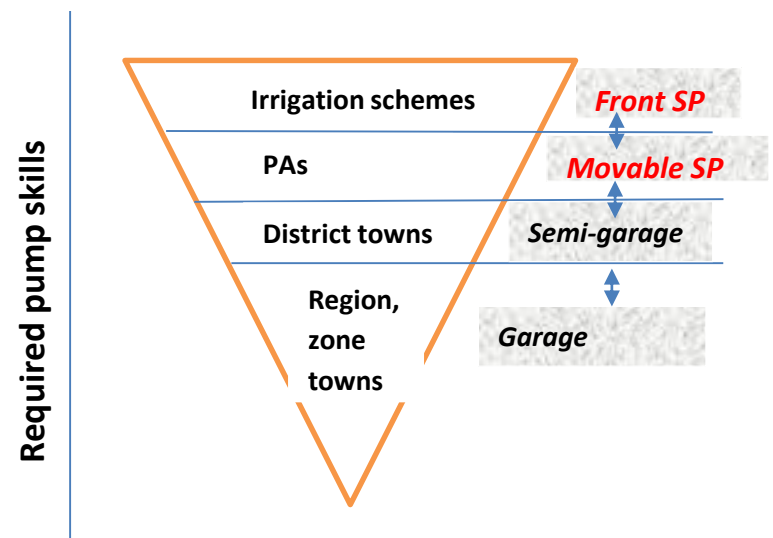
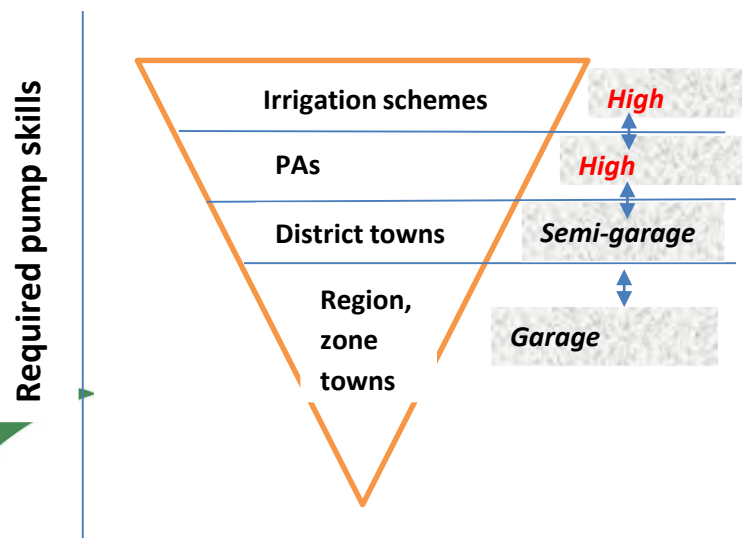
- Less skill and knowledge on pumps, good knowledge on engine by garages
- The frontline WLS service provision (PA and scheme levels) was limited: Quantity and quality of services
- Weak linkages between WLS service providers and pump owners; limited access to crop failure risk reducing measures.



2.2 Intervention approaches in WLS services

WLS service providers strengthened and established

- Frontline service providers (PA/schemes levels) established or strengthened
- Targeting interested young farmers
- District and zonal level mechanics (garage owners) strengthened



2.2 Intervention approaches in WLS services...



Demand and skill-based practical training: Interactive learning and manuals in local languages supplied



Linkages among service providers and pump users established: Skill cascading



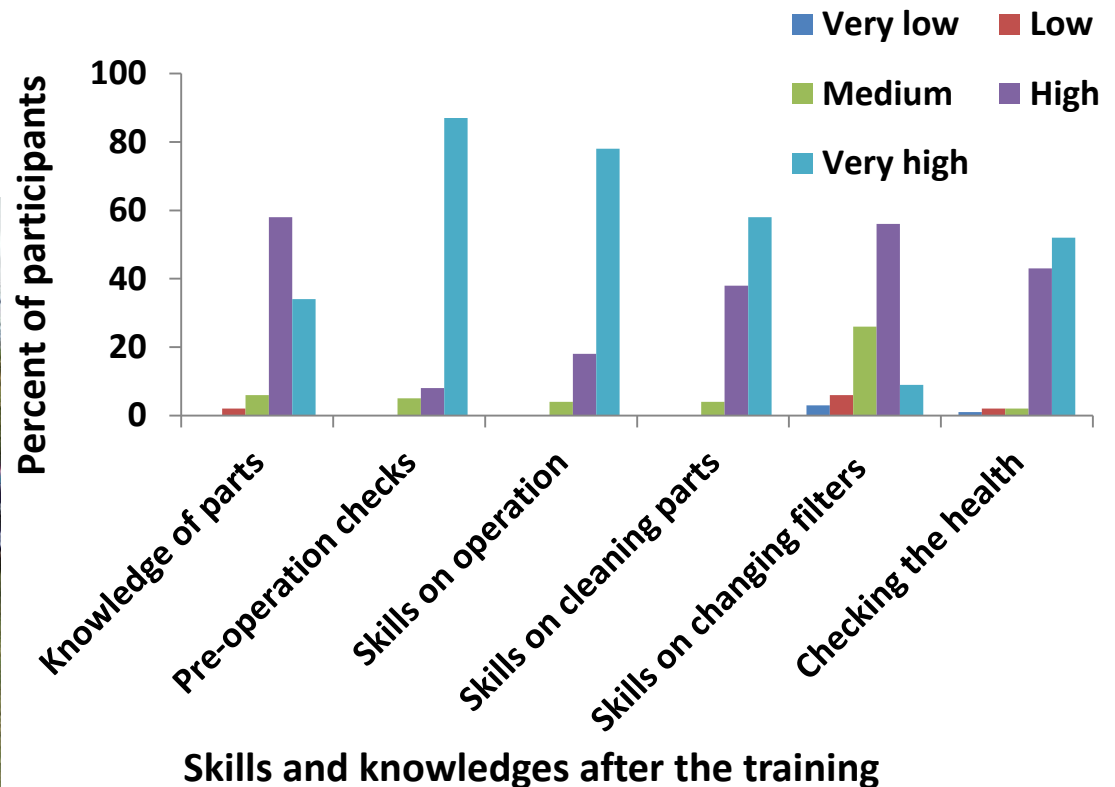
Coaching and mentoring:

- Pump kits awards/confidence
- Business in diversified service provision and crop failure risk reduction measures facilitated
- Follow to ensure that pump owner trained by WLS service providers

3. Results: Output, outcome and impact

Output

- 73 WLS service providers trained & capacitated in two regions
- 60% of the trained young farmers and 67% of the garages started WLS provision as a business in the SNNP
- The WLS service providers trained 305 pump owners on **operation and servicing- *Cascading training***



3. Results: Output, outcome and impact...

Outcomes

Frontline service provider (PA and scheme level)

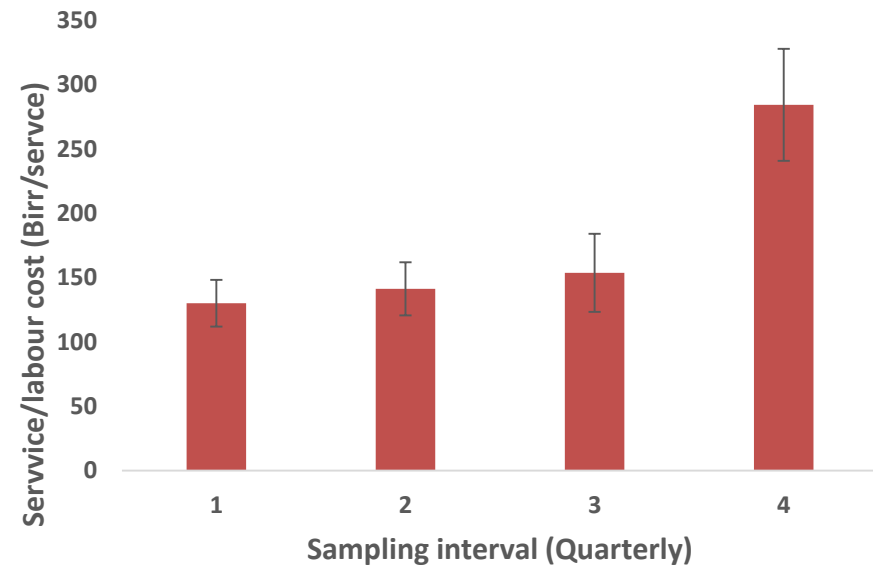
- 75-90% of the pumps brought to frontline service providers could be maintained (*usually common causes of failures*)
- The number of pumps maintained by frontline WLS providers were much greater than garages (N= 4, 1 year)
 - Pump owners have more trust and confidence on farmer-based service providers than garages
 - They could serve in credit/contract basis
 - They could provide on-site services
- Some started providing genuine inputs (fuel, oils, spare parts, accessories, etc.)
- They could share their skills more generously

3. Results: Output, outcome and impact...

outcomes

➤ Garage level WLS

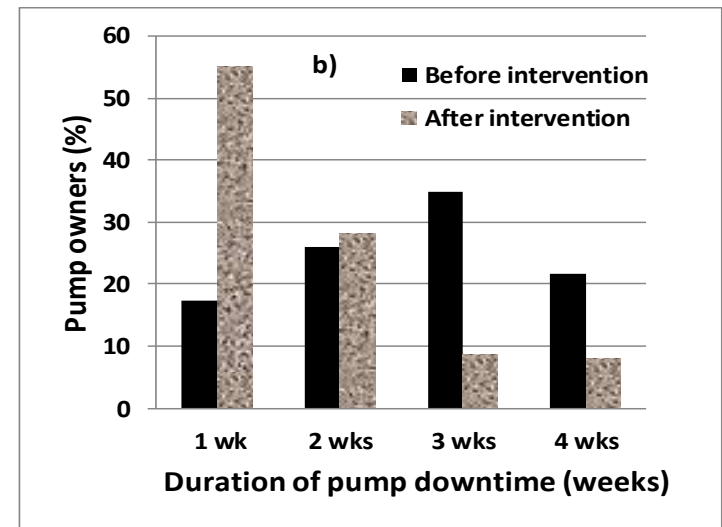
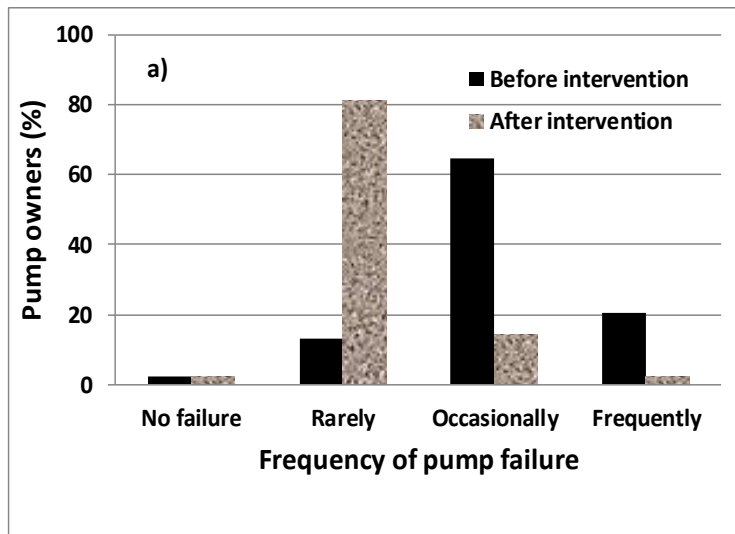
- ❖ Relatively easier to strengthen/establish it a business
- ❖ They are important to capacitate the Frontline service providers
- ❖ They could be motivated to provide mobile services
 - Pump users do not want to transport the pumps
 - pump users want to check the functioning after maintenance
- ❖ The service cost increased with time as they become popular



3. Results: Output, outcome and impact...

Impact

- WLS can be a profitable business in areas where the demand is high ($\mu = 31,200$ Birr only during the first year, $N = 5$)
- Following the interventions, the frequency of damage on pumps reduced substantially
 - ❖ **Proper operation and servicing techniques adopted**
- Downtime of pumps decreased substantially after the intervention

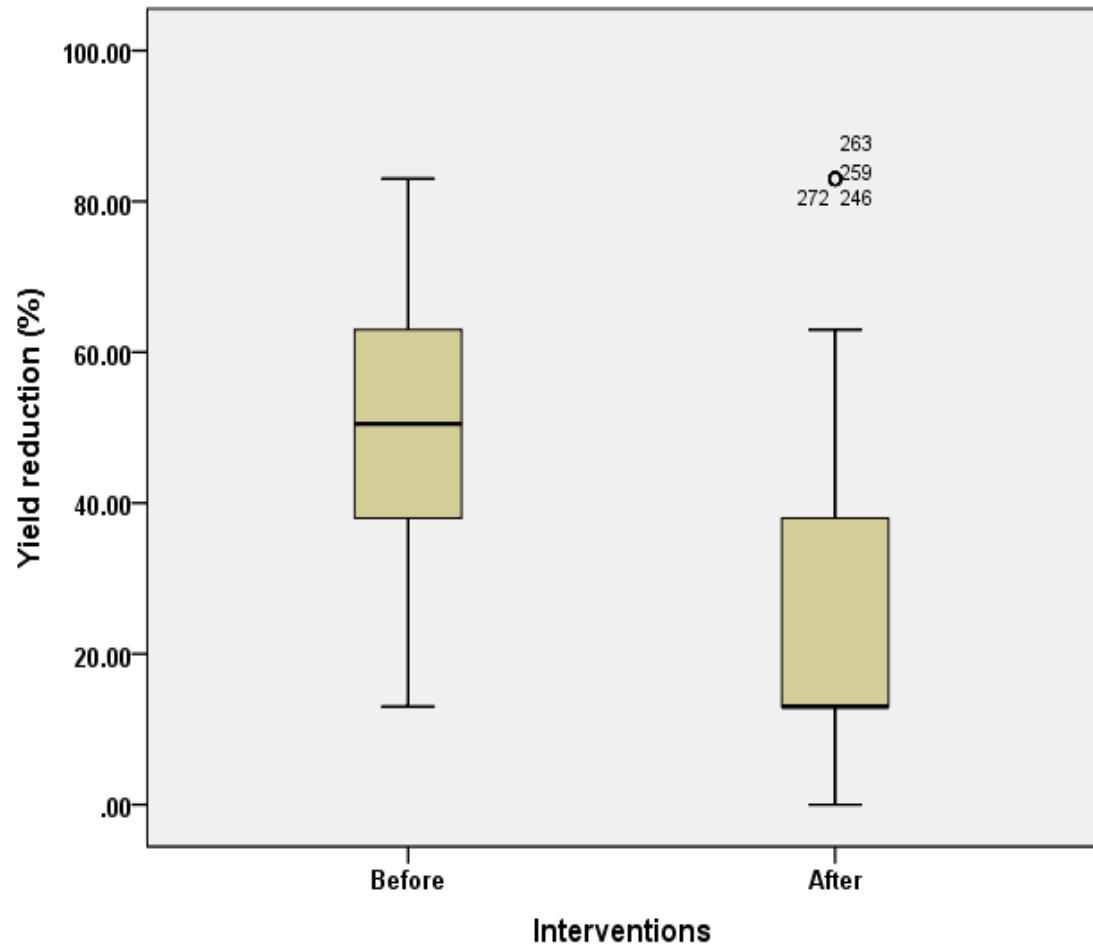


- After the intervention, the pump user farmers could have more confidence and reliability on use of pump-based irrigation

3. Results: Output, outcome and impact...

Impact...

- Yield loss due to pump failure decreased substantially.
 - **From 51% before intervention to 26% after intervention.**



4. Key lessons for scaling out

- Commodity platforms are crucial in identifying the leverage points and prioritize appropriate interventions
- Appropriate selection strategy and establishment of WLS would help to successful development
- Establishment of frontline WLS provision can substantially improve the knowledge and skills on proper **operations and servicing of pumps at grassroots levels**
- **Linking the garages with the frontline WLS providers** enable to cascade the skill and knowledges down to the pump users.
- The service on repair and maintenance could reach even to domain PAs and districts
- The public extension system should take up WLS as part of its market-oriented extension system.

Acknowledgement

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