



Kingdom of the Netherlands

# Smart Water for Agriculture Program (SWA)

Webinar: April 24, 2018

**SNV**



KIT | The Royal Tropical Institute



WAGENINGEN  
UNIVERSITY & RESEARCH

**PRACTICA**  
FOUNDATION



# Smart Water for Agriculture: At a glance

## Development Investor



**Investment Period:**  
April 2016 – Dec 2019

**Investment Value:**  
Euro ~6 million

## Consortium Partners

**SNV**

**PRACTICA**  
FOUNDATION



**Aqua for All**



## Background:

# Irrigated Agriculture Market Landscape in Kenya

### FAO Reports



33% of land in Kenya is used for agriculture and is largely under rainfed agriculture



2.7 million people in Kenya are experiencing food insecurity due to increasingly frequent droughts



Kenya has 353,000 ha. of potential irrigable land with irrigated area having reached only 165,900 ha.



53% of total irrigation potential in Kenya remains untapped

### SWA Research



Systemic and Market Barriers hinder irrigation growth in Kenya



90% of the SWA farmers are using some form of irrigation and have the potential for uptake of new solutions (of the 544 farmers interviewed)



76% of all SWA farmers have access to finance, but only 12% have received credit



The sector offers significant market opportunities for companies if well managed

## Our commitment

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**20,000 SME farmers**  
(50% women) adopt  
Smart Water Solutions to  
improve their income and  
livelihood

20% increase in **water  
productivity**

At least **10 Dutch-Kenya**  
private sector business  
linkages tailored to the  
needs of SME farmers  
facilitated

## Our key client: The entrepreneurial farmer



**Irrigates cash crops  
(0.25 to 12.5 acres)**

**Has significant and  
predictable cash flow**

**Is market engaged**

**Is not 'just' a target  
farmers, but is at the  
forefront of exchange  
and learning**

# Our Approach

Establishing  
Irrigation  
Acceleration  
Platforms

Improving  
Access to Smart  
Water Solutions  
(SWS)

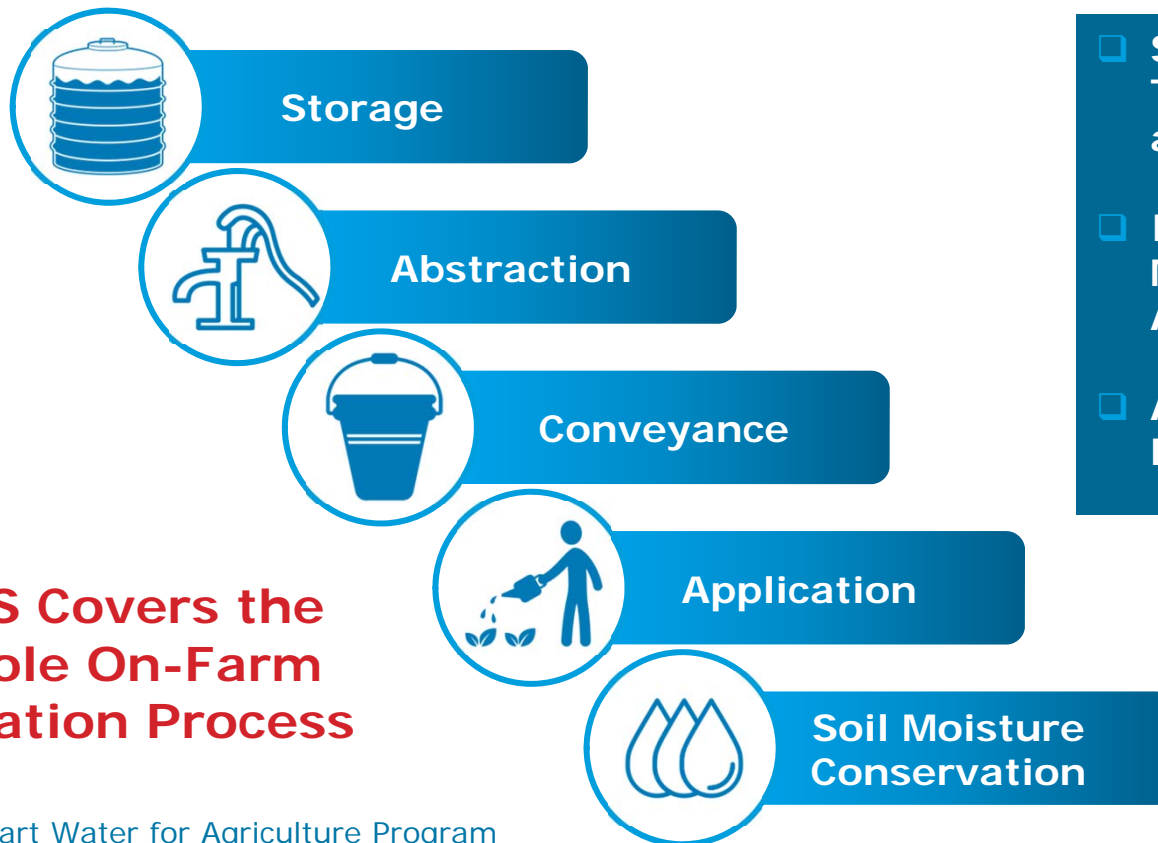
Increasing  
Access to  
Finance for  
SME Farmers

Creating  
Demand for  
SWS through  
Increased  
Access to  
Knowledge

Strengthenin  
g Business  
and Market  
Linkages in  
SWS Sector



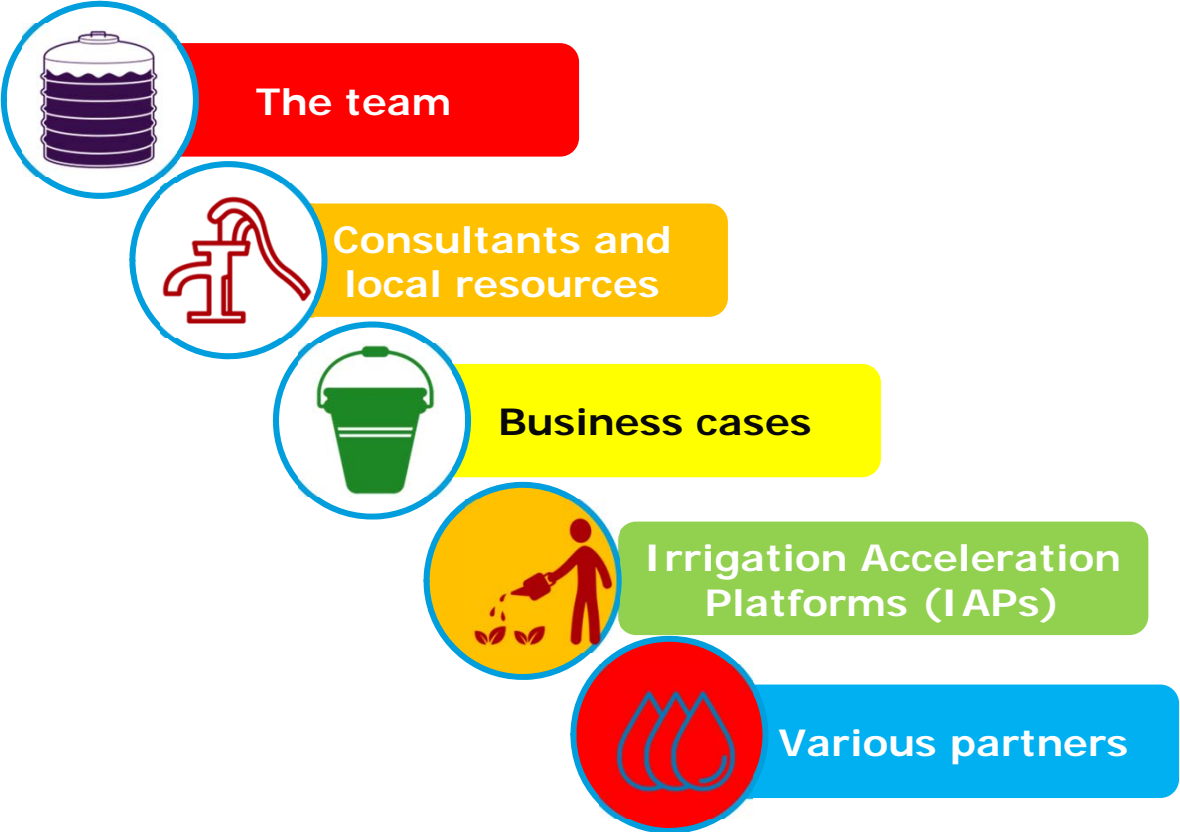
# Overview of Smart Water Solutions Package



**SWS Covers the Whole On-Farm Irrigation Process**

- ❑ Smart Water Technologies, Products and Services
- ❑ Innovative Water Management and Agronomic Practices
- ❑ Access to Market, Finance and Knowledge

# Our approach and resources





## Progress by Dec. 2017 in numbers (MTR report)

Outcome Area	Indicator	2017 Target	2017 Actual	2016-2019 Target
<b>Outcome Area 1: Developed Irrigation Acceleration Platforms which stimulate private sector driven, market led, innovation and business collaboration tailored for SME farmers</b>	No. of SME women and men farmers and suppliers of smart water solutions engaged in irrigation platforms	5,000	5,560	20,000
	No of SWS suppliers providing services to SME farmers	50	188	200
	Business linkages facilitated	10	17	30

## Progress by Dec. 2017 in numbers (MTR report)

Outcome Area	Indicator	2017 Target	2017 Actual	2016-2019 Target
<b>Outcome Area 2: Improved access to and use of Smart Water Solutions</b>	No. of farmers with access to / using SWS	3,000	4,782	20,000
	No. of SW Solution providers responding to specific needs of the SME farmers	75	13	200
	No. of new SW technologies supply chains developed	3	5	10

## Progress by Dec. 2017 in numbers (MTR report)

Outcome Area	Indicator	2017 Target	2017 Actual	2016-2019 Target
Outcome Area 3: Improved access to and use of financial products and services	No. of farmers with demand to access financial products and services to adopt SW technology	2,000	4559	12,500
	No. of farmers using financial products and services for SWS	2,000	2780	12,500
	No. of financial institutions and amount of investment supporting farmers to adopt SW technology	2	14	14

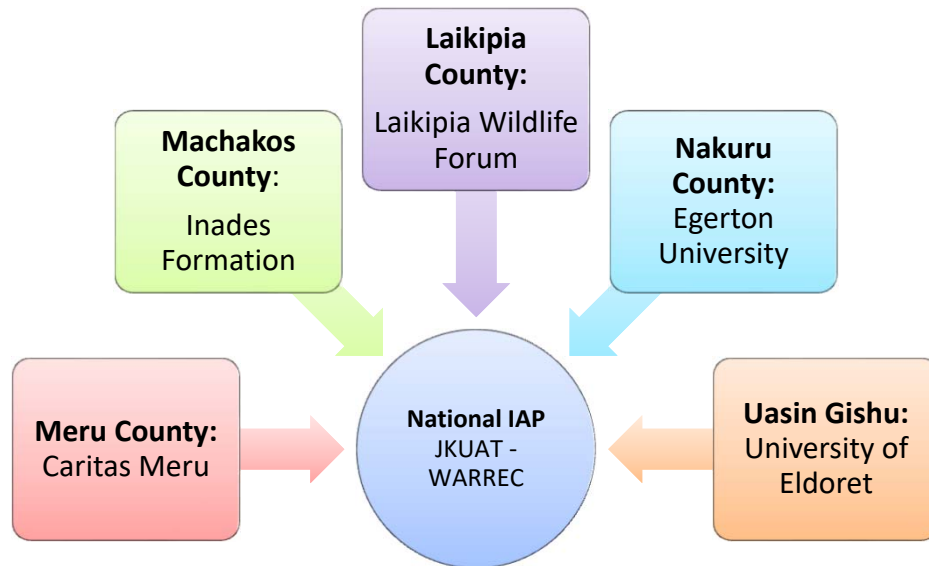
## Progress by Dec. 2017 in numbers (MTR report)

Outcome Area	Indicator	2017 Target	2017 Actual	2016-2019 Target
Outcome Area 4: Increased access to knowledge and demand created for SWS	No. of suppliers of SWS with access to and have gained new knowledge tailored for SME farmers	188	188	200
	No. of new farmers with access to and gained new knowledge on SWS opportunities to their farming systems / working area	5,560	4,560	100000
	No. of potential smart centres for providing knowledge and trainings on SWS		1	2

## Progress by Dec. 2017 in numbers (MTR report)

Outcome Area	Indicator	2017 Target	2017 Actual	2016-2019 Target
<b>Outcome Area 5: Investor business linkages created between Dutch and Kenya Companies in SW services and products for small and medium farmers</b>	No. of Dutch and Kenya companies engaged in joint businesses that promote SWS in project areas	3	6	10
	No. of Dutch and Kenyan companies interested in investing in SWPS businesses tailored for SME farmers	3	10	30
	No. of SME farmers benefitting from the business linkages	1000	2613	4,000

## Our progress - examples: The Irrigation Acceleration Platforms



The IAPs in the 5 targeted counties were set up and there are early stage successes in 3 while 2 have been affected by administrative challenges including human resources capacity

Our progress – examples: improved storage



Community pan - Laikipia



Our progress examples: Community engagement  
(5,300 farmers with increased access to SWS to date)



Farmer-driven: Community excavating water pond in Machakos County



# Our progress examples: improved water delivery

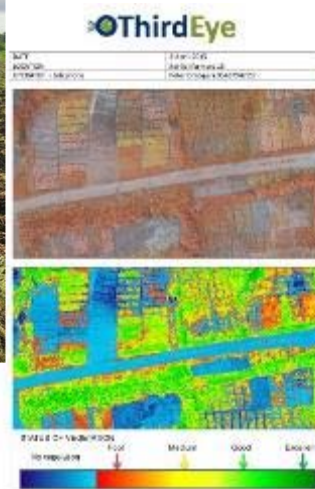


Bucket and flood to improved drip

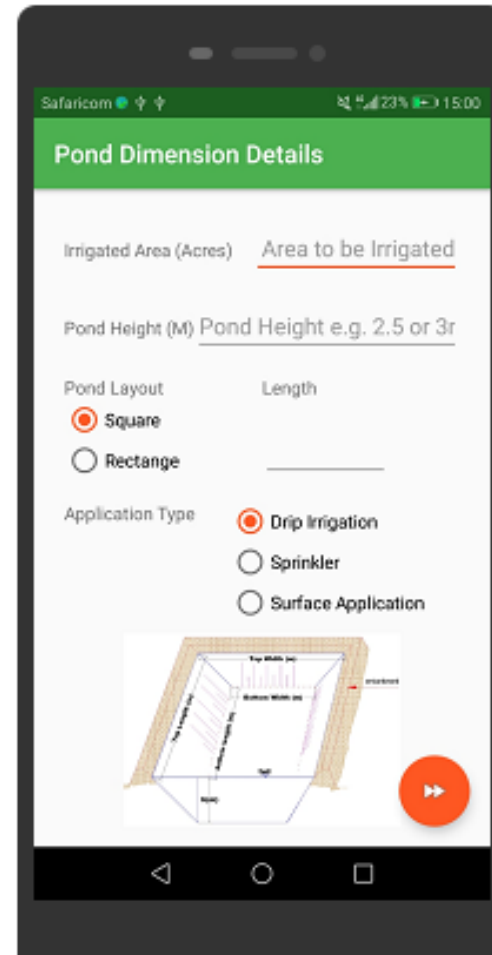
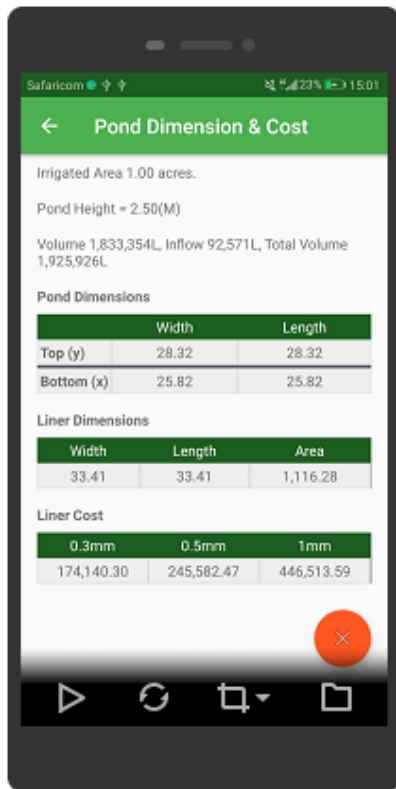
# Our progress: co-investing with SME farmers



# Our progress: innovation



# Our progress: innovation



## Our progress: improved water delivery



Bucket and flood to improved drip – Nakuru and Laikipia



## Our progress: example business cases

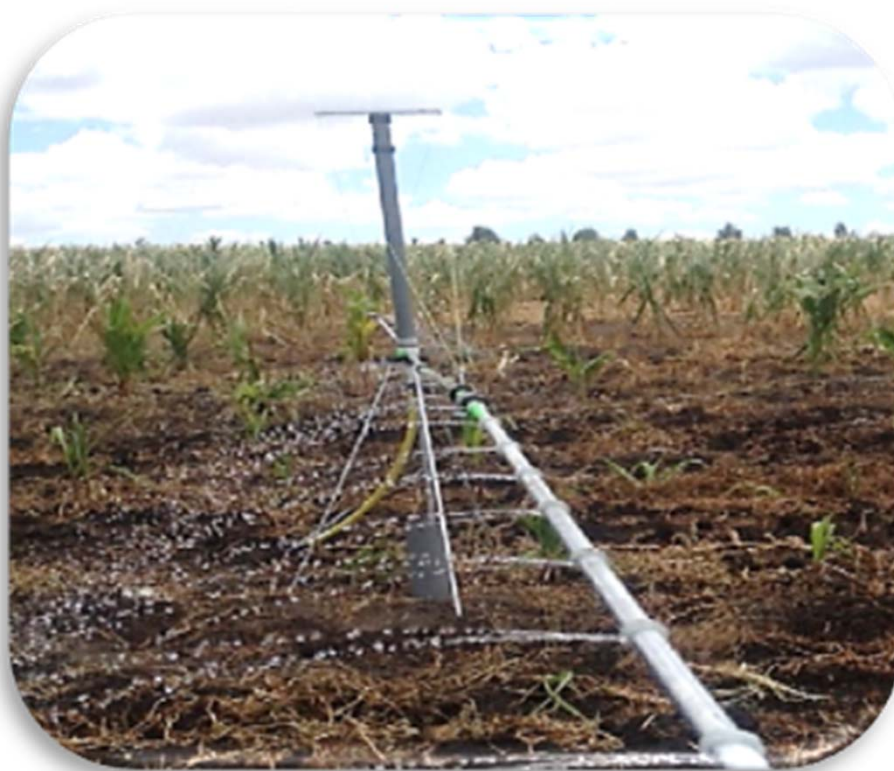


Future Water: Drones to determine on-farm production resource requirements



Energy efficient pumping solutions

Our progress: product and market development – The Rota sprayer

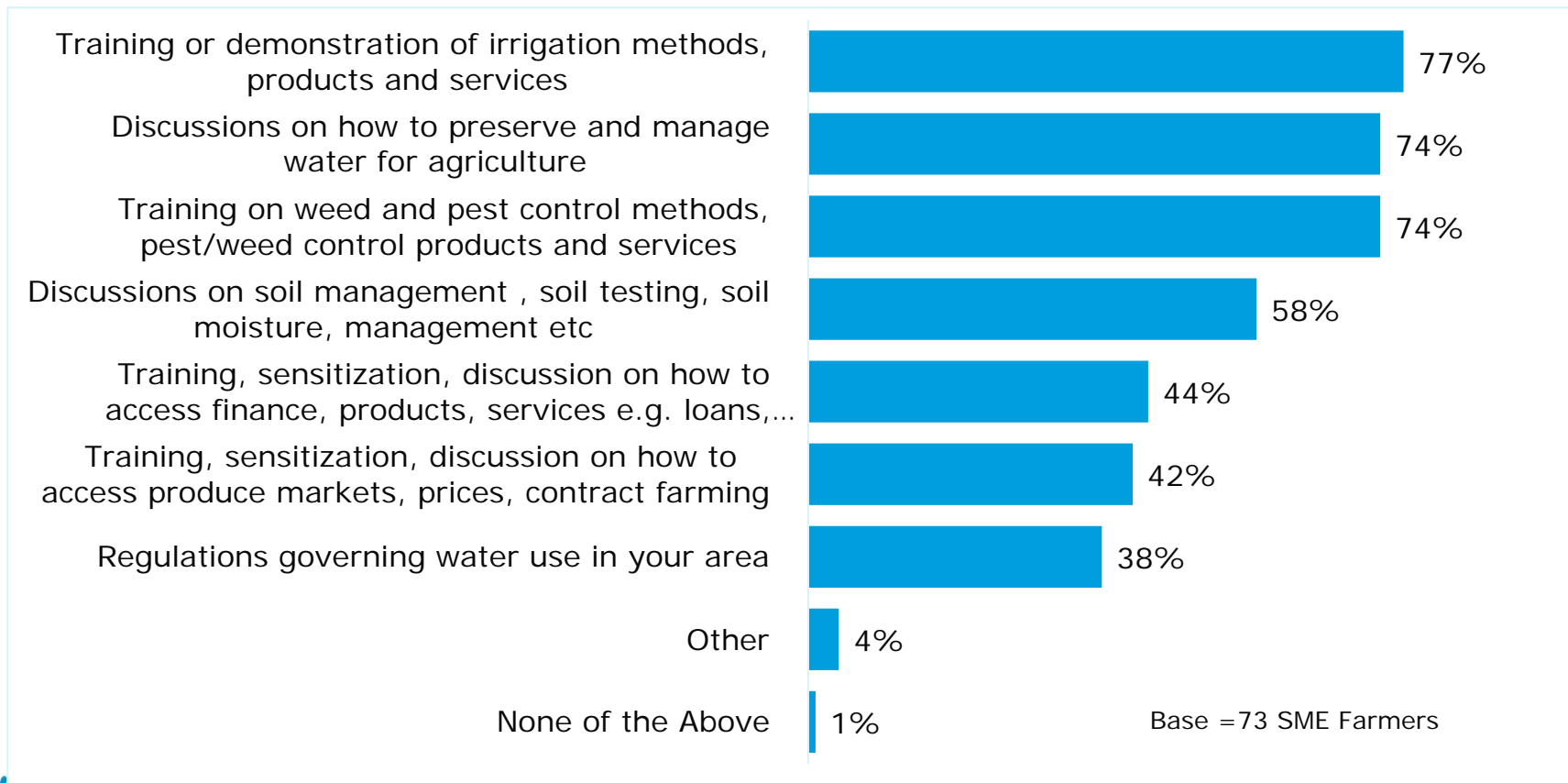


## Our progress examples: Access to financial services





## Our progress example : Improved access to knowledge



Knowledge gained on scarce water resources	
Information on how to utilize scarce water resources	92%
Information on farming methods	67%
Information on producer markets	32%
Received information on how to tackle challenges of weeds and pest management	58%
Got information about market prices for produce	28%
Provided with information on how to better manage production costs	29%
Got information on how to reduce cost of transportation of goods to markets/from markets	24%
Provided information on maintenance (spare parts & technicians) of irrigation systems	21%

The knowledge acquired from the SWA training is signalling change in farmer behaviour

# Our Learning Questions



1. Are we developing, testing, promoting Smart Water Solutions ((technologies, financial products, other) that really fit and benefit larger groups of SME farmers in Kenya? Which ones seem to be most promising and why and which much less so and why?



2. IAP: Are we using the best ways to help set-up and operate effective IAPs? If not what needs to be done to improve. And at the end of the project: Are IAPs effective ways to realize the SWA agenda?



3. Improving access to finance: Are there indeed key constraints preventing farmers or banks to take or give loans for SW investment? Which are these and does the project address these effectively?

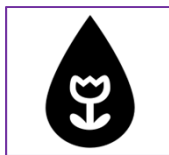
# Our Learning Questions




4. Communication: Do we manage to bring across the key SWS – SWA messages effectively to farmers, which methods work best and why?



5. Kenya-NL business linkages: Is SWA using the appropriate mechanisms to foster such linkages and address possible constraints?



6. Is the project implementation model as a sequence of activities and outputs working well and adapting to challenges in the implementation of needed? If not what needs to be done differently



**Water productivity should be embedded in big development agenda including youth employment and reducing rural-urban migration**

**We also need simple solutions that are not capital intensive**

**IAPs or multi-stakeholder involvement is crucial to achieve scale in Kenya**

**Upscaling is not a follow-up activity to project inception and early implementation phases – it is an integral part of both**

**Important that SWA appoints a lead to champion gender mainstreaming and with clear deliverables and resources to manage the activities.**

**The SME farmer has tapped onto the non-banking financial institutions to meet their needs. The non-banking financial institutions (MFIs & SACCOs) should be given priority in the financial access hierarchy of SWA project.**

**Some lessons Learnt**

Asante Sana

Thank You!!



Dank Je Wel