



End line Assessment of Project Jal Vaibhav - Maharashtra

Implementation Partner: AFARM



Assessment Partner: NuSocia



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CONTEXT

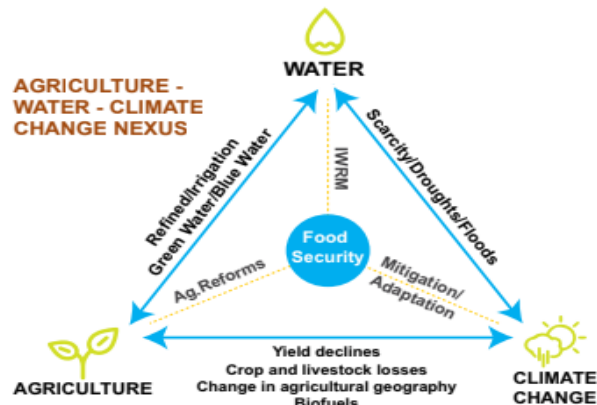


PROJECT BACKGROUND

CLIMATE CHANGE AND IMPACT ON AGRICULTURE

INDIA STATS:

- At least 54% of the country faces high to extremely high water stress.
- Groundwater declined by 61% in 2007- 2017.
- 96 million farmers – 85% small and marginal farmers, dependent on rain-fed agriculture.



Agriculture-Climate Change-IWRM Triangle (Aid Kati 2010)

CLIMATE RESILIENT AGRICULTURE

- Targeted to reduce poverty by improving the usage of resources it depends on.
- **Integrated Water Resources Management (IWRM)** - process which promotes the coordinated development and management of water, land and related resources.
- IWRM has been promoted by the UN Global Water Partnership.

JALVAIBHAV PROJECT

- IWRM undertaken by LTFS to expand opportunities for farmers and vulnerable communities in rural areas of Maharashtra.
 - Address soil and water conservation challenges.
 - Training, capacity building, a package of practices for climate-resilient agriculture with watershed revival.
- Implemented by AFARM (Action for Agricultural Renewal in Maharashtra).
- **IMPACT:** 15,000+ farmers directly in 30 villages.

SCOPE OF WORK: END LINE ASSESSMENT OF JALVAIBHAV PROJECT

JALVAIBHAV PROJECT OUTCOMES

- **Awareness** among **15,000 farmers** on modern agricultural techniques, soil health and climate resilient agriculture
- Increase **knowledge** by **20%** among the targeted set of farmers
- **Adoption** of learnings by **20% farmers**
- **5,000 farmers** availing **soil testing** facilities

ASSESSMENT SCOPE OF WORK

Understand

- Problem and outcomes of the projects
- Identify all stakeholders involved
- Project methodology and the outputs in consultation with LTFS

Assess

- Direct and indirect changes in the target groups as per project goals
- LTFS recall amongst the community
- Overall impact of LTFS Jal Vaibhav project in terms of lives affected – farmers impacted, general community development

Recommend

- Recommendations for improvement and sustainability of the project

METHODOLOGY



STUDY DESIGN

S. No.	Key Areas	Tools Used
1	I. Testing the overall theory of change	<ul style="list-style-type: none"> • Visioning Session with AFARM team (recollection) • Farmer's Diary - Impressions on Theory of change along the process • KIIs and FGDs
2	I. Has JV contributed to the Climate Resilient Agriculture(CRA) and resultant well-being of the farmers? II. To what extent can farmers be considered 'Climate Resilient' over the course of JV project implementation?	<ul style="list-style-type: none"> • Surveys with farmers • FGD with Agricultural Development Committee(ADC), Water User Group(WUG) and Farmer Field School(FFS) • KIIs
3	I. What are the circumstances that make JV more conducive to communities? II. Have these impacts been lasting & sustainable? III. How is sustainability of JV being defined?	<ul style="list-style-type: none"> • FGDs • KIIs • Detailed assessment of ADCs and WUGs
4	I. Do the benefits of JV to its beneficiaries outweigh the cost of the project? II. Did JV provide a cost-effective approach for impacting the <u>establishment, maintenance and sustainability of Hardware</u> (water structures) & <u>Software</u> (community institutions)	NuSocia Strategic Inputs In <u>RCEEIS Framework</u>

PROJECT GEOGRAPHY

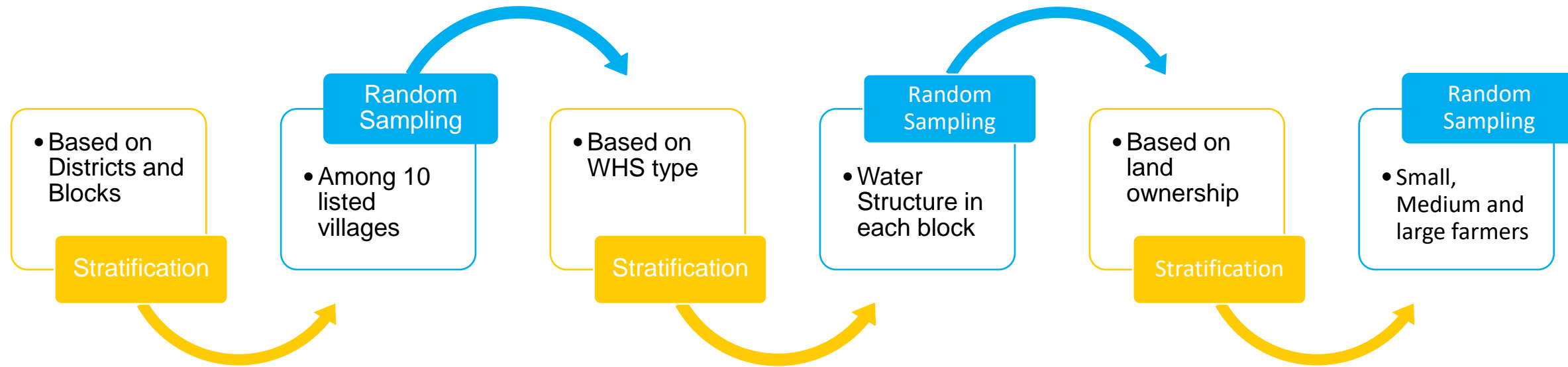
Implementation Partner: AFARM

Project Duration:
FY 2019 - FY 2021

Locations:
Districts(No. of Blocks) –
Solapur(1),
Latur(2),
Osmanabad(2)



SAMPLING



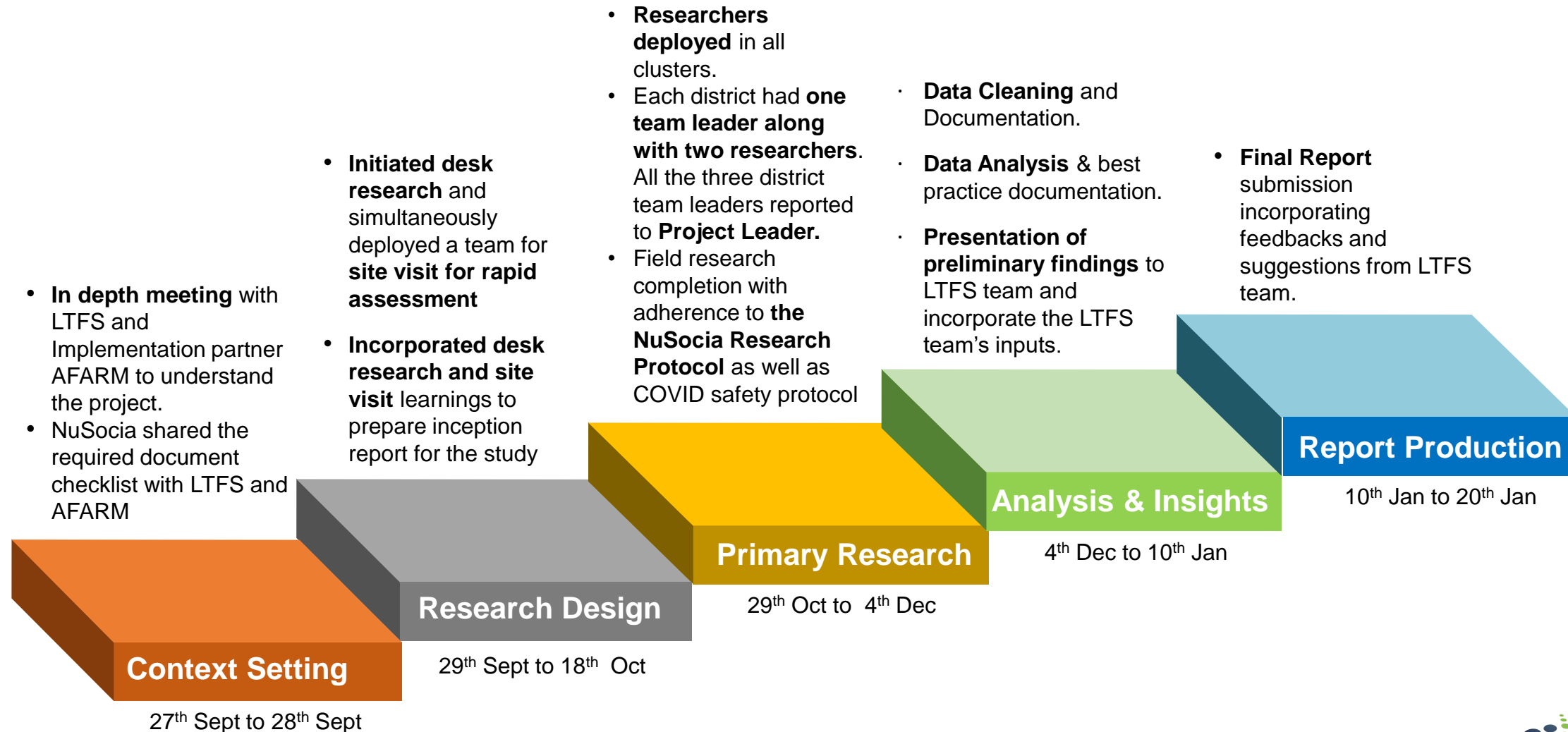
- Stratification used to make sample more accurate by reducing variability in distribution
- Probability Proportional to Size (PPS) specific sample size calculator used to estimate sample size
- Sample size estimated for statistically significant estimates at 95% confidence level and confidence interval of +/- 10% or +/-5%
- 376 Surveys (direct and indirect beneficiaries), 17 FGDs (Water user groups, Farmers, ADCs), 19 KIIs (Govt representatives and other institutions like NGOs, FPOs, Sarpanch, Krishidoots, Implementation team etc.)

STUDY SIZE

Village- Block - District	Villages	Survey	FGD	KII
Kalamb - Osmanabad	2	93	4	6
Osmanabad – Osmanabad	2	72	3	4
Latur - Latur	1	34	1	2
Nilanga-Latur	2	97	5	5
Karmala - Solapur	3	80	4	2
Total	10	376	17	19

District	Cluster	A category villages(Agricultural Interventions)	B category villages (Agriculture and watershed interventions)
Osmanabad	Kalamb		Moha , Massa
	Osmanabad	Darphal, Kamegao	
Latur	Latur	Dhanegao	
	Nilanga	Rathoda, Niture	
Solapur	Karmala		Vanjarwadi, Pondhwadi, Pimpalwadi

WORK PHASES



LIMITATIONS OF THE STUDY

Validation of input e.g. evaluating content of the training was not part of the study objectives.

Technical analysis of structural strength of water harvesting structure was not part of the scope of the study.

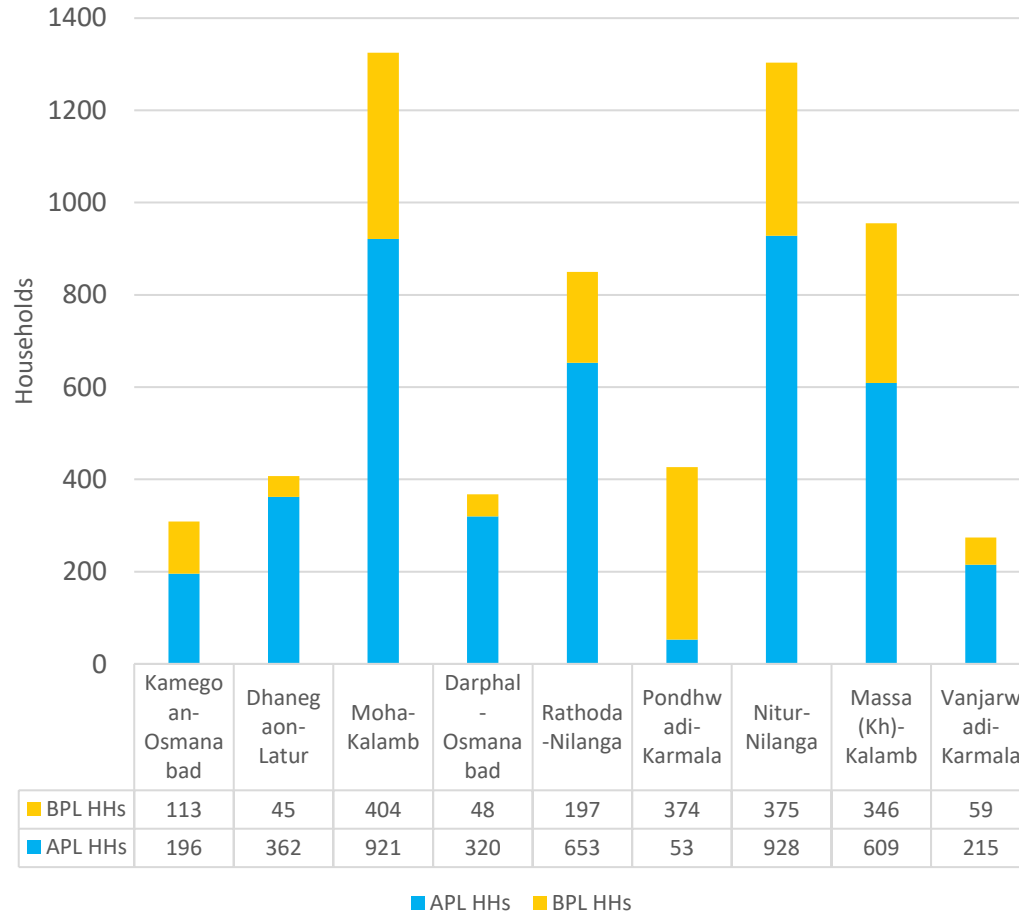
Sampling related limitations: some of the Krishidoots were not available during the study period at the villages due to alternate employment elsewhere or due to Covid-19

FINDINGS

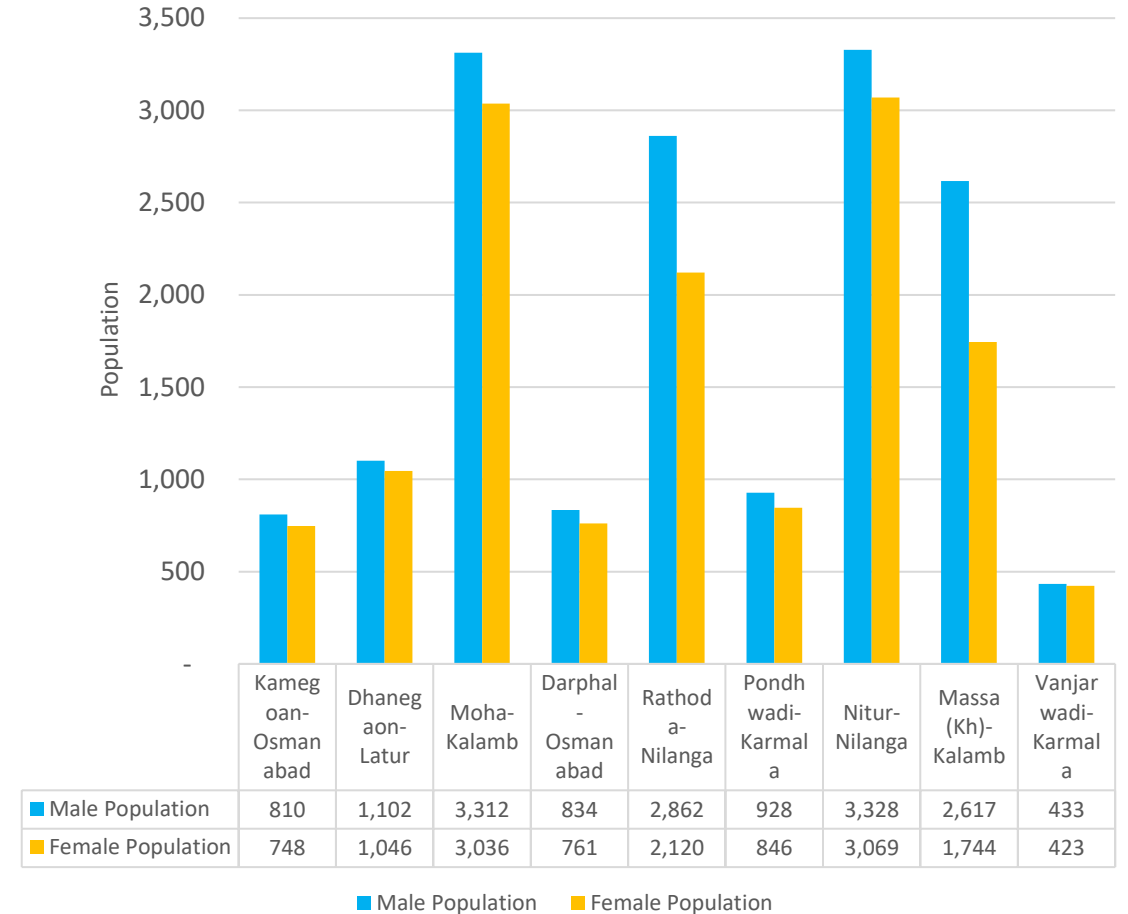


VILLAGE DEMOGRAPHICS

APL/BPL HOUSEHOLDS



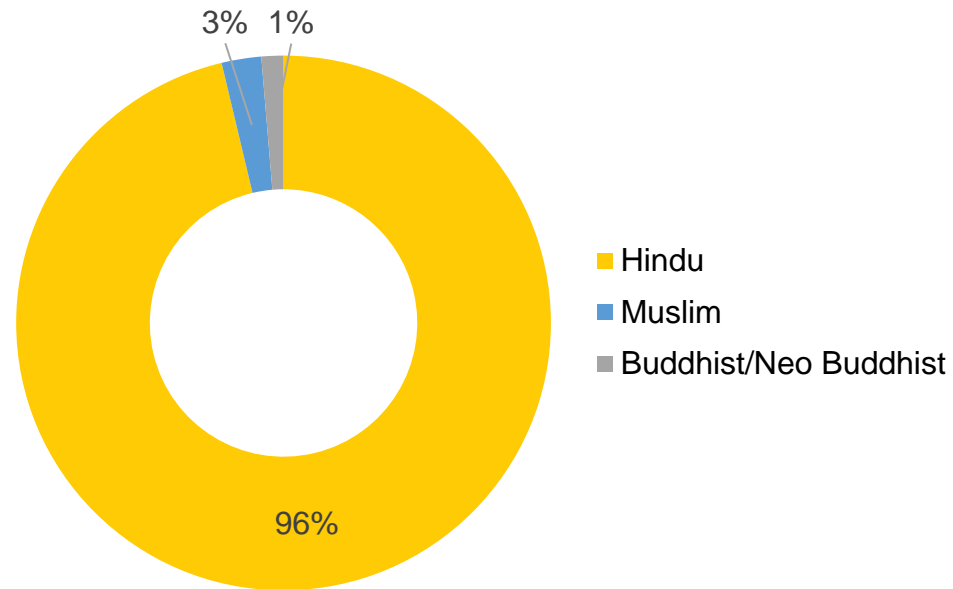
MALE TO FEMALE RATIO



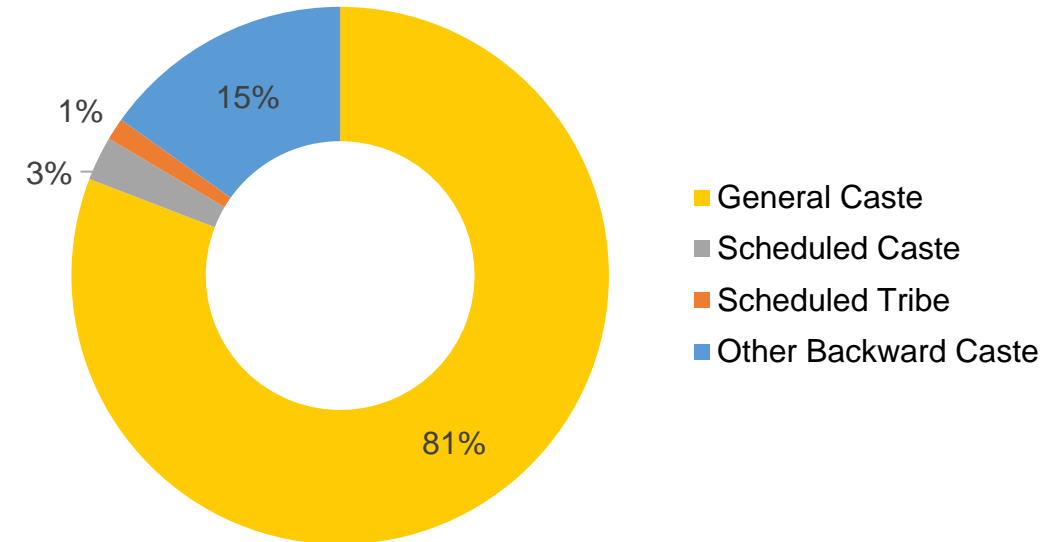
Except for one village, mostly APL families and a healthy male-female ratio can be seen.

DEMOGRAPHIC OF SAMPLE STUDIED

RELIGION



SOCIAL GROUP

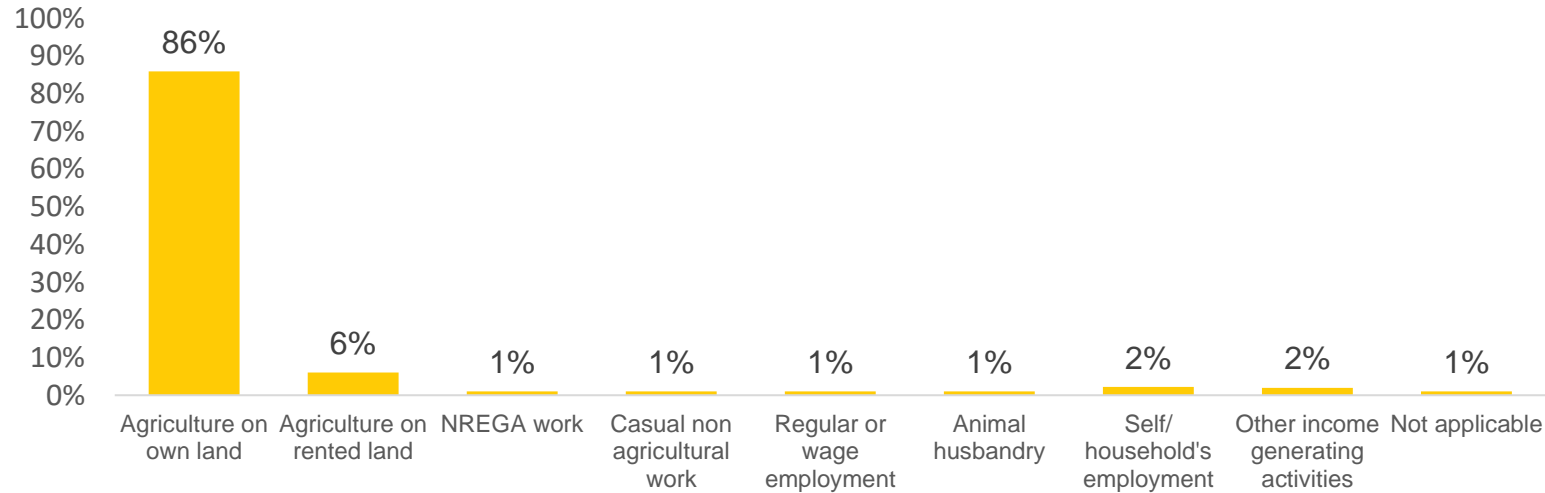


Majority of the respondents were Hindu and belonged to General Caste.

n=376

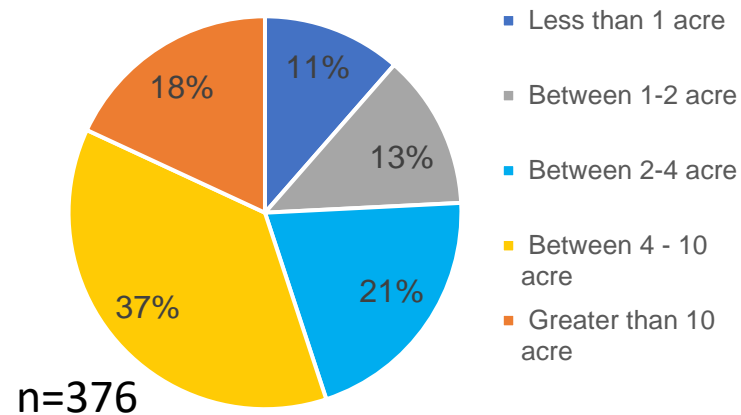
DEMOGRAPHIC OF SAMPLE STUDIED

LIVELIHOOD

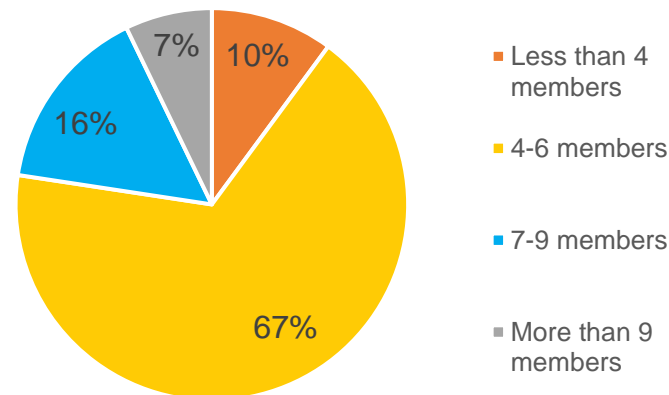


- 86% of the respondents depend on agriculture as their primary income source.
- 55% of them own four or more than four acres of land, and 67% of respondents have four to six members in their family.

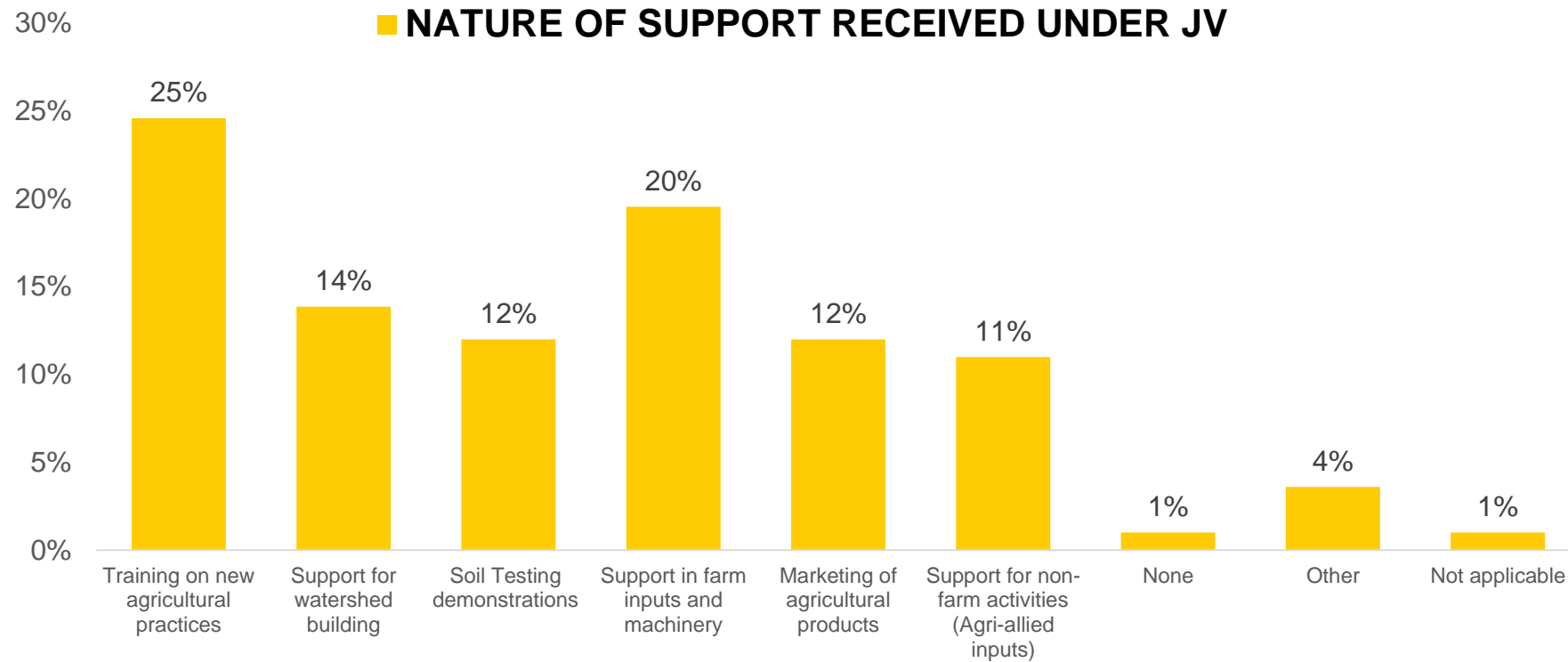
LAND HOLDING SIZE



FAMILY SIZE



SUPPORT FROM PROJECT

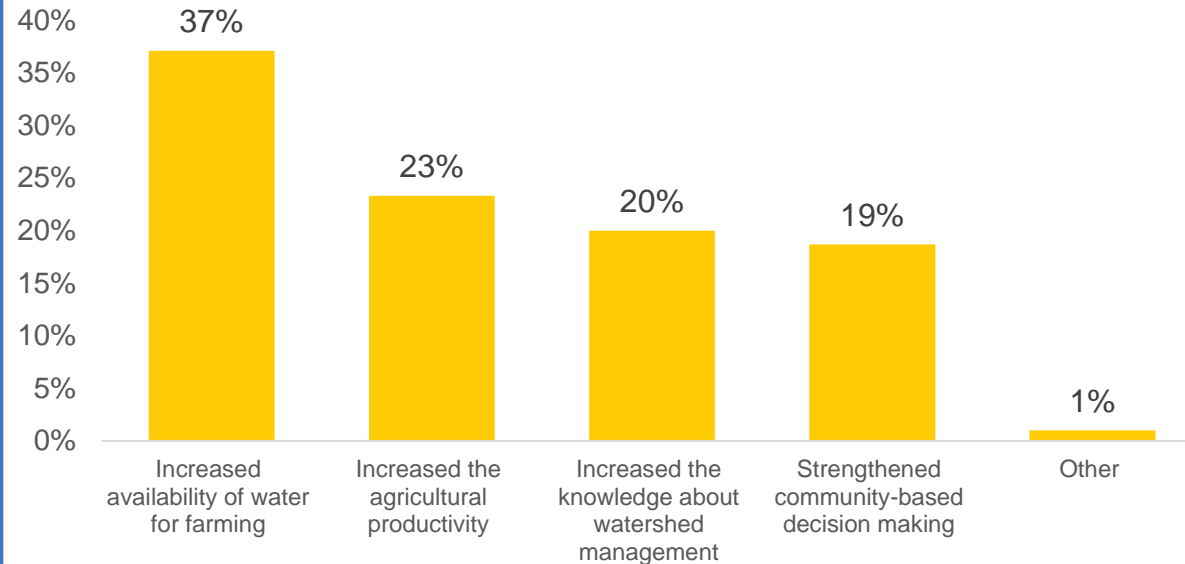


25% feel training on Agricultural Practices and 20% feel Credit Access are prominent value adds from the project.

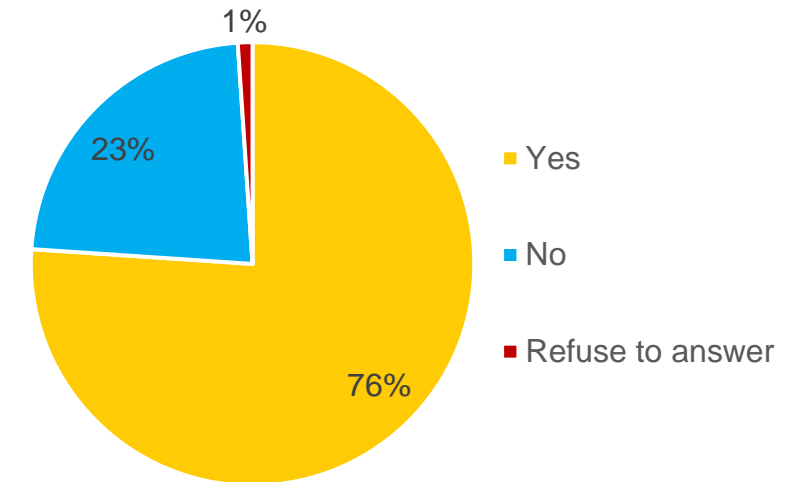
n=376

WATERSHED AND GEOLOGICAL IMPACT

■ BENEFITS OF WATER HARVESTING STRUCTURES



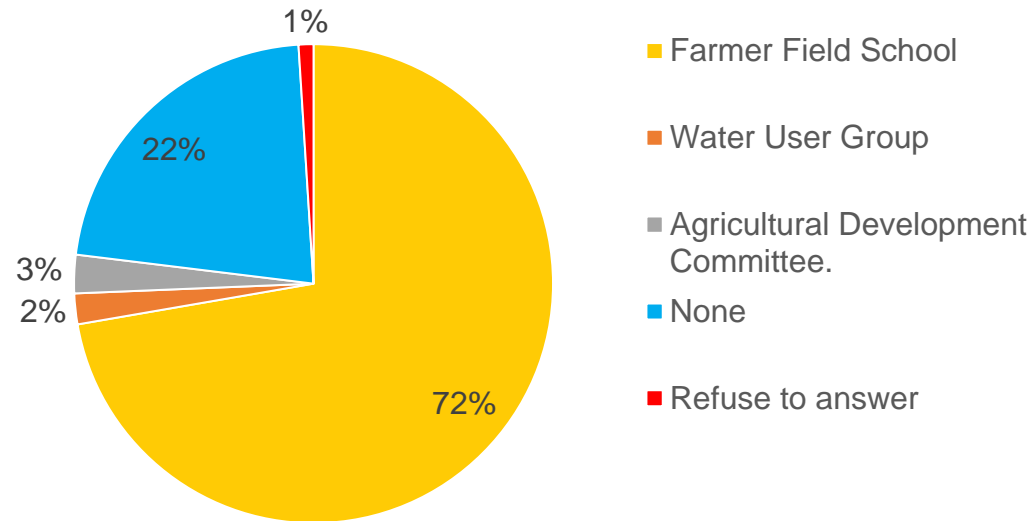
RESPONSIBLE TOWARDS WHS MAINTENANCE



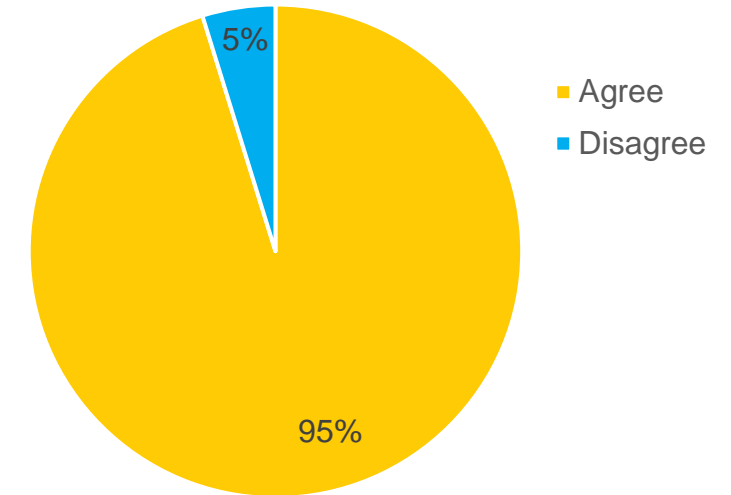
- Out of the 376, 37% of respondents said due to WHS, there is an increase in the availability of water for farming followed by an increase in agricultural productivity.
- 76% of the respondents feel that the maintenance of Water Harvesting Structures is their responsibility.

VILLAGE LEVEL INSTITUTIONS (1/2)

PARTICIPATION IN INSTITUTIONS



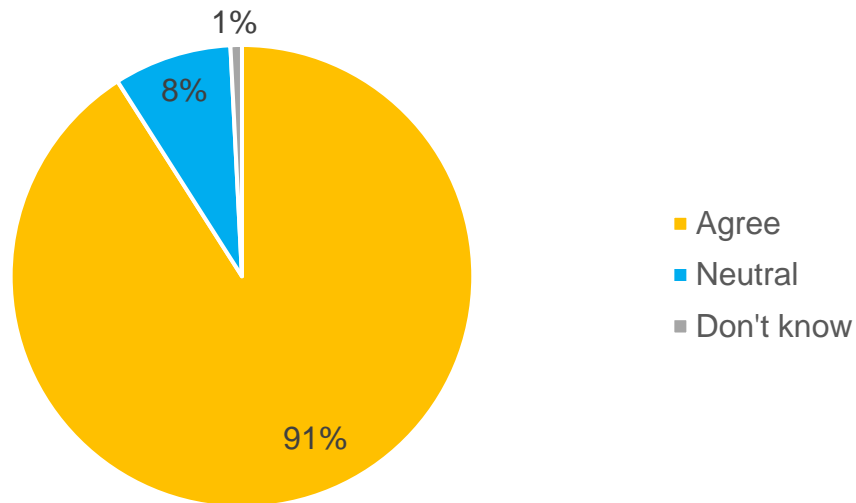
AUTHORITY OF ALL INSTITUTIONS ON FARMING DECISIONS



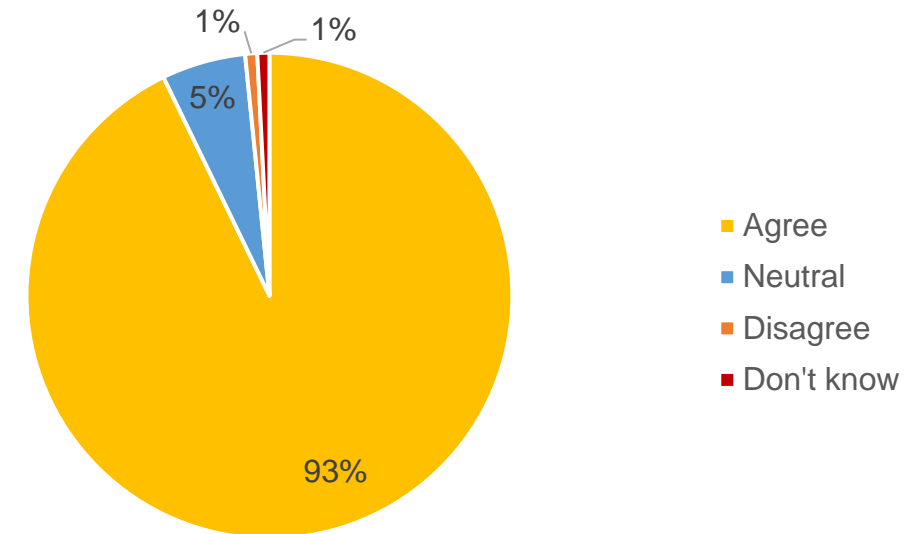
- 72% respondents have participated in Farmer Field Schools
- 95% agreed that village level institutions has authority on an individual as well as village-level farming decision.

VILLAGE LEVEL INSTITUTIONS (2/2)

WATER USER GROUP HAS IMPROVED FARMING ACTIVITY



FARMER FIELD SCHOOL IS USEFUL WAY TO LEARN AGRI PRACTICES



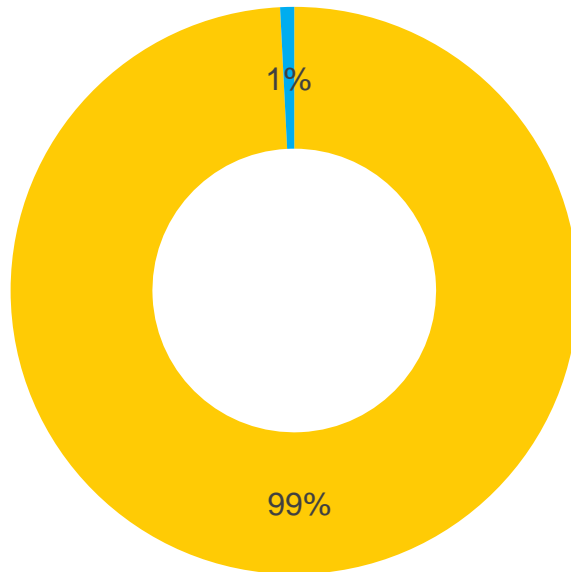
- 91% of respondents agreed that Water User Group activity improved agricultural activity in their village.
- 93% of respondents agreed that Farmer Field Schools are a useful way to learn agricultural practices.

n=376

LTFS AND PROJECT RECALL

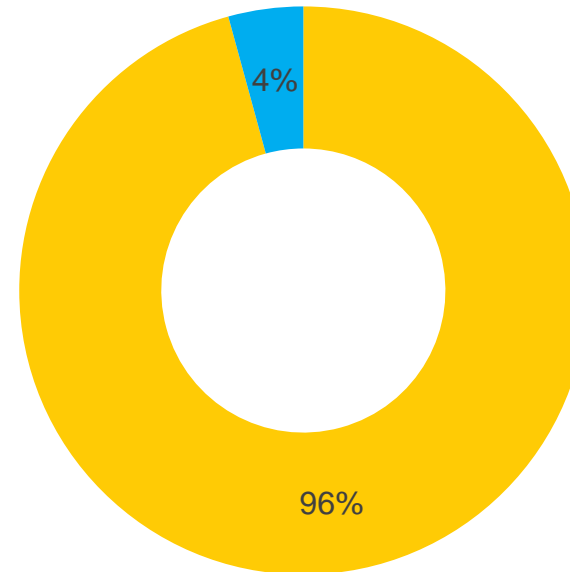
RECALL : JAL VAIBHAV

■ Yes ■ No



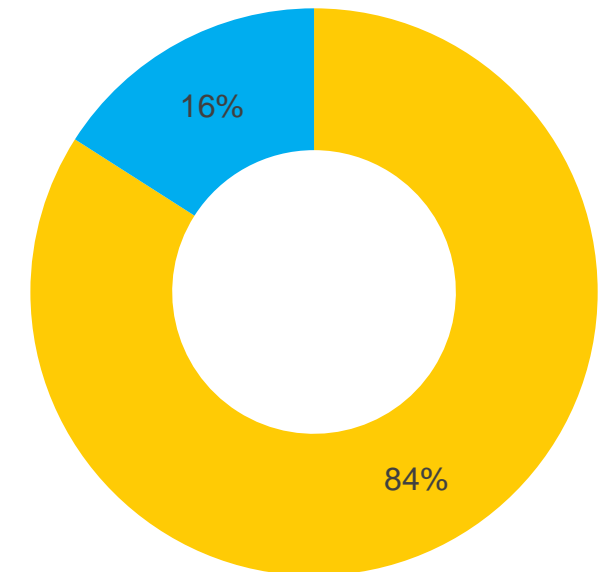
RECALL : LTFS & AFARM

■ Yes ■ No



AWARENESS : LTFS

■ Yes ■ No



Overall, 99% of respondents have recalled of JV project. 96% have recall of LTFS and AFARM. However, the recall of LTFS alone is at 84%.

SUCCESS INDICATORS

	Baseline %	Assessment %
	Farmers adoption	Farmers adoption
Soil Testing	6.5	78.7
Seed Treatment	26	81.38
Adoption of IPM	4.5	56.12
Mix cropping/ Inter cropping	46	69.41

Source: Jal Vaibhav Outcome_ AFARM

Being relatively higher than the surrounding villages, our village could not get water from anywhere except rainwater. We now have a storage capacity of 2.70 crore liters. The village has become tanker free. – Sarpanch of a Village



Quality works of the Jal Vaibhav project have increased the groundwater level of the village, increased the income of farmers. We have high expectations from the second phase of Jal Vaibhav – Sarpanch from a Village

BEST PRACTICES USED

- **Farmer Field School**
 - Provided an Integrated learning facility (soil testing, seed treatment, organic fertilizer, mulching etc.) for farmers.
 - Resulted in the adoption of improved agricultural practices, improvement of productivity, and water availability.
- **Collaboration**
 - The idea of “coming together” leveraging the power of collective buying and marketing has been seeded.
- **Integrated approach**
 - Usage of silt from WHS desilting into improving the soil in the field.
 - Road construction by using soil coming out of WHS construction.

STORY OF CHANGE



Community

- Ganesh M Kharge, Village Borsuri, Block Nilanga, Latur District
- AFARM project

Post initial orientation by AFARM in Nov 2018, many farmers joined as ADC members and helped prepare a village implementation plan for JV including FFS, Soil Testing, WHS, and formation of WUG. Adjoining open wells and bore wells got recharged and all benefitted. Proactive irrigation started. Farmers income increased and soil health also improved. These farmers are a model of how to take lead and prepare a guide map for your village yourself

Thank You!



ABBREVIATION

Abbreviation	
ADC	Agriculture Development Committee
FPC	Farm Produce Company
FFS	Farmer Field School
FGD	Focus Group Discussion
IWRM	Integrated Water Resources Management
JV	Jal Vaibhav
KII	Key Informant Interviews
NA	Not Available
WHS	Water Harvesting Structure
WUG	Water User Group