



## Mid-term impact assessment

### Bundelkhand Initiative for Water, Agriculture and Livelihood (BIWAL)

Caring friends – SRIJAN

DTTILLP, February 2023

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# **I. Introduction**

## Context setting

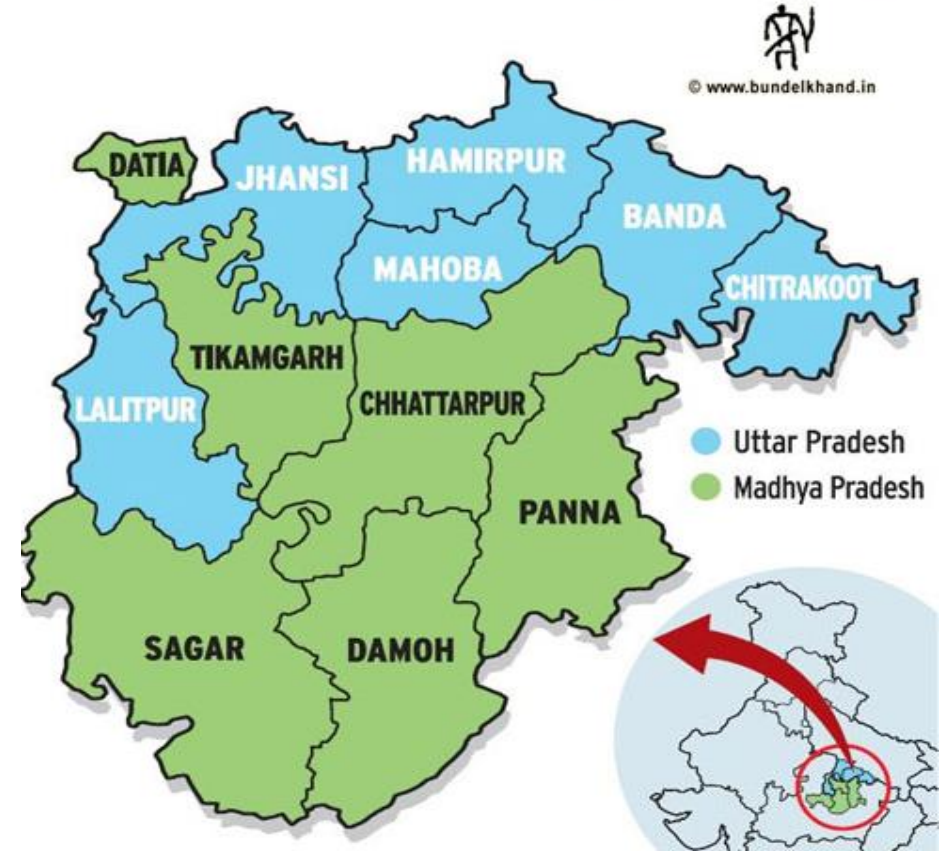


**Historical context:** 12,000+ tanks built by Chandela and Bundela kings during their reign in the region

### Geographical context

- Bundelkhand lies between the Indo-Gangetic Plain to the north and the Vindhya Range to the south
- It is a gently-sloping upland, with barren hilly terrain with sparse vegetation
- Most of the districts where the BIWAL intervention is being carried out, including Jhansi, Lalitpur, Tikamgarh and Chhatarpur, fall in a sub-region called as **Bundelkhand intermediate**. Most of this region has light black soil.
- South of this region lie large tracts of rocky wastelands and undulating terrain, which enables natural or manmade storage of water
- Due to its geology, topography and rainfall pattern, Bundelkhand is prone to both drought and flooding
- In most areas, an impermeable rocky layer is found at shallow depths, which makes groundwater recharge difficult, and leads to high runoff of rainwater and soil.
- Erratic rainfall and thin forest cover in many districts exacerbate the issue, leading to drought or flood in Bundelkhand every few years

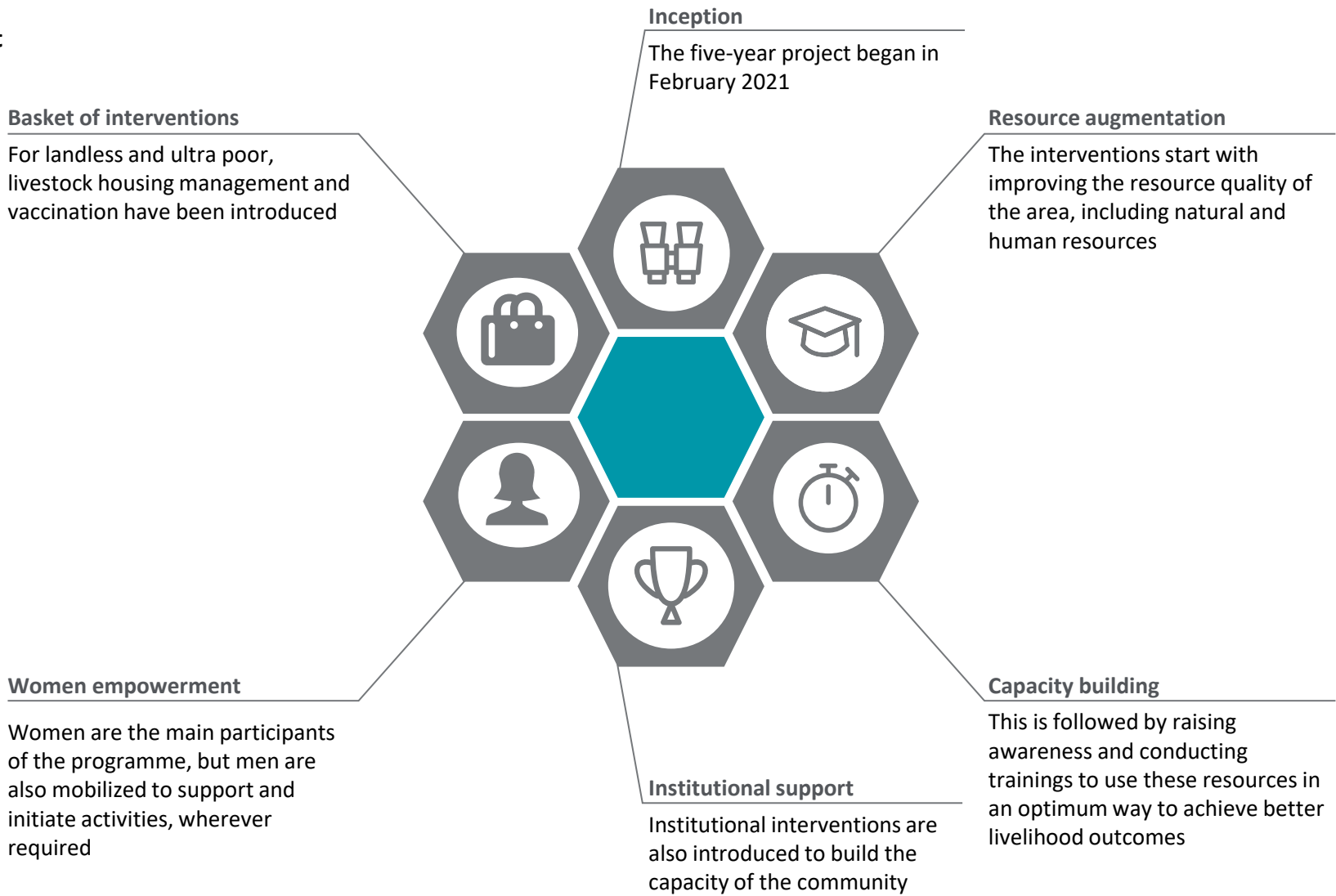
## Bundelkhand Region Map



# Bundelkhand Initiative for Water, Agriculture and Livelihood (BIWAL) | About the project

The three-year impact journey analysis of sustainable rural livelihood development projects focuses on assessing Caring Friends’ support to partner organizations like SRIJAN, Haritika, Bundelkhand Sewa Sansthan (BSS), Arunoday Sansthan, Akhil Bhartiya Samaj Seva Sansthan (ABSSS), and Yuva Kaushal Vikas Mandal (YKVM). The project aims to support livelihoods of 1.18 lakh households in 5 years

## Salient features of the project



# BIWAL | Implementation model

BIWAL is a three-tier model with two verticals to integrate agriculture and livestock interventions, which is implemented across project locations through partner organizations



The Tank Management Committee is the first touch point of any activity in the village. All interventions are carried out through the involvement of TMC and require its approval. TMC is further supported by the Panchayat. This creates convergence among the community institutions and the Panchayati Raj Institution (PRI).













## II. Executive summary

## BIWAL | Major findings from the mid-term assessment











BIWAL employs a holistic approach to sustainable rural development with focus on addressing key issues in the Bundelkhand region. Based on DFID’s Sustainable Livelihoods Framework for assessment, BIWAL’s interventions create impact across all 5 capitals, viz. natural, physical, financial, human and social. Below are few of the areas which are impacted by these women-centric interventions

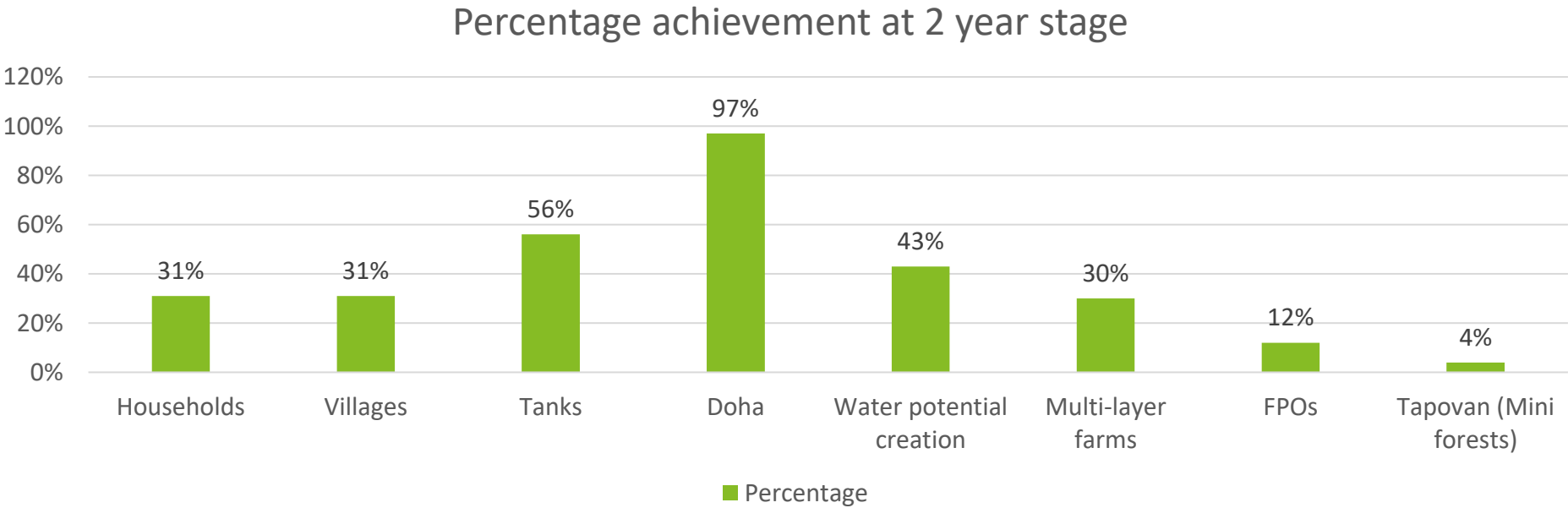
BIWAL					IMPACT	
Problem	Undulating terrain, degraded ecosystem, decreasing water availability, lack of soil and water management practices, climate change challenges, lack of market linkages, loss of high-quality local variety of seeds, increasing use of pesticides and fertilizers, high migration, cattle abandonment, drought conditions				Natural and physical capital	
Solution (Input and activity)	 Rejuvenation of water bodies	 Agriculture ecosystem	 Collectivization	 Livestock	Land holding	
Measures taken (Types of activities)	 Water conservation and soil enrichment	 Agricultural technology enhancement and institutional linkages	 Women led institutions: WPGs, FPO, SHGs, Federations, etc.	 Livestock vaccination, housing management and trainings	Water conservation	
Outputs and Outcomes	Improved farm productivity: quality and production, access to market Improved price negotiation and able to fetch premium price in some cases Income & savings: Savings due to less input cost, financial independence Shift from distressed migration to aspirational migration Future investments leading to improved health and overall improved quality of life & household assets				Soil health	
					Watershed management	
					Infrastructure, equipment	
					Seed conservation	
					Financial capital	
					Income and savings	
					Cost of agricultural inputs	
					Market linkages	
					Social capital	
					Distress versus aspirational migration	
					Social inclusion	
					Social mobility	
					Women empowerment	
					Human capital	
					Capacity building	
					Awareness generation	
					Collectivization	
					Women Producer Groups	



## Major findings from the mid-term assessment

The mid-term assessment shows significant target achievement in rejuvenation of doha and restoration of tanks, while on par progress has been achieved in number of households reached, villages impacted, and multi-layer farms established. The later half of the project would need to focus on creation of FPOs and Mini-forests as they are below par at the mid-term stage

Cumulative Outreach (up to December 2022)										
Indicator										
Target	1,18,000 HHs		1,000 villages	400 Tanks	1,200 Doha	3.6 billion litres	2,200 Multi-layer farms (MLFs)		8 Farmer Producer Organisation (FPO)	500 Tapovan
Achieved	36,240 HHs	1,284 Livestock HHs	306 villages	224 Tanks	1,160 Doha	1.55 billion litres	666 Multi-layer farms (MLFs)	190 Bio Resource Centres (BRCs)	1 Farmer Producer Organisation (FPO)	19 Tapovan



### Project budget (INR)



105.9 cr

### Cost Per HH



INR 8,975



### **III. Programmatic and financial Review**

## Programmatic review

Here we look at different aspects of the program like grant, human resource, village identification, adherence to work plan/activity timelines, type of interventions and the exit strategy

A PMU has been setup to oversee the progress of the program with different Implementation partners

### Types of interventions

### Exit Strategy

Name	Designation
Ashish Ambastha	Team Leader
Rakesh Singh	Team Leader
Krushna Chandra	Project Leader
Kamlesh Kurmi	Project Manager
Sushant Saurav	Project Manager
Neelesh Mehra	Regional Accountant
Govind Pankaj	Finance Executive

#### Process and Data Centralization

The implementation model is same across IPs. This maintains consistent data across program locations.

A centralized **Google Sheet** is used to track the program progress and budget utilization at central level

Interventions	Description
<b>Tank/Doha Rejuvenation</b>	Excavation of silt from tank and drainage line to conserve water and the silt used in farmlands enriches Soil Organic Carbon
<b>Bio Resource Center (BRC)</b>	An entrepreneurial initiative to train and supply products to promote regenerative agriculture
<b>Demo Plot</b>	A 1-acre plot usually integrated with BRC to demonstrate regenerative practices
<b>Multi Layer Farming</b>	An intensive model on a plot of ~ 600 ft <sup>2</sup> to grow vegetable in a layered form to ensure continuous harvest from the plot
<b>Nano-Orchard</b>	Farmers growing fruit plantation in small patches of land (as low as 40 plants)
<b>Tapovan (mini forest)</b>	An intensive forestry technique called <b>Miyawaki</b> forest to raise highly dense plantations of local species of trees
<b>Goatery</b>	Vaccination of goat and housing management to reduce infestation of diseases
<b>Collectivization</b>	Collectivization of the community in different forums and building their capacity



#### Community institutions

Women Producer Groups, Bio Resource Centers, Goat Resource Center and Farmer Producer Organization are an important part of the exit strategy. The aim is to build capacity of the people and generate good amounts of cash flow in these organizations so that they can cater to the supply of farm inputs in the area.

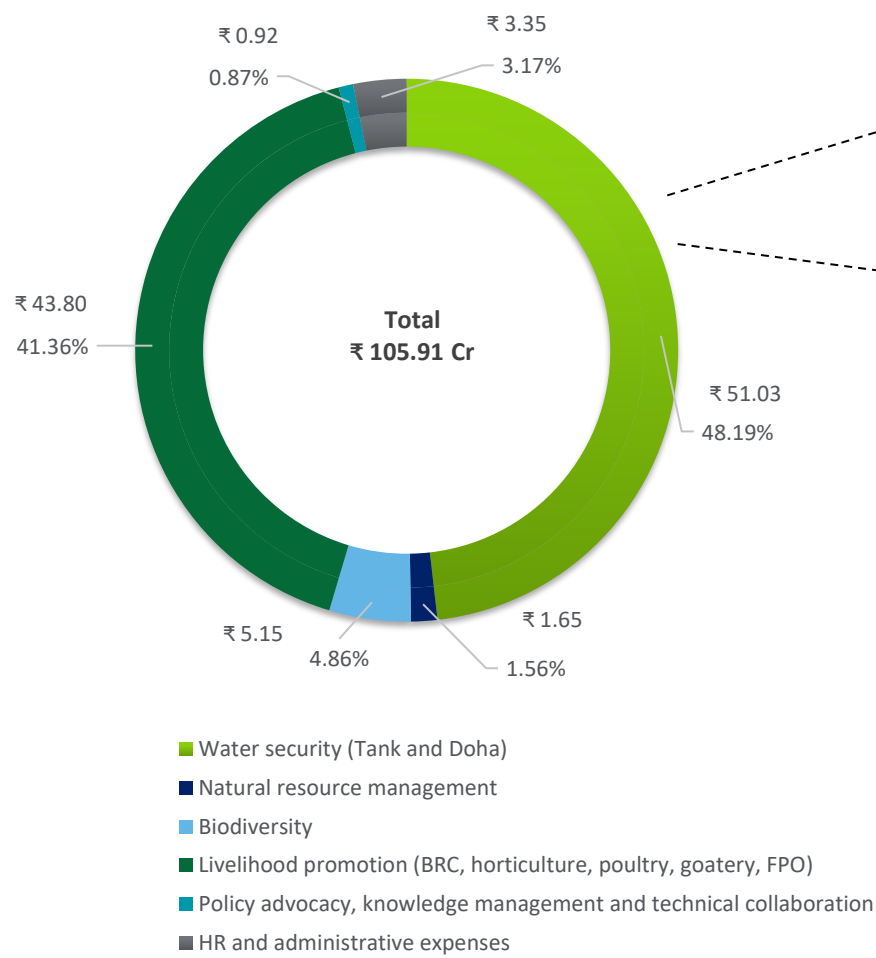




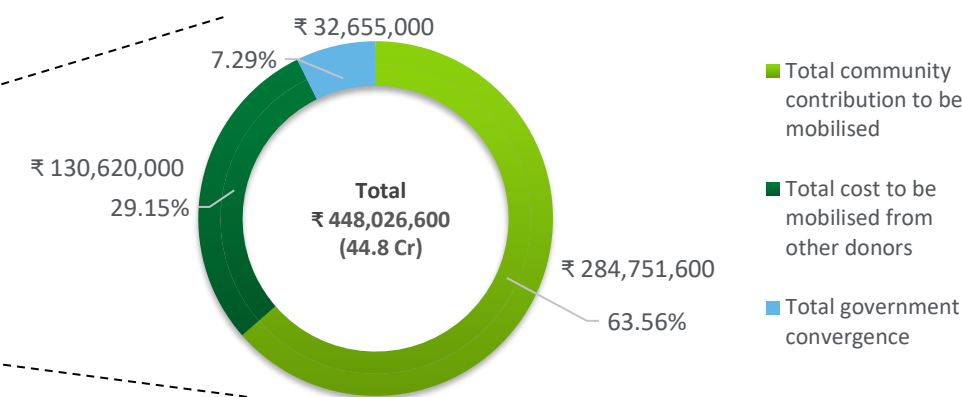
# Funding | Utilization

Funding status and its utilization are given below

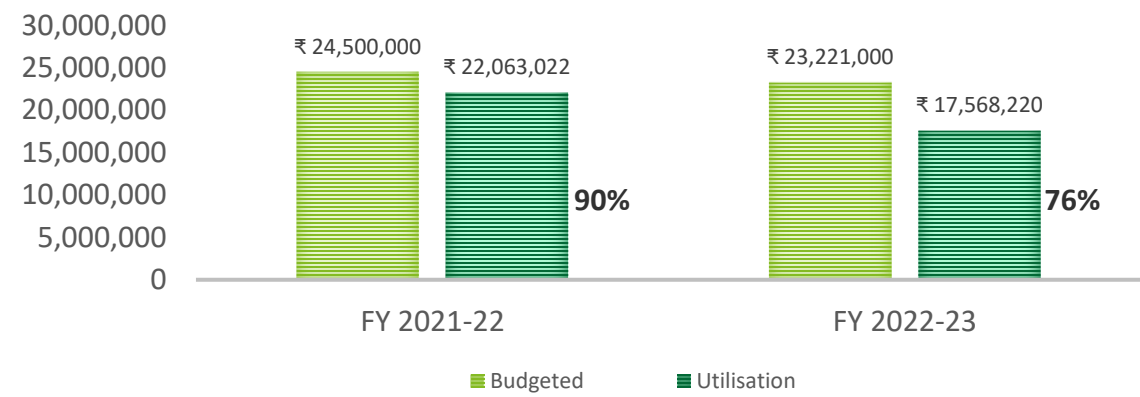
Project budget break-up (in INR Cr)



Tank renovation break-up



BUDGET UTILIZATION (CARING FRIENDS' FUNDING)

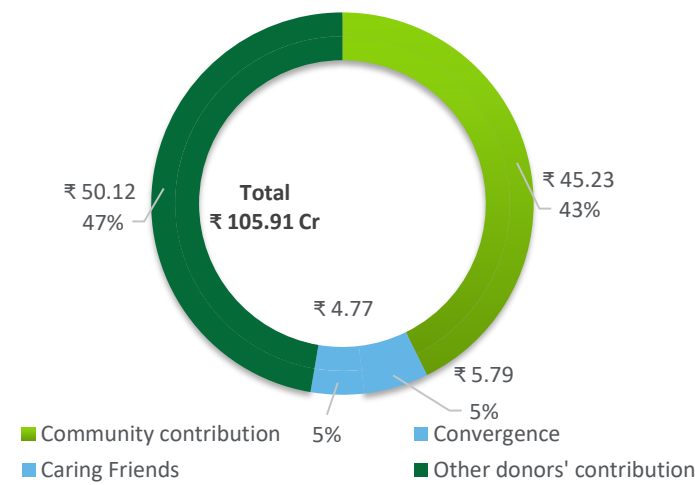


\*FY 2022-23 utilization up to 31 December 2022

# Funding | Mobilization

Mobilization of funds from other donors and government schemes is given below

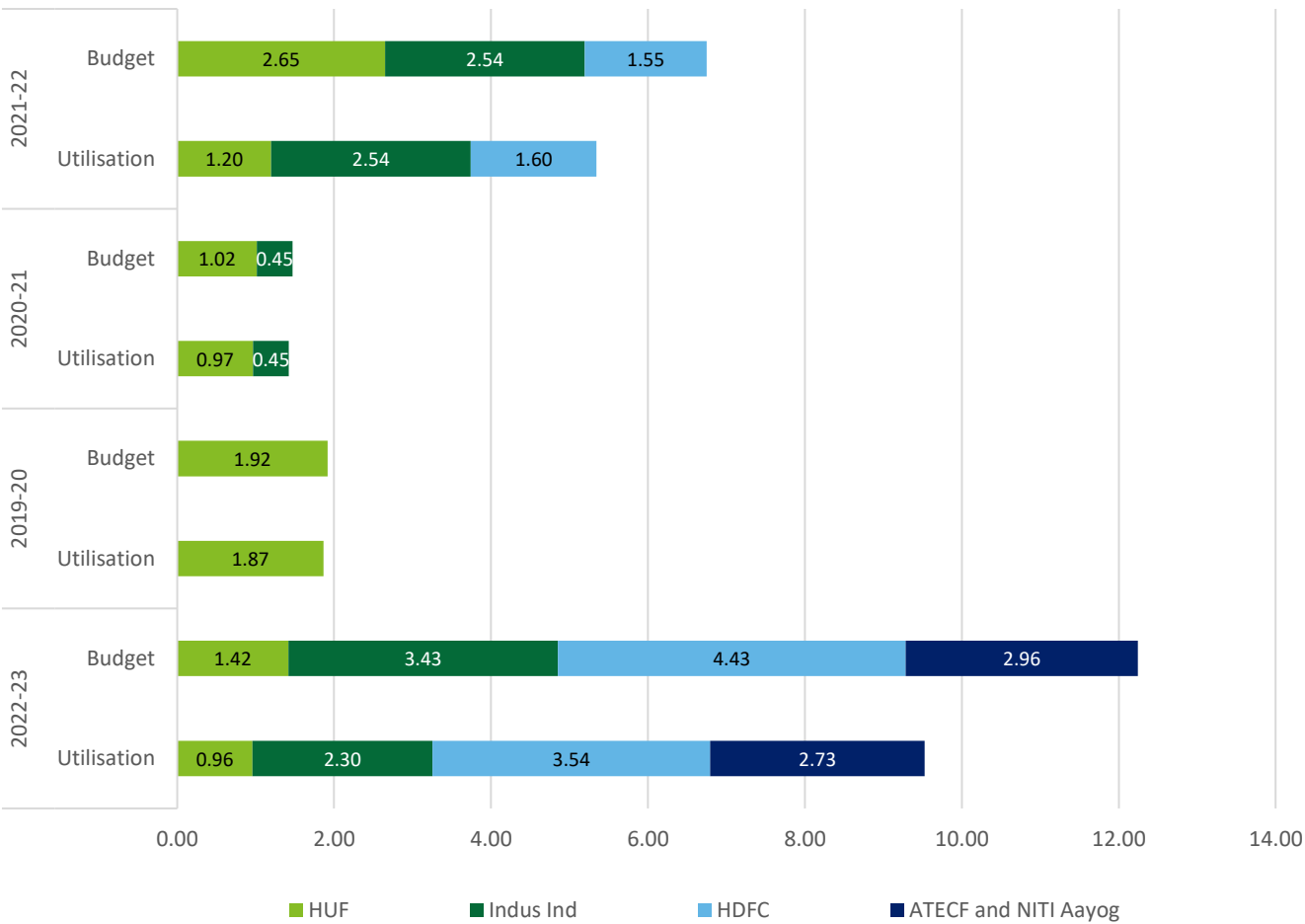
Project funding sources (in INR Cr)



\*Caring friends support is based on actuals for past two years

Other donors		
Name of Donor	Budget (in Cr)	Program interventions supported
Hindustan Unilever Foundation (HUF)	7.15	Tank de-siltation
Indus Ind	8.79	Tank, Doha, area treatment agriculture, water harvesting structures repair
HDFC (Chitrakoot and Jhansi districts)	14.29	Doha, water harvesting structures renovation and new, agriculture, livestock
A.T.E. Chandra Foundation & NITI Aayog	2.77	Tank de-siltation (For one year)

Co-funding sources and utilization (in INR Cr)

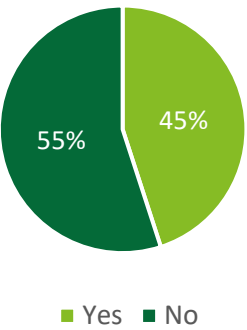


\*FY 2022-23 utilization for HUF and Indus Ind up to December 2022  
FY 2022-23 utilization for HDFC up to January 2023

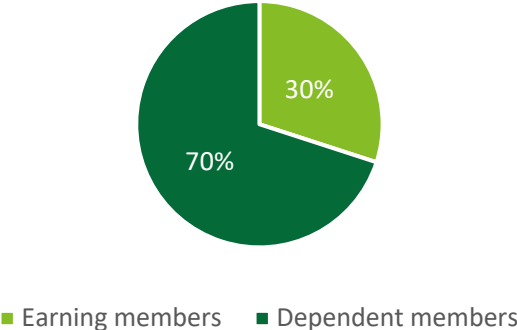
# Demographic and welfare indicators

Here we have presented different demographic and welfare indicators related to the beneficiaries like – Age, earning and dependent family members’ ratio, electricity and water availability, ration card access etc. {n=sample (78 to 109)}

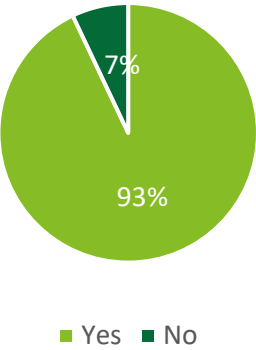
Job card



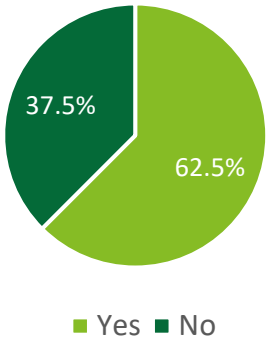
Dependency ratio in family



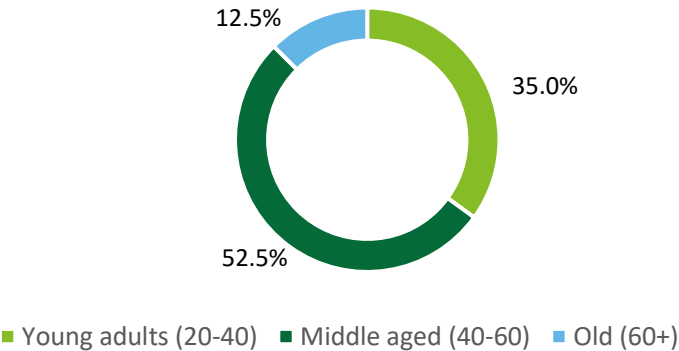
Electricity



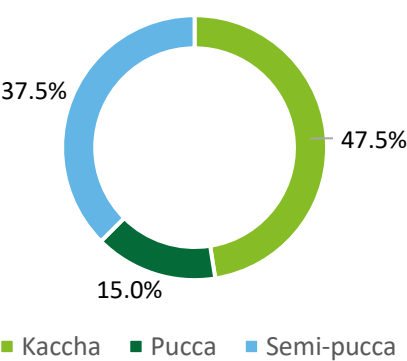
Individual toilets



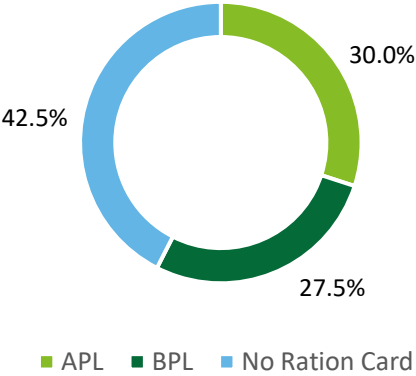
Age distribution



House type



Ration card







## **IV. Major findings**

### ***A. Specific intervention-wise***

## Tank rejuvenation and Doha

Bundelkhand region has more than 1,200 Chandela and Bundela era tanks. These tanks over years have been collecting silt from their catchment areas. Doha is a drainage channel that let the rain-water flow out

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### Salient features

- Before excavating the silt there is a provision of pilot pit to check the quality of the pit and determine how much silt can be excavated without rupturing the structure
- Silt excavation is not done near the embankments to avoid structure leakage
- Silt excavation has resulted in increased water holding capacity of the tank
- TMCs have been formed under the program to take up the responsibility to plan for the catchment area management, water management
- TMCs have been institutionalized through support from Panchayats
- All other interventions (MLF, BRC and nano-orchard) are carried out through proposals to TMC



Survey near tank in Kudar, Niwari



Tank in Lakhepur, Tikamgarh

- Increased tank capacity has resulted in increase in average irrigate land
- **75% of our sample was able to observe a change in water level in wells and 16% of them were able to quantify it to an average of 6.8 feet increase in water level (this is specific to January month)**
- TMC has become an important institution as it is one of the entry point activities to start the program in a village



## Bio Resource Centre

Bio Resource Centre (BRC) Prakritik kendra is a village level model cattle shed which not only demonstrates collection of resources (cow urine and dung) and their use in regenerative agriculture but also acts as a training center and grooming entrepreneurs at village level

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### Salient features

- BRCs are a model to show integration of livestock capital with other natural capitals (land and water)
- BRCs are required to have around 3-4 cows to ensure optimum supply of cow dung and cow urine
- The floor is sloped towards an outlet which is used to collect the cow urine
- WPGs gather at BRCs for their meeting and training
- Various trainings are organized to promote regenerative agriculture (*jivamrit*, *ghanjivamrit*, *neemastra*, *brahmastra*, *mathastra* etc.)
- A 1-acre plot is used as a demo plot where all this concoctions are used as and when required
- BRC operator also sells the various concoctions and bio-fertilizers to villagers at a reasonable price
- Some BRCs have also started collecting local variety of seeds and are promoting them



Ramabai's demo plot in Dhamna village



Seed bank at Guddibai's BRC in Lidhoratal

- **Income realized-** Most of the BRCs were newly setup and thus did not generate much revenue except for Guddibai's BRC in Lidhoratal. She is making around INR 1.5 lakh yearly as a BRC entrepreneur



## Nano-Orchard

Nano-orchards are a proven method to not only increase the Soil Organic Carbon but also diversify the income of the farmer

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### Salient features

- Nano-orchards are an effective method to diversify income
- It also contributes to increasing the Soil Organic Carbon (SOC)
- As the produce is organic, over a couple of years, this leads to better soil health and increased productivity
- Requires less labour after a couple of years
- With intercropping, farmers can get increased benefit from the nano-orchards



Shivram Mishra in his nano orchard with intercropping, Lakhanguwan village



Rekha didi's in in-laws in their nano- orchard, Kandella village

- *Most preferred variety in the region for nano-orchard is guava*
- *Farmers are easily making approximately **INR 1,000 per tree** after a period of 2 years*
- *Since their produce is organic, they are at times able to earn premium over the market rates*
- *Farmers have observed better taste in the fruit*
- *The fruit has better shelf life than ordinarily grown guava*
- *Observed range of number of plants in nano-orchard ranged from 40 to 2500*

## Multi-Layer Farming (MLF)

Multi-layer farms are intensive plots to ensure crop harvest throughout the year

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### Salient features

- Crops are planned in a way to ensure continuous harvest throughout the year
- The plots are treated with home made concoctions (*jivamrit*, *ghanjivamrit*, *neemastra*, *brahmastra*, *mathastra* etc.) and other bio-fertilizers
- A continuous harvest provides farmer with a steady flow of income



*A farmer practicing MLF on two stretches of land after a successful cropping season*



*Tulsa Kushwaha earned an income of approx. 15,000 in the last season with MLF, which is **thrice** her previous income from the same plot*

- *Crops are grown at four levels: root, leafy, bush and climbers*
- *Since the produce is organic, farmers have observed better taste and longer shelf life*
- *Farmers are also at times able to get premium rates for these vegetables*
- *Most of the farmers are looking to increase the area under MLF*
- *70% of the farmer sample confirmed that their income grew by four times after shifting to MLF (average income of INR 25,000 from the 600 ft<sup>2</sup> of land as compared to average of INR 6,000 from the same patch of land)*



## Tapovan | Miyawaki forest

Highly dense forest of local species

### Salient features

- Mini forests are being raised on community land while ensuring availability of water
- The whole land is treated with bio fertilizers before plantation
- The plantation is done in a circular manner
- Only local species are grown in a mini forest
- Species mapping is done way before the plantation to ascertain the local variety of trees
- For initial 2 years, the forest needs intense care (frequent irrigation during summer)



*Plantation density inside a mini forest*



*Mini forest in Dor village*

- *The purpose of a Tapovan is to reintroduce the local varieties of trees that are being replaced*
- *Large number of such mini forests in an area can affect the climate in a region*
- *Such mini forests have attracted a lot of bird species which helps maintain a healthy environment balance*
- *The rate at which Miyawaki forest grow is much faster than a normal forest*

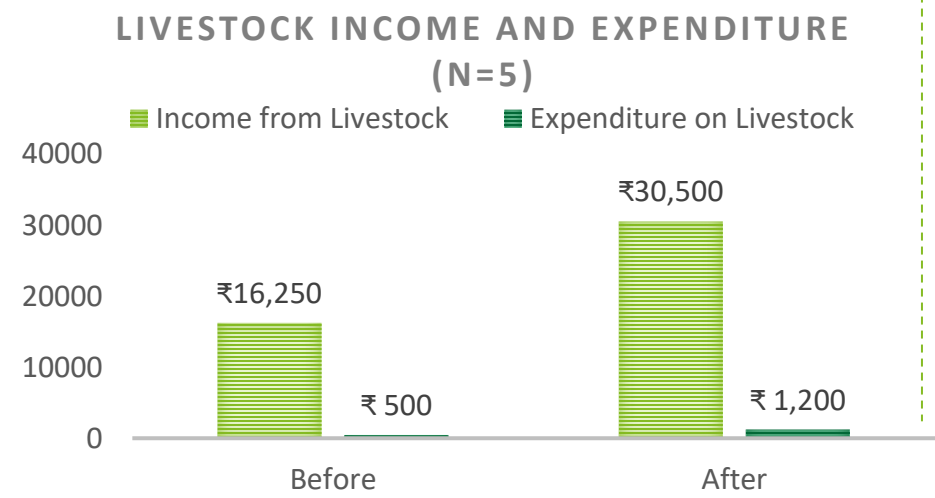


# Livestock | Goatery

Vaccination program, housing management and Pashu Sakhi model

## Salient features

- Pashu Sakhi is a self sustainable model at village level. Pashu Sakhi is paid by the community for the services she provides through vaccination and marketing of goat's mineral mixture (feed for goats)
- Goat Resource Center has been setup to anchor all activities around goatery
- Vaccination drives in partnership with the Block administration office
- Mobilizing vaccines from the Block administration office
- Maintenance of cold chain to maintain effectiveness of vaccines



Khilan Khushwaha with her goats



Goat feed marketed by Goat Resource Center

- There have been instances in villages when farmers lost a huge portion of their livestock to a disease outbreak. Pashu Sakhis are ensuring timely vaccination and good quality feed to the livestock of willing farmers
- Pashu Sakhis are able to earn somewhere around INR 1500-2000 monthly through vaccination and mineral mixture marketing

## Collectivization | FPO

Women are being collectivized into Women Produce Groups (WPGs) and Pashupalak sangathan ()

### Salient features

- Women Producer Groups and Pashupalak sangh at village level
- These institutions are supported by Village Resource Persons (VRPs) and Pashu Sakhis
- BRC and GRC are two arms of the FPO to segregate agricultural and Livestock operationally
- FPO also runs custom hiring center where it leases its equipment to a BRC from where the BRC operator handles it
- FPO was formed in 2022
- FPO has ~1200 members
- Criteria for membership : hold 10 to 200 shares with a face value of INR 10. It raised a total of INR 7 lakh shareholder capital, and this was used to provide input linkage and seed banks.
- Currently the turnover is around INR 25 lakh through seed business

### Ken Betwa Mahila Farmer Producer Company Limited



Guddibai at her custom hiring center with groundnut machine

- FPO has been formed under Companies Act
- Board of Directors (BoD) has 7 women members
- BoD meeting is organized monthly
- Chief Executive Officer , VRP and CLM are being supported by SRIJAN at present
- FPO is an important factor in the sustainability of the program and exit plan





## **IV. Major findings**

### ***B. Outputs and outcomes***



# Average Irrigated Land

Irrigated land refers to the land that has some source of irrigation for through which it can be irrigated as and when required. Through our experience we have observed a change in the average irrigated land through water conservation projects since they lead to groundwater recharge and as a result of which water harvesting structures are activated for a longer period

## Impact



75% of the sampled farmers were either marginal or small farmers



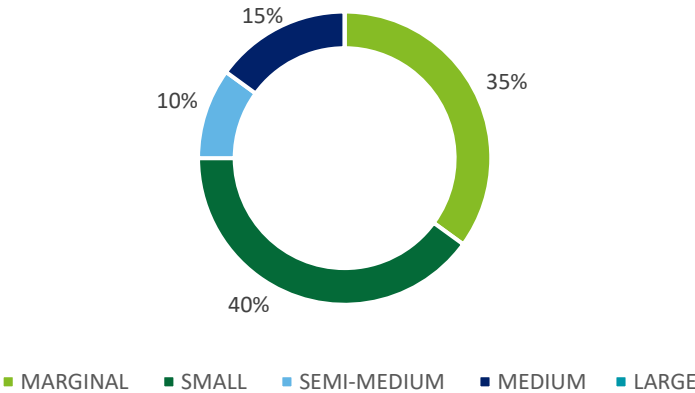
57% of the farmers were benefitting directly (irrigating from Tank or Doha)



Average productive land is 4.71 acres/farmer

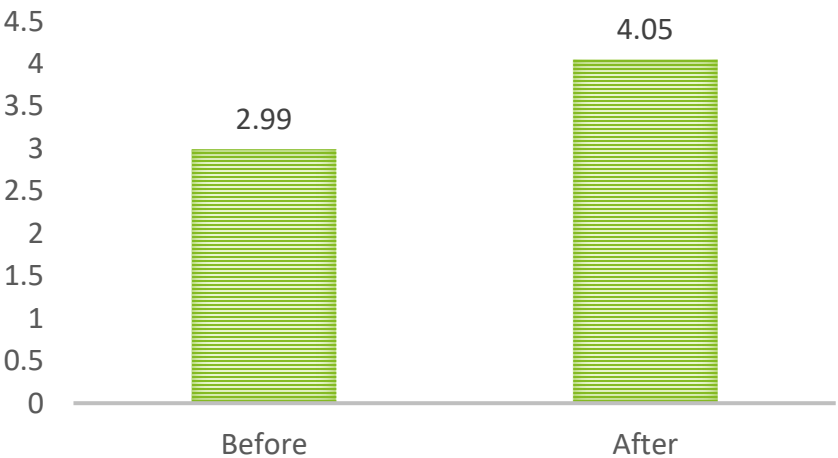
Through tank rejuvenation and doha, we observed an increase in average irrigated land in our sample from 2.99 acres to 4.05 acres. In a couple of cases, families were migrating to cities and did not cultivate their land but after use of silt on the land and increased water availability, the families have stayed in the village

Farmer Landholding (N=40)



Categorization of farmers	Land Size
MARGINAL	< 2.5 ACRE
SMALL	2.5 - 5 acres
SEMI-MEDIUM	5 – 10 acres
MEDIUM	10 – 25 acres
LARGE	> 25 acres

AVERAGE IRRIGATED LAND (IN ACRES) (N=40)



# Average Annual Net Income

Net disposable income is the annual gross income after subtracting the annual cost (expenditure). The total annual gross income of the participants includes earning from farming, kitchen gardening, livestock, tree plantation, MGNREGA, collection of forest produce and daily wages.

## Impact



**Average Annual Net Income  
INR 216k**

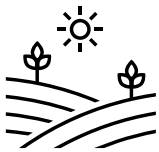


**Percentage increase in average annual net income  
65%**

### Salient features across projects

- The average net income rose by almost 65% from INR 130k to INR 216k

## Factors



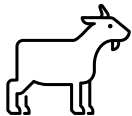
Increased area under irrigation



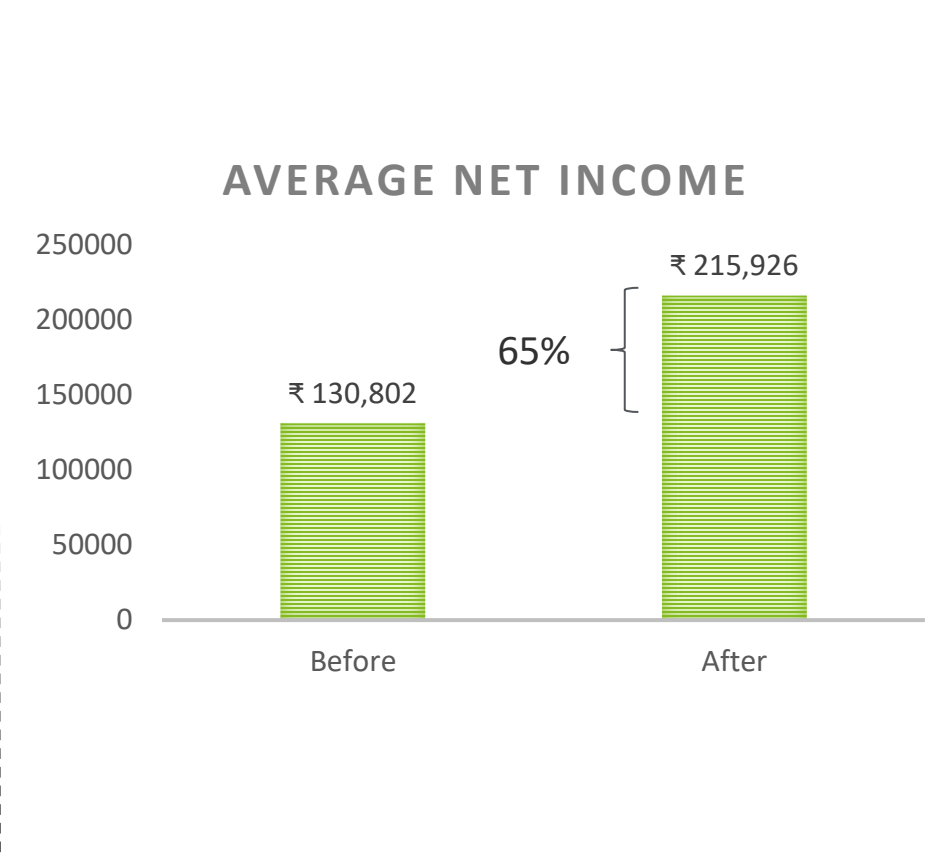
Increased water availability



Adoption of improved agricultural practices



Adoption of improved agricultural practices



# Average Annual Gross Income

The gross income equals the income from farm activities (agriculture, horticulture, kitchen gardening, tree plantation, livestock etc.) + income from non-farm activities (Net income from migration, micro enterprise, wage labor etc.) + income from common land + income from any other sources (pension, social security). This is aggregated to all earning members of the household.

## Impact



**Average Annual  
Net Income  
INR 94k**



**Percentage  
increase in  
average annual  
gross income  
59%**

### Salient features across projects

- The average gross income rose by 59% from INR 146k to INR 233k

## Factors



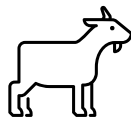
Increased area under irrigation



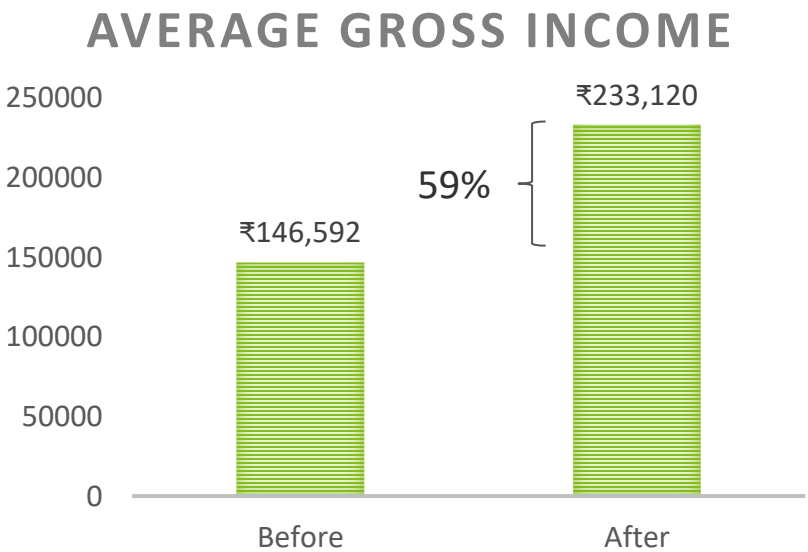
Increased water availability



Adoption of improved agricultural practices



Adoption of improved agricultural practices





# Average Annual Cost

Total cost expensed by the participants equals the expenditure on inputs for farm activities (seeds, fertilizers, labor, pesticides, machinery, fuel, storage, transport, purchase of livestock, veterinary charges etc.) + Expenditure on inputs for non-farm activities.

## Impact

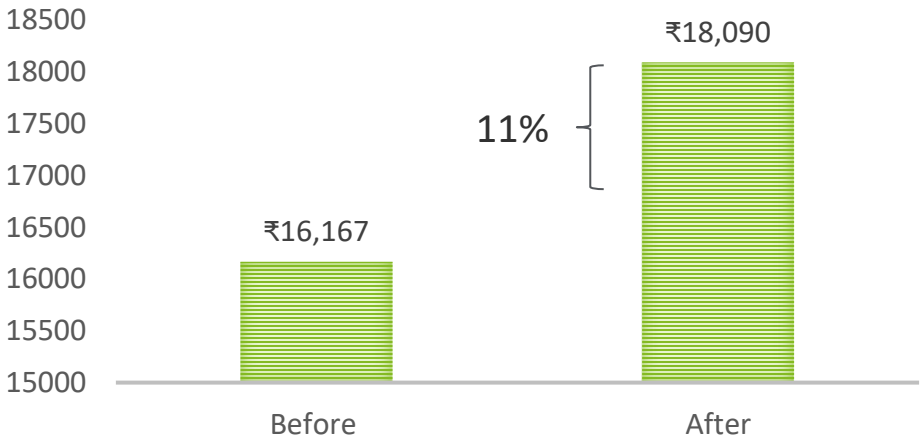


**Average Annual Cost has not changed much and has increased by 11%**

### Salient features across projects

- One of the major reason for lower percentage increase in average input cost is due to adoption of regenerative agricultural practices by famers
- There has not been much change in the input cost vis-à-vis change in average net income
- The association with WPGs and BRCs have made farm inputs easily available to the farmers at prices lower than market
- The average annual cost increased from INR 16,167 to INR 18,090 per beneficiary at the time of assessment
- The increased cost also correlates with many farmers now increasing the intensity of their cropping

### AVERAGE INPUT COST



## Average increase in crops' output

The two major crops of Wheat and Chickpea as per the sample, have shown a good margin of increase in average output. This in turn has also impacted the average income of beneficiaries. Overall, better availability of water throughout the year, and better knowledge of farming practices have reaped dividends for the community.

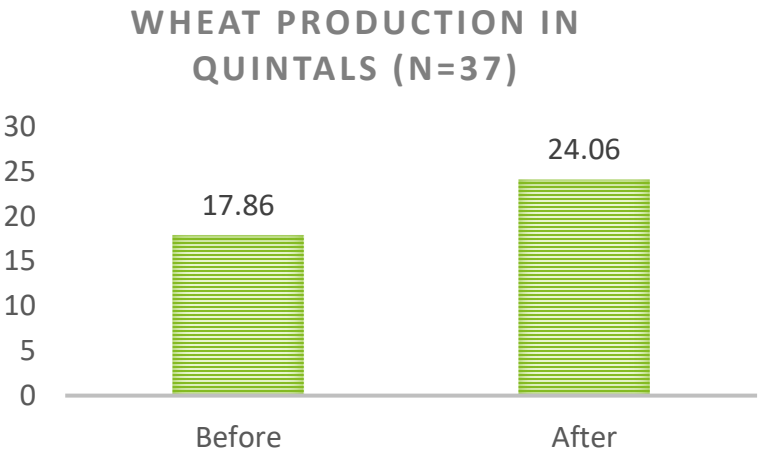
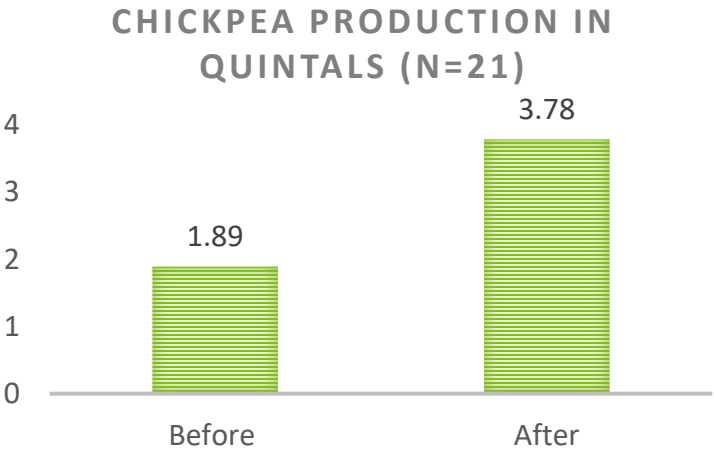
### Impact



**Wheat and Chickpea alone contribute to around Rs. 22,130 increase in average net income.**

### Salient features across projects

- Increase in the average output from crops can be attributed to increased fertility of land due to water availability in most parts of the year.
- Farmers have also started crop diversification practices which in return helps them to grow crops throughout the year with a better income.





# V. Case studies



## Distress migration

Murti Benskar, a resident of Kudar village of Niwari district in Madhya Pradesh narrates her story of distressed migration from the region

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### Context

- The area witnesses high migration of community to bigger cities (Delhi, Bengaluru, Indore, Surat, Hyderabad) where most of the migrants are working as daily wage labourers
- The soil enrichment through use of tank silt and increased water conservation through increased capacity of the tank led to improved resource quality and quantity
- This further resulted in increased income opportunity in the village
- This opportunity when supported with improved farming methods led to income realization

*“Our land was not arable and our well was all dried up for some years and we had no source of income in the village, so we used to migrate to Delhi every year with our kids and work there as daily wage labourers. Our kids were also studying in government schools in Delhi. Only after using the silt excavated from the tank our 3 acres of land has become arable and we have start cultivating the land since 2021. I like it here in the village, here we are able to get rest and we are the owner of our destiny”*



**Conversation with Murti Benskar,  
Kudar village**

Role model for the community

Bharat Bhushan Nigam husband of Basanti Nigam of village Manwara in Chhatarpur district of Madhya Pradesh has a keen interest in reintroduction of local variety of seeds while helping her wife in operating the BRC

Context

- While the purpose is meant to demonstrate regenerative agricultural practices, local variety of seeds is an important aspect of the climate resilient agriculture
- FPO is engaged with the seed banks at the BRCs to provide them with the local variety of seeds and then the seed bank distributes the seeds to interested farmers
- The farmers after harvesting the crop returns 25% of the produce to the BRC so that it can be used as seed by more farmers
- Local variety of seeds unlike hybrid seeds do not need to be changed every few years and gel very well with the bio fertilizers

क्र.सं.	किसान का नाम	सिस्टम का नाम	किसान का पता	सिस्टम का नाम	किसान का पता	सिस्टम का नाम	किसान का पता
1	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
2	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
3	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
4	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
5	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
6	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
7	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
8	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
9	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
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12	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
13	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
14	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
15	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
16	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
17	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
18	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
19	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा
20	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा	श्री रामचंद्र शर्मा

Seed distribution recordkeeping at BRC in Manwara



Bharat Bhushan Nigam with local variety of seeds

“Our local variety of seeds have immense production potential. My personal favourite is **Kathiya**, it is a local variety of wheat, and its roti is a delicacy to have. Apart from this we are trying to propagate the local variety of seeds through an agreement with farmers that they will have to give back 25% of the produce to the BRC so that it can be provided to more farmers ”

## Multi-level farming a boon for small and marginal farmers

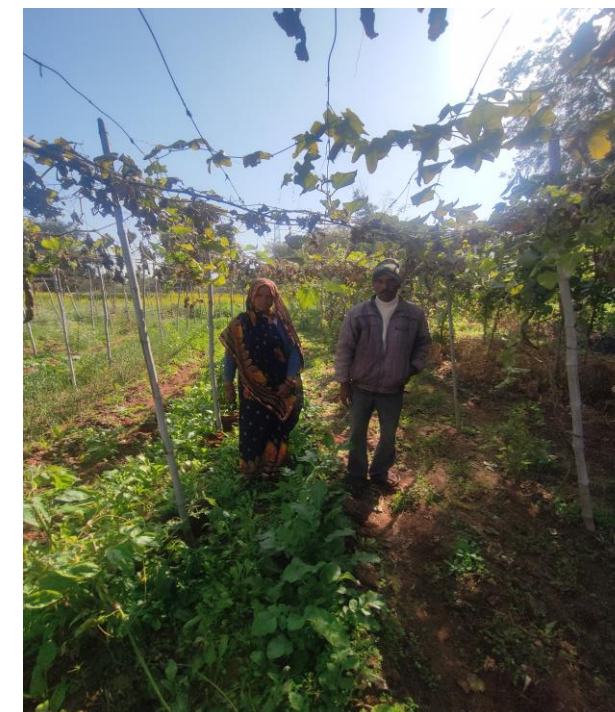
Mohan Raikwar is a marginal farmer from Barma Tal village of Tikamgarh district. He shares with us his experience of practicing MLF, and how it helped him in becoming self sufficient and giving his children a better future.

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### Context

- With small land holdings and no knowledge of proper farming techniques, farmers like Mohan Lal usually struggle to make their ends meet.
- Continuous use of expensive chemical fertilizers like DAP and Urea and pesticides has decreased the fertility of the land and their high costs make profit margins even lower for the already debt-ridden farmers.
- MLF helps the farmer to gain a continuous source of income throughout the year that too from a small piece of land and less input costs.
- MLF helps small farmers to generate a surplus income, which they can further use to generate a new source of livelihood.

*“With MLF my income has increased, now I am earning Rs 50,000 a year that too by practicing it only on 1 acre of my 2-acre land. I am now independent of market to feed my family and can send my children to schools. I have also bought 3 buffaloes with my surplus income. I was the first one to start this practice in my village and now there are 12-13 farmers following it after me. I feel happy when someone approaches me to learn this method. The organic manure which I use, results in better growth and the vegetables are healthier and better in taste. I want to learn more about other farming techniques”*



*Mohan Raikwar and his wife are practicing MLF since last one year*

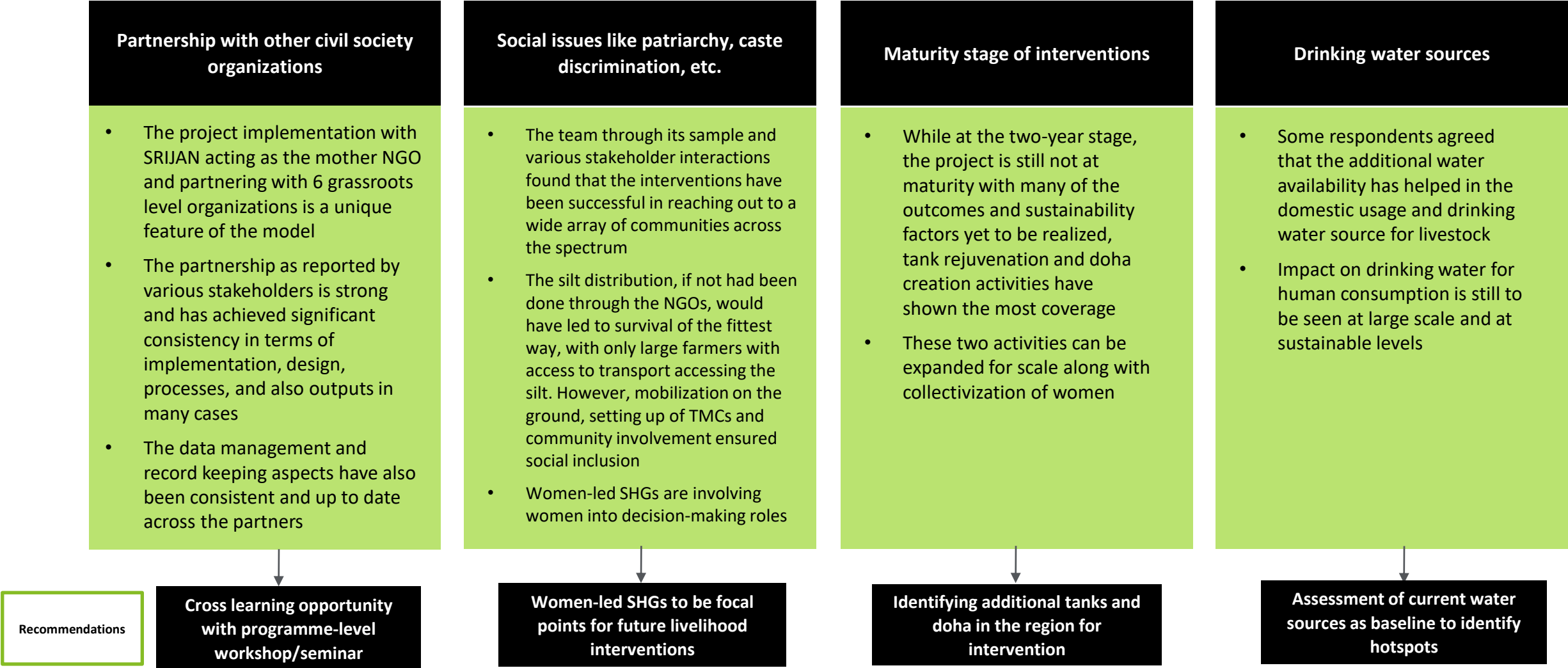




## VI. Learnings and recommendations

# Learnings and recommendations

The learnings and recommendations on some unique aspects of the project are as follows:



# Learnings and recommendations

The learnings and recommendations at the mid-term stage are as follows:

## Target achievement

The project would need to focus on the creation of FPOs and mini-forests as they are below par at the mid-term stage

## High rate of informal interest

Through conversations it was also observed that community have limited access to formal source of credit and there were farmers who have taken loan from informal sources at a very high rate of interest. This is one of the threats to the community and may limit the participation of the needy in the programme

## Alignment with NRLM

WPGs are like a parallel institution to the NRLM structure (SHGs and Federations). Integration of both can lead to huge fund mobilization for the WPGs and FPOs

## Convergence with government schemes

A large portion of funds is required for the rejuvenation of tanks and this fund could be mobilized through various government schemes like MGNREGS

## Natural Resource Management

A ridge to valley approach to treat a large area in terms of soil and water conservation yields superior results. Also, treatment at valley level will have low sustainability and tanks will need excavation regularly. In situ soil conservation techniques like farm bunding to be promoted in the catchment area of the tanks

## Rights and entitlements

A large part of the sample did not have access to toilets and job cards. MGNREGS can become a source of fund mobilization for tank rejuvenation and income generation for farmers (55% of the sample did not have Job cards and 42.5% did not have ration cards)

## Funding security

Tank de-siltation requires regular flow of funds. There maybe a fall out in the programme in case there is no concrete source of funding for de-siltation



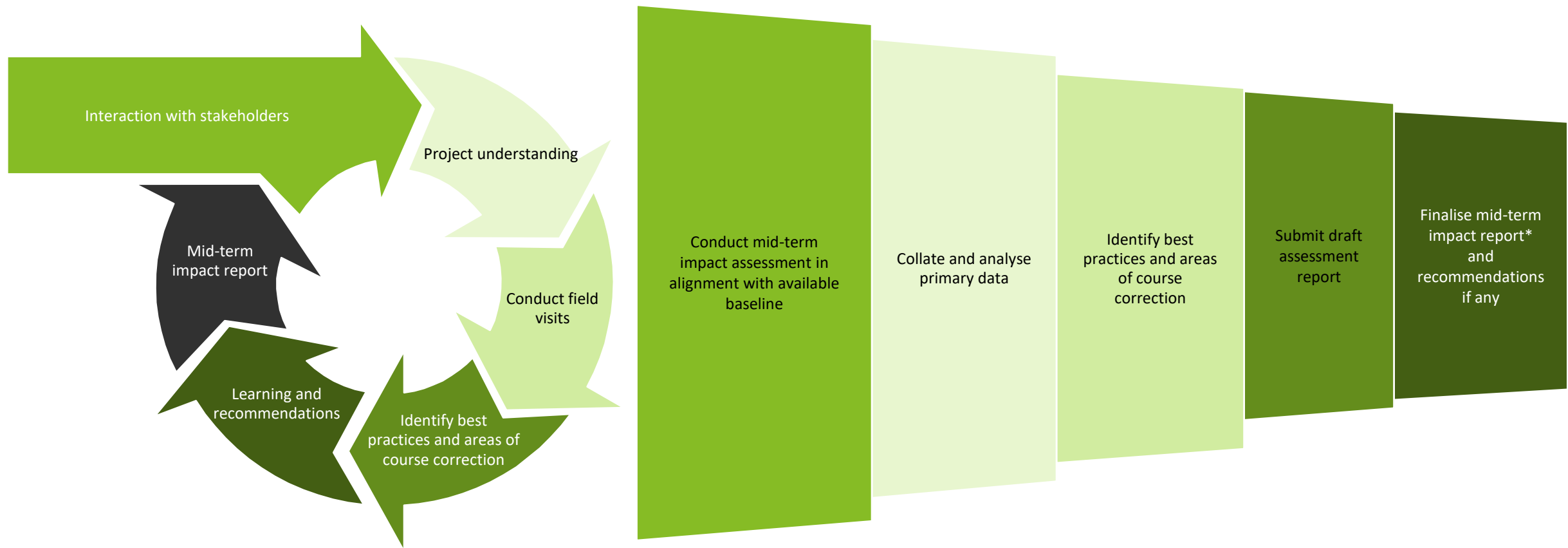




## **Annexure: Approach and methodology**

# Approach and methodology

Our approach for conducting the mid-term impact assessment of BIWAL project funded by Caring Friends is based on previously conducted similar impact assessments to ensure standardization and research quality



\*Final mid-term impact report will follow

## Approach and methodology

A mixed assessment design which is aligned to project objectives was adopted to conduct the mid-term impact assessment. Qualitative and quantitative data using primary and secondary sources was collected and analyzed. A high-level overview of the sample mid-term impact study across the project locations is given below. We used multiple tools to gather data. For tanks and doha, we used surveys. For other individual interventions, KIIs were used, and for mini forests FGDs were used.

### Total stakeholder interactions



140

### Participant Sample Size



80

Survey & interviews

30

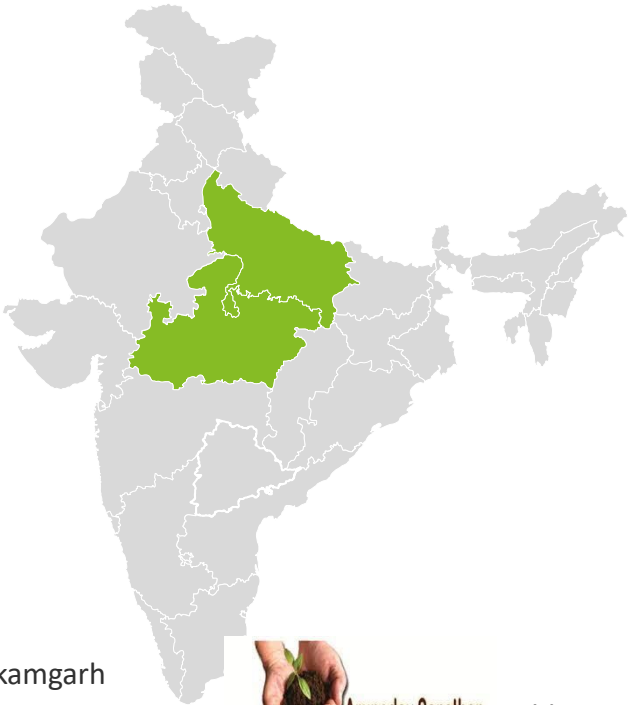
FGDs

30

KII

Stakeholders	Type of interaction
Implementation team	KII
Community institution members	FGD, KII
Farmer members	Survey, FGD
Panchayat members	KII
Community volunteers	KII

### Key reach



Niwari, Tikamgarh



Arunoday Sansthan

Chhatarpur, Mahoba



Chhatarpur





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