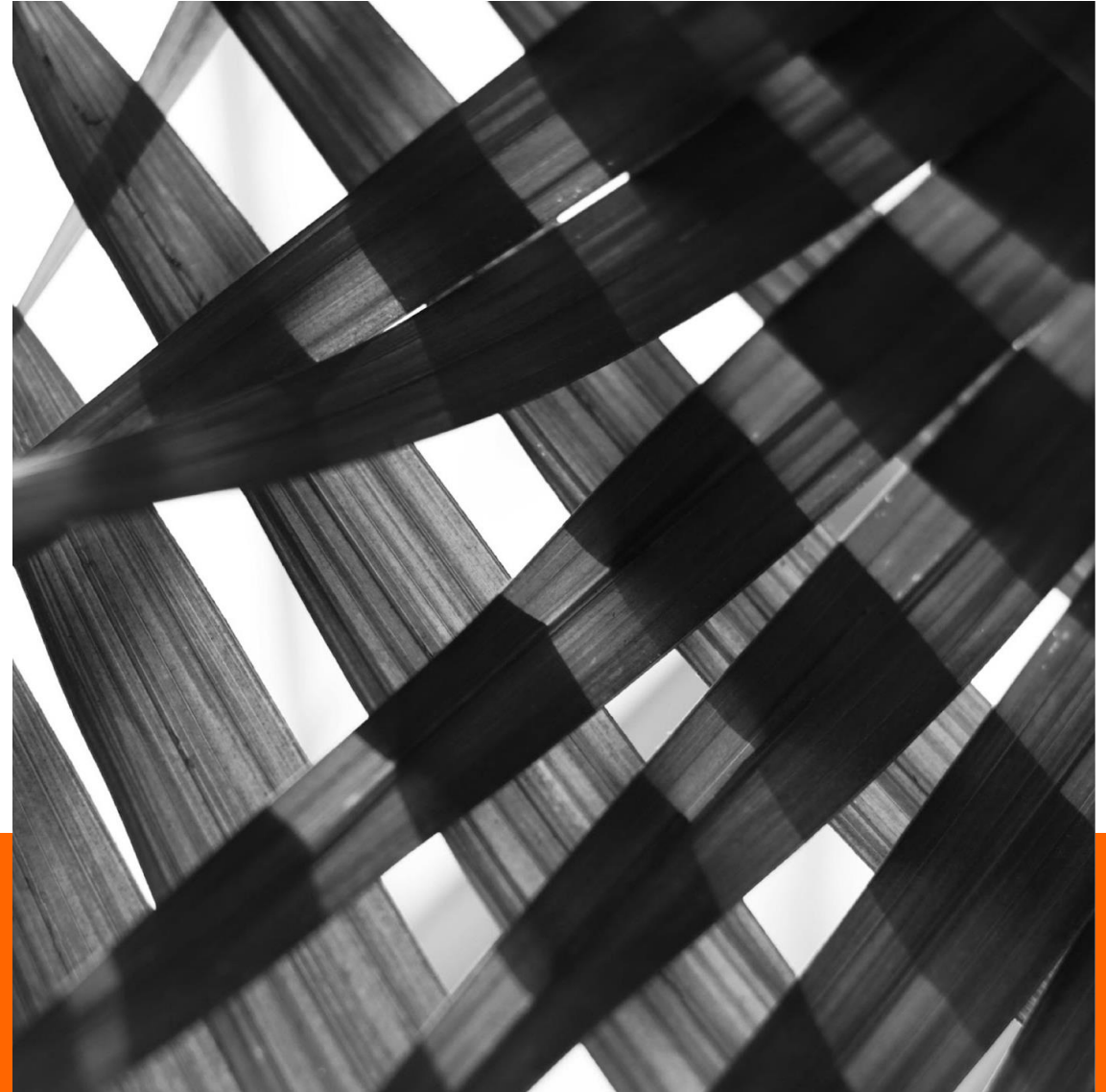




Stakeholders Impact Assessment for JalTara: Groundwater Recharge Project

Mantha, Jalna, Maharashtra

December 2022



Content*

1. JaITara Project & Result Overview

2. Social Return on Investment

- Pilot Village
- Forecast Village

3. Results: Key Highlights

- Social Capital Impact
- Natural Capital Impact

4. Qualitative Study

5. SDG

**Note: The majority of slides focus on the results of the pilot villages except for slide number 3 & 5 which showcases the forecasted SROI based on the data of the pilot study.*

Overview of JalTara: Groundwater Recharge Project



- This assessment is driven by Save Groundwater Foundation's & AOL's desire to evaluate the benefits generated by the JalTara Groundwater Recharge program for the local communities in Mantha tehsil, Maharashtra – across two separate projects from 2021 and 2022.
- Scope of this impact assessment is centered on the positive impacts generated by the watershed in terms of social and ecological aspects for a period of one year*.
- Pilot Project – Summer 2021
- In this project completed in summer of 2021, the JalTara team dug ~1400 recharge pits across 4 villages in Mantha tehsil, Jalna, Maharashtra. We surveyed 40 farmers from 2 villages (out of the 4) for this analysis.
- Forecast Project – Summer 2022
- In this project completed in summer of 2022, the JalTara team dug ~17,000 recharge pits across 33 villages in Mantha tehsil, Jalna, Maharashtra. We surveyed 100 farmers from 8 villages (out of the 33) for this analysis.

*The SROI cannot be 100% attributable to the reference program intervention, as multiple ecological and anthropogenic factors could contribute to the same (beyond the current assessment's scope)

* Reference year is the 1st year of the project initiation.

Results Overview

Total Benefits Generated by JaITara: Groundwater Recharge Project (in INR Lakhs)		
Program Benefits	Pilot Village	Forecast Village
Farm profits	90.13	608.00
Benefit from Livestock	0.55	3.00
Benefit from Increased Labor requirement	10.72	116.00
Avoided crop loss from waterlogging ¹	4.88	16.19
Avoided water tanker cost ²	0.21	3.70
Avoided pollution from fertilizer use	3.98	18.64
Water recharge	217.33	609.41
Monetary Carbon Savings ³ (forecasted)	0.08	1.79
Total program benefits (Lakhs)	322.73	1359.60
SROI (INR)	19.21	30.81

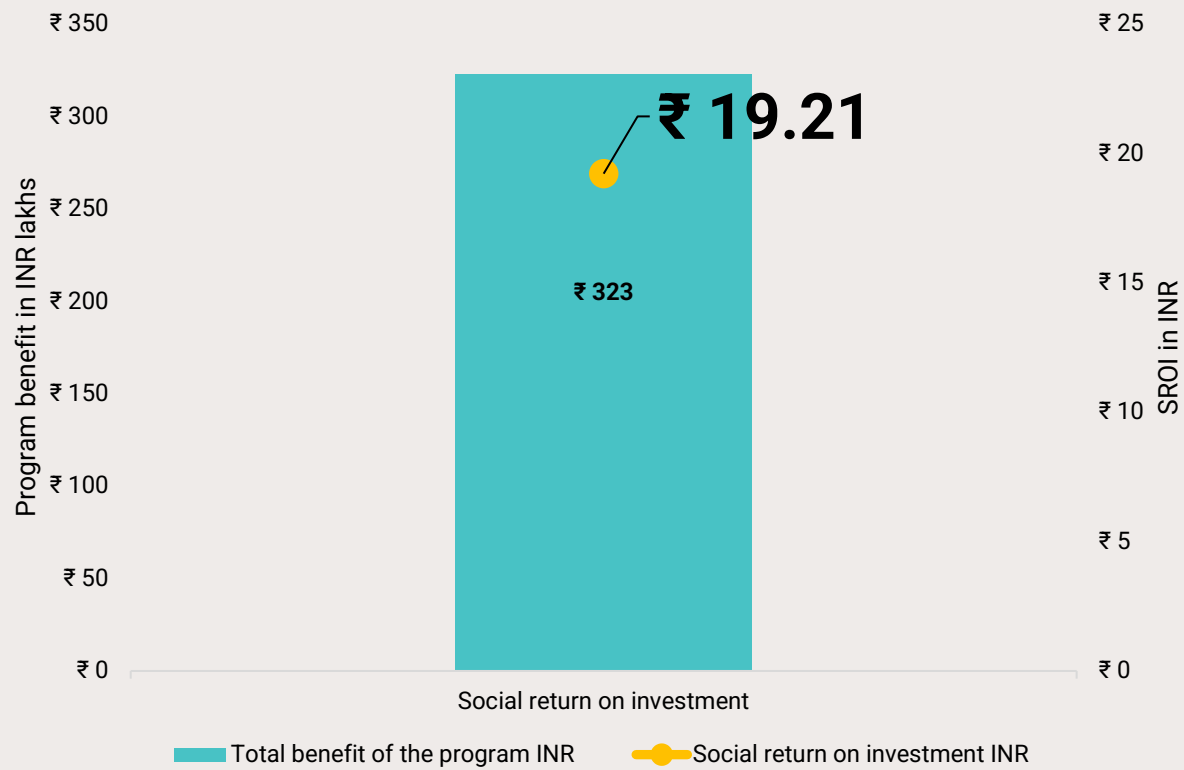
Note:

1. Total Economic benefit from farm profit includes monetary benefits of avoided crop loss.
2. The benefit of avoided water tank cost is accruing to local government bodies, hence this value is excluded from SROI calculation. The assessment considers the overall benefits generated for the farmers at the household level.
3. Social Cost of Carbon Savings are excluded from SROI calculation as it is a forecasted value considering the carbon sequestration by the planted saplings in the next 20 years..

Overview of JalTara: Groundwater Recharge Project

(I) Pilot Villages

Social Return on Investment for JalTara Groundwater Recharge Project



- This assessment is driven by Save Groundwater Foundation’s & AOL’s desire to evaluate the benefits generated by the JalTara Groundwater Recharge project for the local communities in Mantha tehsil, Maharashtra.
- In this project completed in summer of 2021, the JalTara team dug ~1400 recharge pits across 4 villages in Mantha tehsil, Jalna, Maharashtra. We surveyed 40 farmers from 2 villages (out of the 4) for this analysis.
- Scope of this impact assessment is centered on the positive impacts generated by the watershed in terms of social and ecological aspects for a period of one year*.
- Results show a high amount of economic benefit due to an increase in farm productivity and annual earnings, water recharge, reduction in crop loss, avoided water purchase, fertilizer usage and monetary carbon savings.
- The intervention generates an overall ‘Social Return on Investment (SROI)’ value of **INR 19.21** (per INR invested).

*The SROI cannot be 100% attributable to the reference program intervention, as multiple ecological and anthropogenic factors could contribute to the same (beyond the current assessment’s scope)

* Reference year is the 1st year of the project initiation.

Overview of JalTara: Groundwater Recharge Project

(II) Forecast Villages

Forecasted Social Return on Investment for JalTara Groundwater Recharge Project



- This assessment is driven by Save Groundwater Foundation’s & AOL’s desire to evaluate the benefits generated by the JalTara Groundwater Recharge program for the local communities in Mantha tehsil, Maharashtra.
- In this project completed in summer of 2022, the JalTara team dug ~17,000 recharge pits across 33 villages in Mantha tehsil, Jalna, Maharashtra. We surveyed 96 farmers from 8 villages (out of the 33) for this analysis.
- Scope of this impact assessment is centered on forecasting the positive impacts generated by the watershed in terms of social and ecological aspects for a period of one year.
- Results show a high amount of economic benefit due to an increase in farm productivity and annual earnings, water recharge, reduction in crop loss, avoided water purchase, fertilizer usage, and monetary carbon savings.
- The intervention generates an overall ‘Social Return on Investment (SROI)’ value of **INR 30.81** (per INR invested).

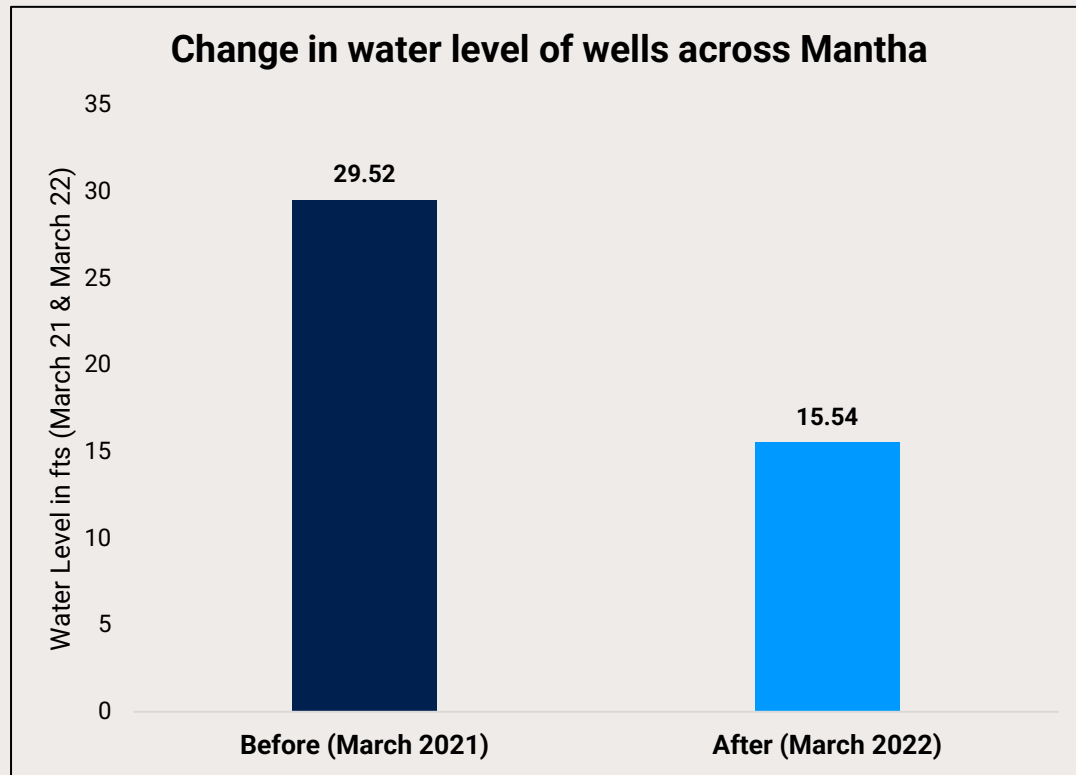
*The SROI cannot be 100% attributable to the reference program intervention, as multiple ecological and anthropogenic factors could contribute to the same (beyond the current assessment’s scope).

*The forecasted SROI is calculated based on the assumption taken from pilot study to extrapolate the monetary impact, hence this valuation can not be considered as actual impact.

*The results are forecasted for a period of one year using the data set provided by JalTara Team for the pilot villages.

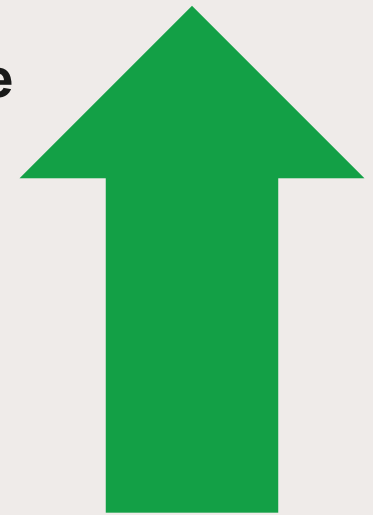
Social Capital Impact: Pilot Villages

Change in water levels



Average Increase
in Water Table

14 ft

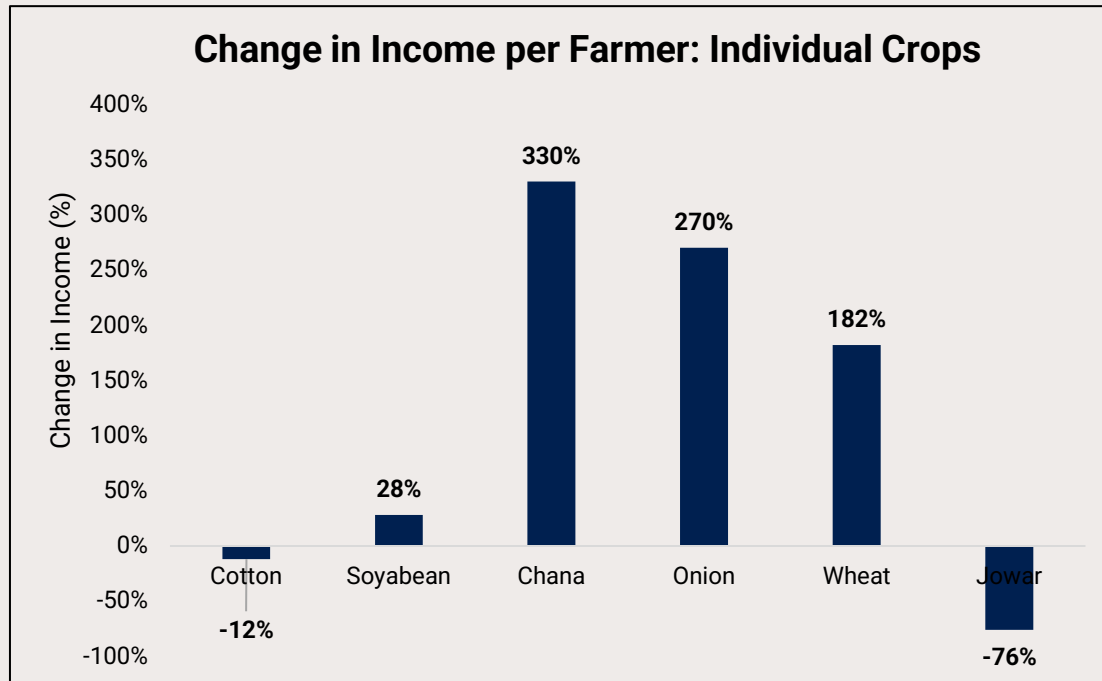


Note:

There has been an increase in the water levels (for wells across both villages) by **48%** post the intervention – about **14 feet**

Social Capital Impact: Pilot Villages

Change in farmer's income



Note:

For cotton and jowar farm income has decreased by 12% and 76% due to decrease in overall cultivation area

Farm income for remaining crops has increased due to an increase in overall cultivation land.

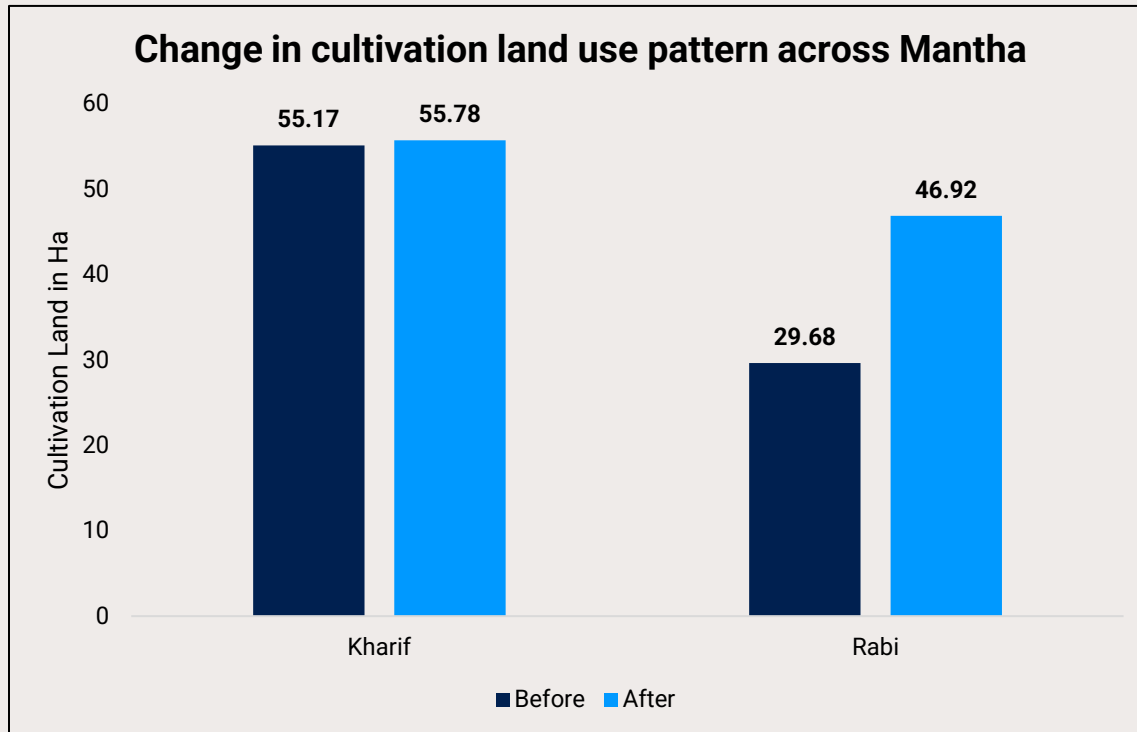
**Average Increase
in Farmer's
Income**

120%



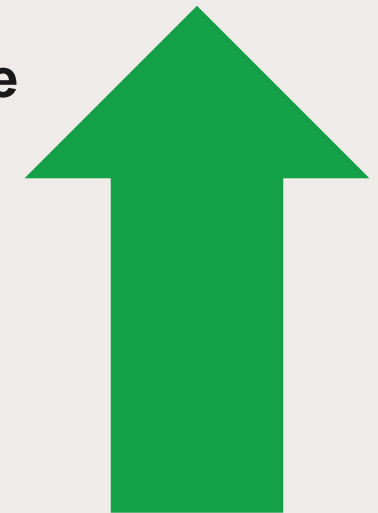
Social Capital Impact: Pilot Villages

Change in land use pattern



Average Increase
in Land Usage
(Rabi Season)

58%

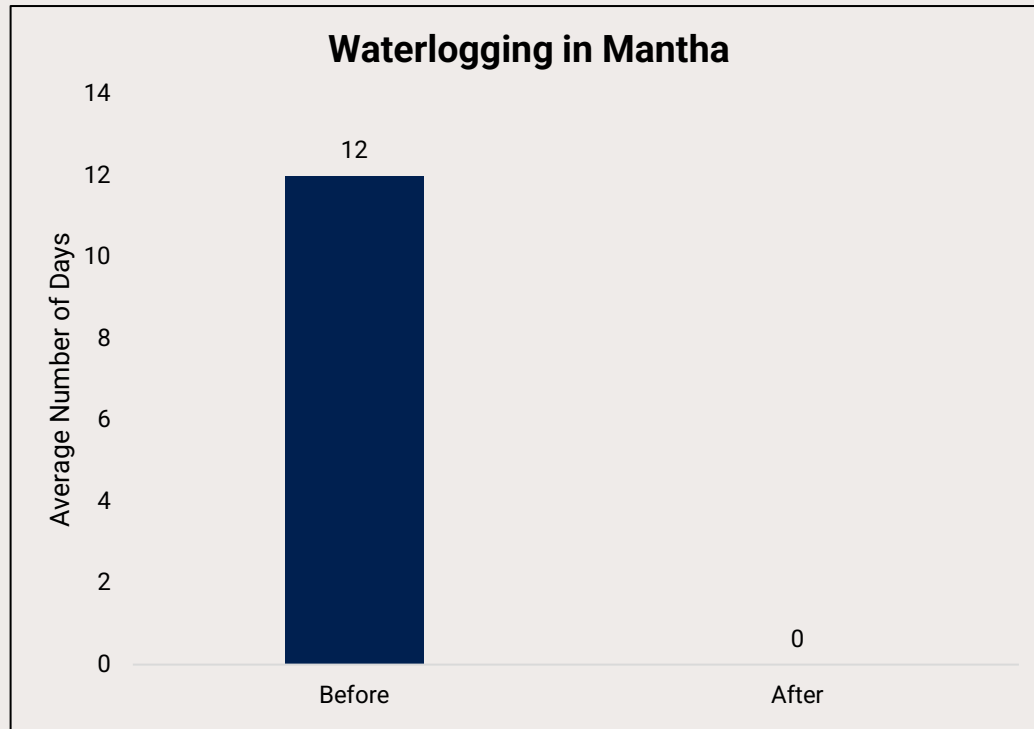


Note:

For the Kharif season cultivation land use has increased by 1% after the intervention, whereas the land use during the Rabi season has increased by 58%. This is mainly due to the availability of water in the Rabi season.

Social Capital Impact: Pilot Villages

Waterlogging in farms



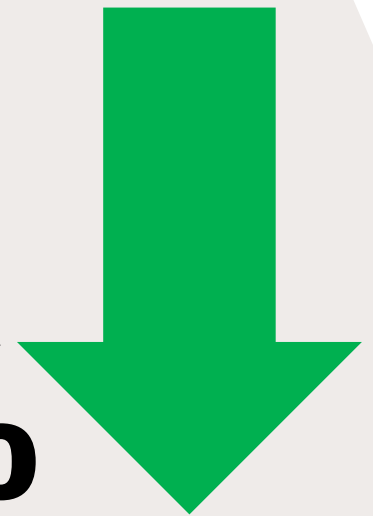
Note:

The occurrence of waterlogging has completely been eliminated after the intervention.

*This has reduced crop loss to **100%**.*

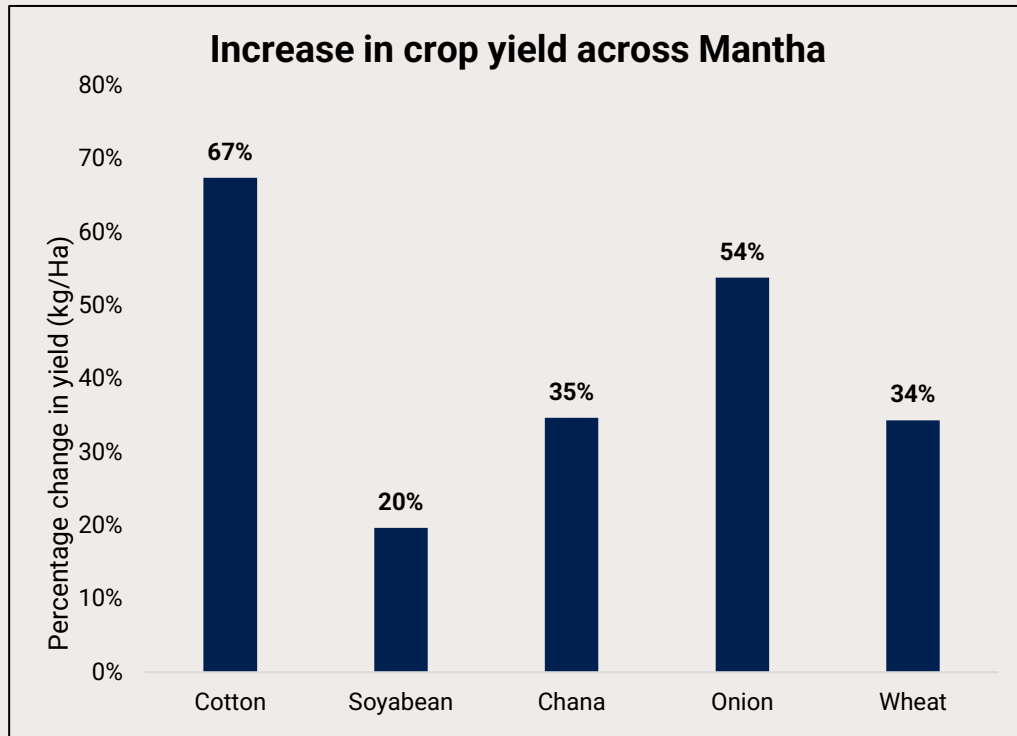
Decrease in Crop Spoilage due to Waterlogging

100%



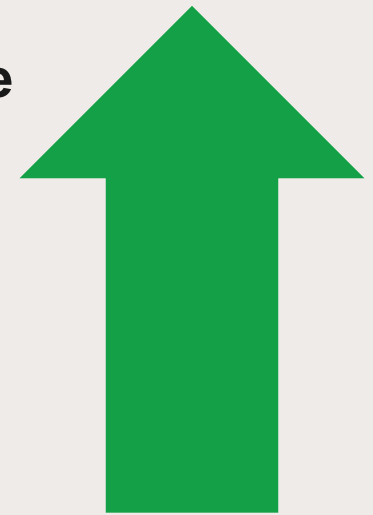
Social Capital Impact: Pilot Villages

Increase in crop yield



Average Increase
in Crop Yield

42%

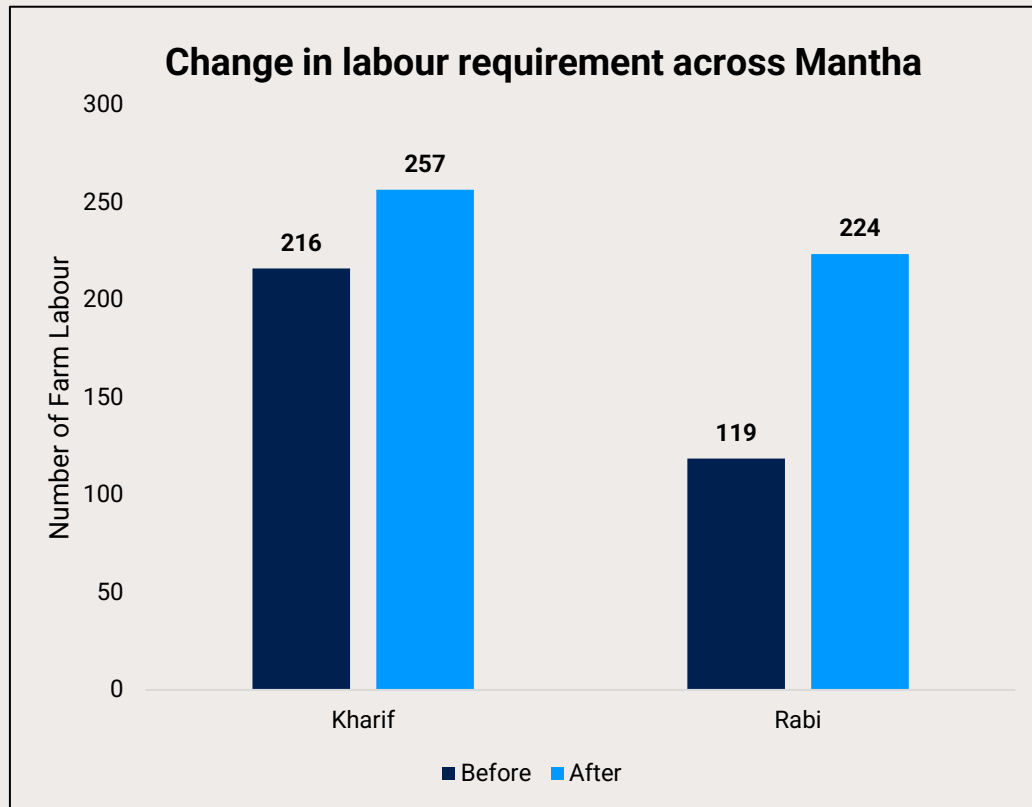


Note:

- Maximum increase in yield has been observed in cotton by **67%** followed by **54%** increase for onion, and an increase of **20%** in soyabean – average improvement in yield is **42%**.

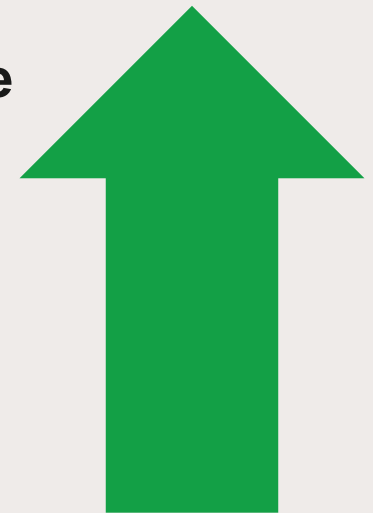
Social Capital Impact: Pilot Villages

Increased labour requirement



**Average Increase
in Labour (Rabi
Season)**

88%



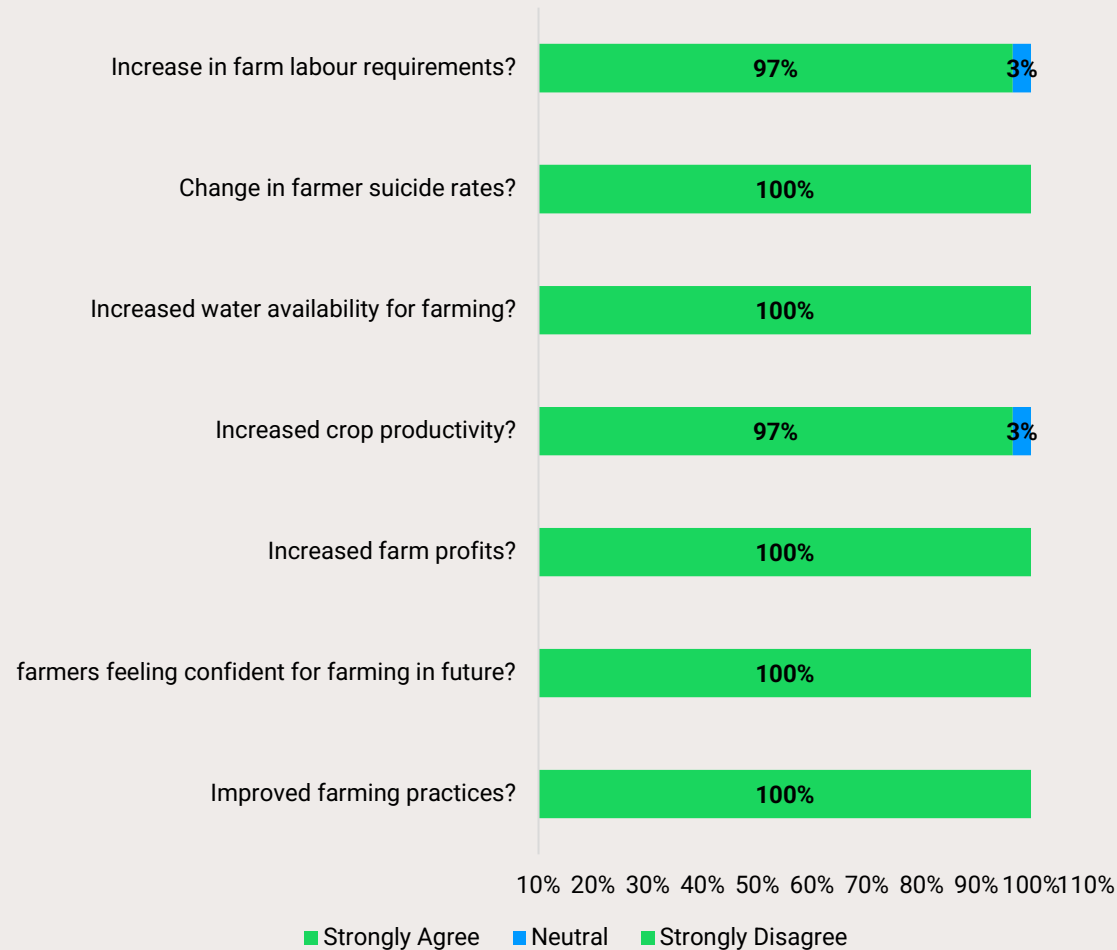
Note:

- Labour requirement has increased by **19%** during the Kharif season and by **88%** during Rabi season. The increased labour requirement is due to the enhancement in the cultivation area.

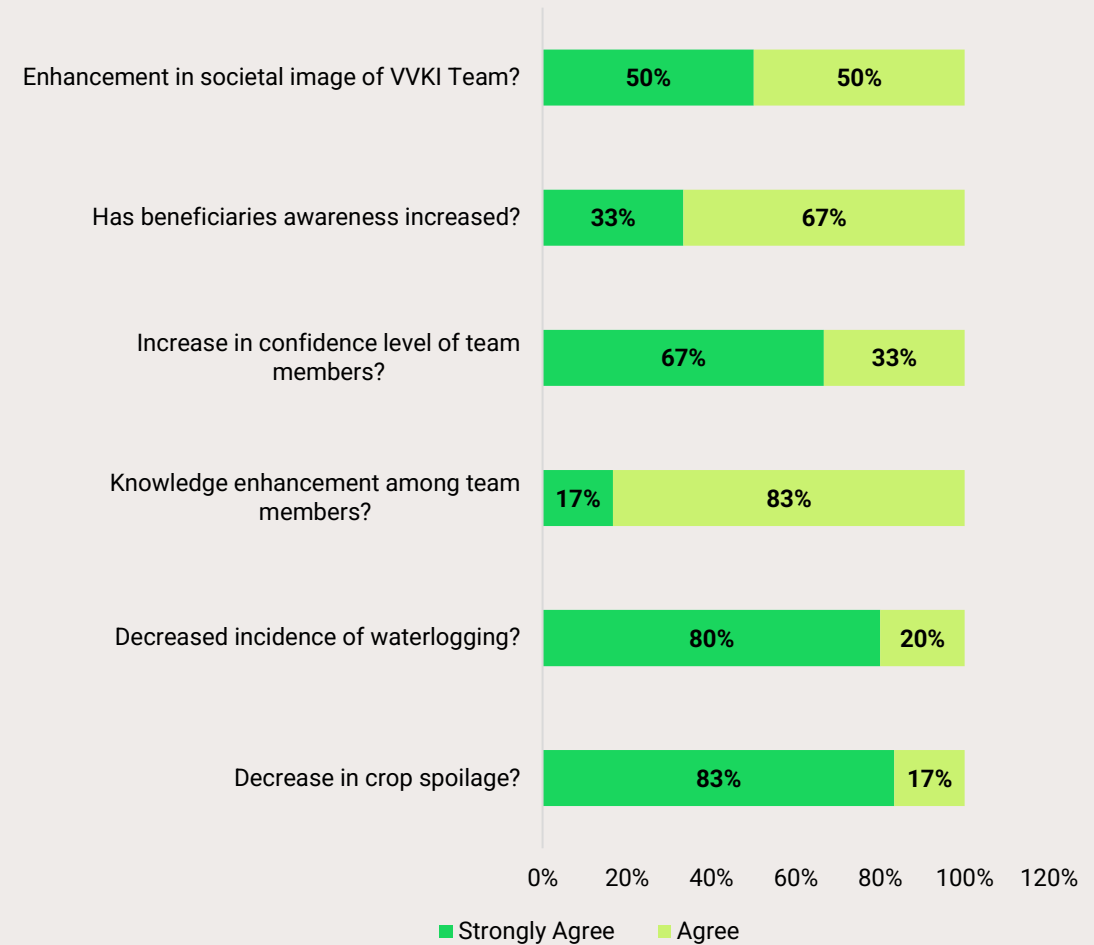
Qualitative Study: Pilot Villages

The overall qualitative results indicate and affirm a positive impact has been generated through the intervention and it also substantiates and validates the quantitative numbers.

Qualitative Study: Income and Farm Profits



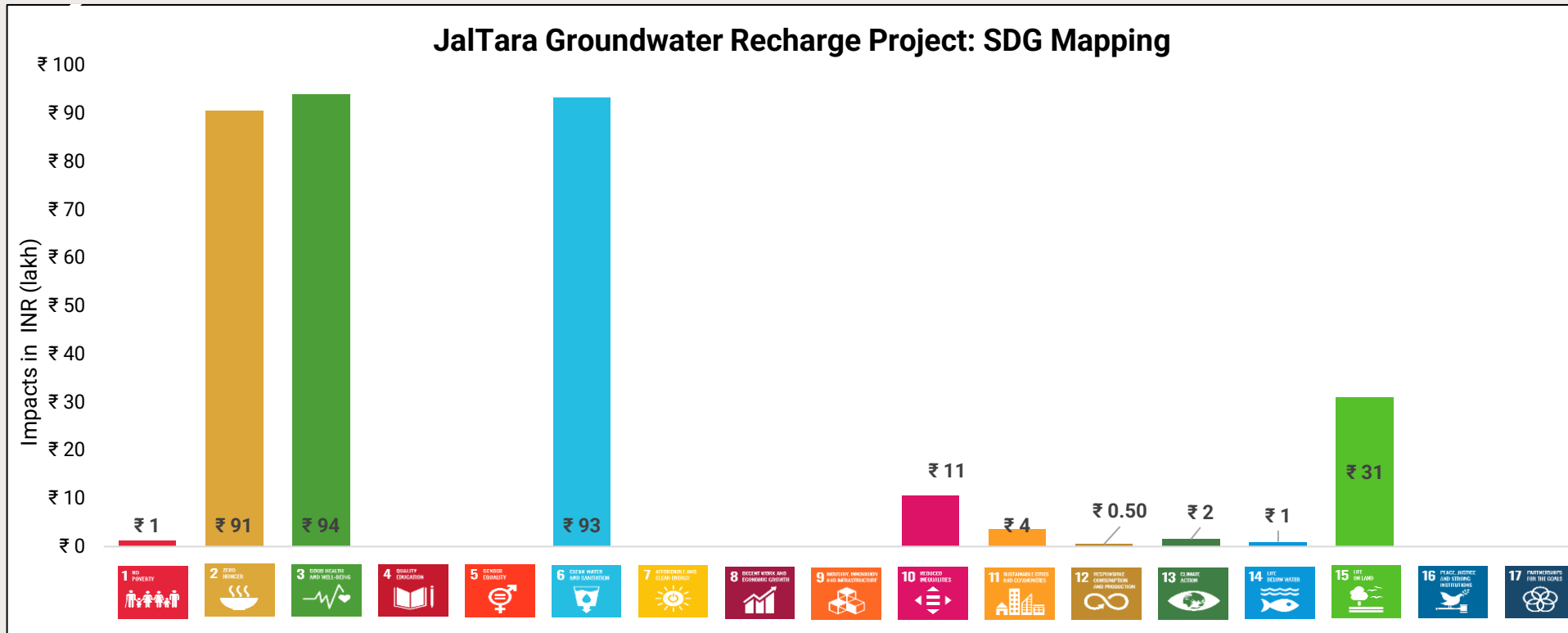
Qualitative Study: Team Effort and Livelihood



The qualitative study results are based on the survey response of 30 beneficiaries.

SDG Impact: Pilot Villages

The highest impact is reflected on SDG 2 (Zero Hunger), SDG 3 (Good Health & Well Being) and SDG 6 (Clean Water & Sanitation) due to a significant increase in farm profits, water recharge and avoiding water pollution.



UN SDGs Impacted



- ❖ SDG 1: No Poverty (Avoided crop loss)
- ❖ SDG 2: Zero Hunger (Increased farm profits)
- ❖ SDG 3: Good Health & Well Being (Water recharge & Avoided water pollution)
- ❖ SDG 6: Clean Water & Sanitation (Household saving & water recharge)
- ❖ SDG 10: Reduced Inequalities (Additional labour requirement)
- ❖ SDG 11: Sustainable Cities & Communities (Avoided crop loss)
- ❖ SDG 12: Responsible Consumption & Production (Avoided water pollution)
- ❖ SDG 13: Climate Action (Avoided pollution)
- ❖ SDG 14: Life Below Water (Avoided pollution)
- ❖ SDG 15: Life on Land (Water recharge)

Thank You

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