Impact Assessment of Water Conservation Project, Maharashtra

The Corporate Social responsibility (CSR) Policy of CGCEL, is rooted in the belief that business sustainability is closely connected to the sustainable development of the communities and environment in which the business operates. Water Conservation, Skill & Entrepreneurship Development and Community Care are three focus areas identified under CSR framework.

One such project under Water Conservation was implemented in collaboration with social impact organization. Third party impact assessment of the project was conducted by Thinkthrough Consulting Private Limited.

Project title: Enriching land & water productivity through soil & water conservation

Location: Village Pargaon Khurd, Sangamner, Ahmednagar, Maharashtra

Implementation Partner: Vanrai (Social impact not for profit organization)

Project timeline: April 2020 to March 2021

Project objectives

- Water resource conservation through rainwater harvesting
- Development and promotion of farmers capabilities- based water use for better crop production in the area
- Improved water productivity, water use efficiency, resource development through community participation
- Capacity building of the local community with the necessary data, skills, and knowledge to manage land & water resources sustainably

Project Rationale

- Sangamner block is in the rain shadow zone of the Western Ghats has shown a trend of declining ground water levels and is considered an over exploited block with respect to ground water resources further aggravated by higher surface run off in Sangamner block due to prominent hill ranges, isolated hillocks, and undulations
- The limited availability of water in the region adversely impacts the agricultural productivity of the region which in turn affects livelihoods
- The limited availability of water also unfavorably impacts agriculture allied sectors such as animal husbandry and horticulture
- The village was treated under Government of India's Integrated Watershed Management Project in the year of 2013-14. Around 430 Ha area of was treated under the project

Key interventions

- Construction of 3 Cement Nala Bunds
- Repair work for 2 existing Cement Nala Bunds and 5 Earthen Nala Bunds

- 1600 cubic metres of Nala widening, and deepening was undertaken as a part of the project
- The project also provided demonstrations of in-situ soil moisture conservation, established observation wells, and supported water level monitoring
- Capacity building of the farmer community on water literacy, water budgeting and an analysis of the cropping pattern (land use)
- Formation and strengthening of village level institutions as well as setting up regulatory norms for ground water management

Key findings of the assessment

Change in water availability:

- The project achieved its target for constructing new rainwater harvesting structure and repair of existing structures for the initial year of its implementation
- The farmer community can now avail life-saving irrigation facilities for Kharif crops and thus the area under irrigation increased from 13% to 57% for Kharif season – with only 41% land still dependent on rainfall
- Increase in the water table up to 15 ft leading to an increase in supplemental irrigations for Rabi crops thus increasing the land under irrigation from 36% to 85% for Rabi season
- Improved year-round availability of drinking water leading to reduced drudgery for women and girls in the village

Change In cultivation area and irrigation

- Improved yield for all crops especially for Jowar and Bajra in Kharif season. For Rabi crops, the yield of wheat has improved as a result of improved access to irrigation
- Overall increase of 57% in cropping intensity for the village
- Farmers also reported an increase in the area under cultivation for Soybean crop because of improved water availability. This has led to improved agricultural income for farmers as Soybean sells at a higher price
- As water availability has improved and more fallow land is brought under cultivation, sugarcane and cotton have been introduced in the area as new crops

Change in agriculture allied sector

- Increase in maize cultivation which is used as a fodder crop and supports in feeding the livestock. This has resulted in an improved herd size and health of the cattle in the village
- increase of 40% in the number of livestock (cows and goats) in the village and an average milk yield increase of 1.85 liters per day per cow
- The increased milk yield has attracted new dairy cooperatives to the village and more milk collection booths have been set up in the village

Change in Income

- Average increase of 12% in agricultural income and 38% in their income from animal husbandry – which is attributable to the project activities
- The community expressed confidence in reaping sustained benefits from the project in the long run, as water availability and agricultural productivity in the region will improve

Key recommendations

- Strengthening the technical approaches for implementation and ensuring larger community participation especially focusing on participation of women beneficiaries
- The soil and water conservation activities may be scaled up to increase the impact of the project on the village communities
- Project may consider promoting water-efficient irrigation and sustainable agriculture practices amongst the farmer community

End of the document

Summary of Impact Assessment Report

Water Conservation Project

Chande Budruk, Karjat, Ahmednagar

The Corporate Social responsibility (CSR) Policy of CGCEL, is rooted in the belief that business sustainability is closely connected to the sustainable development of the communities and environment in which the business operates. Water Conservation, Skill & Entrepreneurship Development and Community Care are three focus areas identified under the CSR framework.

One such project under Water Conservation was implemented in collaboration with BBKGSS, a reputed NGO in this domain. The third-party Baseline, Endline, Structural Audit & HydroGeo Assessment of the project was conducted by NuSocia, an impact advisory firm.

Project title: Water Conservation Program

Location: Chande Burduk, Karjat Block, Ahmednagar District, Maharashtra

Implementation Partner: Bhartiya Bahuuddeshiya Khadi and Gramodyog Shikshan Sansthan (BBKGSS) (Not-for-Profit Organisation)

Project timeline: February 2022 to December 2022

Project Objectives:
1. To Increase the soil water level and stabilise the water table, to conserve soil and water through proper conservation techniques and structures
2. To decrease soil erosion and revive the non-functional wells
3. To Increase awareness about the importance of water and soil conservation
4. To Increase income generation opportunities within agriculture and allied activities, increase and stabilise agriculture and horticulture, and animal husbandry income, and generate local employment opportunities for the marginal farmers through agri-allied and tech-savvy activities

Project Rationale:

- Karjat, Ahmednagar faces water scarcity problems due to its geographical location, with limited rainfall and an erratic pattern. As a result, the water supply is limited, and the water resources are depleted which leads to water scarcity in the region
- Karjat is predominantly an agricultural area, and the agricultural sector relies heavily on water for irrigation. The lack of water availability can severely impact crop production and yield, leading to financial losses for farmers and the local economy
- Climate change is causing changes in rainfall patterns, making it more unpredictable and erratic. As a result, it is essential to conserve and manage water resources effectively to adapt to these changes

- The improved availability of water resources can create opportunities for more sustainable economic development

Key Interventions:

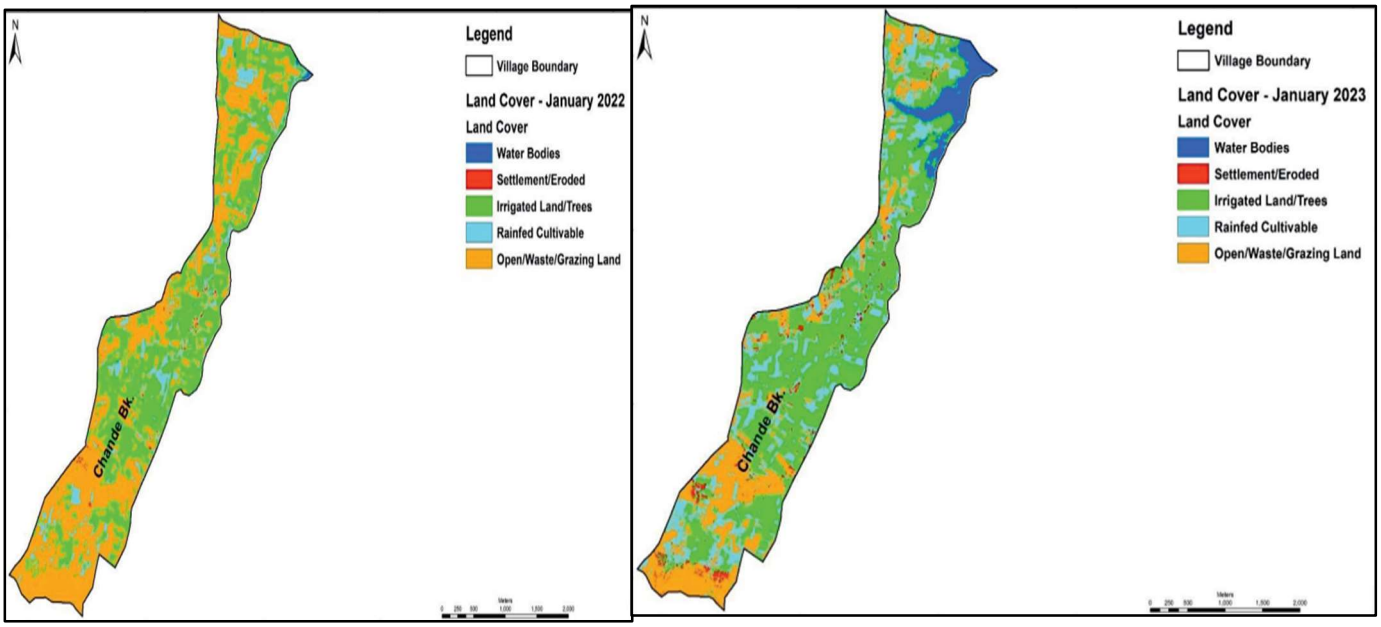
Intervention	Quantity
Digging of Percolation Tank	01 Nos
Desilting of Earthen Nala Bund	02 Nos
Repairing of Earthen Nala Bund	02 Nos

Key Findings of the assessment:

1. Change in Water Recharge:
    - The amount of runoff harvested indicates that approximately 100% of the area's total runoff has been captured because of Water Conservation Structures implemented under project
    - Total runoff conserved for the year 2022-23 was 31.15 Lakh liters (3115203.8 m3/kiloliters).

2. Change in area under cultivation :
    - On field research along with HydroGeo study indicates increase in area under cultivation because of the Water Conservation Project.

- 213 acre (86.20 hectare) area increased under cultivation from Waste/Fallow



land Jan 2022 Jan 2023

There is an increase in the cultivation area in the year 2023 has been observed

3. Change in Cropping Pattern:
   - 22% in cropping pattern because of the water conservation project
   - Onion, Corn, Cotton and horticulture cultivation has increased by 8% in the region because of the Water Conservation project

4. Change in Income & Expenditure :
   - Water availability as a result of the Water Conservation Project led to changes in cropping patterns and it has also impacted the farming practices as more farmers have reinvested their income in good farming practices such as soil testing, seed treatment and cropping method
   - The Water Conservation Structures have helped in reducing the dependency on rainfed farming and hence increase in organised irrigation practices has been observed. For example, the farm bund method
   - 27% farmers confirm that their annual farming income has increased because of the Water Conservation Project
   - Average 9% increment in the annual income of farmers verified through field data
   - Additional annual income gained by farmers reinvested in technology oriented farming practices as well as reinvested in purchasing livestocks

5. Change in Agricultural Allied Businesses:

- 97% farmers confirmed that expenses on fodder have drastically reduced because the water availability leads to fodder availability
- In the month of January 2023, village dairy daily milk collection was nearly 400 litres more compared to the baseline because of water and fodder availability resulting from the Water Conservation Project

Key Recommendation:

- Formation of a village-level committee for on- ground monitoring and evaluation
- Collaboration and leveraging Government schemes

End of the document.

Summary of Impact Assessment Report

Water Conservation Project

Chande Khurd, Karjat, Ahmednagar

The Corporate Social responsibility (CSR) Policy of CGCEL, is rooted in the belief that business sustainability is closely connected to the sustainable development of the communities and environment in which the business operates. Water Conservation, Skill & Entrepreneurship Development and Community Care are three focus areas identified under the CSR framework.

One such project under Water Conservation was implemented in collaboration with BBKGSS. The third-party Baseline, Endline, Structural Audit & Assessment of the project was conducted by NuSocia, an impact advisory firm.

Project title: Water Conservation Program

Location: Chande Khurd, Karjat Block, Ahmednagar District, Maharashtra

Implementation Partner: Bhartiya Bahuuddeshiya Khadi and Gramodyog Shikshan Sansthan (BBKGSS) (Not-for-Profit Organisation)

Project timeline: February 2022 to March 2023

Project Objectives:

1. To Increase the soil water level and stabilise the water table, to conserve soil and water through proper conservation techniques and structures
2. To decrease soil erosion and revive the nonfunctional wells
3. To Increase awareness about the importance of water and soil conservation
4. To Increase income generation opportunities within agriculture and allied activities

Project Rationale:

- Karjat, Ahmednagar faces water scarcity problems due to its geographical location, with limited rainfall and an erratic pattern. As a result, the water supply is limited and the water resources are depleted which leads to water scarcity in the region.
- Karjat is predominantly an agricultural area, and the agricultural sector relies heavily on water for irrigation. The lack of water availability can severely impact crop production and yield, leading to financial losses for farmers and the local economy.
- Climate change is causing changes in rainfall patterns, making it more unpredictable and erratic. As a result, it is essential to conserve and manage water resources effectively to adapt to these changes
- By implementing water conservation measures, there are potential economic benefits that can be realised. The improved availability of water resources can create opportunities for more sustainable economic development

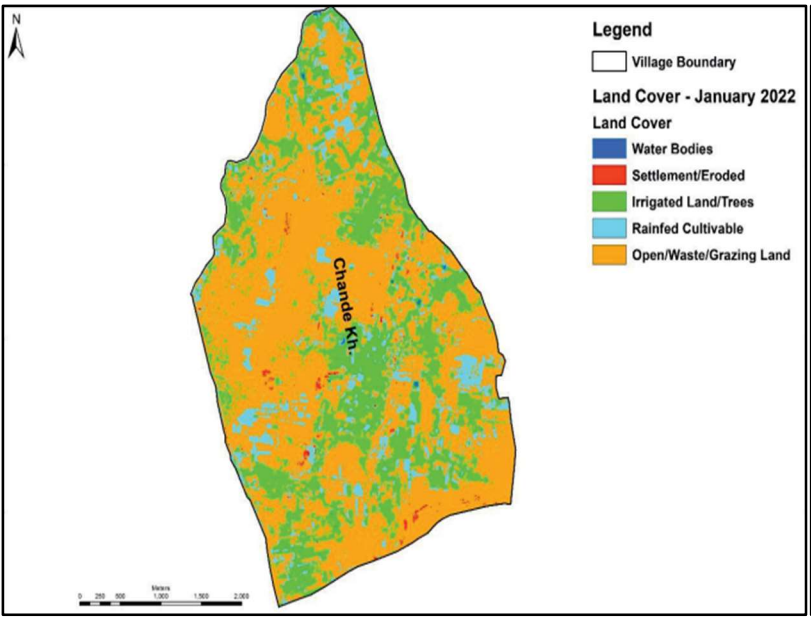
Key Interventions:

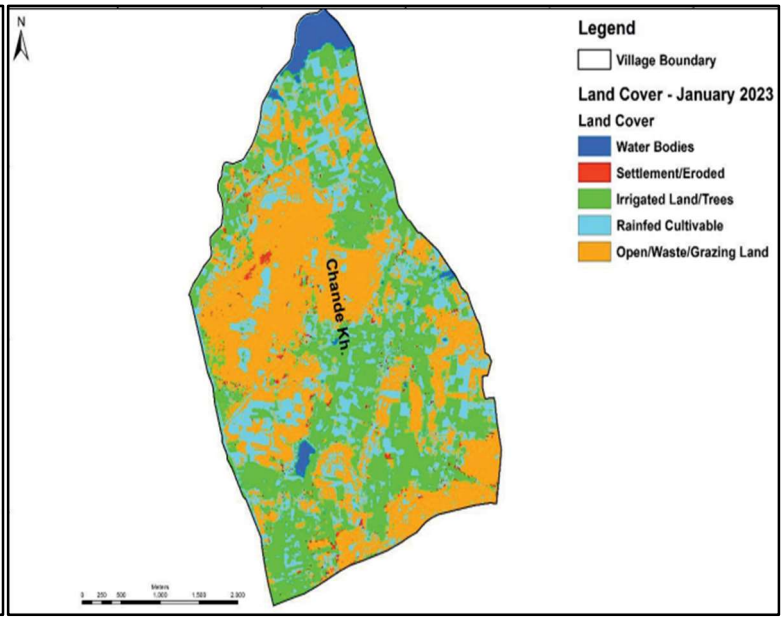
Intervention	Quantity
Digging of Percolation Tank	01 Nos
Desilting of Earthen Nala Bund	03 Nos
Repairing of Mati Nala Bund	03 Nos
Cement Nala Bund	01 Nos
Loose Boulder Structures	100 Nos
Gabion Bund	01 Nos
Water Absorption Trenches	30 Ha
Staggered Contour Trenches	35 Ha

Key Findings of the assessment:

1. Change in Water Recharge:
   - The amount of runoff harvested indicates that approximately 100% of the area's total runoff has been captured because of Water Conservation Structures implemented by CCF.
   - Total runoff conserved because of Water Conservation Structures for the year 2022-23 was 27.28 Lakh liters (272870m3/kiloliters)

2. Change in area under cultivation :
   - On field research along with HydroGeo study indicates increase in area under cultivation because of the Water Conservation Project.





- 480 acre (194.5 hectare) area increased under cultivation from Waste/Fallow land.

Jan 2022 Jan 2023

There is an increase in the cultivation area in the year 2023 has been observed

3. Change in Cropping Pattern :
   - 25% farmers confirmed that the change in cropping pattern is because of the water conservation project.
   - Onion, Wheat, Cotton and horticulture cultivation has increased by 9% in the region because of the Water Conservation project.

4. Change in Income & Expenditure:
   - Water availability as a result of the Water Conservation Project led to changes in cropping patterns and it has also impacted the farming practices as more farmers have reinvested their income in good farming practices such as soil testing, seed treatment and cropping method.
   - The Water Conservation Structures have helped in reducing the dependency on rainfed farming and hence increase in organised irrigation practices has been observed. For example, the farm bund method.
   - 25% farmers confirm that their annual farming income has increased because of the Water Conservation Project.
   - Average 12% increment in the annual income of farmers verified through field data.
   - Additional annual income gained by farmers reinvested in technology-oriented farming practices as well as reinvested in purchasing livestocks.
5. Change in Agricultural Allied Businesses:

- 17% increase in the number of farmers who have started doing Livestock rearing of cows, buffaloes, and goats because of the availability of Water and Fodder due to the Water Conservation Intervention
- 100% farmers confirmed that expenses on fodder have drastically reduced because the water availability leads to fodder availability
- In the month of January 2023, village dairy daily milk collection was nearly 300 litres more compared to the baseline because of water and fodder availability resulting from the Water Conservation Project

Key Recommendation:

- Formation of a village-level committee for on ground monitoring and evaluation.
- Leveraging resources and manpower can aid in effective implementation with the greatest impact possible
- Involve the local community in the planning and construction of water structures to ensure their ownership and sustainability
- Implement proper maintenance of water structures to ensure their longevity and effectiveness

End of the document

Summary of Impact Assessment Report

Water Conservation Project

Nanduri Dumala, Sangamner, Ahmednagar

The Corporate Social responsibility (CSR) Policy of CGCEL, is rooted in the belief that business sustainability is closely connected to the sustainable development of the communities and environment in which the business operates. Water Conservation, Skill & Entrepreneurship Development and Community Care are three focus areas identified under the CSR framework

One such project under Water Conservation was implemented in collaboration with Vanarai, a reputed NGO in this domain. The third-party Baseline, Endline, Structural Audit & HydroGeo Assessment of the project was conducted by NuSocia, an impact advisory firm.

Project title: Water Conservation Program

Location: Nanduri Dumala, Sangamner Block, Ahmednagar District, Maharashtra

Implementation Partner: Vanarai (Not-for-Profit Organisation)

Project timeline: January 2022 to June 2022

Project Objectives:

1. Increasing community participation in sustainable watershed development and further management
2. Preventing soil erosion, increasing soil moisture, raising groundwater levels, and conserving and increasing the biomass cover of the area
3. Controlling soil erosion by lowering runoff velocities
4. Increasing agricultural production of farmers

Project Rationale:

- Sangamner, Ahmednagar faces water scarcity problems due to its geographical location, with limited rainfall and an erratic pattern. As a result, the water supply is limited and the water resources are depleted which leads to water scarcity in the region
- Sangamner is predominantly an agricultural area, and the agricultural sector relies heavily on water for irrigation. The lack of water availability can severely impact crop production and yield, leading to financial losses for farmers and the local economy
- Climate change is causing changes in rainfall patterns, making it more unpredictable and erratic. As a result, it is essential to conserve and manage water resources effectively to adapt to these changes

- By implementing water conservation measures, there are potential economic benefits that can be realised. The improved availability of water resources can create opportunities for more sustainable economic development

- **Key Interventions:**

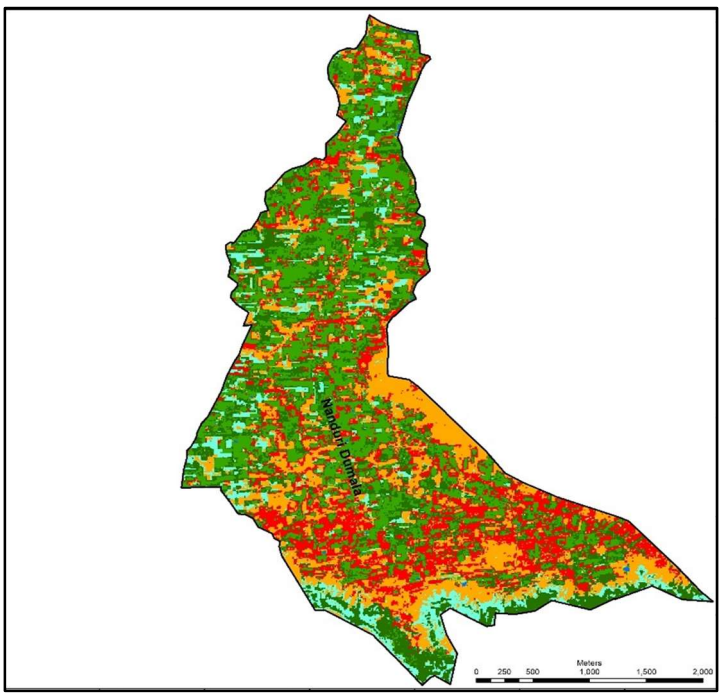
Intervention	Quantity
Digging of Percolation Tank	01 Nos
Construction of new Cement Nala Bund	02 Nos
Repairing of Cement Nala Bund	02 Nos
Nala Deepening	01 Km
Loose Boulder Structures	300 Nos
Deep CCT	23 Ha
Tree Plantation	3840

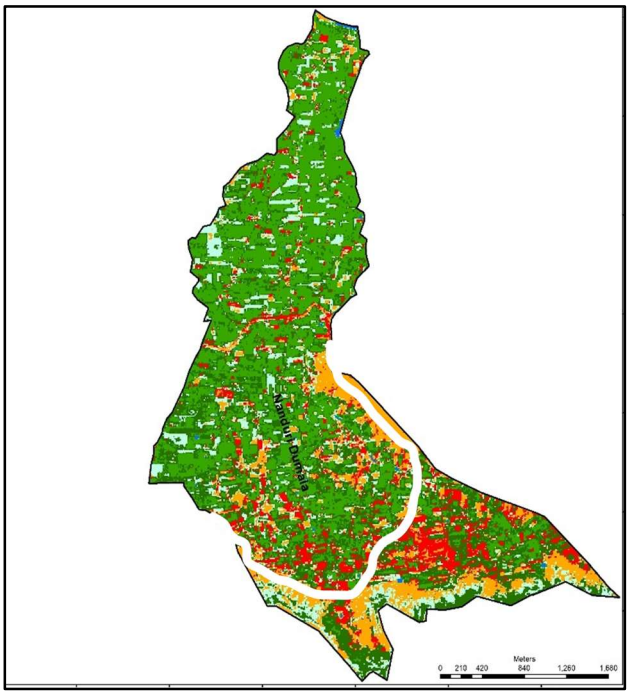
Key Findings of the assessment:

1. Change in Water Recharge:
   - The amount of runoff harvested indicates that approximately 25.4% of the area's total runoff has been captured because of Water Conservation Structures implemented under project
   - Total runoff conserved because of Water Conservation Structures for the year 2022-23 was 1.55 Lakh liters (155927.2 m3/kiloliters)

2. Change in area under cultivation:
   - On field research along with HydroGeo study indicates increase in area under cultivation because of the Water Conservation Project.

- 104 acre (42.16 hectare) area increased under cultivation from Waste/Falloland.





Jan 2022 Jan 2023

There is an increase in the cultivation area in the year 2023 has been observed

3. Change in Cropping Pattern:
   - 73% farmers confirmed that the change in cropping pattern is because of the water conservation project
   - Corn, Soyabean, Wheat, Sugarcane cash crop cultivation has increased by 11% in the region because of the Water Conservation project

4. Change in Income & Expenditure:
   - Water availability as a result of the Water Conservation Project led to changes in cropping patterns and it has also impacted the farming practices as more farmers have reinvested their income in good farming practices such as soil testing, seed treatment and cropping method.
   - The Water Conservation Structures have helped in reducing the dependency on rainfed farming and hence increase in organised irrigation practices has been observed. For example, the farm bund method
   - 69% farmers confirm that their annual farming income has increased because of the Water Conservation Project
   - Average 12% increment in the annual income of farmers verified through field data
   - Additional annual income gained by farmers reinvested in technology-oriented farming practices as well as reinvested in purchasing livestocks.

5. Change in Agricultural Allied Businesses :

- 8% increase in the number of farmers who have started doing Livestock rearing of cows, buffaloes, and goats because of the availability of Water and Fodder due to the Water Conservation Intervention.
- 44% farmers confirmed that expenses on fodder have drastically reduced because the water availability leads to fodder availability
- In the month of January 2023, village dairy daily milk collection was nearly 300 litres more compared to the baseline because of water and fodder availability resulting from the Water Conservation Project

Key Recommendation:

- Formation of a village-level committee for on ground monitoring and evaluation

- Collaboration and leveraging resources and manpower can aid in effective implementation with the greatest impact possible
- Involve the local community in the planning and construction of water structures to ensure their ownership and sustainability

End of the document.

Summary of Impact Assessment Report

Water Conservation Project
Kauthadi, Daund, Pune

The Corporate Social responsibility (CSR) Policy of CGCEL, is rooted in the belief that business sustainability is closely connected to the sustainable development of the communities and environment in which the business operates. Water Conservation, Skill & Entrepreneurship Development and Community Care are three focus areas identified under the CSR framework.

One such project under Water Conservation was implemented in collaboration with BBKGSS, a reputed NGO in this domain. The third-party Baseline, Endline, Structural Audit & HydroGeo Assessment of the project was conducted by NuSocia, an impact advisory firm.

Project title: Water Conservation Program

Location: Kauthadi, Daund, Pune District, Maharashtra

Implementation Partner: Bhartiya Bahuuddeshiya Khadi And Gramodyog Shikshan Sansthan (BBKGSS) (Not-for-Profit Organisation)

Project timeline: February 2022 to March 2023

Project Objectives:
1. To Increase the soil water level and stabilise the water table, to conserve soil and water through proper conservation techniques and structures
2. To decrease soil erosion and revive the non-functional wells
3. To Increase awareness about the importance of water and soil conservation
4. To Increase income generation opportunities within agriculture and allied activities,

Project Rationale:
- Karjat, Ahmednagar faces water scarcity problems due to its geographical location, with limited rainfall and an erratic pattern. As a result, the water supply is limited, and the water resources are depleted which leads to water scarcity in the region.
- Karjat is predominantly an agricultural area, and the agricultural sector relies heavily on water for irrigation. The lack of water availability can severely impact crop production and yield, leading to financial losses for farmers and the local economy.
- Climate change is causing changes in rainfall patterns, making it more unpredictable and erratic. As a result, it is essential to conserve and manage water resources effectively to adapt to these changes.
- The improved availability of water resources can create opportunities for more sustainable economic development.

- **Key Interventions:**

Intervention	Quantity
Digging of Percolation Tank	01 Nos
Desilting of Earthen Nala Bund	05 Nos
Repairing of Mati Nala Bund	05 Nos
Cement Nala Bund	01 Nos
Loose Boulder Structures	50 Nos
Nala De-siltation	02 Km
Compartment Bunding	30 Ha

Key Findings of the assessment:

Change in Water Recharge:

- The amount of runoff harvested indicates that approximately 100% of the area's total runoff has been captured because of Water Conservation Structures implemented by CCF
- Total runoff conserved because of Water Conservation Structures for the year 2022-23 was 4.58 Lakh liters (458350.7m3/kiloliters)

1. Change in area under cultivation:
   - On field research along with HydroGeo study indicates increase in area under cultivation because of the Water Conservation Project.
   - 47-acre (19.1 hectare) area increased under cultivation from Waste/Fallow land.

There is an increase in the cultivation area in the year 2023 has been observed

2. Change in Cropping Pattern:
   - 16% farmers confirmed that the change in cropping pattern is because of the water conservation project
   - Onion and Corn cultivation has increased by 13% in the region because of the Water Conservation project

3. Change in Income & Expenditure:
   - Average 8% increment in the annual income of farmers verified through field data
   - Additional annual income gained by farmers reinvested in technology-oriented farming practices as well as reinvested in purchasing livestocks
4. Change in Agricultural Allied Businesses:
   - 68% farmers confirmed that expenses on fodder have drastically reduced because the water availability leads to fodder availability.

- In the month of January 2023, village dairy daily milk collection was nearly 200 litres more compared to the baseline because of water and fodder availability resulting from the Water Conservation Project

Key Recommendation:

- Formation of a village-level committee composed of one member from each village pocket, as well as an implementation partner and a member of the monitoring agency for on ground monitoring and evaluation.

- During the project implementation year, there are numerous opportunities for collaboration with government or private initiatives that are taking place on the ground. Collaboration and leveraging resources and manpower can aid in effective implementation with the greatest impact possible.

- Involve the local community in the planning and construction of water structures to ensure their ownership and sustainability. This can be done by involving community members in the decision-making process.

End of the document.

Summary of Impact Assessment Report

Water Conservation Project

Pemgiri, Sangamner, Ahmednagar

The Corporate Social responsibility (CSR) Policy of CGCEL, is rooted in the belief that business sustainability is closely connected to the sustainable development of the communities and environment in which the business operates. Water Conservation, Skill & Entrepreneurship Development and Community Care are three focus areas identified under the CSR framework.

One such project under Water Conservation was implemented in collaboration with Vanarai, a reputed NGO in this domain. The third-party Baseline, Endline, Structural Audit & HydroGeo Assessment of the project was conducted by NuSocia, an impact advisory firm.

Project title: Water Conservation Program

Location: Pemgiri, Sangamner Block, Ahmednagar District, Maharashtra

Implementation Partner: Vanarai (Not-for-Profit Organisation)

Project timeline: January 2022 to June 2022

Project Objectives:

1. Increasing community participation in sustainable watershed development and further management
2. Preventing soil erosion, increasing soil moisture, raising groundwater levels, and conserving and increasing the biomass cover of the area
3. Controlling soil erosion by lowering runoff velocities
4. Increasing agricultural production of farmers

Project Rationale:

- Sangamner, Ahmednagar faces water scarcity problems due to its geographical location, with limited rainfall and an erratic pattern. As a result, the water supply is limited and the water resources are depleted which leads to water scarcity in the region.
- Sangamner is predominantly an agricultural area, and the agricultural sector relies heavily on water for irrigation. The lack of water availability can severely impact crop production and yield, leading to financial losses for farmers and the local economy.
- Climate change is causing changes in rainfall patterns, making it more unpredictable and erratic. As a result, it is essential to conserve and manage water resources effectively to adapt to these changes.
- By implementing water conservation measures, there are potential economic benefits that can be realized. The improved availability of water resources can create opportunities for more sustainable economic development.

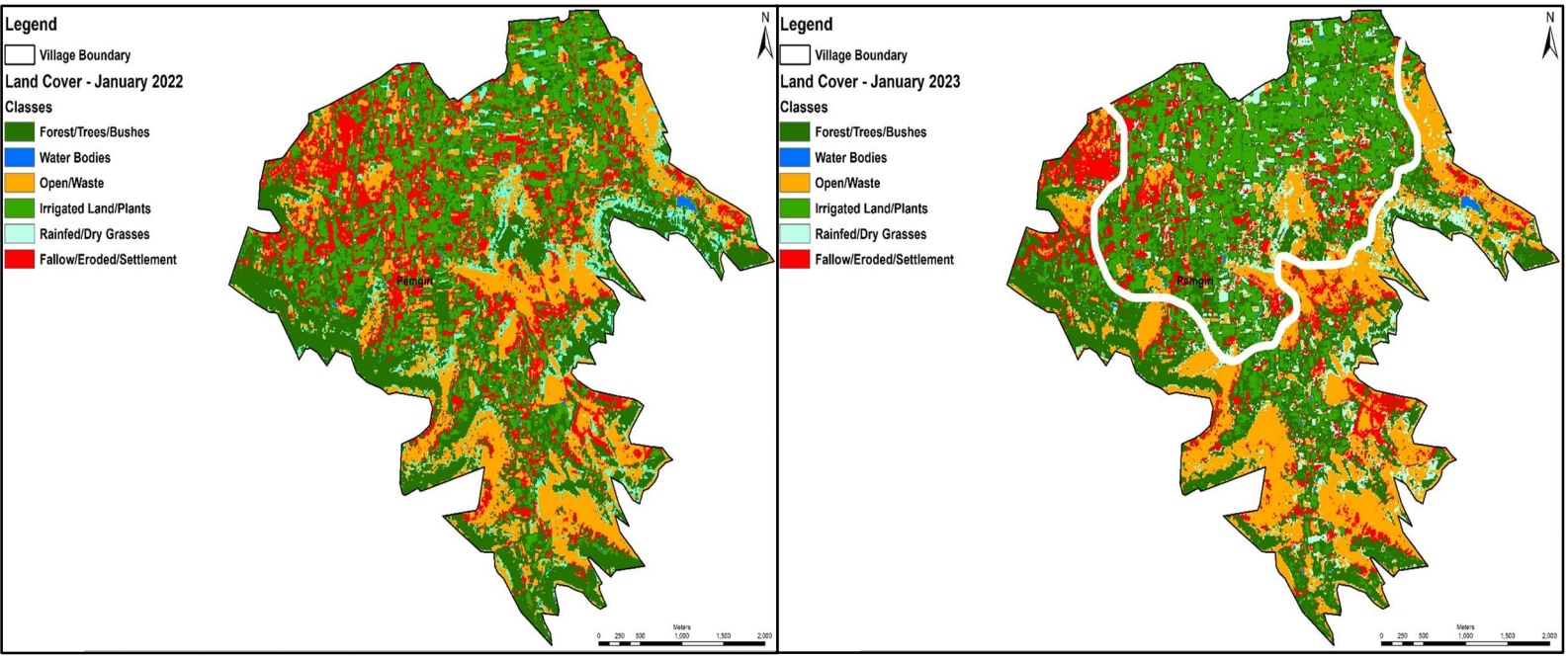
Key Interventions:

Intervention	Quantity
Digging of Percolation Tank	01 Nos
Deepening of Cement Nala Bund	10 Nos
Repairing of Earthen Nala Bund	17 Nos
Gabion Bund	13 Nos
Tree Plantation	12640 Trees

Key Findings of the assessment:

1. Change in Water Recharge:
   - The amount of runoff harvested indicates that approximately 21% of the area's total runoff has been captured because of Water Conservation Structures implemented by CCF
   - Total runoff conserved because of Water Conservation Structures for the year 2022-23 was 2.4 Lakh liters (240052.8 m3/kiloliters)

2. Change in area under cultivation:
   - On field research along with HydroGeo study indicates increase in area under cultivation because of the Water Conservation Project.
   - 111-acre (44.98 hectare) area increased under cultivation from Waste/Fallow land.



Jan 2022 **Jan 2023**

There is an increase in the cultivation area in the year 2023 has been observed

3. Change in Cropping Pattern:
   - 65% farmers confirmed that the change in cropping pattern is because of the water conservation project
   - Onion, Soyabean, Wheat, Sugarcane cash crop cultivation has increased by 7% in the region because of the Water Conservation project

4. Change in Income & Expenditure:
   - Water availability as a result of the Water Conservation Project led to changes in cropping patterns and it has also impacted the farming practices as more farmers have reinvested their income in good farming practices such as soil testing, seed treatment and cropping method.
   - The Water Conservation Structures have helped in reducing the dependency on rainfed farming and hence increase in organised irrigation practices has been observed. For example, the farm bund method.
   - 62% farmers confirm that their annual farming income has increased because of the Water Conservation Project.
   - Average 11% increment in the annual income of farmers verified through field data.
   - Additional annual income gained by farmers reinvested in technology-oriented farming practices as well as reinvested in purchasing livestocks.

5. Change in Agricultural Allied Businesses:

- 8% increase in the number of farmers who have started doing Livestock rearing of cows, buffaloes, and goats because of the availability of Water and Fodder due to the Water Conservation Intervention.
- 46% farmers confirmed that expenses on fodder have drastically reduced because the water availability leads to fodder availability.
- In the month of January 2023, village dairy daily milk collection was nearly 400 litres more compared to the baseline because of water and fodder availability resulting from the Water Conservation Project.

Key Recommendation:

- Formation of a village-level committee composed of one member from each village pocket, as well as an implementation partner and a member of the monitoring agency for on ground monitoring and evaluation.

- During the project implementation year, there are numerous opportunities for collaboration with government or private initiatives that are taking place on the ground. Collaboration and leveraging resources and manpower can aid in effective implementation with the greatest impact possible.

- Involve the local community in the planning and construction of water structures to ensure their ownership and sustainability. This can be done by involving community members in the decision-making process.

- Implement proper maintenance of water structures to ensure their longevity and effectiveness.

End of the Note

Summary of Impact Assessment Report

Water Conservation Project

Pimpalgaon Matha, Sangamner, Ahmednagar

The Corporate Social responsibility (CSR) Policy of CGCEL, is rooted in the belief that business sustainability is closely connected to the sustainable development of the communities and environment in which the business operates. Water Conservation, Skill & Entrepreneurship Development and Community Care are three focus areas identified under the CSR framework.

One such project under Water Conservation was implemented in collaboration with Vanarai, a reputed NGO in this domain. The third-party Baseline, Endline, Structural Audit & HydroGeo Assessment of the project was conducted by NuSocia, an impact advisory firm.

Project title: Water Conservation Program

Location: Pimpalgaon Matha, Sangamner Block, Ahmednagar District, Maharashtra

Implementation Partner: Vanarai (Not-for-Profit Organisation)

Project timeline: January 2022 to June 2022

Project Objectives:

1. Increasing community participation in sustainable watershed development and further management
2. Preventing soil erosion, increasing soil moisture, raising groundwater levels, and conserving and increasing the biomass cover of the area
3. Controlling soil erosion by lowering runoff velocities
4. Increasing agricultural production of farmers

Project Rationale:

- Sangamner, Ahmednagar faces water scarcity problems due to its geographical location, with limited rainfall and an erratic pattern. As a result, the water supply is limited, and the water resources are depleted which leads to water scarcity in the region.
- Sangamner is predominantly an agricultural area, and the agricultural sector relies heavily on water for irrigation. The lack of water availability can severely impact crop production and yield, leading to financial losses for farmers and the local economy
- Climate change is causing changes in rainfall patterns, making it more unpredictable and erratic. As a result, it is essential to conserve and manage water resources effectively to adapt to these changes

- By implementing water conservation measures, there are potential economic benefits that can be realised. The improved availability of water resources can create opportunities for more sustainable economic development

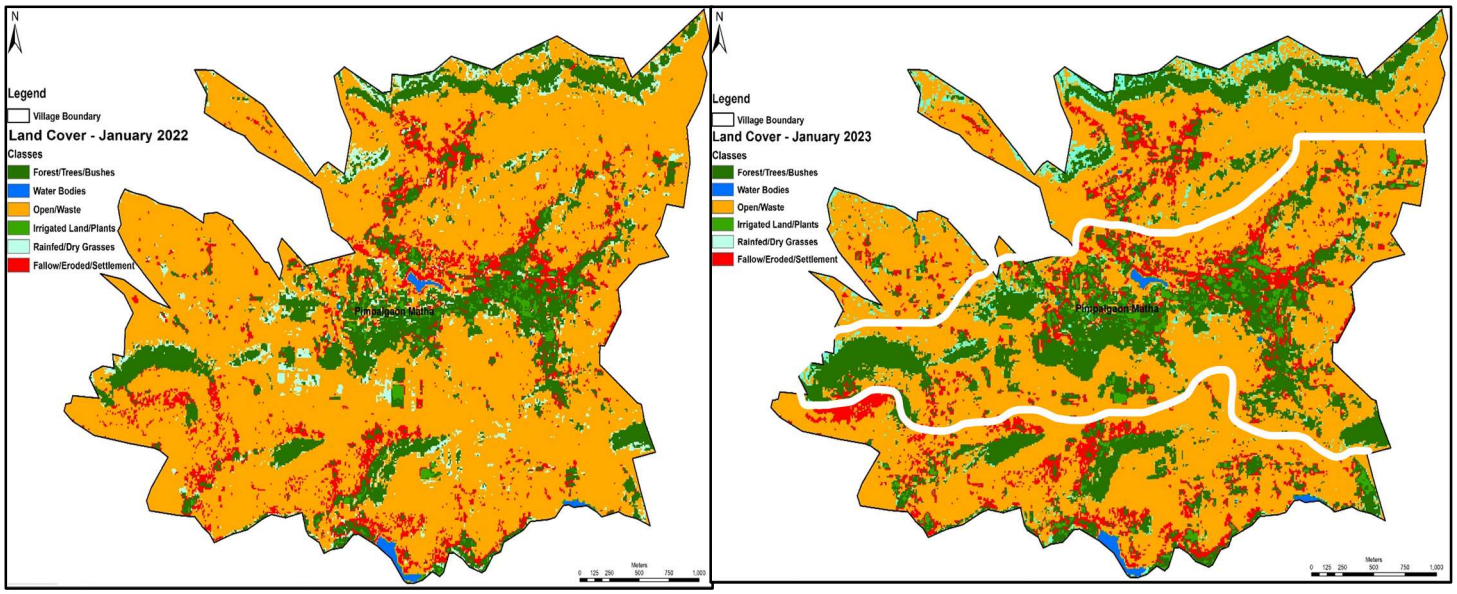
Key Interventions:

Intervention	Quantity
Digging of Percolation Tank	03 Nos
Construction of new Cement Nala Bund	02 Nos
Loose Boulder Structures	200 Nos
Deep CCT	40 Ha
Tree Plantation	3840

Key Findings of the assessment:

1. Change in Water Recharge:
   - The amount of runoff harvested indicates that approximately 15.4% of the area's total runoff has been captured because of Water Conservation Structures implemented by CCF
   - Total runoff conserved because of Water Conservation Structures for the year 2022-23 was 1.01 Lakh liters (101314.9 m3/kiloliters)

2. Change in area under cultivation:
   - On field research along with HydroGeo study indicates increase in area under cultivation because of the Water Conservation Project.
   - 26 acre (10.63 hectare) area increased under cultivation from Waste/Fallow land



Jan 2022 Jan 2023

There is an increase in the cultivation area in the year 2023 has been observed

3. Change in Cropping Pattern:
   - 54% farmers confirmed that the change in cropping pattern is because of the water conservation project.
   - Onion, Soyabean, Wheat, Sugarcane cash crop cultivation has increased by 12.5% in the region because of the Water Conservation project.

4. Change in Income & Expenditure:
   - Water availability as a result of the Water Conservation Project led to changes in cropping patterns and it has also impacted the farming practices as more farmers have reinvested their income in good farming practices such as soil testing, seed treatment and cropping method.
   - The Water Conservation Structures have helped in reducing the dependency on rainfed farming and hence increase in organised irrigation practices has been observed. For example, the Drip irrigation method.
   - 56% farmers confirm that their annual farming income has increased because of the Water Conservation Project.
   - Average 08% increment in the annual income of farmers verified through field data.
   - Additional annual income gained by farmers reinvested in technology-oriented farming practices as well as reinvested in purchasing livestocks.

5. Change in Agricultural Allied Businesses:
   - 3% increase in the number of farmers who have started doing Livestock rearing of cows, buffaloes, and goats because of the availability of Water and Fodder due to the Water Conservation Intervention.

- 22% farmers confirmed that expenses on fodder have drastically reduced because the water availability leads to fodder availability.
- In the month of January 2023, village dairy daily milk collection was nearly 200 litres more compared to the baseline because of water and fodder availability resulting from the Water Conservation Project.

Key Recommendation:

- Formation of a village-level committee for on- ground monitoring and evaluation
- During the project implementation year, there are numerous opportunities for collaboration with government or private initiatives that are taking place on the ground.
- Involve the local community in the planning and construction of water structures to ensure their ownership and sustainability. This can be done by involving community members in the decision-making process.
- Implement proper maintenance of water structures to ensure their longevity and effectiveness.

End of the document