HDFC Holistic Rural Development Program

Project P0626

IMPLEMENTED BY

THE CORBETT FOUNDATION

IMPACT ASSESSMENT OF HDFC BANK CSR

SUBMITTED BY

THINKTHROUGH CONSULTING PVT. LTD.

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1. Introduction

1.1 Background and Context

Western Ghats is globally recognized for its immense biological diversity. The region is a centre of endemism with over 2000 species of flora and fauna found only in the Western Ghats, out of which 325 species are globally threatened.[1] Western Ghats is one of the eight 'hottest hotspots' for biodiversity in the world.[2] In 2012, an area of 7,653.15 sq. km in the Western Ghats earned the title of a 'UNESCO World Heritage Site'.

Holistic rural development in India is an inclusive approach that focuses on improving the overall well-being of rural communities by addressing multiple aspects of development simultaneously. It goes beyond just economic growth and includes education, healthcare, sanitation, women's empowerment, livelihood opportunities, skill development, infrastructure, and environmental sustainability. This approach recognizes that rural progress is interconnected—better education leads to improved job opportunities, good healthcare enhances productivity, sustainable farming ensures food security, and infrastructure like irrigation sources and electricity boosts economic activities. Government schemes like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Pradhan Mantri Awas Yojana (PMAY), National Rural 8 Health Mission (NRHM), and corporate social responsibility (CSR) initiatives play a key role in driving holistic rural development.

The Rajmachi Conservation Reserve (CR), spread over 23,850.42 and the Lonavala CR, spread over 8978.5 hectares in Pune and Raigad districts, are parts of the Western Ghats, which is a UNESCO World Heritage Site and one of the global biodiversity hotspots. Rajmachi CR is located less than 60 km from the metropolitan of Pune while Lonavala CR is on the outskirts of Lonavala hill town. With presence of Sanctuaries (Bhimashankar Wildlife Sanctuary, Karnala Wildlife Sanctuary and Sudhagad Wildlife) and other ecologically important places such as Matheran, Prabalgad, Tamhini Ghat, there is a need to implement sustainable activities for the coexistence between humans and wildlife. The growing urban development activities in Pune have been threatening natural open spaces around the city. The small town of Lonavala has a huge influx of tourists. Without intervention from civil society organizations in collaboration with various other stakeholders such as government departments, wildlife researchers, ecologists and most importantly, local communities, the biodiversity of the Western Ghats and its cultural association with the local communities may not last long.

One such CSR initiative, that aims to mitigate human-wildlife conflict as well as ecological preservation along with sustainable growth is HDFC Bank's flagship CSR initiative, the Holistic Rural Development Program (HRDP), under HDFC Bank Parivartan, the CSR wing of HDFC Bank.

Context of HRDP under Parivartan

The HRDP initiative is designed to drive sustainable socio-economic transformation in rural India. Through strategic collaborations with NGOs nationwide, the initiative supports enterprise development and infrastructure enhancement, ensuring that skill training and livelihood promotion are seamlessly integrated into comprehensive rural development efforts.

[1] https://whc.unesco.org/en/list/1342
[2] https://whc.unesco.org/en/list/1342/

At its core, HRDP prioritizes human capital development, recognizing that empowering individuals with the right knowledge and skills is the key to personal and professional growth. Economic independence is a fundamental pillar, with a strong emphasis on skill-building and livelihood generation, enabling rural communities to become self-sufficient and reduce dependency.

Another critical aspect of HRDP is improving living conditions, addressing broader socio-economic challenges while equipping individuals with the resources needed for sustainable progress. By fostering self-reliance and resilience, the initiative envisions a long-term upliftment of rural communities.

Aligned with HDFC Bank's commitment to corporate social responsibility, HRDP serves as a catalyst for positive change, creating a holistic and inclusive development model that extends beyond immediate interventions, ensuring long-term well-being and sustainability for rural populations,

"Bringing Parivartan today for a better tomorrow."

1.2 Overview of the Project

HRDP P0626 was a rural development project implemented by HDFC Bank in two Conservation Reserves (CR) - Lonavala and Rajmachi. The objective was Human-wildlife coexistence to ensure long-term conservation in the Western Ghats. The project was designed to address local needs through integrated development, aligning with the broader Parivartan Vision.

The project was implemented in eight villages in Wahangaon Round of Rajmachi CR viz. Kusur, Khand, Sawale, Pimpari, Ingloon, Kivale, Bhoyre, Kalhat, and eight villages in/near Lonavala CR area viz. Kurvande, Aundhe Kh., Atvan, Devghar, Gevhande Apati, Bhaje, Aundholi, & Shilatne were selected.

The project had a target of 2,369 beneficiaries but achieved 1,470 due to various implementation challenges including land constraints, funding restrictions, terrain difficulties, and weather issues.

The project ran for 11 months before being pre-closed. It was designed as a multi-faceted intervention targeting various aspects of community development and conservation.

Project Objectives:

1. **Natural Resource Management (NRM)**
    - Improve water conservation through check dams and community ponds
    - Implement watershed management techniques
    - Mitigate human-wildlife conflict through distribution of torches
    - Improve livestock health through cattle vaccination
2. **Education & Institutional Strengthening**
    - Strengthen infrastructure in schools and Anganwadis
    - Train teachers, principals, and forest guards
    - Conduct awareness workshops in schools through nature clubs

3. **Sustainable Livelihoods & Enterprise Development (SDLE)**
    - Train farmers in modern and sustainable agricultural practices
    - Support women's Self-Help Groups (SHGs) for income generation
    - Develop entrepreneurship skills, particularly in food processing

The Corbett Foundation (TCF) undertook this integrated rural development project with community participation in Rajmachi and Lonavala regions of Pune, Maharashtra to achieve the overall goal of human-wildlife coexistence.

TCF is a charitable trust, a non-profit and a non-governmental organization that is fully dedicated to the conservation of wildlife with active involvement of local communities. TCF has successfully demonstrated its interventions around important tiger conservation landscapes in Assam, Madhya Pradesh, Maharashtra, Manipur and Uttarakhand, and in semi-arid ecosystems of Western India (Gujarat and Rajasthan) where it works towards the protection of Great Indian Bustard, a critically endangered species and other threatened flora and fauna. TCF adopts a 'holistic approach' to conservation which includes interventions in the areas of ecological research, biodiversity conservation, human-wildlife conflict mitigation, habitat restoration, sustainable livelihoods, watershed development, sustainable rural development, human and veterinary health, policy and advocacy.

1.3 Objectives and Scope of Evaluation

1.3.1 Purpose of the Evaluation

Thinkthrough Consulting Pvt Ltd (TTC) was engaged by HDFC Parivartan to conduct an independent-third party rapid impact assessment of its CSR initiative under the HRDP Program, delivered in partnership with The Corbett Foundation (TCF).

The primary goal of this assessment was to evaluate on the impact indicators of the project across key domain areas. Specifically, the study aims to:

1. Assess the achievement of project objectives, evaluating the extent to which planned goals have been met.
2. Examine the impact on beneficiaries, identifying tangible improvements in their lives resulting from the interventions.
3. Conduct comparative analyses, where possible, to evaluate the effectiveness of the approach across different regions under the same implementing partner.
4. Offer critical insights and recommendations, drawing lessons from the evaluation to enhance the design and execution of future projects

1.3.2 Key Research Questions

To assess the impact of the HRDP Project P0626, this evaluation followed the OECD DAC criteria, which provided a structured framework for analysing development effectiveness. The following research questions guide the assessment, offering insights into the project's relevance, effectiveness, efficiency, impact, sustainability, and coherence within the broader development landscape-

- **Relevance:** To what extent did the project address the priority needs of the target communities, and how well was it aligned with local development challenges and national policies?

- **Coherence:** How well does the project complement, align with, and leverage existing government schemes, policies, and other development initiatives in the region?
- **Efficiency:** Were the project resources (financial, human, and technical) utilized optimally to achieve the desired outcomes in a cost-effective and timely manner?
    - **Timeliness:** Were the interventions implemented in a timely manner?
    - **Satisfaction:** Are the beneficiaries satisfied with the interventions?
- **Effectiveness:** How successfully were the planned interventions implemented, and to what extent did they achieve the intended project objectives?
- **Outcomes:** What significant and measurable changes—both intended and unintended—has the project brought to the lives of beneficiaries and the broader community?
- **Sustainability:** To what extent are the project's benefits likely to continue after the withdrawal of external support, and what measures have been put in place to ensure long-term impact?

2.Methodology

2.1 Evaluation Framework

The evaluation of the Program, guided by the OECD's Development Assistance Committee (DAC) criteria, allowed for a systematic and thorough assessment across six crucial dimensions: Relevance, Coherence, Efficiency, Effectiveness, Impact, and Sustainability.

1. **Relevance**: Assess how well the program addresses the financial, educational, and social needs of the target communities.
2. **Coherence**: Examine alignment with existing programs, including Shram Sarathi's initiatives and government schemes.
3. **Efficiency**: Evaluate resource utilization, identifying cost-effectiveness and operational improvements. Two specific components under efficiency have been measured for this study- Timeliness and Satisfaction.

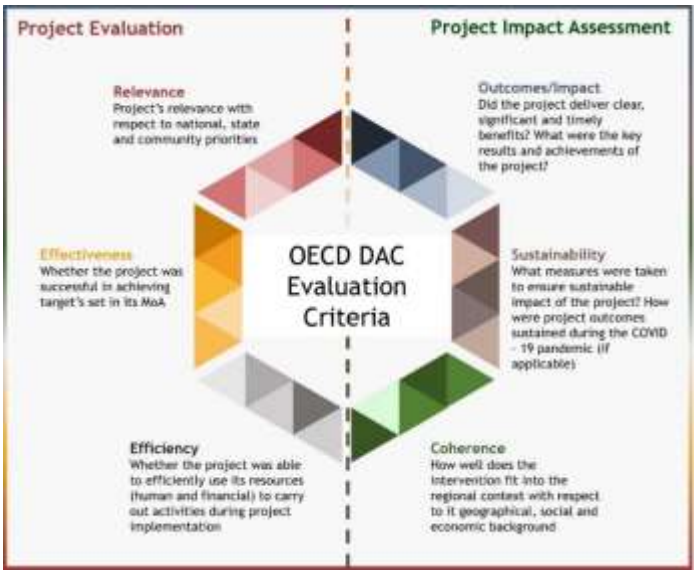

Figure 1: OECD DAC Framework

4. **Effectiveness**: Measure the achievement of program goals, such as improved financial literacy and access to formal financial services.
5. **Impact**: Analyze long-term changes in economic stability, empowerment, and knowledge retention, including unintended outcomes.

6. **Sustainability**: Assess the likelihood of continued benefits post-project through self-sufficiency, capacity building, and partnerships.

NOTE: Due to the pre-mature closing of the project, the Impact component of the OECD DAC criteria was not measured. Instead, evaluators opted for a "quick impact assessment approach" focusing on the other OECD DAC criteria (relevance, efficiency, effectiveness, sustainability, and coherence) along with short-term outcomes rather than impact, through qualitative methods that were more appropriate given the limited timeframe and smaller beneficiary pool available for assessment.

2.2 Study Design

To capture insights across these criteria, the study employed qualitative research, through qualitative data collection tools like Focus Group Discussions (FGDs), Spontaneous Group Discussions (SGDs), Key Informant Interviews (KIIs), In-Depth Interviews (IDIs) and case studies which provided in-depth perspectives from stakeholders, including beneficiaries, partners, and program implementers. This combination ensured a holistic view, enabling the evaluation to go beyond numerical data and capture the lived experiences, challenges, and enabling factors that shape the success of the interventions.

The initial preparatory activities, including the inception meeting, review of secondary literature, development of data collection tools, planning for fieldwork, and the actual field data collection, were successfully completed by March 2025.

Once the findings were collated, the next steps involved analysis of the data. Data analysis was carried out by segregating the information as per the relevant themes and was analysed with in-depth discussions with field researchers.

2.3 Sampling Strategy

For building a holistic understanding of the entire program as well as the thematic areas covered by the program, the following geographical coverage was considered for sampling.

Table 1: Geographical Sampling for the study

Project Code	State	District	Block	Villages
P0626	Maharashtra	Pune	Rajmachi	Kalhat Khand Kiwale Pimpari
			Lonavala	Shilatane Bhaje Aundhe Kurvande

In line with the qualitative approach for the study, adequate qualitative sample was covered. The sample distribution is presented as below.

Qualitative Sample Distribution

As part of the qualitative sample, beneficiaries of different interventions: farmers, forest range officers, students, teachers, field mobilisers and project team were selected to gain an in-depth understanding of the project cycle and processes. The qualitative sample covered during the study is presented in the table below.

Table 2: Qualitative Sampling Distribution

Stakeholders		Interactions	Number of respondents
Education	Students	4 FGDs	17
	Teachers and Headmasters	2 KIIs	2
	Anganwadi Sevikas	3 KIIs	3
SHGs	Women members	4 FGDs	10
PRI members	Sarpanch	2 IDIs	2
Community (Torch, Community Ponds, Check Dam beneficiaries)	Farmers	3 FGDs	10
Farmers (Agriculture and Poultry)	Farmers	8 Case Studies	8
Forest Guards	Range Officer	1 KII	1
HDFC Team	Project Manager	2 KIIs	2
Total		29	45

2.4 Data Collection

Responses from qualitative interactions were recorded through first-hand field notes by the researchers who administered the interactions. Some audio recordings were also taken for validation purposes later.

2.5 Data Analysis

- The numerical data with respect to project outreach, target, output and outcome achievement was sourced from HDFC- Seva Mandir DMS and the project MIS.
- The theme-wise and intervention-wise disaggregated data around key progress and achievement indicators were additionally extracted from interactions and other hardcopies of data sources. This data was then validated during the primary data collection with various project stakeholders.
- As a precursor to analysing the information collected through qualitative tools, internal workshops with the field team and leaders helped triangulate perspectives and develop a comprehensive understanding of key research questions. Field insights were organized according to the analysis framework and aligned with stakeholders to create a consolidated information sheet.
- In addition, a scoring matrix has also been calculated for each theme and overall project, indicating the numerical analysis of the project's performance. The scoring framework provides a structured rating matrix to evaluate the impact of the HRDP Project 626 based on key OECD DAC criteria: Relevance, Coherence, Effectiveness, Efficiency and Sustainability. Each criterion is rated on a five-point scale, ranging from Score 1 (Very Poor) to Score 5 (Very Good). The scoring is designed to measure how well the project aligns with community needs, achieves its objectives, utilizes resources efficiently, delivers long-term impact, and ensures sustainability. The evaluation involved assessing qualitative and quantitative data, benchmarking project outcomes against these defined rating levels. This systematic approach ensures objective, evidence-based impact measurement, guiding future

development strategies. In the report, the scores have been analysed theme-wise and justified with data for each OECD DAC component.

Table 3: Scoring Criteria

	Score 5	Score 4	Score 3	Score 2	Score 1
Relevance	Essential support	High priority	Medium priority	Low priority	Not a priority
Efficiency-Timeliness	On time	Slightly delayed	Moderately delayed	Very much delayed	Extremely delayed
Efficiency-Satisfaction	Very good	Good	Acceptable	Poor	Very poor
Effectiveness	High	Moderate	Neutral	Not much	Not at all
Sustainability	Excellent measures	Adequate measures	Some measures	Not sure	No measures are made yet
Coherence	High alignment	Good alignment	Basic alignment	Limited alignment	No alignment and major coordination

3.Findings and Analysis

3.1 Interventions and Activities

1. Natural Resource Management (NRM)

- Check Dams & Community Ponds: Constructed to improve water conservation and agricultural productivity.
- Watershed Management: Implemented soil and water conservation techniques.
- Sustainability: Engaged local communities in maintaining infrastructure.

2. Sustainable Livelihoods & Enterprise (SDLE)

- Farmer Training Programs: Provided knowledge on improved agricultural practices, organic farming, and water-efficient techniques.
- Self-Help Groups (SHGs): Women-led SHGs were trained in income-generating activities.

3. Human-Wildlife Conflict Mitigation

- Distribution of Torches: Farmers were provided with torches to deter wildlife and reduce conflicts.
- Awareness Programs: Conducted for local communities on coexisting with wildlife.

4. Livestock Healthcare & Vaccination

- Cattle Vaccination Drives: Conducted to improve livestock health and prevent disease outbreaks.

- Capacity Building: Farmers were trained on cattle management and preventive healthcare.

5. Education & Institutional Strengthening

- School Infrastructure Development: Strengthened infrastructure for schools and Anganwadis.
- Training for School Teachers & Principals: Focused on innovative teaching methods and digital learning.
- Forest Guard Training: Provided technical knowledge and skill enhancement for forest officials.

Figure 2: Infrastructure enhancements of Anganwadi in Lonavala

3.2 Project Score Card

The Scoring Matrix for Human-Wildlife Coexistence Project P0626 is given as below:

Table 4: Score Card of P0626

Criteria	Score (1-5)	Reason
Relevance	2/5	While the project design was relevant to local needs, premature closures, funding delays, and a vendor-driven model limited its execution and alignment with beneficiary expectations.
Efficiency - Timeliness	2.5/5	Delays caused by monsoon, premature closures, and funding constraints affected timely implementation of key interventions like farm ponds and SHG enterprises.
Efficiency - Satisfaction	2.5/5	Moderate satisfaction with infrastructure but concerns about lack of follow-up and insufficient training for livelihood activities like poultry farming and vermicomposting.
Effectiveness	2.5/5	Achieved many targets but gaps in skill-building, wildlife protection measures, and market linkages limited long-term success of livelihood initiatives.
Coherence	2.5/5	The project partially aligned with government schemes and local needs but suffered from inconsistencies in implementation, inadequate integration of activities, and a lack of sustained follow-up, reducing its overall coherence.
Sustainability	1/5	The project lacked adequate follow-up support, market linkages, and risk management strategies, leaving many interventions incomplete or unsustainable after the project's premature closure because of lack of community involvement majorly.

Explanation of Scores:

- **Relevance (2/5):** While the project design was relevant to local needs, such as addressing human-wildlife conflict, water scarcity, and livelihood insecurity,

execution gaps due to premature closures, funding delays, and a vendor-driven model limited its alignment with beneficiary expectations. Many interventions were left incomplete or inadequately supported.

- **Efficiency - Timeliness (2.5/5):** The project faced significant delays due to monsoon rains, premature closures, and logistical challenges, leaving key activities like farm ponds, SHG enterprises, and cattle vaccination incomplete. Though some targets were met, the overall timeline was inconsistent.
- **Efficiency - Satisfaction (2.5/5):** Beneficiaries expressed moderate satisfaction with infrastructure improvements (e.g., school infrastructure upgrades, farm ponds) and initial support but raised concerns about inadequate follow-up, lack of vaccination programs, and insufficient training for livelihood activities like poultry farming and vermicomposting.
- **Effectiveness (2.5/5):** The project achieved partial success in meeting its objectives, such as reducing wildlife intrusion through forest ponds and distributing ranger torches and reducing water scarcity by building farm ponds and check dams. However, gaps in skill-building, market linkages, and wildlife protection measures limited the long-term impact and sustainability of the interventions and to meet the ultimate objective of the project i.e. human-wildlife conflict mitigation.
- **Coherence (2.5/5):** The project partially aligned with government schemes and SDGs, ensuring complementarity with local policies. However, inconsistencies in implementation, premature closures, and gaps in integrating activities (e.g., Nature Clubs, SHG enterprises) reduced overall coherence.
- **Sustainability (1/5):** The project lacked adequate follow-up support, market linkages, and risk management strategies, leaving many interventions incomplete or unsustainable after the project's premature closure. Unaddressed wildlife threats and absence of community-driven continuation of the intervention models further undermined long-term viability.

3.3 Relevance

The **relevance** criteria of the OECD DAC framework examines whether the intervention addresses pressing issues faced by the community, complements local and broader development objectives, and is adaptable to the socio-economic and cultural realities of the population it serves.

The Human-Wildlife Coexistence Project was designed with a strong focus on addressing critical local needs such as human-wildlife conflict, water scarcity, livelihood insecurity, and educational infrastructure. While the project's objectives were highly relevant to the target communities in the Western Ghats, its execution fell short due to premature closures, funding delays, and a vendor-driven model, which undermined its overall relevance, bring down the **score to 2**.

1. **Alignment with Local Needs and Challenges**

The project was designed to address pressing issues faced by rural communities in and around the Rajmachi and Lonavala conservation reserves, including human-wildlife conflict, water scarcity, limited livelihood opportunities, and inadequate educational infrastructure.

- **Human-Wildlife Conflict Mitigation:** One of the primary concerns in the region is crop raiding and livestock damage caused by wildlife such as wild boars, deer, and mongoose. Qualitative interactions highlighted that, interventions like the

distribution of high-beam LED torches and the construction of forest ponds significantly reduced wildlife intrusion into farmlands.

However, lack of community-driven measures to ensure its sustainability reduced its relevance in the longer term. For instance:

- In Kalhat, farmers reported that the forest pond constructed by HDFC helped divert wildlife away from their fields, reducing crop damage during most seasons. However, wildlife threats persisted during the dry season when forest ponds dried up, highlighting gaps in long-term planning.

Figure 3: Dried-up Forest Pond in Kalhat, Rajmachi

- Similarly, the provision of ranger torches empowered farmers to monitor and deter wildlife encroachment in the immediate instance. These high-beam LED torches were specifically designed to deter wildlife, such as wild boars, deer, and other animals, from encroaching on farmlands and damaging crops during nighttime. However, a key issue was the lack of clarity among farmers regarding what to do if the torches became damaged or malfunctioned. Farmers were not informed about whom to contact for repairs or replacements, leaving them unsure how to address technical issues.

- **Water Scarcity and Agriculture:** Water scarcity was identified as a critical barrier to year-round farming. The construction of farm ponds addressed this issue by enhancing water retention and enabling continuous cultivation. These ponds were designed to improve water retention, enabling year-round cultivation and reducing the dependency on erratic rainfall. For example:

  - Farmers in Ingloon noted that the new farm pond allowed them to cultivate crops during the dry season, which was previously impossible due to water shortages.

  However, while the initiative addressed an immediate need, its relevance was somewhat diminished by challenges in execution. Beneficiaries in Kalhat expressed frustration over the inability to merge the old and new ponds into a single, larger structure, as they had initially requested. Furthermore, the drying up of nearby forest ponds during the dry season made the animals encroach into farms towards the farms ponds as an alternative for their water source.

  Despite these gaps, the interventions remained a relevant and impactful, directly supporting agricultural productivity and livelihood security. However, enhancing flexibility in design and ensuring timely implementation could have further strengthened their relevance to the beneficiaries' needs.

- **Livelihood Enhancement:** The project introduced livelihood interventions such as poultry farming, vermicomposting, and SHG-based enterprises (e.g., spice making, sewing, and pickle production). These activities were particularly relevant for economically marginalized groups, including women and small-scale farmers.

Figure 4: Poultry farmer in Bhaje, Lonavala

2. **Contribution to Education and Awareness**

The project also prioritized improving educational infrastructure and raising awareness about environmental conservation among students and teachers.

- **School Infrastructure Strengthening:** Improvements such as flooring, wall painting, K-Yan tabs and projector installations, and washroom upgrades were highly relevant to the needs of schools in remote areas. However, some gaps like lack of technical know-how of the functionality of the K-Yan tabs among teachers and students, and contextually irrelevant paintings on school walls were some issues that need to be addressed to ensure its higher relevance.
    - In Kalhat Primary School, these interventions contributed to better hygiene, safety, and learning environments, leading to increased student enrollment and recognition as a "Clean School".
    - Similarly, in Kiwale School, the installation of steel railings and washroom doors enhanced safety and sanitation for students.
- **Environmental Awareness:** Schools located near forest areas received training on wildlife conservation and first aid for snake bites.

While these sessions were appreciated, the absence of a functional Nature Club in many schools limited sustained engagement with environmental education.

3. **Community Engagement and Ownership**

The project demonstrated relevance by actively involving local stakeholders in planning and implementation. For example:

- Beneficiaries identified during village meetings expressed satisfaction with the transparency of the process.
- Community ownership was evident in cases where beneficiaries maintained handed-over assets, such as farm ponds and sewing machines.

However, delays in fund disbursement and premature project closures in some areas undermined community trust of certain interventions.

4. **Challenges in Relevance**

While the project was largely relevant, there were gaps that impacted its effectiveness:

- **Mismatch in Expectations:** In one farm in Kalhat, the farmer family preferred merging old and new farm ponds into a single structure, but this was not permitted as per HDFC mandates.
- **Limited Follow-Up Support:** Activities like poultry farming and SHG enterprises lacked ongoing mentorship, marketing guidance, and risk management strategies, limiting their relevance over time.

Figure 5: The unjointed farm pond in Kalhat

5. **Feedback from Beneficiaries:**

Beneficiaries expressed satisfaction with the relevance of the interventions. For example:

- Farmers appreciated the utility of ranger torches in deterring wildlife encroachment.
- Students and teachers valued the improved school infrastructure and hygiene facilities.

Overall, the Human-Wildlife Coexistence Project was highly relevant to the socio-economic and environmental needs of the target communities in the Western Ghats. It addressed key challenges such as human-wildlife conflict, water scarcity, and livelihood insecurity while contributing to broader development goals. However, ensuring sustained relevance will require addressing gaps in follow-up support, community engagement, and sustained integration with government schemes.

3.4 Efficiency- Timeliness

The **Efficiency - Timeliness** aspect of the Human-Wildlife Coexistence Project reflects how effectively and promptly the project activities were implemented within the stipulated timeline. While some activities were completed on schedule, delays caused by environmental factors, premature closures, and funding constraints impacted the overall timeliness of implementation.

With a **score of 2.5**, the project demonstrated moderate efficiency in terms of timeliness, with some activities completed on schedule but others delayed due to external and internal challenges.

1. **Timely Completion of Key Activities**

Several components of the project were successfully completed within the planned timeline:

- **Ranger Torch Distribution:** The distribution of 800 ranger torches was completed as per the target, ensuring that farmers had access to this critical tool for deterring wildlife encroachment in a timely manner.

Figure 6: Ranger Torches in Rajmachi

- **School Infrastructure Strengthening:** Out of the targeted 16 schools, infrastructure improvements were completed in 14 schools, including flooring, wall painting, K-Yan tablets and projector installations, and washroom upgrades. These interventions contributed to immediate improvements in the learning environment.
- **Forest Department Training:** Capacity building workshops for 140 forest department officials were conducted efficiently over two days, aligning with the project timeline.
- **Watchtower Construction:** One watchtower was established out of the planned two, providing partial but timely support for monitoring wildlife movements.

These achievements demonstrate that certain activities were prioritized and executed within the planned timeframe, contributing positively to the project's efficiency.

2. **Challenges Leading to Delays**

Despite these successes, several challenges delayed the implementation of key activities:

- **Monsoon Season:** Heavy rainfall during the monsoon season significantly disrupted construction work, particularly for activities like farm ponds, forest ponds, and open well fencing. For instance:
    - In Ingloon, farmers reported that water scarcity issues persisted due to delays in completing farm pond construction.
    - Monsoon rains also delayed the installation of stop dams and other natural resource management (NRM) interventions, leaving some beneficiaries without completed structures.
- Funding Disbursement Delays: Beneficiaries in Kalhat highlighted delays in fund disbursement stalled activities, such as cattle vaccination and SHG enterprise development.
- **Premature Project Closure:** The early closure of the project left some interventions incomplete. For example:

- In Pimpari, the spice-making machine provided to the women's SHG became non-functional due to a damaged belt, and no follow-up repairs were arranged before the project ended as per the qualitative interactions.
- Farmers in Bhaje expressed frustration over the lack of ongoing support after the initial training for poultry farming and vermicomposting.

3. **Impact of Delays on Beneficiaries**

The delays in implementation had tangible consequences for beneficiaries:

- **Farm Ponds and Forest Ponds:** Only 2 forest ponds and 2 farm ponds were established out of the planned 10, leaving many farmers without access to improved water retention systems during the dry season.
- **Open Well Fencing:** Only 14 out of the planned 30 open wells were fenced, limiting the safety measures for both humans and wildlife.
- **Cement Stop Dams:** Only 2 out of the planned 4 cement stop dams were constructed, reducing the project's impact on water conservation efforts.
- **SHG Enterprises:** Women in Kiwale and Pimpari struggled to sustain their businesses due to delays in training, licensing, and market linkages. For example:
  - The sewing machines provided to the Tejaswini Women's SHG remained underutilized as women shifted to alternative employment opportunities due to a lack of timely marketing support.

4. **Adaptation to Challenges**

Despite the delays, the project team made efforts to adapt and ensure progress where possible:

- **Flexible Scheduling:** Meetings with beneficiaries were scheduled early in the morning or late at night to accommodate their availability.
- **Alternative Solutions:** When activities like Continuous Contour Trenches (CCT) and wetland rejuvenation were deemed infeasible, the team redirected efforts toward achievable interventions like forest ponds and farm ponds.
- **Post-Monsoon Acceleration:** Activities were accelerated in the second and third quarters of the project period to compensate for delays caused by the monsoon season.

While the Human-Wildlife Coexistence Project achieved several milestones within the planned timeline, delays caused by monsoon rains, premature closures, and funding constraints impacted the overall timeliness of implementation. Critical activities such as farm pond construction, SHG enterprise development, and open well fencing was either delayed or left incomplete, affecting the project's efficiency.

3.5 Efficiency- Satisfaction

The Efficiency - Satisfaction aspect of the Human-Wildlife Coexistence Project reflects how well the project met the expectations and needs of its beneficiaries, including farmers,

students, teachers, and women in SHGs. While beneficiaries expressed moderate satisfaction with certain infrastructure improvements and initial support, significant gaps in follow-up training, vaccination programs, and market linkages led to dissatisfaction in key areas.

With a **score of 2.5**, the project demonstrated moderate efficiency in terms of beneficiary satisfaction, with appreciation for infrastructure improvements but concerns about inadequate follow-up support, vaccination programs, and market linkages for livelihood activities.

1. **Moderate Satisfaction with Infrastructure Improvements**

Beneficiaries appreciated the tangible infrastructure improvements implemented under the project:

- **School Infrastructure:** Teachers and students valued the upgrades such as flooring, wall painting, K-Yan projector installations, and washroom facilities. For example:
    - In Kalhat Primary School, the headmaster praised the foundation's efforts, rating the initiatives 5/5 for their effectiveness.
    - The school received recognition as a "Clean School" due to improved hygiene and maintenance.
- **Anganwadi Infrastructure:** Beneficiaries acknowledged the refurbishment of Anganwadis, though only 11 out of the planned 16 were completed.

Figure 7: Anganwadi in Shilatne, Lonavala

- **Farmer Assets:** Farmers reported satisfaction with tools like ranger torches and paddy threshing machines, which significantly reduced labor costs and improved efficiency.

However, challenges such as water scarcity in schools and unused K-Yan projectors limited the long-term impact of these interventions.

2. **Concerns About Livelihood Interventions**

While some livelihood initiatives were well-received initially, dissatisfaction arose due to inadequate follow-up support:

- **Poultry Farming:** Farmers expressed frustration over the lack of ongoing vaccination support and feed supplies. For instance:
    - In Bhaje, Seema Maruti Sathe reported that no assistance was provided after the initial phase, leading to frequent chicken deaths and reduced motivation.
    - Only two out of five farmers continued poultry farming successfully, highlighting the need for better guidance and technical support.
- **SHG Enterprises:** Women in SHGs, such as the Tejaswini Women's SHG in Kiwale, appreciated the sewing machines and spice-making training but faced challenges in sustaining their businesses due to a lack of marketing strategies and financial incentives.
    - Many women shifted to alternative employment opportunities, such as jobs in an ice cream company, due to low profits and unstable income from the SHG activities.

3. **Wildlife Protection Measures**

- **Ranger Torches:** Farmers in Kalhat and other villages expressed satisfaction with the distribution of high-beam LED torches, which helped deter wildlife encroachment effectively.
- **Forest Ponds:** The construction of forest ponds was highly appreciated, as it significantly reduced crop damage by diverting wildlife away from farmlands during most seasons. However, the condition of some were poor at the time of field visit of this study.
- **Challenges:** Wildlife threats persisted during the dry season when forest ponds dried up, indicating the need for additional measures like fencing or larger water retention structures.

4. **Training and Awareness Programs**

- **Agricultural Training:** Farmers in Ingloon appreciated the training on modern farming techniques, pesticide spraying, and farm equipment handling. However, they highlighted gaps in addressing critical issues like labor shortages and water scarcity.
- **Environmental Education:** Students and teachers valued wildlife awareness sessions, but the absence of functional Nature Clubs in many schools limited sustained engagement.
- **Health and Safety Training:** Forest guards, such as Ms. Jayshree Gondawale, found the training on wildlife management and animal census methods highly practical and useful.

5. **Impact of Premature Closures and Delays**

- **Incomplete Projects:** Premature closures left some beneficiaries without completed interventions, leading to dissatisfaction. For example:
    - In Pimpari, the spice-making machine became non-functional due to a damaged belt, and no repairs were arranged before the project ended.

- Farmers in Bhaje expressed disappointment over the lack of follow-up support after the initial training for vermicomposting and poultry farming.

- **Delayed Implementation:** Monsoon rains and funding constraints delayed activities, leaving beneficiaries frustrated with the slow progress.

6. **Community Ownership and Feedback**

Despite challenges, the project fostered a sense of community ownership in some areas:

- Beneficiaries identified during village meetings expressed satisfaction with the transparency of the process.
- Community members maintained handed-over assets, such as farm ponds and sewing machines, demonstrating ownership.

However, delays in fund disbursement and premature closures undermined trust in some cases. For instance, in Aundhe, villagers felt abandoned after the project representatives stopped responding to phone calls following the discontinuation of the poultry project.

While the Human-Wildlife Coexistence Project achieved moderate satisfaction among beneficiaries through infrastructure improvements and initial support, gaps in follow-up training, vaccination programs, and market linkages led to dissatisfaction in key areas.

3.6 Effectiveness

The project has successfully implemented multiple interventions across the selected villages, improving conservation efforts, community livelihoods, and education. Although, the project reflected scope for improvement. Below is a detailed analysis of effectiveness based on field notes, target vs. achievement, and the scorecard.

The project has made significant progress in conservation, livelihoods, and education, but **sustainability and implementation gaps** limit its full impact, leading to a **score of 2.5**. While infrastructure improvements like farm ponds, CCTs, and school facilities have enhanced conditions, maintenance and long-term usability remain challenges. Similarly, livelihood programs have introduced modern farming techniques and entrepreneurship training, but market linkages and logistical issues need strengthening.

In human-wildlife conflict mitigation, measures like solar torches and watchtowers have been beneficial, but maintenance concerns persist. Educational interventions, such as nature clubs and K-Yan projectors, have enriched learning, yet teacher training and student engagement require reinforcement. Lastly, while forest department staff training has improved preparedness, hands-on field exposure remains limited.

Overall, the project has created some positive changes, but regular follow-ups, capacity building, and sustainability planning are needed to enhance effectiveness and long-term impact.

Human-Wildlife Conflict Mitigation

1. **Preventing Crop Raiding - Torches (Ranger-Led Searchlights)**

To address the pressing issue of crop raiding, LED searchlight torches were distributed among farmers. These torches have significantly reduced nocturnal raids by wild animals, particularly in villages near forested areas. Farmers in **Rajmachi and Lonavala** acknowledged that these torches deter wild boars and deer effectively. However, some interactions indicated that the torches require periodic maintenance, and some households struggle with upkeep. While effective, regular maintenance and awareness sessions on optimal use are needed.

"These torches have been useful, but we need guidance on battery life and repairs."
- Sunil Patil, Farmer, Rajmachi

2. **Farm/Forest Pond Development & Open Well Fencing**

Water scarcity remains a persistent challenge in the region, affecting both agriculture and wildlife interactions. To address this, the project implemented the development of farm ponds and the fencing of open wells. These interventions have had a significant impact by enhancing water availability, leading to improved irrigation and reducing human-wildlife conflict. Farmers in Lonavala and Rajmachi have reported better crop yields due to increased access to water, while the protection of open wells has minimized the risk of accidental animal falls—a common issue in these areas.

However, despite these benefits, budget constraints have led to incomplete fencing in some locations, leaving certain wells exposed. This incomplete implementation has created safety gaps, with farmers in Bhaja village expressing concerns that open wells still pose a hazard to livestock and wildlife. Furthermore, a lack of community ownership in some villages has resulted in poor maintenance of farm ponds, reducing their long-term effectiveness. The intervention has delivered tangible improvements in water security and safety, but incomplete fencing and maintenance challenges limit its full potential.

"We see fewer animal intrusions now, but some wells still pose a danger."
- Vishnu Jadhav, Farmer, Lonavala

3. **Cement Structure Dam & Construction of Continuous Contour Trenches (CCT)**

The construction of Continuous Contour Trenches (CCTs) and cement structure dams has played a crucial role in improving soil moisture retention and groundwater recharge in the selected villages. These structures help prevent topsoil erosion while allowing rainwater to percolate into the ground, thereby enhancing water availability for agriculture. Farmers in Kusgaon and Bhaje villages have reported better soil moisture levels, leading to higher crop yields and extended growing seasons. This has particularly benefited smallholder farmers who rely on rain-fed agriculture.

"The fields stay wet longer, but we need to ensure proper cleaning of CCTs."
- Ramesh Pawar, Kusgaon

However, the long-term sustainability of these interventions depends on community ownership and regular maintenance, which remains a challenge. In Rajmachi, for instance, some trenches have silted up due to lack of periodic cleaning, reducing their effectiveness. Additionally, while farmers appreciate the benefits of these structures, not all villages have fully adopted collective maintenance practices, impacting their long-term viability.

Figure 8: Check dam in Kurvande, Rajmachi

During the field visit to Kurvande, Lonavala, the team observed that another check dam was being constructed in close proximity to the one built by HDFC. Further investigation revealed that the HDFC-funded check dam had been modified during its construction, with its height reduced to increase its width. However, the structure proved to be ineffective in addressing the water retention needs of the community. As a result, a private entity initiated the construction of a new check dam nearby to compensate for the shortcomings of the existing one.

When the field team consulted the village sarpanch, it became evident that the new check dam was being built without prior consultations with the local community. Additionally, the HDFC team was unaware of this development. This lack of communication and coordination highlights gaps in stakeholder engagement and underscores the importance of ensuring that infrastructure projects are both effective and aligned with community needs from the outset.

4. **Watchtower & Water Lifting System**

A watchtower constructed in **Rajmachi** to monitor wildlife movement, provided farmers with an early warning system. Additionally, water-lifting mechanisms have been installed in key areas to improve irrigation. While these measures have helped, challenges remain in maintaining the watchtower's structural integrity. Useful but needs sustainability planning. For instance, farmers noted that the upkeep of watch tower would require more resources for upkeep.

"The watchtower gives us visibility, but repairs are costly."

- Nitin More, Rajmachi

The installation of water-lifting systems has been a crucial intervention in addressing irrigation challenges, particularly in Lonavala and Rajmachi, where water scarcity has historically affected agricultural productivity. By facilitating more reliable access to water, these systems have enabled farmers to cultivate their land more effectively and expand cropping cycles beyond the monsoon season.

However, implementation challenges remain. Some villages reported inconsistent power supply affecting system functionality, while others cited technical difficulties in operating and maintaining the equipment. Additionally, while the system has proven beneficial in areas with strong community participation, in villages where maintenance responsibility is unclear, there have been instances of underutilization. Addressing these challenges through capacity-building workshops and ensuring technical support availability would enhance long-term effectiveness. A valuable intervention with demonstrable benefits, but ongoing maintenance support and power reliability are crucial for sustained impact.

"This system has helped us cultivate more land, but we need better guidance on troubleshooting issues."

- Prakash Shinde, Farmer, Lonavala

Livelihood & Capacity Building Initiatives

1. Cattle Vaccination & Modern Farming Practices

Livelihood support initiatives such as cattle vaccination programs impacted the farmers. These efforts have led to a noticeable decline in livestock diseases, particularly in Bhaja and Khandala, where farmers reported fewer outbreaks of foot-and-mouth disease and hemorrhagic septicemia—common ailments affecting cattle in the region. As a result, milk yields have improved, benefiting both household consumption and market sales.

However, despite these gains, logistical delays in vaccination drives have been a persistent challenge. Some vaccination camps faced shortages of vaccines, while others were postponed due to poor coordination between veterinary teams and village committees. This led to uneven coverage, with some farmers in Lonavala and Rajmachi reporting that their livestock missed timely doses. Additionally, follow-up treatments and record-keeping were inconsistent, making it difficult to track the long-term health of vaccinated animals.

To improve effectiveness, better planning, outreach, and integration with local veterinary services are needed to ensure timely and comprehensive coverage. Thus, positive impact observed, but gaps in logistics and coordination need to be addressed.

"Cattle health has improved, but vaccination camps need better coordination."

- Shobha Kale, Farmer, Bhaje

Skill Training & Livelihood Enhancement

Entrepreneurial training sessions aimed at diversifying income sources have been instrumental in reducing dependency on forest resources. In Lonavala and Karjat, many women have started small-scale food processing businesses, including pickle-making, spice grinding, and bakery products. These ventures have provided an alternative income stream, especially for households that previously relied on firewood collection and seasonal agriculture.

Figure 9: Stickers for the SHG produced spices in Rajmachi

However, a key challenge remains in establishing strong market linkages. Women entrepreneurs struggle to access larger buyers, secure fair pricing, and sustain demand beyond local markets. For example, in Rajmachi, an SHG group that produced spices were given even stickers for their products to be sold but the linkage to access larger markets were missing. Additionally, some participants expressed the need for continued mentorship and financial literacy training to manage their businesses effectively. Without proper guidance on branding and distribution, many enterprises remain small-scale and inconsistent in revenue generation. Training is impactful, but market access and business sustainability remain weak.

"We learned new skills, but finding buyers is tough."
- Meena Jagtap, Lonavala

To mitigate the impact of wildlife-induced crop loss, modern farming techniques were introduced to 400 farmers across 16 villages. This included crop diversification, intercropping, and the use of non-palatable crops to deter wild animals. In Rajmachi and Khandala, some farmers reported a reduction in crop losses due to improved fencing and strategic planting of less attractive crops like chili and ginger. However, challenges persist.

While the new methods have shown positive results, adoption remains uneven across villages due to limited awareness and skepticism among traditional farmers. Additionally, some farmers noted difficulties in accessing quality seeds and technical guidance, which slowed the transition to modern practices. Adoption is increasing, but more demonstration farms and farmer-to-farmer learning could enhance effectiveness.

"Growing chilies helped keep animals away, but not everyone is ready to change crops."
- Suresh Yadav, Farmer, Rajmachi

Education & Awareness Initiatives

1. **Village-Level Awareness Workshops & Nature Clubs**

The project conducted awareness sessions in 16 villages to educate communities on conservation, sustainable practices, and human-wildlife coexistence. These sessions aimed to foster a sense of responsibility toward environmental protection. However, engagement levels varied across villages. While some communities actively participated, others showed limited interest due to competing daily priorities, such as livelihood concerns.

In schools at Kiwale and Rajmachi, nature club workshops introduced students to wildlife conservation and eco-friendly practices. These interactive sessions were well-received, with students expressing enthusiasm for learning about local biodiversity. However, field observations revealed that retention of information was inconsistent—some students remembered key lessons, while others struggled to recall details after a few months. This highlights the need for reinforcement sessions and more frequent engagement to strengthen long-term awareness. The sessions were informative, but follow-ups are needed to reinforce learning. Furthermore, there was no functional Nature Clubs in existence which challenged the sustained learnings.

"We enjoyed the wildlife session, but we need more such workshops."
- Rahul Salve, Student, Kiwale

2. ZP School & Anganwadi Infrastructure Strengthening

The project has significantly improved infrastructure in 16 schools and Anganwadis, creating better learning environments for children. These enhancements include new flooring, washroom doors, painting, and safety railings, making schools more child friendly. In Kiwale, the installation of the KYAN projector was a major milestone, aiming to introduce digital learning tools.

Figure 10: Rajmachi Anganwadi

During field visits, it was observed that while teachers appreciate the benefits of the KYAN projector, many lack the technical skills to operate it independently. The Headmistress's son, who is an engineering student, visits on Saturdays to assist with the projector, but this is not a sustainable solution. Teachers require ongoing training to effectively integrate digital tools into their lessons.

Additionally, in some villages, school infrastructure improvements were well received, but basic amenities like functional toilets and drinking water supply remain inconsistent. This suggests that while physical upgrades are valuable, complementary support such as regular maintenance and teacher training is necessary to ensure long-term effectiveness. The infrastructure improvements are impactful, but lack of training support limits full utilization of educational resources.

> *"We have the projector, but we struggle to use it because we don't know how to function it."*
>
> *- Jyoti Umardande, Headmistress, Kiwale*

3. Capacity Building for Forest Department Staff & Ecological Research

The training sessions for frontline forest staff of RCR have played a crucial role in strengthening wildlife protection and conservation efforts. These sessions focused on habitat monitoring, anti-poaching measures, and human-wildlife conflict mitigation strategies. While the theoretical training has improved awareness and procedural knowledge, field staff have expressed a need for more hands-on, practical exercises to deal with real-time challenges in forest management.

During discussions with forest guards, it was observed that while they feel more equipped to handle incidents, there is still a need for regular refresher courses and scenario-based drills. In particular, forest staff in Rajmachi and Lonavala highlighted difficulties in responding quickly to emergency wildlife encounters due to limited on-ground practice.

Additionally, ecological research and assessments have been initiated to track biodiversity trends and habitat health. However, data collation has been slower than expected, leading to delays in generating actionable insights. The research process has been hindered by limited resources, lack of digital tools, and gaps in systematic data recording.

To ensure long-term effectiveness, a structured capacity-building roadmap that integrates practical field exercises, technology-driven research tools, and continuous learning opportunities is recommended.

Positive impact on knowledge enhancement, but field preparedness and data efficiency need strengthening.

> *"We are better equipped now, but more practical training is needed."*
> *- Forest Guard, RCR*

Figure 11: Forest Guard in Kalhat, wearing the kit provided by TCF and HDFC

The project has made significant progress in improving conservation, livelihoods, and education in the selected villages. While infrastructure enhancements, training programs, and conflict mitigation strategies have been effective, long-term sustainability depends on **community engagement, capacity building, and consistent follow-up support**. Strengthening local ownership and addressing logistical gaps will be crucial for ensuring lasting impact and scalability of these interventions.

3.7 Short-term Outcomes

The Human-Wildlife Coexistence Project implemented by TCF in collaboration with HDFC Bank under its PARIVARTAN CSR initiative achieved several short-term outcomes across its key focus areas: **natural resource management, livelihood enhancement, education, and capacity building**. These outcomes reflect the immediate impact of the project on beneficiaries and ecosystems in the Rajmachi and Lonavala conservation reserves.

1. **Natural Resource Management (NRM)**

- **Farm Ponds and Forest Ponds:**

Two forest ponds and two farm ponds were constructed out of the planned ten, benefiting farmers and wildlife alike.

- Farmers reported that the forest pond significantly reduced crop damage by diverting wildlife away from farmlands during most seasons.
- Water retention in farm ponds enabled year-round cultivation, addressing water scarcity issues in villages like Ingloon.

- **Open Well Fencing and Stop Dams:**

Fourteen open wells were fenced to prevent human and animal accidents, while two cement stop dams were constructed to improve water availability. However, some beneficiaries expressed concerns about the limited scale of these interventions, as water scarcity persisted in certain areas.

- **Ranger Torches:**

800 high-beam LED torches were distributed to farmers, helping deter wildlife encroachment effectively. Farmers appreciated their utility in protecting crops and livestock during nighttime.

2. **Livelihood Enhancement**

- **Poultry Farming:**

Out of the five poultry farming initiatives, only two farmers successfully continued the business due to challenges like wildlife threats, lack of vaccination support, and insufficient training. For instance, Seema Maruti Sathe in Bhaje reported moderate success but highlighted the need for ongoing support and market connections to sustain the business.

Figure 12: Poultry farming in Lonavala

- **Vermicomposting:**
    - Five farmers received vermicomposting training, but only two projects remained active. One farmer produced 70–80 kg of compost over seven months, reducing farming costs and improving crop yields.
    - Lack of marketing knowledge limited income generation, as the farmer used the compost for personal use rather than selling it.
- **SHG Enterprises:**

Women's SHGs engaged in activities like spice making, sewing, and pickle production. While initial enthusiasm was high, many women shifted to alternative employment opportunities due to low profits and unstable income. For example, the Tejaswini Women's SHG in Kiwale struggled to sustain its sewing business as members opted for jobs in an ice cream company offering fixed monthly salaries. Additionally, accessibility issues arose because all the sewing machines were kept in one woman's home, limiting their availability and making it inconvenient for other members to use them regularly.

- **Agricultural Support:**
    - A paddy threshing machine provided to farmers in Ingloon significantly reduced labor and time costs, enabling efficient harvesting.

- Similarly, a rice milling machine in Kalhat improved productivity, allowing farmers to save time and resources for additional cultivation or wage labor.

3. **Education and Awareness**

- **School Infrastructure Strengthening:**
    - Infrastructure improvements were completed in 14 out of 16 targeted schools, benefiting 712 students. Upgrades included flooring, wall painting, KYAN projector installations, and washroom facilities.
    - Schools like Kalhat Primary School gained recognition as “Clean Schools” due to improved hygiene and maintenance.
- **Wildlife Awareness Sessions:**
    - Sixteen awareness sessions were conducted in schools, educating students about local wildlife and conservation measures. Students demonstrated knowledge of snakebite first aid and wildlife protection.
    - However, Nature Clubs were not established as planned, limiting sustained engagement with environmental education.

4. **Capacity Building**

- **Forest Department Training:**

A total of 140 forest department officials received training on wildlife management, tree census methods, and animal census techniques. Participants found the workshops highly practical and useful for fieldwork.

- **Community Ownership:**

Beneficiaries identified during village meetings expressed satisfaction with the transparency of the process. Community ownership was evident in cases where beneficiaries maintained handed-over assets, such as farm ponds and sewing machines.

5. **Health and Veterinary Support**

- **Cattle Vaccination:**

Vaccinations were administered to 49 cattle beneficiaries, addressing health issues like lumpy skin disease and foot-and-mouth disease. Farmers appreciated the timely intervention, which improved livestock health.

Challenges in Achieving Short-Term Outcomes

While the project achieved notable outcomes, several challenges hindered its overall effectiveness:

- Heavy rainfall stalled construction work, leaving some beneficiaries without completed interventions
- Activities like poultry farming and SHG enterprises suffered due to inadequate post-training mentoring and market linkages
- Wildlife attacks on poultry farms and crops persisted, especially during the dry season when forest ponds dried up

The Human-Wildlife Coexistence Project achieved significant short-term outcomes in improving water availability, enhancing agricultural productivity, strengthening school infrastructure, and raising environmental awareness. However, gaps in follow-up support, vaccination programs, and market linkages limited the long-term viability of livelihood initiatives.

3.8 Coherence

Coherence evaluates how well a project aligns with the strategies of funding partners, implementing agencies, and broader policy frameworks. It examines internal coherence—the synergy between the project, HDFC Bank's CSR goals, and The Corbett Foundation's mission—and external coherence, which assesses alignment with government programs and conservation strategies.

The project earned a **score of 2.5** for Coherence, reflecting its strong alignment with HDFC Bank's Sustainable Livelihood Initiative and Parivartan program and TCF's conservation-driven, community-focused approach. Its interventions in human-wildlife conflict mitigation, rural livelihoods, and environmental conservation effectively integrate with both entities' objectives. However, challenges in sustainability, logistical delays, and gaps in capacity-building limit its long-term impact. Strengthening community ownership, market linkages, and maintenance mechanisms will be essential for maximizing its effectiveness.

Internal Coherence

The project, funded by HDFC Bank and implemented by The Corbett Foundation (TCF), demonstrates a strong alignment between its objectives and activities. The interventions in human-wildlife conflict mitigation, livelihood enhancement, and education are designed to create a holistic approach to conservation and community well-being.

Alignment with HDFC Bank's CSR Policy

HDFC Bank's Sustainable Livelihood Initiative (SLI) and Parivartan program focus on rural development, environmental sustainability, and financial inclusion. This project aligns with these goals by improving water conservation, promoting sustainable agriculture, and enhancing rural livelihoods. The installation of farm ponds, solar-powered torches, and well fencing supports environmental sustainability by mitigating human-wildlife conflict, ensuring resource conservation, and protecting local communities. Similarly, skill-building and vaccination programs contribute to sustainable livelihoods by reducing dependency on forests and improving the resilience of rural economies.

Alignment with The Corbett Foundation's Mission and Work

TCF's conservation model emphasizes a holistic approach that integrates habitat restoration, human-wildlife conflict mitigation, community engagement, and environmental education. This project aligns well with TCF's broader conservation strategy by implementing key interventions such as cattle vaccination, sustainable livelihood training, and habitat restoration, which collectively reduce pressure on natural resources and promote coexistence between humans and wildlife. By addressing both ecological and socio-economic challenges, the project mirrors TCF's commitment to fostering sustainable rural development alongside conservation.

Project Interventions and Impact

The installation of farm ponds and open well fencing aligns with efforts to reduce human-wildlife encounters by ensuring better water availability for both farmers and wildlife. This

is further strengthened by the introduction of solar-powered torches that deter crop-raiding animals. Farmers in Rajmachi and Lonavala have reported fewer wild boar intrusions at night. However, some torches require maintenance, limiting their effectiveness. Effective interventions, but operational sustainability needs reinforcement.

Similarly, livelihood interventions such as modern farming training and cattle vaccination programs support conservation goals by reducing dependence on forest resources. Farmers in Bhaje and Khandala observed fewer livestock disease outbreaks post-vaccination, yet logistical delays in some villages affected timely implementation.

The education and awareness initiatives further strengthen internal coherence. Nature clubs in schools help instil conservation values among students, while infrastructure enhancements in ZP schools and Anganwadis improve the learning environment. However, challenges remain in KYAN projector utilization, as teachers require additional training.

Alignment with other CSR Projects

Figure 13: Other CSR in Lonavala School

The Human-Wildlife Coexistence Project demonstrated alignment with other CSR initiatives in the region, showcasing a collaborative approach to rural development and conservation. For instance, while HDFC Bank focused on interventions like farm ponds, forest ponds, and school infrastructure, other organizations such as the Tata Group contributed by constructing a dam in a nearby location, and Schaeffler operated a mobile health van to provide healthcare services. This overlap of efforts highlights the potential for synergy among CSR projects, as they collectively address critical needs like water scarcity, education, and healthcare in the community. However, the lack of coordination between these initiatives sometimes led to inefficiencies, such as the construction of an ineffective check dam by HDFC near a more efficient one built by another NGO in Pimpari. Despite these challenges, the project's alignment with broader CSR goals underscored its contribution to sustainable rural development, though better integration and communication among stakeholders could have enhanced overall impact and resource utilization.

Figure 14: Mahindra CSR in Shilatne School, Lonavala

In the primary school of Shilatne, Lonavala, Mahindra CSR had already constructed hygiene facilities such as washrooms, which aligned with The Corbett Foundation's efforts to improve school infrastructure under the HDFC Bank PARIVARTAN project. Both initiatives shared a common goal of enhancing the learning environment and promoting hygiene among students, demonstrating a complementary approach to sustainable rural development. For instance, while Mahindra CSR focused on sanitation infrastructure, The Corbett Foundation contributed by installing flooring, painting walls, and setting up K-YAN projectors to support digital learning.

External Coherence

The project aligns well with broader conservation and rural development goals at the regional and national levels. The initiatives complement government programs such as the National Rural Livelihood Mission (NRLM) and Wildlife Protection and Conservation Policies.

One key example is the construction of Continuous Contour Trenches (CCTs) and cement structure dams, which align with national efforts to combat soil erosion and improve groundwater recharge. Farmers in Kusgaon and Bhaje villages reported better soil moisture retention, yet long-term success depends on community ownership and maintenance efforts. In terms of livelihood diversification, entrepreneurial training for women in Lonavala and Karjat aligns with national skill development initiatives. Women have initiated small-scale food processing units, but market linkages remain weak, limiting income generation.

Lastly, capacity-building efforts for forest department frontline staff align with regional conservation goals. While training sessions have improved protection measures, hands-on field exposure remains limited, affecting the practical application of skills learned.

In conclusion, the project demonstrates strong coherence by effectively integrating HDFC Bank's CSR objectives with TCF's holistic conservation model. The alignment between sustainable rural development, human-wildlife conflict mitigation, and community-led conservation efforts ensures a synergistic approach that benefits both biodiversity and local livelihoods. However, while the project aligns well with national and regional policies, sustaining its impact will require enhanced operational efficiency, strengthened community ownership, and continuous skill-building. Addressing these areas will further solidify its coherence and long-term success.

3.9 Sustainability

The project was designed with an emphasis on long-term sustainability, ensuring that the benefits of its interventions extend beyond the project duration. By integrating community participation, conservation-linked livelihoods, and local capacity-building, the project sought to create a self-sustaining model for environmental conservation and rural development. However, due to an unexpected early conclusion, some sustainability measures could not be fully institutionalized, impacting community ownership in certain areas.

The project laid the foundation for sustainable conservation and community-driven development, but the premature closure affected long-term sustainability measures. Thus, it has been assigned a **score of 1**. Key areas such as livelihood market integration, infrastructure maintenance, and institutional support for conservation efforts required further reinforcement. While communities have benefitted from training, resources, and conservation infrastructure, ensuring long-term impact will depend on post-project engagement and local capacity-building.

Environmental Sustainability and Conservation Efforts

Figure 15: Well- fencing in Rajmachi

A core focus of the project was human-wildlife conflict mitigation, achieved through the installation of solar-powered torches, well fencing, and farm ponds. These interventions were designed to be self-sustaining, with communities responsible for maintenance and upkeep. However, while the solar torches significantly reduced nocturnal crop-raiding incidents, some communities reported challenges in long-term maintenance and replacements, indicating the need for stronger repair mechanisms and local ownership.

The farm ponds and CCTs played a crucial role in soil conservation and water retention, benefiting both farmers and local biodiversity. While initial results were promising, ensuring the long-term impact required stronger community-led maintenance mechanisms. The early closure of the project meant that capacity-building efforts for sustainable maintenance were cut short, making continued support from local governance structures critical for sustainability.

Livelihood and Economic Sustainability

The project introduced skill-building programs, including modern farming techniques, dairy management, and alternative livelihoods such as food processing and handicrafts, to reduce dependency on forest resources. The aim was to establish self-sufficient income sources, allowing communities to engage in environmentally responsible economic activities.

While several participants successfully adopted new skills, market linkages for sustainable income generation remained weak, limiting the long-term viability of some livelihood interventions. The early closure of the project meant that support for connecting beneficiaries with local markets and financial institutions was incomplete, affecting the full realization of economic sustainability. Nonetheless, the knowledge imparted through training programs continues to benefit farmers and entrepreneurs, with some groups actively seeking further partnerships and funding.

Education and Capacity-Building for Sustainability

The project incorporated education and awareness initiatives, such as nature clubs in schools, KYAN projector-assisted learning, and teacher training sessions, to create a long-term conservation ethic within the community. The nature clubs successfully engaged students, fostering early exposure to conservation principles. However, teacher training for KYAN projectors remained an area where continued support was needed to ensure effective integration into school curricula.

Additionally, the training of forest department staff was a significant step in capacity-building for wildlife conservation. The knowledge gained through these workshops remains valuable, but the limited duration of hands-on field exposure impacted the practical application of learned skills, highlighting the need for ongoing engagement and refresher training.

Community Ownership and Institutional Sustainability

The project made deliberate efforts to promote community ownership, engaging village committees, self-help groups (SHGs), and farmer collectives in various interventions. However, the sudden exit impacted the full transition of project ownership to local stakeholders. Some communities, especially those engaged in livelihood and conservation-based activities, expressed concerns about the continuity of support structures that were still in a formative stage.

Despite this, the project aligned well with government schemes like the National Rural Livelihood Mission (NRLM) and forest conservation programs, creating potential pathways for continued institutional support. Strengthening these linkages further could ensure the long-term sustainability of project outcomes even after the project's formal conclusion.

Despite the challenges posed by the early closure, the project took important steps toward promoting sustainable conservation practices, supporting rural livelihoods, and encouraging community participation. While the interventions have shown positive outcomes, further efforts in strengthening local governance, improving market access, and enhancing capacity-building would be beneficial for ensuring long-term sustainability.

4. Recommendations

To further enhance the impact and sustainability of the Human-Wildlife Coexistence Project, it is suggested that future initiatives incorporate the following recommendations:

1. Establish a robust **post-implementation support system** to address gaps in training, vaccination programs, and market linkages. For instance, regular follow-ups with poultry farmers and SHG members can help resolve challenges like wildlife threats, disease outbreaks, or lack of marketing strategies. Partnering with local NGOs or extension services could provide ongoing technical guidance.

2. Develop **clear strategies to connect beneficiaries with markets** for their products, such as vermicompost, spices, and sewing outputs. This could include organizing buyer-seller meets, creating online platforms, or collaborating with local businesses to ensure stable income generation for SHGs and farmers.

3. **Scale up the construction of farm ponds, forest ponds, and stop dams** to address persistent water scarcity issues. Prioritize areas with the highest need and consider larger structures to ensure water availability during dry seasons. Additionally, explore alternative solutions like rainwater harvesting systems to complement existing efforts.

4. **Address logistical challenges** faced by beneficiaries, such as the centralized placement of sewing machines in one household, which limited accessibility for other SHG members. Distribute resources more equitably or establish community centers where shared assets can be accessed conveniently by all members.

5. **Expand initiatives like ranger torch distribution and fencing** to cover more areas prone to human-wildlife conflict. Explore additional measures, such as solar-powered fencing or early warning systems, to further reduce crop damage and livestock losses during peak wildlife intrusion periods.

6. **Establish functional Nature Clubs** in schools to ensure sustained engagement with environmental awareness programs. Provide teachers with training and resources to conduct regular activities, such as tree planting, wildlife monitoring, and conservation campaigns, fostering long-term behavioral change among students.

7. **Address delays** caused by funding constraints and environmental factors by incorporating buffer periods into project schedules and ensuring timely disbursement of funds. Collaborating closely with local authorities and stakeholders can also help expedite approvals and resource allocation.

8. **Encourage greater community ownership** by involving beneficiaries in decision-making processes and empowering them to take leadership roles in implementing and maintaining project activities. This approach will foster accountability and ensure interventions align closely with local needs.

5.Conclusion

The Human-Wildlife Coexistence Project achieved several short-term outcomes across its key focus areas. These outcomes reflect the immediate impact of the project on beneficiaries and ecosystems in the Rajmachi and Lonavala conservation reserves.

In terms of natural resource management, the project successfully constructed two forest ponds and two farm ponds, benefiting farmers by reducing wildlife encroachment and improving water availability for agriculture. Additionally, 14 open wells were fenced to prevent accidents, and two cement stop dams were built to improve water retention. The distribution of 800 high-beam LED torches helped farmers deter wildlife effectively, while a watchtower was established to monitor wildlife movements. However, delays caused by monsoon rains and funding constraints left some interventions incomplete, such as the planned wetland rejuvenation and Continuous Contour Trenches (CCT).

The project also made strides in livelihood enhancement, though with mixed results. Poultry farming initiatives were partially successful, with only two out of five farmers continuing the business due to challenges like wildlife threats and lack of vaccination support in one village. Vermicomposting training led to the production of 70–80 kg of compost by one farmer, reducing farming costs and improving crop yields, but marketing knowledge was lacking, limiting income generation. Women's SHGs engaged in activities like spice making and sewing, but many shifted to alternative employment due to unstable income and insufficient market linkages. Agricultural support interventions, such as the provision of paddy threshing machines and rice milling machines, were well-received, saving labor and time for farmers in villages like Ingloon and Kalhat.

In the area of education and awareness, the project strengthened infrastructure in 14 schools, benefiting 712 students. Improvements included flooring, wall painting, K-Yan projector installations, and washroom upgrades, led to increased enrollment and recognition as "Clean Schools." Wildlife awareness sessions were conducted in all targeted schools, educating students about local biodiversity and conservation measures. However, the absence of functional Nature Clubs limited sustained engagement with environmental education. Teachers and students valued the upgrades but highlighted gaps in training and maintenance, particularly regarding the underutilized K-Yan projectors.

The project also focused on capacity building for frontline staff and communities. A total of 140 forest department officials received training on wildlife management, tree census methods, and animal census techniques, equipping them with practical skills for fieldwork. Cattle vaccination programs reached 49 beneficiaries, addressing health issues like lumpy skin disease and foot-and-mouth disease. While these interventions were appreciated, beneficiaries expressed concerns about the need for ongoing support and more frequent vaccination campaigns.

The Project achieved several positive outcomes, particularly in improving water availability, enhancing agricultural productivity, strengthening school infrastructure, and raising environmental awareness. Despite challenges like funding delays, monsoon disruptions, and gaps in follow-up support, the project fostered strong community ownership and transparency, with beneficiaries expressing hope for continued collaboration. By addressing unresolved issues through sustained mentorship, improved accessibility, and stronger market linkages, the project has the potential to create even greater impact in the future, serving as a model for sustainable rural development and wildlife conservation in the Western Ghats and beyond.

6. Annexures

Case Studies

Success Story 1- Empowering Women Through Skill Development

A Vision for Change

The Success Story of Indrayani SHG

In the village of Kurwande, a group of determined women came together to form the Indrayani Women's Self-Help Group (SHG) under the leadership of Dhanashree Santosh Matere. This initiative, supported by The Corbett Foundation and HDFC Bank, aimed to provide women with sustainable livelihood opportunities. Recognizing the potential for homemade food businesses, the women decided to specialize in Chikki (traditional nut and jaggery bars)—a product well-known in the local markets and popular among tourists.

The women underwent an intensive four-day full-time training program, where they learned to make various types of Chikki using peanuts, jaggery, sugar, sesame seeds, and puffed amaranth. To kickstart their business, they were provided with essential raw materials and utensils for free, ensuring they could begin production without financial burden. The training and business model were designed to utilize local resources and target the nearby tourism industry. The women didn't just stop at production—they actively conducted a market survey to understand demand and pricing. Their innovative sales strategies included:

- selling directly at local tourist spots around Lonavala
- tapping into the nearby Indian Army training centre, where families of army personnel became regular customers
- expanding their reach through word-of-mouth marketing and local vendor networks

This proactive approach helped the group establish their product in the market, leading to consistent sales and a growing customer base. Like any other business, the women faced hurdles:

A temporary store space was also provided to them at a tourist point in Lonavala, but due to an early closure, they lost this key selling location.

After exhausting the initial supply of raw materials, production slowed down. Out of the 10 women in the group, 7 had to take up daily wage jobs in farming or household work due to financial constraints.

Despite these setbacks, 3 women remained determined, pooling ₹500 each to continue the business. Their dedication and perseverance kept the initiative alive. This initiative has created a lasting impact in the community: *The women have maintained accurate financial records, demonstrating transparency and accountability*. They have applied for a loan through the Maharashtra Bank, showing their commitment to long-term business growth. Other women in the village have expressed interest in joining the SHG, proving that this initiative has the potential to expand and uplift more families.

The Indrayani SHG's journey highlights the power of skill-building, collaboration, and perseverance. While they have taken a strong first step, their success can be amplified with:

- Additional support in securing raw materials and financial aid
- Access to a permanent retail space for stable sales

- Guidance in business expansion and market linkage, as there are not any formal linkages set up currently

With continued backing, these women can achieve self-sufficiency, scale their business, and inspire many more to follow in their footsteps. Their story is a testament to how empowerment and opportunity can transform lives in rural India.

Success Story 2: Transforming Paddy Farming in Ingloon

Farmers Leading the Way

In the small village of Ingloon, a group of 30-40 farmers came together to improve their agricultural practices with the support of HDFC Bank and TCF. Among them, Dilip Annasaheb Pingle and Subhash Bhausaheb Pingle played key roles in driving this initiative forward and formed a farmer interest group.

Recognizing the challenges of manual paddy threshing, the group decided to invest in a paddy threshing machine, a move that transformed their farming efficiency and reduced dependence on labour. The paddy threshing machine proved to be a game-changer: Easy to use, requiring only 2 litters of diesel for operation. Low cost, available for rent at just ₹100 per use. Saves time and labor, reducing overall harvesting costs. Well-maintained, with farmers collectively contributing ₹100-₹200 for upkeep. By renting the machine within the community, farmers ensured sustainability while also helping each other save money on labour-intensive work.

Beyond machinery, training and education played a vital role in the project's success. Farmers participated in comprehensive training sessions, learning: Efficient machine operation through hands-on demonstrations and YouTube tutorials. Modern agricultural techniques, including pesticide spraying and farm equipment usage. Soil health management, with a focus on reducing chemical fertilizers for sustainable farming. Wildlife protection methods, including the use of torches to deter wild animals.

These training sessions empowered farmers, giving them the confidence and skills to improve their productivity and profits. Like any success story, the journey was not without obstacles. Farmers faced:

- Severe labour shortages, requiring them to hire workers from Uttar Pradesh and Bihar.
- Wildlife threats, with animals like sambar deer and wild boars damaging crops.
- Water scarcity, a pressing issue that affected irrigation and crop yields.

Despite these challenges, the farmers adapted and thrived, demonstrating resilience and a willingness to learn.

Thanks to the paddy threshing machine and accompanying training sessions, farmers experienced a marked reduction in manual labour and time spent during the harvesting process. The mechanized process made harvesting significantly faster, more efficient, and cost-effective, enabling farmers to process larger quantities of paddy in a shorter time. This not only reduced physical drudgery, especially for women and older farmers, but also lowered dependence on hired labour, bringing down overall cultivation costs.

The improved efficiency translated into higher productivity, enhanced crop quality, and increased income for the farmers. Additionally, the intervention fostered a sense of

community ownership, as farmers collaborated to maintain the machine and share operational knowledge, ensuring long-term use and sustained benefits.

Their journey proves that small changes, when implemented collectively, can lead to big transformations in rural agriculture. While the initiative has brought tremendous benefits, the farmers envision a brighter future with: Continuous support and technical guidance to refine their practices. Better water management solutions to overcome irrigation challenges. Strategies to address labour shortages through mechanization and workforce development.

With determination, innovation, and community spirit, the farmers of Ingloon have paved the way for a more efficient and sustainable future in agriculture. Their story is a testament to how collaborative efforts and modern technology can empower rural communities and drive real change.