

Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 of the allotted sites Forest Division- wise covering 14 Forest Divisions of Bharatpur and Jaipur Sambhag, Rajasthan State

Final Report



Submitted to:

Principal Chief Conservator of Forest,
Monitoring & Evaluation,
Office of the Principal Chief Conservator of Forest (HoFF),
Aranya Bhawan, Jhalana Dungari, Jaipur
Rajasthan-302004, INDIA



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ACKNOWLEDGEMENT

Forests are vital ecosystems that provide numerous benefits, including the oxygen production, climate regulation, water purification, and biodiversity conservation. They also support human livelihoods, offer resources like timber and food, and play a crucial role in maintaining ecological balance. Trees and forests are vital for a healthy planet and human well-being, providing numerous benefits like clean air and water, supporting biodiversity, and mitigating climate change. They also offer economic opportunities and contribute to the quality of life by creating green spaces and helping to control urban heat. The State of Rajasthan is in the process of implementing large-scale afforestation works throughout the state under various schemes, including the State Plan, NABARD, CAMPA, RFBDP, and Externally Aided projects.

For the effective implementation of plantation activities in the state, various Plantation Models have been developed, including ANR, RDF I, RDF II, PLP, Silvi-pastoral, PEO, and EOP. Currently, the Forest Department offers models that provide financial support for periods of 5, 8, and 12 years. With a view to bringing in transparency, this exercise of independent evaluation through a third-party institution is being executed by the department to evaluate the afforestation activities carried out in Bharatpur and Jaipur Sambhag between the years 2013-14 to 2023-24. It is imperative to assess the afforestation activities to understand the achievements and challenges encountered in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag.

The Third-Party Evaluation/study of the Plantation sites has been carried out at the sample sites. The evaluation /assessment of the plantation sites have been conducted for various works and activities, including Fencing, Soil Water Conservation (SWC) works, seed sowings, and plantings. The task of conducting a third-party evaluation/study of the Plantation sites has been commissioned by the Office of the Principal Chief Conservator of Forests (HoFF), Government of Rajasthan, Jaipur, Rajasthan, to the Centre for Development Communication & Studies (CDECS). The purpose is to evaluate the afforestation activities carried out in Bharatpur and Jaipur Sambhag between the years 2013-14 to 2023-24.

Under the planned third-party evaluation, a systematic stocktaking and verification of physical outputs/ performance/ achievements, as well as the identification of process adherence and quality consciousness at various levels of project implementation, have been undertaken. CDECS would like to acknowledge the support and contribution of the Office of the Principal Chief Conservator of Forests (HoFF), Government of Rajasthan, for providing us with the opportunity to undertake this study.

We take this opportunity to express our gratitude to Shri Arijit Banerjee, IFS, PCCF (HoFF), Office of the Principal Chief Conservator of Forest, Rajasthan, for awarding the evaluation work and providing regular support and guidance.

We owe our gratitude to Shri Pavan Kumar Upadhaya sb, IFS, Principal Chief Conservator of Forest, Monitoring & Evaluation, Office of the Principal Chief Conservator of Forest (HoFF), for his concern and appreciation for the Third Party “Evaluation study of

Afforestation works. With his cooperation & support, this report has been prepared & submitted as per the terms of reference.

We owe our gratitude to Mr. K.C.A. Arun Prasad, Additional Principal Chief Conservator of Forest, Office of the Principal Chief Conservator of Forest (HoFF), for his concern for the study and the thoughtful preparation and guidance provided for this third-party evaluation study. We acknowledge the support the study has received from Mr. Sanjay Kaushik, DCF, P&M, for his support right from the inception of the study. He has continuously inspired us at every stage of this study.

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We sincerely thank the committed & sensitive team of CDECS who made excellent efforts to complete this Evaluation covering all 14 Forest Divisions in a timely manner.

This Evaluation study report, based on an empirical study, will help in examining various aspects of the programme and making appropriate changes to plantation models, thereby making afforestation activities more effective in achieving their objectives. Additionally, the findings of this report will be helpful to various stakeholders and individuals concerned with the planning, implementation, and management of effective afforestation in the state, particularly in Jaipur and Bharatpur Sambhag.

DR. UPENDRA K. SINGH

Team Leader

28 August, 2025
Jaipur

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Abbreviations

ACF	Assistant Conservator of Forest
ANR	Assisted Natural Regeneration
APCCF	Additional Principal Chief Conservator of Forest
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CBD	Contour Bunding
CDECS	Centre For Development Communication & Studies
CG	Community Group
DCF	Deputy Conservator of Forest
DLT	Drainage Line Treatment
DFL	Degraded Forest Land
ECD	Earthen Check Dam
EPA	Entry Point Activities
EOP	Enrichment of Old Plantation
GIS	Geographical Information System
GPS	Global Positioning System
HOFF	Head of Forest Forces
IEC	Information Education & Communication
LSCD	Loose Stone Check Dam
MIS	Management Information System
NGO	Non Governmental Organization
NFL	Non-Forest Land
NTFP	Non Timber Forest Produce
NABARD	National Bank For Agriculture and Rural Development
PCCF	Principal Chief Conservator of Forests
PCT	Percolation Tank
PLP	Panchayat Land Plantation
RO	Range Officer
RDF	Rehabilitation of Degraded Forest
RFBDP	Rajasthan Forestry and Biodiversity Development Project
RTR	Ranthambore Tiger Reserve
SDS	Sand Dunes Stabilization
SMC	Soil & Moisture Conservation
SPP	Silvipastoral Plantation
STR	Sariska Tiger Reserve
VFPMC	Village Forest Protection & Management Committee
VLW	Village Level Worker
WHS	Water Harvesting Structure

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Some Reality

Our Task now is not to fix the blame for the past, but to fix the course for future.

.....John Fitzgerald Kennedy

Only through addressing the drivers or enablers of degradation can we address the changes necessary to support human health and forests, including how we produce food, build infrastructure – from roads, mines, and ports to rapid urbanization – and how cities manage forests near, far, and even within their limits. We need new partnerships to do this well.

.....Thoughts

Investing in forests creates jobs, reduces zoonoses, and delivers on climate and biodiversity goals. Not only do you minimize the risk of new pathogens, but you also generate all sorts of other benefits for people.

.....Thoughts

“If I Have the Belief that I can do it, I shall surely acquire the capacity to do it even if I may not have in the beginning”.

.....Mahatma Gandhi

Chapter – 1

Executive Summary

1.1 The Introduction

Forests, a vital environmental resource, are under constant threat because of the growing population, both human and livestock. The ever-increasing dependency on forests and forests produce has further led to a deterioration of the situation.

In the State of Rajasthan, ‘forests’ are an important consideration and a life line for defining the economy and the climate. The Government of Rajasthan is committed to the conservation and development of forests in consonance with the socio-economic and ecological imperatives of the State.

In order to achieve the above stated target with sustainable forest management, people’s participation is indispensable. Although the capacity development of the forest department is continuously undertaken, it is very significant to conduct afforestation and plantation-related activities through the participatory scheme of Joint Forest Management (“JFM”), i.e., through VFPMC/EDC (Village Forest Planning and Management Committee/Eco-Development Committee).

1.2 The Evaluation Study

The State of Rajasthan is in the process of implementing large-scale afforestation works throughout the state under various schemes, including the State Plan, NABARD, CAMPA, and Externally Aided projects.

For the effective implementation of plantation activities in the state, various plantation models have been developed, namely ANR, RDF I, RDF II, PLP, Silvi-pastoral, PEO, and EOP. Currently, the Department has models that provide financial support for 5 years, 8 years, and 12 years. With a view to bring in transparency, this exercise of independent evaluation through third party institution is being executed by the department to evaluate the afforestation activities carried out in Bharatpur and Jaipur Sambhag between year 2013-14 to 2023-24. It is imperative to carry out the evaluation of the afforestation activities to understand the achievements and challenges in plantation activities carried in 14 Forest Divisions of Bharatpur and Jaipur Sambhag namely, Bharatpur, Dholpur, Karauli, Sawai Madhopur, NCS Dholpur, RTR II Karauli, Alwar, Dausa, Jaipur. Jaipur North, Jaipur WL, Jhunjhunu, Sikar and Sariska Tiger Reserve.

1.3 The Objectives of the Evaluation Study

The objectives of the evaluation study are:

1. Evaluate the quantity and assess the quality of various works done in a plantation.
2. Evaluation of survival rate, including the growth of plants and their impact on vegetal cover.
3. To check the documentation, record keeping, reports relating to assets created.

4. To assess the overall impact of the various activities carried out in a plantation including public participation under Joint Forest Management and Eco-development activities.
5. To identify and suggest areas for improvement and actions to be taken.
6. Compliance of official circulars/ orders by the implementing authorities.

1.4 The Methodology of Third Party Evaluation Study

This 3rd Party Evaluation study have been conducted for evaluation of survival rate on randomly selected plantation sites as well as for qualitative and quantitative assessment of various activities of the project and identification of areas for improvement. Under the Third Party evaluation study, systematic stock-taking and verification of physical outputs/ performance/ achievements, as well as identification of process adherence and quality consciousness at various levels of project implementation, have been undertaken. The results and analysis derived from the assessment will enable the project to further improve the processes and ensure strict adherence to the laid-down guidelines.

The quantitative and qualitative tools have been utilized for the Third-Party Evaluation study of Afforestation as per the RFP. In total, 12 Formats were used. The third - party institution is being engaged by the department to evaluate the afforestation activities carried out in Bharatpur and Jaipur Sambhag between the years 2013-14 to 2023-24, covering 14 Forest Divisions of Bharatpur and Jaipur Sambhag.

1.5 Sampling & Sample size

The Third Party Evaluation study has been undertaken in 02 Forest Circles/ Sambhag covering 14 Forest Divisions. The scope of work for the Evaluating Agency involves the following:

Selection of sample Sites

- i. The selection of sites/assets has been provided by the client (Office of HoFF) to the Organization. The sample sites to be evaluated/ assessed have been provided by the Department in sealed envelopes which were opened in the presence of the DCF of the concerned division before the start of the field-work.
- ii. Criteria for Third Party Evaluation of Plantations sites – 100%.
- iii. All activities were evaluated and their impact, achievements, and benefits were assessed at the selected plantation sites.

1.6 Sample Verification – Joint verification

The basic data collected from all sites (in the prescribed formats, site-wise) has been compiled and submitted to the Department. Based on the direction and official order, the evaluation agency also participated in the joint verification of 10% of the sites randomly selected for joint verification of the data collected by Office of PCCF (HoFF). Results from 8 sample sites showed data alignment within a $\pm 10\%$ variation, indicating the evaluation study's data is both precise and accurate.

1.7 Coverage under Plantation & Afforestation

In total, 77 sample sites were evaluated in 14 Forest Divisions. Sambhag-wise, 47 sample sites were from Jaipur Sambhag and 30 from Bharatpur Sambhag.

1.8 Concluding Remarks

The third-party evaluation of plantations and afforestation activities undertaken between 2013-14 to 2023-24 across 14 forest divisions in Jaipur and Bharatpur Sambhag revealed a mixed performance. Execution was largely planned and aligned with the project design under schemes such as CAMPA, RFBDP, NABARD, and the State Plan. Fencing and guarding emerged as crucial for protection, with ditch fencing being the most common form, reported at 83.1 percent of sites, though its effectiveness varied with the need for regular maintenance and monitoring. Soil and Water Conservation (SWC) works, including contour trenches, check dams, and water harvesting structures, were implemented widely; however, their quality of execution was uneven, with some sites showing tangible benefits in soil moisture retention and groundwater recharge, while others lacked effective upkeep and continuity.

The analysis of seed sowing on mounds of ditch/dola fencing in the third stage highlighted inconsistent results: while 50 percent of sites reported poor outcomes, approximately 37.5 percent achieved good to very good results, indicating potential under favorable conditions but also significant site-level disparities. Vegetal cover improvements were observed in several areas, yet survival percentages of planted stock often lagged behind expectations, with many sites showing survival below 40 percent despite achieving more than 40 percent vegetal cover. Documentation and record-keeping were another concern, it gives positive feedback as it was reported available at almost all the sample plantation sites. The gaps were noted in the updation of plantation journals and related records, though some divisions maintained them adequately.

Overall, while the plantations contributed to restoring degraded landscapes and improving ecological balance in targeted regions, the analysis underscores that the effectiveness of interventions depended heavily on site preparation, execution quality, and ongoing maintenance. The findings point to the need for more consistent technical execution, stronger follow-up support, and improved documentation to enhance both survival rates and long-term sustainability of the plantations.

The recommendations emphasize the need for site-specific, adaptive, and community-engaged approaches to improve afforestation outcomes, ensure plant survival, and enhance soil and moisture conservation. This includes integrating physical and social fencing, structured watering and maintenance schedules, protection from biotic pressures, and revising plantation models based on topography and climate. Strengthening institutions like VFPMC through regular meetings, documentation, training, and capacity building of field staff is vital. Further, effective monitoring, record-keeping, and policy interventions - such as extended protection periods and better planning of soil and water conservation structures - are essential for sustainable forest development and achieving climate and ecological goals.

Chapter - 2

Introduction, Background, Purpose and Scope of Evaluation

2.1 A holistic Framework - Linking Forests and Human health

The recognition of the interconnections between forests and human health should encourage the adoption of a holistic framework to understand the direct and indirect interactions and to elicit actions to maintain and restore the vitality of forests. This framework taken into consideration that forest - from intact to those degraded or regrown - sustains various nature-society interactions involving different people. These interactions are defined by the three major functions forests provide with respect to human health: (1) provisioning functions of food, medicinal plants, and water; (2) prevention functions including reducing the risk of spillovers of infectious diseases and the risks of natural hazards (e.g., flooding, landslides, storms, and heat); and (3) healing functions, mainly by reducing the risks of Non-Communicable Diseases. However, the results of these interactions and the actions people might take to support human health through the protection, management, and restoration of forests depend on a wider set of contextual factors (i.e., environmental, institutional, and behavioral).

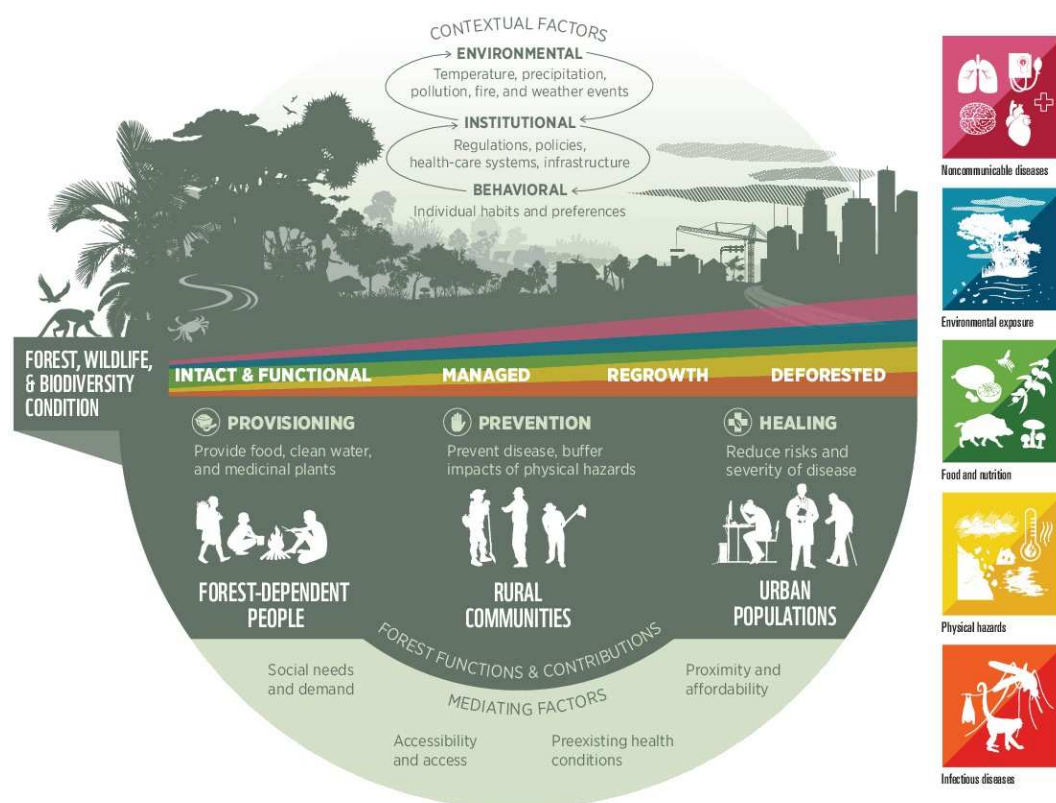


Figure - Forest and human health interactions and the factors that shape them

(Source: WWF report on Forest Vitality Report)

behavioral) and are influenced by a plethora of mediating factors including the prevalence of pre-existing health conditions; social demands; access, accessibility, and proximity to forests; and the time or financial resources that allow people to afford the benefits that forests can provide.

Forest & Human Health

Worldwide, 750 million people - 60 million of whom are Indigenous - inhabit forests. An estimated 1.6 billion people depend directly on forests for their livelihoods. Forests are also home to more than three-quarters of the world's life on land. Yet these essential forests are under significant threat. Human impacts have led to the loss of about 40% of the Earth's forests. Increasing agricultural areas; poorly planned infrastructure and land management; and illegal logging have led to substantial forest loss and degradation - 17% of the Amazon has been converted from forest in the past 50 years. Deforestation continues today at an alarming rate: Between 2015 and 2020, the world lost 10 million hectares of forest per year (of the approximately 4 billion hectares of existing forest in 2015). Tropical rain forests experienced their greatest reduction in tree cover between 1992 and 2015. In addition, there is growing evidence suggesting that for the forests that remain, their degradation is also extensive.

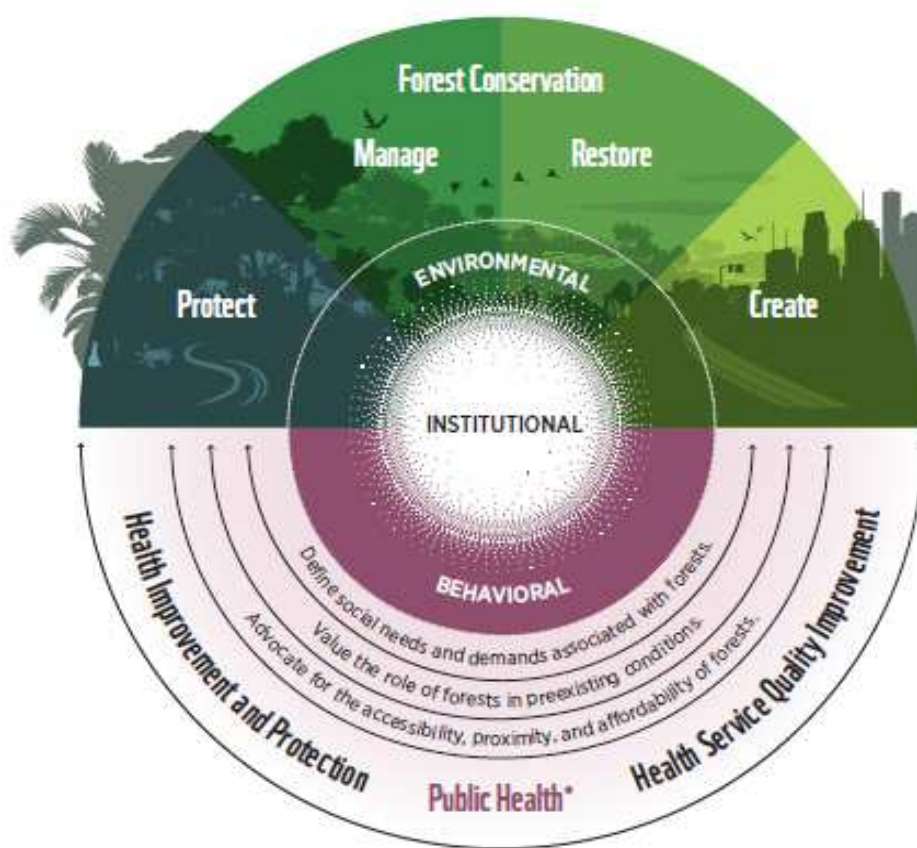


Figure - Responses required to sustain and enhance the positive impacts of forests on human health (Source: WWF report on Forest Vitality Report)

While little noticed until now, human health is entwined with forests, not only wherever forests grow but also remotely in places far removed from forests. The concepts of forests themselves, what is included in human health, and how they might be connected have been evolving. This includes changes in our understanding of the factors that mediate how people

and forests interact. Just as a forest is more than its trees, human health is more than its clinical “vital signs.”

The relation and association of people with forest - how people live and interact with their environments can support or impair their health and the health of others. This report illustrates the positive role of forests in supporting human health. However, there are instances when the relationship is not win-win and where forests can contribute to human health risks (from fires, infectious diseases, etc.) or where their existence may seem to impede development objectives. For example, deforestation often enables more people to live in areas and can provide important, if not equitable, income streams and livelihoods through the land uses (typically agriculture) that replace forests. There are significant local and economic incentives that drive forest loss, often supported by regional and national economic systems. However, forest loss and degradation affect more than the local people whose livelihoods, health, and cultures can be tied to forests and deforested land. Their loss and degradation also impact regional and global commons that rely on forests to mediate clean air and water, sequester carbon, and support most terrestrial species. As a result, the analysis of interactions between forests and human health must embrace multiple levels of understanding given how these interactions influence local autonomy and sovereignty, environmental and social power dynamics, and human lives (*Source: WW: The Vitality of Forest report*).

Importance of Forests for the climate

It has proven fact that the Forests are the largest storehouses of carbon after the oceans, as they absorb this greenhouse gas from the air and lock it away above and below ground. So, it is no surprise that when we cut down or damage our forests, we release huge amounts of carbon emissions that contribute to the climate crisis.

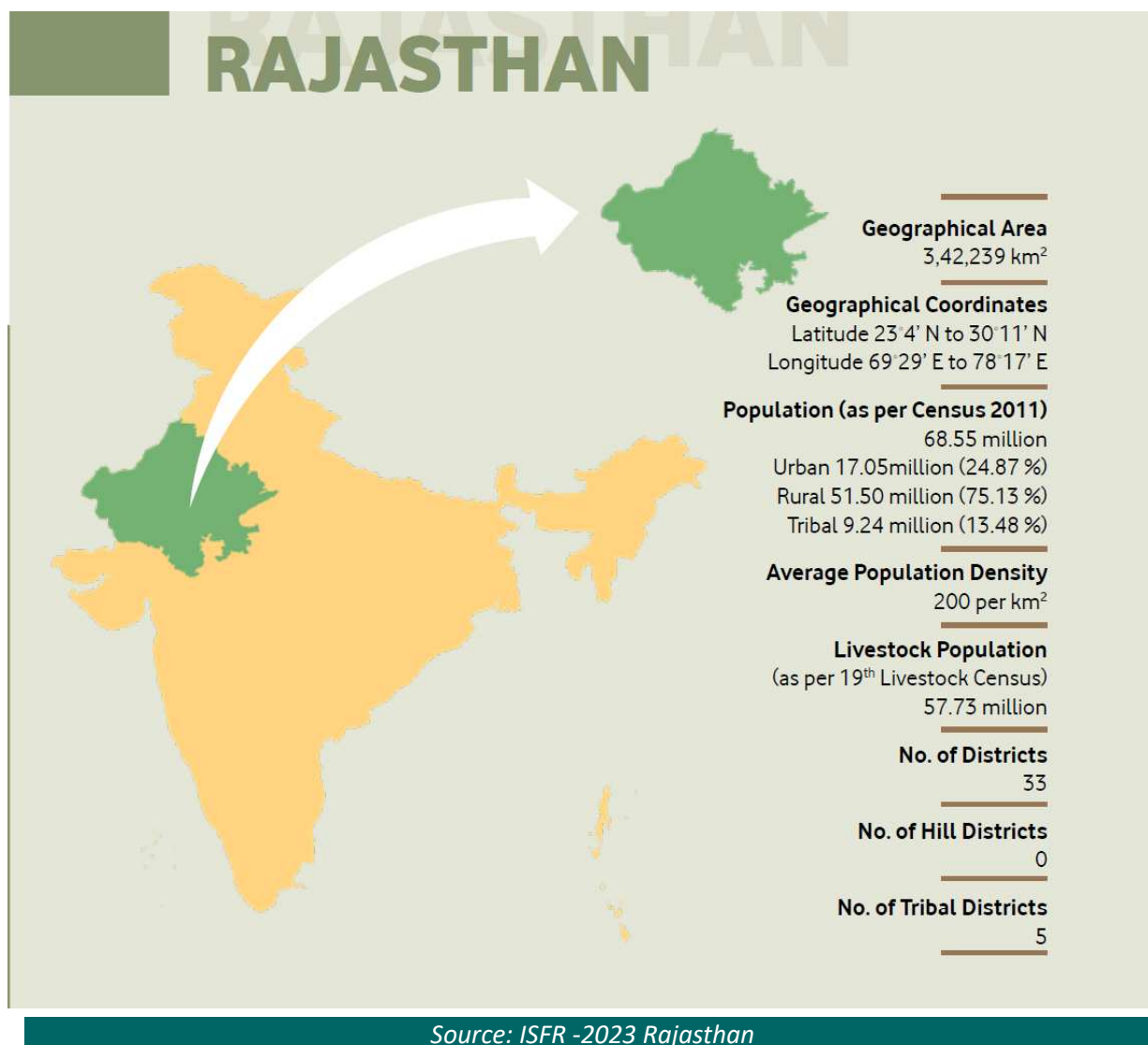
The importance of forests cannot be negated, as they can help protect people and nature from the consequences of a warming world. As the impacts of climate change, including floods and storms from rising sea levels and increased precipitation become more frequent and severe, forests can provide a crucial buffer for our communities.

The destructions and the extreme events caused by climate change, such as more frequent wildfires, limit the ability of our forests to regenerate. At the same time, deforestation contributes to climate change by increasing the risk of fires. Stopping deforestation and restoring forests is a crucial part of climate action.

Every human health is inextricably linked to forest health. Deforestation has serious consequences on the health of people directly dependent on forests, as well as those living in cities and towns, as it increases the risk of diseases crossing over from animals to humans. Meanwhile, time spent in forests has been shown to have a positive benefit on conditions including cardiovascular disease, respiratory concerns, diabetes and mental health.

2.2 Introduction & Background of State of Rajasthan

Rajasthan is the largest Indian state with 10.4% of India's geographical area, but with a population of around 6.85 crores, it accounts for only 5.66% (an increase from 5.49% in 2001) of India's total population as per the 2011 census. The state is sparsely populated, with an overall density of only 200 persons per km² in 2011 (an increase from 165 persons per km² in 2001) as against a national average of 382 per km². However, the population density in the state varies widely from as low as 13 persons per km² in Jaisalmer district to as high as 471 persons per km² in Jaipur district. The high variation in density is due to the presence of the large, inhospitable Thar Desert.



The state of Rajasthan lies between 23° 30' to 30° 11' North Latitudes and 69° 29' to 78° 17' East Longitudes. It shares its western boundary with Pakistan and is bounded by the Indian States, viz. by Punjab State in the north, Haryana and Uttar Pradesh States in the northeast, Madhya Pradesh State in the southeast and south and Gujarat State in the south (Map of Rajasthan).

The geographical area of the state is 34.22 million ha which is 10.41% of country's geographical area. There is mark difference in the physiographic features of the state. The Aravallis, one of the oldest mountain systems, divides the state into two unequal parts. The Aravallis cover over 30% of the state. A vast expanse of arid and semi-arid tract lies in the west of the Aravallis, The Vindhyan hill system, another important hill range in the south-east of the state, drains into Chambal and Banas rivers. Ravine formation is a very serious problem in the fragile sedimentary tracts of these rivers.

Rajasthan is the driest state in India. Two thirds of its geographical area is covered by Thar Desert, and the state has only 1.16% of surface water in India. The average rainfall in Rajasthan is 531 mm against the national average of 1,200 mm. In the absence of surface water, reliance on ground water is excessive, and water table is depleting at an alarming rate in most of the area except in canal command area. Due to the severe climatic conditions mentioned above, the forest & tree cover of Rajasthan State is only 7.11% (forest cover is 4.87%, and tree cover is 2.55% respectively), which is far below the national average of 23.4%, and the open forest cover out of the total forest is as high as 71.8%. Furthermore, the state faces a major challenge of desertification due to recurrent drought and increasing human and livestock pressures. Especially in western Rajasthan, desertification is causing wind erosion and deposition, followed by the water erosion, as well as water logging and salinity. More than 60% area of western Rajasthan is affected by the desertification and requires intensive management to contain desertification.

State Forest Policy 2010 envisioned increasing 20% of vegetal cover in the state geographical area. Forest cover in the state actually increased around 82 sq.km from 2017 to 2021. There is now a clear need to provide much needed momentum to the efforts being made in this direction.

In the more recent times, a clear obligation has also been felt to integrate the vision of sustainable forest management through elements of ecosystem conservation, ecological security, climate change mitigation and adaptation, promotion of urban forestry and robust convergence with Sustainable Development Goals (SDGs).

In June 2023, Rajasthan Forest Policy 2023 has been brought out by the government. The policy aims to increase vegetation cover to 20 percent of the geographical area within next twenty years with special focus on increasing vegetation cover outside forests.

In order to achieve the above-mentioned target with sustainable forest management, people's participation is indispensable. In addition, it also focuses to protect, conserve, restore and manage existing natural forests, wildlife and bio-diversity to enhance their productive capacity for ecological security and flow of ecosystem services as well as to contribute towards economic and social well being. Moreover, the effort has been planned to increase the extent of forest cover/ tree cover in the state by encouraging reforestation, restoration and rehabilitation measures in the existing forest areas and by encouraging and expanding vegetal cover in urban and rural areas outside the forest areas. The policy also envisages to encourage community participation and improve livelihood opportunities for people through sustainable use of forest and grassland based resources and ecosystem services etc

2.3 Scope of Work & Objectives of the Study

The Third Party Evaluation/ study of the Plantations sites have been carried out at the sample sites. The evaluation /assessment of the plantation sites have been done of the various works/ activities namely, Fencing, Soil & Water Conservation (SWC) works, sowings, plantings, etc., were integral part of the evaluation/ assessment. The well designed formats have been used as given in the RFP (Annexure: 2) and also an additional formats have been developed for assessing the perception and views of various stakeholders namely, Forest Division level officials, Range level officials and VFPMC/EDC member.

The Key Objectives

Largely, we have undertaken the Third Party Evaluation/ study of the Plantations sites as per the objectives and scope given in the RFP. The key objectives of the evaluation/ Study are given below:

- ✿ Evaluate the quantity and assess the quality of various works done in a plantation.
- ✿ Evaluation of survival rate including growth of plants and their impact on vegetal cover.
- ✿ To check the documentation, record keeping, reports relating to assets created.
- ✿ To assess the overall impact of the various activities carried out in a plantation including public participation under Joint Forest Management and Eco-development activities.
- ✿ To identify and suggest areas for improvement and actions to be taken.
- ✿ Compliance of official circulars/ orders by the implementing authorities.

2.4 About Third Party Evaluation of Plantation sites

Rajasthan Forest Department undertakes large scale afforestation works in the entire State under various schemes like State Plan, NABARD, CAMPA, Externally Aided Projects (RFBDP), etc., For the purpose of effective implementation of plantations across the state, different plantation models have been formulated. These models serve as guiding principles in treating a site for afforestation. In the present context, the Forest Department has models which provide financial support for 5 years, 8 years and 12 years. As per the policy in the department, the Afforestation activities carried out by the Department is being monitored through different stages. With a view to bring in transparency, this exercise of independent evaluation through third parties is being attempted to. Under this exercise, afforestation activities carried out between 2013-24 to 2023-24 at the 77 sample plantation sites in 14 Forest divisions of Bharatpur and Jaipur Sambhag were evaluated / assessed both quantitatively and qualitatively.

Chapter - 3

The Methodology, Sampling & Approach of Third Party Evaluation Study

3.1 The Methodology

Under the study titled 'Third Party Evaluation / Study of Plantations created under various schemes during the years 2013-14 to 2023-24', an effort has been made to follow and adhere to the norms and guidelines as provided under RFP. In terms of a third-party evaluation study, methodology and approach are essential aspects for various Plantations and Afforestation works executed under various schemes (CAMPA, RFBDP, NABARD, and State Plan, etc.). As it has been said, '**well begun is half done**'. These proverbs remind us that the wonderful beginning of the project will certainly lead us to achieve better in terms of quality and quantity. However, as far as the Third-Party Evaluation/study of plantations and afforestation activities executed under various schemes, division-wise, is concerned, it is a stage that will help the project drive in a more planned and controlled way to reach the goal with all the zeal and enthusiasm that was planned in the beginning. Thus, Third Party Evaluation study at this stage, i.e., after a specific period of project implementation, is a stage where lot many care is required to assess the success, achievements, procedures, problems & sustainability etc. in terms of growth and development of plantations and impact of various inputs given at the sample sites of the forest divisions. This may be related to procedural, human, policy, or execution issues, which will need to be assessed to determine if the planned pace/rate, timeliness, number, quantity, and quality are affected in the project.

The primary objective is to evaluate the intervention of the Rajasthan State Forest Department in relation to the implementation of afforestation works using funds from the State Plan, External Aided (RFBDP), CAMPA, and NABARD, among others. Under this Third Party Evaluation, various afforestation works have been undertaken in 14 Forest Divisions of Bharatpur and Jaipur Sambhag, covering 14 Forest Divisions, including protected areas, which span 9 districts.

Following the project proposal and logical framework, the third party evaluation study of various activities under the project has been taken-up to assess what the project has achieved against agreed outputs and outcome and to further guide the project in terms of its focus as per the norms and guidelines for plantations, fencing and soil water and moisture conservation at the plantation site during advance work (First stage), plantation year (Second stage) and maintenance years (Third/ Fourth/Fifth stage). The Third Party Evaluation of afforestation activities primarily focused on assessing various works and activities, including fencing, Soil and Water Conservation (SWC) works, sowing, and planting. The well designed formats 1-11 were used as given in the RFP (Annexure: 2). In addition, as per the RFP, an additional format (Form -12) have also be developed by the evaluation institution for assessing the perception and views of various stakeholders namely, Forest Division level officials, Range level officials and VFPMC/EDC member and finally the observation and comments of the evaluator on the sample plantation site. This evaluation has also taken into consideration the Strengths, Weaknesses, Opportunities, Threats, and quality of interventions

under the project. This evaluation is an independent process that focuses primarily on identifying problems encountered by the project, both in its design and implementation to date, and especially on developing recommendations for improvements and modifications that could make the project more effective in attaining its stated objectives and outcomes.

In the evaluation, we applied the evaluation criteria of relevance, effectiveness, efficiency, quality, level of satisfaction, usage, and usefulness in the given situation. Under the assignment of third-party evaluation, the project design has been analyzed in light of the current situation, considering the project's inputs, outputs & outcomes in relation to its objectives. Additionally, as part of the planned Third Party evaluation, systematic stocktaking and verification of physical outputs/ performance/ achievements, as well as identification of process adherence and quality consciousness at various levels of project implementation, have been undertaken. The results and analysis derived from the assessment will enable the project to improve its processes further and ensure strict adherence to the laid-down objectives and guidelines.

The basic design logic that has been used in the third-party evaluation can be summarized here under,

- Status of plantations, Afforestation, survival, soil & water conservation structures undertaken at plantation sites w.r.t Plantation /Afforestation Models. For the effective implementation of plantation activities in the state, various Plantation Models have been developed, namely ANR, SDS, RDF I, RDF II, PLP, Silvi-pastoral, PEO, and EOP.
- Presently, the department has models that provide financial support for 5 years, 8 years, and 12 years. With a view to bringing in transparency, this exercise of independent evaluation through a third-party institution is being executed by the department to evaluate the afforestation activities carried out in Bharatpur and Jaipur Sambhag between 2013-14 to 2023-24.
- A third-party evaluation study of the Plantation sites has been conducted at the sample sites. The evaluation /assessment of the plantation sites has been conducted for various works/ activities, including guarding and fencing, Soil Water Conservation (SWC) works, sowings, and plantings. The Third-Party Evaluation/study of the Plantation sites has been carried out at the sample sites.
- To what extent the plan of action has been adhered to in terms of procedure, construction, and plantation in conformity with the guidelines, etc., laid down in the project.
- Field verification and validation of plantations and the quality of work done.
- Verification of related documents, such as micro plan, plantation journal, plantation card, treatment plan, designs of Soil and Water conservation works, and estimate for afforestation work.
- Assessment of the overall impact of the various afforestation models in terms of the Identification of Strengths, Weaknesses, Opportunities, and Threats.
- Analysis of the causes of success and low performance.
- Identification of constraints or barriers to effective execution of the project in order to suggest areas for improvement and actions that need to be taken.

- Suggesting Solutions in order to overcome barriers and also to address root causes & threats.

Five Criteria for Evaluation Study

The Evaluation Study focused on the five evaluation criteria:

- Relevance,
- Effectiveness,
- Efficiency,
- Sustainability and,
- Impact

Each criterion is associated with several key evaluation questions that are to be addressed and explored.

The Methods, Technique, and Tools

The Institution has conducted a Third Party Evaluation/study of the Plantations created under various schemes from 2013-14 to 2023-24, as per the various circulars and guidelines of the State Forest Department. Based on prevailing circulars and guidelines, the Organization has developed a detailed methodology to evaluate plantation sites, and other related works/activities for Fencing/ protection and Soil and Water conservation.

A combination of both quantitative and qualitative research techniques (plurality of tools and technique) have been used for the Third Party Evaluation/ study of Plantations executed in the **02 Forest Circles namely, Bharatpur and Jaipur covering 14 Forest divisions** (As per RFP) i.e. Plantation works created during the year 2013-14 to 2023-24 to draw the holistic picture of the issues and the problems and finally to ensure the successful completion of the assisted activities as per set aims and objectives in due course of time under various schemes (NABARD/CAMPA/RDF/SDS/RFBDP) of plantation executed.

We know that methodological devices make a study organized, systematic, and scientific-rational. The selection of methods also reflects the evaluation institution's assessment and research aptitude, as well as its objectivity towards the entire Third Party Evaluation study. By using this objectivity, i.e., inter-subjective agreement, the evaluator establishes the relationship between (1) ideas and ideas, (2) ideas and experiences, and (3) experiences and experiences. This 'triple synthesis' is necessary for making evaluative and assessment studies particular. In the study, we have constructed triple syntheses for both qualitative and quantitative assessments. Our purpose is to undertake a third-party evaluation of Plantations created under various schemes in the state from 2013-14 to 2023-24. Our evaluation team had discussed in detail the nature of the data collection tools (Tools 1 to 12). The team members have visited the plantation sites, and related data have been collected with the help of Data collection Tools (1-12) finalized by the department. The secondary data related to the process of activities undertaken, namely plantations, SMC works, and other related works/activities at the sample sites have been collected from those documents which relevant authorities have prepared at the site namely, Measurement Book (MB), Plantation journal, plantation card, estimates and Maps (survey and treatment map). Since the main effort of the evaluation team is 'to make data rational', the conversations with the project officials/ functionaries, community/ JFMC members (VFPMC/EDC members), along with villagers in

'informal' space have also been given importance. The team's efforts were also aimed at associating with providing a status of methods through the elements of flexibility, consistency, and coherence, so that evaluations would not lack direction. Such aspects in evaluation are strongly needed because missing links between causes and effects can be understood only when flexibility, consistency, and coherence are maintained in the methodological efforts.

The quantitative and qualitative tools have been used for the Third Party Evaluation/study of the Plantations created under various schemes during the years 2013-14 to 2023-24 in the two Sambhag, namely Bharatpur and Jaipur, covering 14 Forest divisions of the State.

The methods, tools and techniques used in the Third Party Evaluation / study are stated hereunder:

Methods	Statistical - Quantitative and Qualitative Methods Quantitative Methods: Empirical, Assessing the individual plantation and afforestation works, Soil and Water conservation structures namely, CCT, SGT, Deep CCT, Percolation tank/Nadi, MPT, ECD, Loose Stone Check Dam (LSD), Check dams, Loose Stone Bund etc. Records – Micro-Plan, Measurement Book, Survey Map/treatment map, Plantation Journal, estimates, Plantation card, Transparency board, VFPMC/EDC records etc. Qualitative Methods: Following standard procedures in execution, of plantation and Soil Moistures conservation and protection measures,
Techniques for collecting information	• Examining records, literature related to afforestation/ plantations, SMC works, Forest Protection/Fencing works as per the models/ circulars and specifications/estimates. • Observing/inspecting the sites of afforestation/ plantations (NFL, DFL, ANR, RDF –I, RDF-II and SDS sites and SWC/ SMC works (SGT/CCT, CBD, Check dams, LSD, WHS, Anicuts) and Fencing/Protection measures executed at the sample sites, etc. • Quality, Standards and Specifications • Interaction with the State, Division & Range officials, Community leaders, members of VFPMC/EDCs, and villagers • Using secondary data & information • Listening to or interrogating informants: - Open interviews. • Visual Aids • Examining records of Plantation sites
Tools	• Questionnaire for assessing the survival rates of plantations & quality of works as per standards and norms. • Checklists • Observation schedule The evaluation formats for different works under Plantation executed under various schemes will be used as given in the TOR of the RFP/tender for: A. Plantation Evaluation –Formats/Tools to assess the survival & SMC works

		B. SMC and other related works C. Evaluation formats given in the RFP –Form 1a, 1b, 1c, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12
Techniques for analysis	•	Computer based data processing Statistical methods (SPSS)/ EXCEL Transforming qualitative information into quantitative data.

3.2 The Evaluation Design & Approach

The Evaluation Study has followed the SWOT Analysis to assess the Strengths, Weaknesses, Opportunities, and Threats, and will come out with the suggestions and recommendations to set the whole tune for successful completion of the Plantation/ Afforestation as per their models for achieving its set goals and objectives in the light of the present situations and circumstances.

The results and analysis derived from the assessment will enable the project to improve its processes further and ensure strict adherence to the laid-down guidelines for the Third Party Evaluation/study in the State.

Strengths Weaknesses Opportunities and Threats

STRENGTHS ▪ In terms of teams and management structure ▪ Process, procedures and management ▪ Inputs ▪ Fencing/Guarding ▪ Afforestation/ Plantations, ▪ Management & development ▪ Outcomes& Achievements ▪ Soil & Water conservation works/activities/ structures and its benefits –immediate and long terms ▪ Maintenance ▪ Documentation, Records and reporting	WEAKNESSES ▪ System and processes ▪ Management ▪ Poor Execution & Achievements ▪ Designs and interventions ▪ Quality of execution - Soil & Water conservation works/activities/ structures ▪ Records, documents and reports ▪ Record keeping ▪ Maintenance ▪ Follow-up & support ▪ Orientation & Trainings – Technical know how
OPPORTUNITIES ▪ Existing system –how beneficial and what is beneficial ▪ Consolidate and use the system strengthening measures ▪ Monitoring system ▪ Support system	THREATS ▪ Gap in various areas, process, system and activities need to be strengthened ▪ Factors and processes affecting the project and its quality execution ▪ Procedures and actions, norms and standards ▪ Physical structures for soil and water conservations & regular maintenance

Objectives Vs. areas of Third Party Evaluation/Study

The key Objectives of External evaluation/ Study:

S.No.	Objectives	Areas of Assessment/ study
1.	Evaluate the quantity and assess the quality of various works done in a plantation.	- Assess the total area claimed for the plantation activities and SMC works at the plantation sites. - Evaluate the works undertaken at the site as per the Plantation journal, survey and treatment map – number /quantity of plants planted, species of plants, SMC works, protection and fencing works etc. - Assess the Quality works undertaken at the site as per the Plantation journal, plantation card/ Measurement Book (MB) and survey and treatment map – number /quantity of plants planted, species of plants, SMC works (In situ soil and soil & water conservation works like CCT/SGT/ DCCT/Contour dykes, ECD, gabions, Masonry checkdam, Loose Stone Checkdam, Ponds/Talai etc.), Fencing works and participation of VFPMC/EDCs etc.
2.	To evaluate the survival rate including growth of plants and their impact on vegetal cover.	- Spot/ Field verification and validation of Afforestation's/ plantations and quality of work done along with GPS locations. - Survival rate of plantations under various models including growth and impact of plantation at various stages - Improvement of vegetal cover.
3.	To check the documentation, record keeping, reports relating to assets created at plantation site.	- Verification of related documents such as micro plan, plantation journal, plantation card, Estimates, design and estimate for SMC and constructions, and other necessary supporting documents in relation to the field situation and periodical progress reports submitted. - The records / documentation will be checked at the Plantation site level, namely, ❖ Survey map / treatment map. ❖ Micro-plan ❖ Plantation journal ❖ Plantation card ❖ MB

		✿ Site estimate ✿ Transparency board ✿ VFPMC / EDC's records
4.	To assess the overall impact of the various activities carried out in a plantation including public participation under Joint Forest Management and Eco-development activities.	● Status and Impact of afforestation and plantations made under various models at the sample sites namely, ANR, SDS, RDF I, RDF II, PLP, Silvi-pastoral, PEO, EOP etc. ● Review the benefits and outcome of the various activities undertaken –SMC Works, afforestation /plantations, forest protection as per site requirement, etc. ● Level of participation, involvement and ownership of Joint Forest Management/ Village Forest Protection & Management Committees / Eco-development committees (JFPMC/VFPMC/EDCs).
5.	To identify and suggest areas for improvement and actions to be taken.	● To gather the best practices in the Forest Divisions/ range/ Sites under various activities of plantation undertaken under various schemes during 2013-14 to 2023-24. ● To assess the strengths, weaknesses and challenges in the various activities undertaken in the forest divisions/ range and sites. ● To identify the areas of the plantations, SMC works, Protection and fencing works which need improvement. ● To provide State Forest department/ Forest Divisions with recommendation for improvements.
6.	To assess the compliance of official circulars/ orders by the implementing authorities	● To an extent the directions/order/ circulars and Guidelines of State has been followed at division /range / plantation sites level – Estimates, BSR etc. has been followed /adhered.

3.3 The Approach for Field level evaluation of plantation sites

- a) Finding the plantation site as per record and reaching along with forest functionaries and in charge of the site
- b) Meeting with Stakeholders
- c) Collecting and Checking of records
- d) Signing of pre-panchnama
- e) Move around the boundaries as per records and interaction with site in charge
- f) Measurement of fencing of the planted area

- g) Counting of planted live/dead plants
- h) Measurement of height and girth of planted live plants
- i) Counting of plants of natural regeneration
- j) Estimation of plants/results of seed sowing
- k) Measurement and Assessment of SMC works
- l) Re-inspection of plantation site after completion of counting
- m) Recording of field observations in assessment formats
- n) Getting signature of the field staffs/ site in-charge on formats to have consensus on the evaluation findings
- o) Filling the post evaluation Panchnamma and getting signatures

3.4 Sampling & Sample size

The Third Party Evaluation/ study of the Plantations sites was carried out at the sample sites whose names are in the sample list of plantations given Forest division-wise by the Office of PCCF (M&E), Office of Principal Chief Conservator of Forest (HoFF), Department of Forests, Government of Rajasthan.

The Third Party Evaluation study was carried out in 02 Forest Circles/ Sambhag (Bharatpur & Jaipur) covering 14 Forest Divisions (Bharatpur, Dholpur, Karauli, Sawai Madhopur, NCS Dholpur, RTR II Karauli, Alwar, Dausa, Jaipur, Jaipur North, Jaipur WL, Jhunjhunu, Sikar and Sariska Tiger Reserve) of Rajasthan. In total 77 Plantations sites were covered in 02 Forest Sambhag i.e. Bharatpur (30 Plantations sites) & Jaipur (47 Plantations sites).

Table 3.1: Samples covered for Assessment of Plantation sites

S.N o.	Division (Sambhag)	S.No.	Forest division	Total Nos. of sites	Stages				
					1	2	3	4	5
I.	Bharatpur	1.	Bharatpur	5	0	2	2	0	1
		2.	Dholpur	6	0	4	1	1	0
		3.	Karauli	7	0	6	0	0	1
		4.	Sawai Madhopur	7	0	3	3	1	0
		5.	NCS Dholpur	4	0	3	0	1	0
		6.	RTR -II, Karauli	1	0	1	0	0	0
			Sub-total (A)	30	0	19	6	3	2
II.	Jaipur	1	Alwar	9	0	6	1	1	1
		2	Dausa	12	0	7	2	2	1
		3	Jaipur	4	0	2	1	1	0
		4	Jaipur (North)	4	0	2	1	1	0
		5	Jhunjhunu	7	0	4	3	0	0

S.No.	Division (Sambhag)	S.No.	Forest division	Total Nos. of sites	Stages				
					1	2	3	4	5
		6	Sikar	8	0	6	1	1	0
			Sub-total (B)	44	0	27	9	6	2
III.	Sariska Alwar	1	Jaipur WL	1	0	1	0	0	0
		2	Sariska Tiger Reserve, Alwar	2	0	0	1	1	0
			Sub-total (C)	3	0	1	1	1	0
			Grand Total	77	0	47	16	10	4

Chapter - 4

Analysis of Findings of Assessment of the Plantation sites

The Third Party Evaluation study of various Plantation works has been taken-up to assess what the plantations/ Afforestation's has achieved against agreed outputs and outcome and to further guide the project in terms of its focus as per the norms and guidelines for plantations, Fencing and Soil Water and Moisture conservation at the plantation site during Advance work (**First stage**), Plantation year (**Second stage**) and maintenance years (**Third/ Fourth/Fifth stage**). The Third Party Evaluation of Afforestation activities was primarily focused on assessing various works and activities, including Fencing, Soil Water Conservation (SWC) works, seed sowing, and planting carried out at the sample sites covering 02 Sambhag, namely, Jaipur and Bharatpur, created under various schemes (CAMPA, RFBDP, NABARD, and State Plan, etc.) during the years 2013-14 to 2023-24, covering 14 Forest Divisions, namely, Bharatpur, Dholpur, Karauli, Sawai Madhopur, NCS Dholpur, RTR II Karauli, Alwar, Dausa, Jaipur. Jaipur North, Jaipur WL, Jhunjhunu, Sikar and Sariska Tiger Reserve (STR).



Largely, the overall execution of plantations/ afforestation's under various schemes (CAMPA, RFBDP, NABARD, and State Plan etc.) during the years 2013-14 to 2023-24' was undertaken in a planned manner as per the project design for plantations/afforestation of forest, forest protection, management and development. The results and analysis derived from the assessment would enable the plantations/afforestation activities to further improve the planning, inputs, processes and strict adherence to the laid down objectives and guidelines.

In the third party evaluation study, the data have been collected based on the terms of reference (TOR) provided by Forest Department, Government of Rajasthan. The data analysis and findings of Evaluation study have been presented under the following sections on various components of plantations/ afforestation namely, Fencing, Soil Water

Conservation (SWC) works, sowing, planting and overall impact of various activities/ works carried out at the plantation sites including guarding and protection measures.

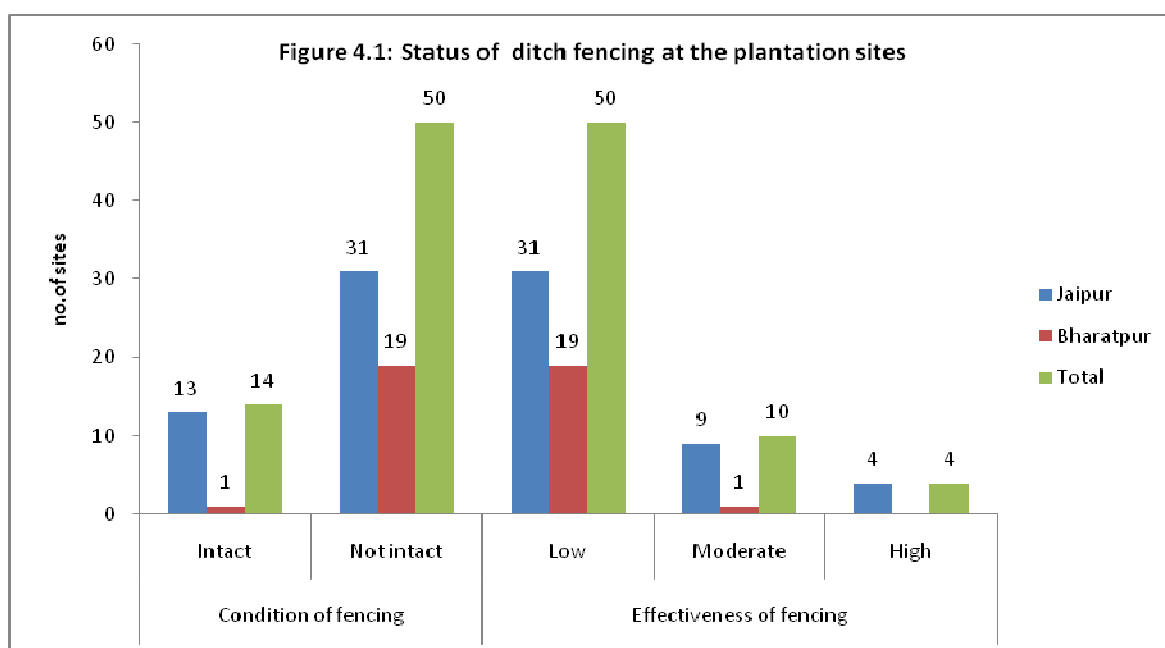
4.1 Fencing and guarding of Plantation sites boundaries (Protection & Management)

Proper fencing and guarding of plantation site boundaries are crucial components of adequate plantation protection and management. This process safeguards the plantation against various biotic and abiotic threats, ensuring the healthy establishment and sustainable growth of planted species. The Key purposes are to protect young plantations from grazing by livestock and also to prevent unauthorized entry, encroachments, and illegal cutting. Fencing essentially helps in the present situation to define the boundaries clearly and to avoid land disputes amongst the nearby villagers. Moreover, forest boundaries also support early growth by minimizing disturbances. The intact fencing and forest boundaries also require regular maintenance to ensure proper function of the fencing at the plantation sites. In terms of maintenance, it requires regular inspection and repair of damaged sections of the fence, clearing of vegetation near the fence to prevent damage or fire hazards, and replacement of broken components (e.g., wire, posts, and loose stone wall). Also, the effective use of fencing can be ensured through periodic monitoring by forest staff or project officials and updating the fencing records in the plantation journal for any incidents, repairs, or intrusions.

In the sample Plantation sites, various types of Fencing has been done to enclose the treated area namely, Ditch fencing, Loose stone wall fencing, Barbed wire fencing and Dola fencing, etc. The analysis of fencing and its condition and effectiveness is dealt in the following section.

(a) Ditch Fencing

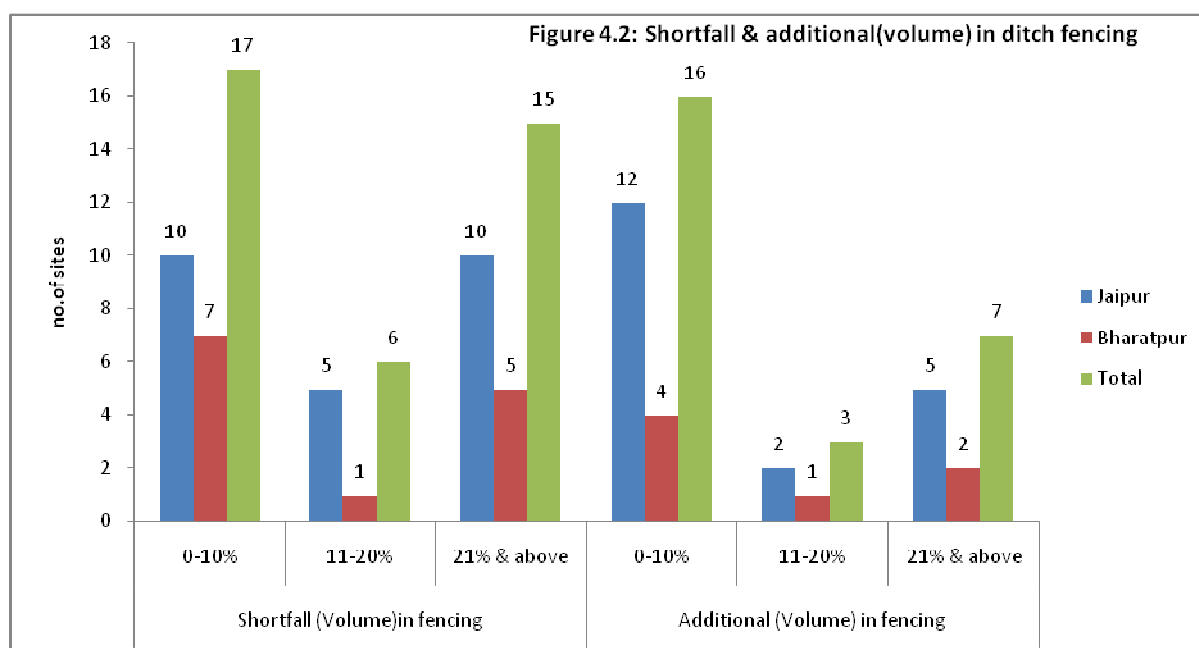
The ditch fencing was reported at 64 plantation sites (83.1 percent). Sambhag-wise, the ditch fencing was reported in 44 plantation sites (93.8 percent) in Jaipur Sambhag & whereas the ditch fencing was reported in 20 plantation sites (66.7 percent) in Bharatpur Sambhag. The status of ditch fencing at plantation sites reveals notable issues in both condition and



effectiveness. Among the observed sites, only 14 plantation sites (21.9 percent) had intact ditch fencing, of which 13 sites (29.5 percent) were in Jaipur Sambhag and just 1 site (5.0 percent) in Bharatpur Sambhag, pointing to a stark contrast in structural maintenance between the two divisions. On the other hand, 50 sites (78.1 percent) had fencing that was not intact — with Jaipur Sambhag contributing 31 sites (70.5 percent) and Bharatpur Sambhag, 19 sites (95.0 percent) — indicating a widespread problem in fencing upkeep across both regions. In terms of effectiveness, the situation is equally concerning. A total of 50 sites (78.1 percent) had fencing deemed “Low” in effectiveness, again with Jaipur 31 sites (70.5 percent) and Bharatpur 19 sites (95.0 percent) equally contributing to the total. Only 10 sites (15.6 percent) were considered to have “Moderate” effectiveness viz. 9 sites (20.5 percent) in Jaipur and 1 site (5.0 percent) in Bharatpur and a mere 4 sites (9.1 percent) (all in Jaipur) registered “High” effectiveness. This shows that not only is the physical integrity of ditch fencing weak, but its functional performance is also extremely limited, with the vast majority falling into the ineffective category. The ditch fencing was either filled with soil or damaged by Neelgai, stray animals & cattles. Sometimes it was damaged by local community/encroachers for their vested interest.

Shortfall and Additional Volume in Ditch Fencing

The volume-related discrepancies in ditch fencing further highlight implementation inconsistencies. In terms of shortfall, the highest category was "0–10% shortfall," observed in 17 sites (44.7 percent). Sambhag-wise, 10 sites from Jaipur (40.0 percent) and 7 sites from Bharatpur (53.8 percent). The "11–20%" shortfall was seen in 6 sites (15.8 percent) viz. 5 from Jaipur (20.0 percent) and 1 from Bharatpur (7.7 percent), while the most severe category — "21% & above" — affected 15 sites (39.5 percent) in total viz. 10 sites from Jaipur (40.0 percent) & 5 sites from Bharatpur (38.5 percent)). On the other hand, additional volume in ditch fencing was reported in 16 sites (61.5 percent) with a "0–10%" excess, again majorly from Jaipur 12 sites (63.2 percent) and a few from Bharatpur 4 sites (57.1 percent). Higher excesses were less common but still present: the "11–20%" additional volume was reported in 3 sites (11.5 percent), and "21% & above" in 7 sites (26.9 percent) — 5 sites (26.3 percent) from Jaipur and 2 sites (28.6 percent) from Bharatpur. These figures suggest that even where ditch fencing has been implemented, it lacks volumetric accuracy. Jaipur



Sambhag consistently records higher instances of both shortfall and surplus, indicating fluctuating field-level execution.



Table 4.1: Status of Ditch fencing

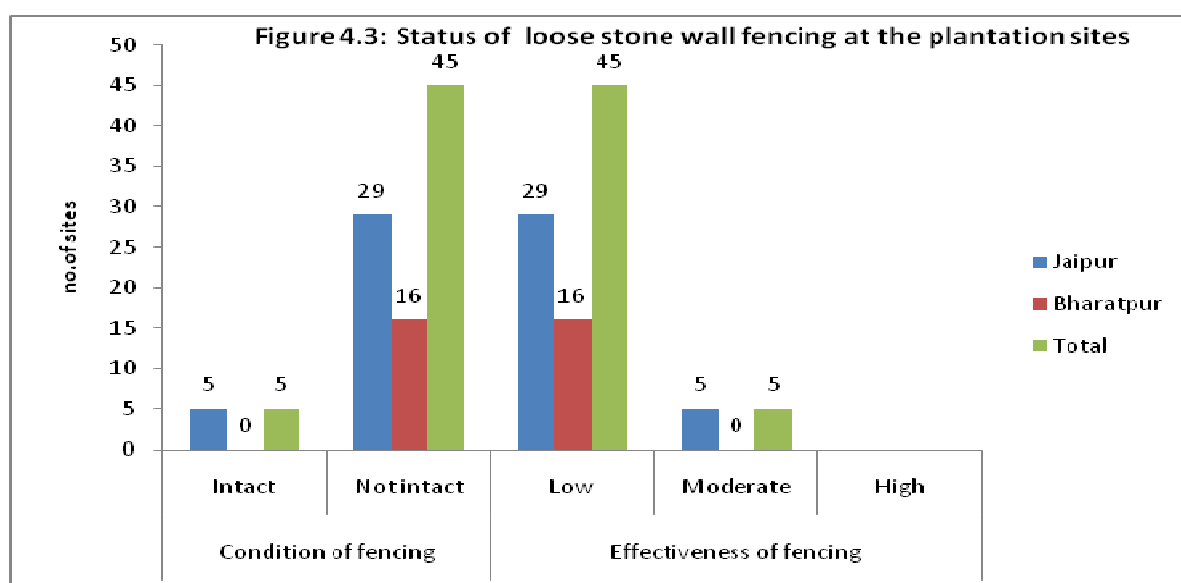
S.N o.	Division (Sambh ag)	Division	Total No. of sampl e sites in the divisi on	Shortfall (Volume)in fencing				Additional (Volume) in fencing				Condition of the fencing			Effectiveness of the fencing			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total	Intact	Not Intact	Total	Low	Moder ate	High	Total
1	Jaipur	Alwar	9	2 (28.6)	2 (28.6)	3 (42.9)	7 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)	7 (77.8)	2 (22.2)	9 (100.0)	2 (22.2)	4 (44.4)	3 (33.3)	9 (100.0)
2	Jaipur	Dausa	12	1 (14.3)	1 (14.3)	5 (71.4)	7 (100.0)	4 (80.0)	1 (20.0)	0 (0.0)	5 (100.0)	0 (0.0)	12 (100.0)	12 (100.0)	12 (100.0)	0 (0.0)	0 (0.0)	12 (100.0)
3	Jaipur	Jaipur	4	3 (75.0)	1 (25.0)	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (25.0)	3 (75.0)	4 (100.0)	3 (75.0)	1 (25.0)	0 (0.0)	4 (100.0)
4	Jaipur	Jaipur (North)	4	1 (100.0)	0 (0.0)	0	1 (100.0)	1 (33.3)	0 (0.0)	2 (66.7)	3 (100.0)	0 (0.0)	4 (100.0)	4 (100.0)	4 (100.0)	0 (0.0)	0 (0.0)	4 (100.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
6	Jaipur	Jhunjhunu	7	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	3 (60.0)	0 (0.0)	2 (40.0)	5 (100.0)	4 (66.7)	2 (33.3)	6 (100.0)	2 (33.3)	4 (66.7)	0 (0.0)	6 (100.0)
7	Jaipur	Sikar	8	1 (33.3)	0 (0.0)	2 (66.7)	3 (100.0)	1 (33.3)	1 (33.3)	1 (33.3)	3 (100.0)	0 (0.0)	6 (100.0)	6 (100.0)	6 (100.0)	0 (0.0)	0 (0.0)	6 (100.0)
8	Jaipur	Sariska Alwar	2	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)
Sub total (A)			47	10 (40.0)	5 (20.0)	10 (40.0)	25 (100.0)	12 (63.2)	2 (10.5)	5 (26.3)	19 (100.0)	13 (29.5)	31 (70.5)	44 (100.0)	31 (70.5)	9 (20.5)	4 (9.1)	44 (100)

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Shortfall (Volume) in fencing				Additional (Volume) in fencing				Condition of the fencing			Effectiveness of the fencing			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total	Intact	Not Intact	Total	Low	Moderate	High	Total
9	Bharatpur	Bharatpur	5	1 (33.3)	1 (33.3)	1 (33.3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)	3 (100.0)	0 (0.0)	0 (0.0)	3 (100.0)
10	Bharatpur	Dholpur	6	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
11	Bharatpur	Karauli	7	2 (66.7)	0 (0.0)	1 (33.3)	3 (100.0)	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)	0 (0.0)	5 (100.0)	5 (100.0)	5 (100.0)	0 (0.0)	0 (0.0)	5 (100.0)
12	Bharatpur	Sawai Madhopur	7	3 (100.0)	0 (0.0)	0 (0.0)	3 (100.0)	2 (50.0)	0 (0.0)	2 (50.0)	4 (100.0)	0 (0.0)	7 (100.0)	7 (100.0)	7 (100.0)	0 (0.0)	0 (0.0)	7 (100.0)
13	Bharatpur	NCS Dholpur	4	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)	3 (100.0)	0 (0.0)	0 (0.0)	3 (100.0)
14	Bharatpur	RTR -II, Karauli	1	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
Sub total (B)			30	7 (53.8)	1 (7.7)	5 (38.5)	13 (100.0)	4 (57.1)	1 (14.3)	2 (28.6)	7 (100.0)	1 (5.0)	19 (95.0)	20 (100.0)	19 (95.0)	1 (5.0)	0 (0.0)	20 (100.0)
Grand Total			77	17 (44.7)	6 (15.8)	15 (39.5)	38 (100.0)	16 (61.5)	3 (11.5)	7 (26.9)	26 (100.0)	14 (21.9)	50 (78.1)	64 (100.0)	50 (78.1)	10 (15.6)	4 (6.3)	64 (100.0)

Note: Figures in the brackets are the percentages

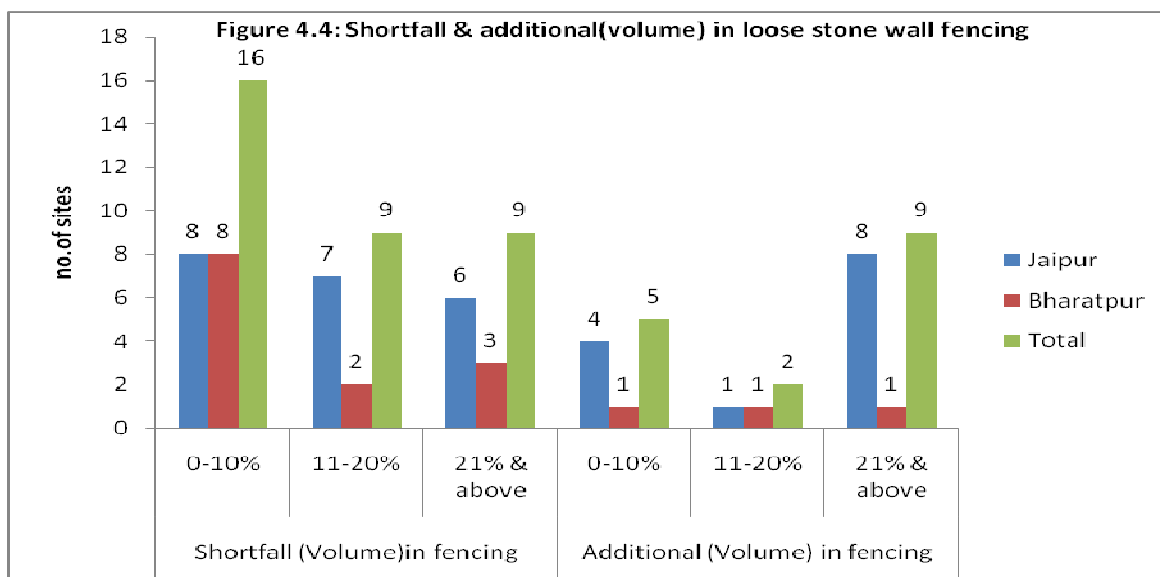
(b) Loose stone wall fencing

The loose stone wall fencing was reported in 50 plantation sites (64.9 percent). Sambhag-wise, the loose stone wall fencing was reported in 34 plantation sites (72.3 percent) in Jaipur, whereas in Bharatpur Sambhag the loose stone wall fencing was reported in 16 plantation sites (53.3 percent). The status of loose stone wall fencing is also problematic. Only 5 sites (10.0 percent) reported fencing in “Intact” condition, all from Jaipur, with Bharatpur showing none. A significantly larger number — 45 sites (90.0 percent) in total viz. 29 sites (85.3 percent) in Jaipur Sambhag & 16 sites (100.0 percent) in Bharatpur Sambhag — had “Not intact” fencing, indicating poor maintenance. The effectiveness data mirrors this finding: 45 sites (90.0 percent) were rated as having “Low” effectiveness (again split as 29 in Jaipur, 16 in Bharatpur Sambhag), while only 5 sites (10.0 percent) had “Moderate” effectiveness — all from Jaipur Sambhag. No site reported “High” effectiveness, highlighting a complete absence of best-case performance. This reflects that loose stone wall fencing is not only structurally compromised in most sites but also functionally inadequate, particularly in Bharatpur Sambhag.



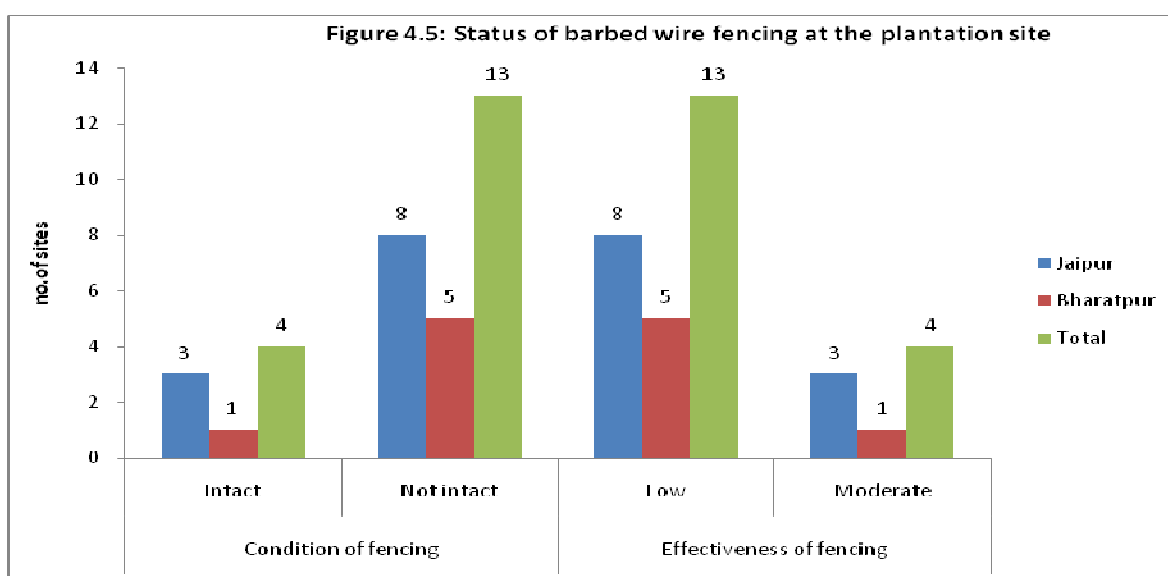
Shortfall and Additional Volume in Loose Stone Wall Fencing

Volume discrepancies in loose stone wall fencing reinforce the trend of inconsistent implementation. For shortfall, the highest count falls in the "0–10%" range — 16 sites (47.1 percent) in total, evenly split i.e. 8 sites each between Jaipur (38.1 percent) and Bharatpur (61.5 percent) Sambhag. The "11–20%" range affected 9 sites (26.5 percent) viz. 7 sites in Jaipur (33.3 percent) & 2 sites in Bharatpur (15.4 percent) Sambhag, and the most severe category — "21% & above" — accounted for another 9 sites (26.5 percent) i.e. 6 sites in Jaipur (28.6 percent) & 3 sites (23.1 percent) in Bharatpur Sambhag. In terms of additional volume, the majority again fell into the highest band (21% & above), with 9 sites (56.3 percent) showing this issue. Lower excess volumes i.e. "0–10%" range was observed in 05 sites (31.3 percent), whereas 2 sites (12.5 percent) fell in the "11–20%" range. These fluctuations in both shortfall and excess suggest measurement or execution lapses during field implementation.



(c) Barbed wire fencing

The barbed wire fencing was reported in 17 plantation sites (22.1 percent). Sambhag-wise, the barbed wire fencing was reported in 11 plantation sites (23.4 percent) in Jaipur, whereas, in Bharatpur Sambhag the same was reported in 06 plantation sites (20 percent). Out of 17



sites where barbed-wire fences inspected, only in 4 sites (23.5 percent) the barbed wire fencing remained intact i.e. 3 sites (27.3 percent) in Jaipur Sambhag & 1 site (16.7 percent) in Bharatpur Sambhag, while in 13 sites (76.5 percent) the same was judged “Not intact.” Functionally, in 13 sites (76.5 percent) the effectiveness of barbed wire fencing performed at a “Low” level -8 sites (72.7 percent) in Jaipur Sambhag & 5 sites (83.3 percent) in Bharatpur Sambhag and only in 4 sites (23.5 percent) at “Moderate” effectiveness; none attained “High.” The wire of barbed wire fencing was either damaged & fallen on the ground or its wire remains loose at many places. The poles of the barbed wire fencing were broken & were lying on the ground.

These findings make clear that post-installation checks—tensioning, anchoring, and routine maintenance—are as vital as initial construction for ensuring long-term barrier performance and plantation protection.

Table 4.2: Status of Loose stone wall fencing

S.No.	Division (Sambha g)	Division	Total No. of sample sites in the division	Shortfall (Volume) in fencing				Additional (Volume) in fencing				Condition of the fencing			Effectiveness of fencing		
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total	Intact	Not Intact	Total	Low	Moderate	Total
1	Jaipur	Alwar	9	0 (0.0)	3 (100.0)	0 (0.0)	3 (100.0)	1 (16.7)	0 (0.0)	5 (83.3)	6 (100.0)	2 (22.2)	7 (77.8)	9 (100.0)	7 (77.8)	2 (22.2)	9 (100.0)
2	Jaipur	Dausa	12	4 (57.1)	1 (14.3)	2 (28.6)	7 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	8 (100.0)	8 (100.0)	8 (100.0)	0 (0.0)	8 (100.0)
3	Jaipur	Jaipur	4	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)
4	Jaipur	Jaipur (North)	4	0 (0.0)	2 (66.7)	1 (33.3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (66.7)	1 (33.3)	3 (100.0)	1 (33.3)	2 (66.7)	3 (100.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)
6	Jaipur	Jhunjhunu	7	2 (66.7)	0 (0.0)	1 (33.3)	3 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	4 (100.0)	4 (100.0)	4 (100.0)	0 (0.0)	4 (100.0)
7	Jaipur	Sikar	8	2 (66.7)	0 (0.0)	1 (33.3)	3 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)	0 (0.0)	5 (100.0)	5 (100.0)	5 (100.0)	0 (0.0)	5 (100.0)
8	Jaipur	Sariska Alwar	2	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)
Sub total (A)			47	8 (38.1)	7 (33.3)	6 (28.6)	21 (100.0)	4 (30.8)	1 (7.7)	8 (61.5)	13 (100.0)	5 (14.7)	29 (85.3)	34 (100.0)	29 (85.3)	5 (14.7)	34 (100.0)

S.No.	Division (Sambha g)	Division	Total No. of sample sites in the division	Shortfall (Volume)in fencing				Additional (Volume) in fencing				Condition of the fencing			Effectiveness of fencing		
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total	Intact	Not Intact	Total	Low	Moderate	Total
9	Bharatpur	Bharatpur	5	3 (100.0)	0 (0.0)	0 (0.0)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)	3 (100.0)	0 (0.0)	3 (100.0)
10	Bharatpur	Dholpur	6	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)
11	Bharatpur	Karauli	7	2 (50.0)	1 (25.0)	1 (25.0)	4 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	5 (100.0)	5 (100.0)	5 (100.0)	0 (0.0)	5 (100.0)
12	Bharatpur	Sawai Madhopur	7	2 (66.7)	1 (33.3)	0 (0.0)	3 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	4 (100.0)	4 (100.0)	4 (100.0)	0 (0.0)	4 (100.0)
13	Bharatpur	NCS Dholpur	4	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)
Sub total (B)			30	8 (61.5)	2 (15.4)	3 (23.1)	13 (100.0)	1 (33.3)	1 (33.3)	1 (33.3)	3 (100.0)	0 (0.0)	16 (100.0)	16 (100.0)	16 (100.0)	0 (0.0)	16 (100.0)
Grand Total			77	16 (47.1)	9 (26.5)	9 (26.5)	34 (100.0)	5 (31.3)	2 (12.5)	9 (56.3)	16 (100.0)	5 (10.0)	45 (90.0)	50 (100.0)	45 (90.0)	5 (10.0)	50 (100.0)

Note: Figures in the brackets are the percentages

Table 4.3: Status of Barbed wire fencing

S.No.	Division (Sambha g)	Division	Total No. of sample sites in the division	Shortfall (Length)in fencing				Additional (Length) in fencing				Condition of the fencing			Effectiveness of fencing		
				0-10%	11-20%	21 & above	Total	0-10%	11-20%	21 & above	Total	Intact	Not Intact	Total	Low	Moderate	Total
1	Jaipur	Alwar	9	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2	Jaipur	Dausa	12	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
3	Jaipur	Jaipur	4	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)
4	Jaipur	Jaipur (North)	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	7	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	4 (100.0)	0 (0.0)	0 (0.0)	4 (100.0)	3 (60.0)	2 (40.0)	5 (100.0)	2 (40.0)	3 (60.0)	5 (100.0)
7	Jaipur	Sikar	8	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	5 (100.0)	0 (0.0)	0 (0.0)	5 (100.0)	0 (0.0)	5 (100.0)	5 (100.0)	5 (100.0)	0 (0.0)	5 (100.0)
8	Jaipur	Sariska Alwar	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		47	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)	9 (100.0)	0 (0.0)	0 (0.0)	9 (100.0)	3 (27.3)	8 (72.7)	11 (100.0)	8 (72.7)	3 (27.3)	11 (100.0)
9	Bharatpur	Bharatpur	5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)

S.No.	Division (Sambha g)	Division	Total No. of sample sites in the division	Shortfall (Length)in fencing				Additional (Length) in fencing				Condition of the fencing			Effectiveness of fencing		
				0-10%	11-20%	21 & above	Total	0-10%	11-20%	21 & above	Total	Intact	Not Intact	Total	Low	Moderate	Total
10	Bharatpur	Dholpur	6	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
11	Bharatpur	Karauli	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (60.0)	1 (20.0)	1 (20.0)	5 (100.0)	0 (0.0)	5 (100.0)	5 (100.0)	5 (100.0)	0 (0.0)	5 (100.0)
13	Bharatpur	NCS Dholpur	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Sub total (B)			30	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (66.7)	1 (16.7)	1 (16.7)	6 (100.0)	1 (16.7)	5 (83.3)	6 (100.0)	5 (83.3)	1 (16.7)	6 (100.0)
	Grand Total		77	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)	13 (86.7)	1 (6.7)	1 (6.7)	15 (100.0)	4 (23.5)	13 (76.5)	17 (100.0)	13 (76.5)	4 (23.5)	17 (100.0)

Note: Figures in the brackets are the percentages

Barbed-Wire Fencing Length Accuracy

Length discrepancies as per field evaluation of barbed-wire fencing against MB further revealed precision issues: two sites (100 percent) under-built by $\geq 21\%$, while 13 sites (86.7 percent) over-built by 0–10 %, 01 site(6.7 percent) each by 11–20 %, & by $\geq 21\%$. This mix of severe under- and over-builds underscores the need for robust field-measurement tools and standard operating procedures for fencing installations.

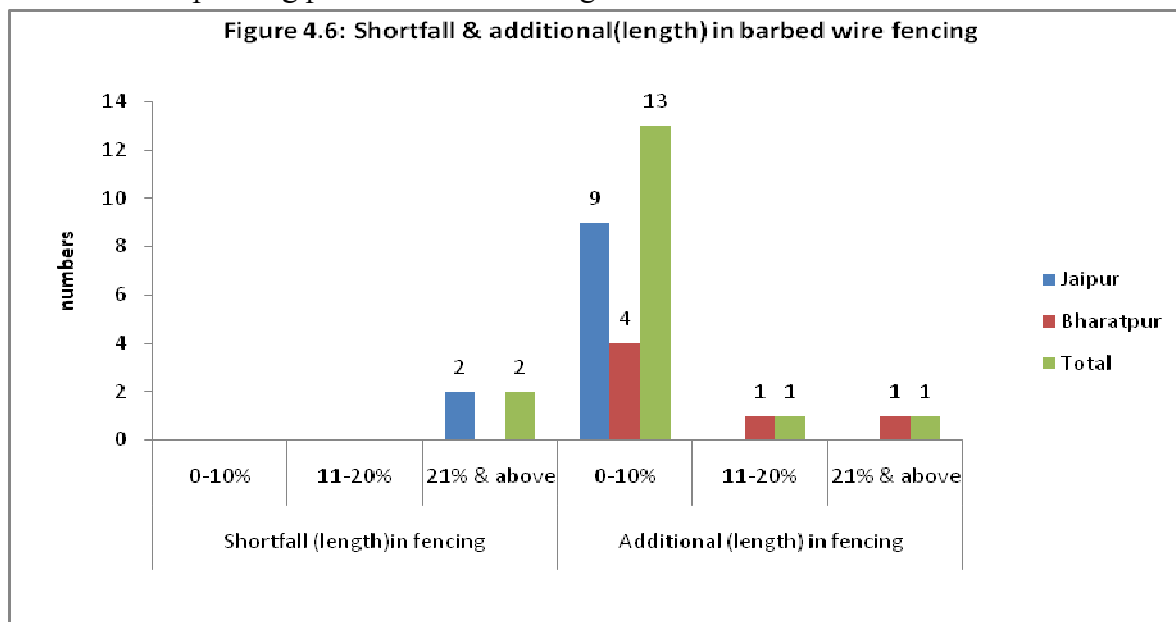


Table 4.4: Status of Hedge fencing

S.No .	Division (Sambhag)	Division	Total No. of sample sites in the division	Shortfall (Length)in fencing				Additional (Length) in fencing				Condition of the fencing			Effectiveness of fencing	
				0-10%	11-20%	21 % & above	Total	0-10%	11-20%	21 % & above	Total	Intact	Not Intact	Total	Low	Total
1	Jaipur	Alwar	9	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	1 (100.0)
2	Jaipur	Dausa	12	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)	4 (100.0)	0 (0.0)	4 (100.0)	4 (100.0)	4 (100.0)	4 (100.0)
3	Jaipur	Jaipur	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	Jaipur	Jaipur (North)	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	8	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	Jaipur	Sariska Alwar	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		47	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	5 (100.0)	0 (0.0)	0 (0.0)	5 (100.0)	0 (0.0)	6 (100.0)	6 (100.0)	6 (100.0)	6 (100.0)
9	Bharatpur	Bharatpur	5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	6	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

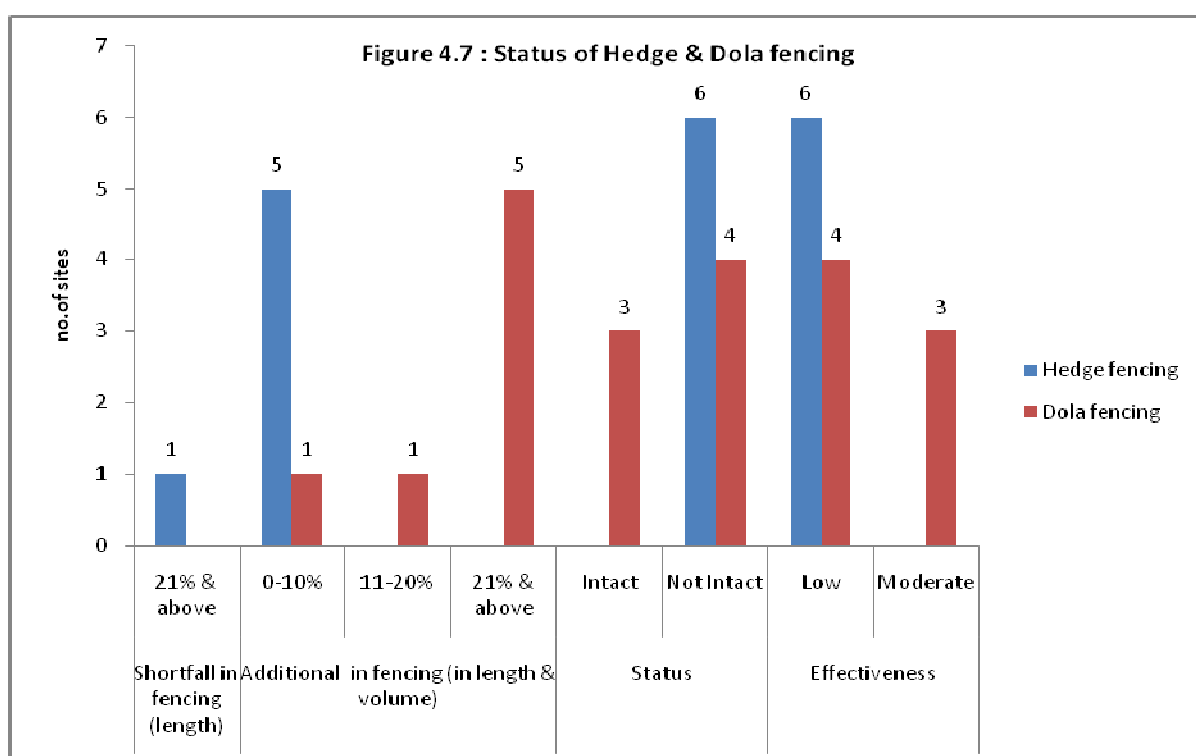
S.No .	Division (Sambhag)	Division	Total No. of sample sites in the division	Shortfall (Length)in fencing				Additional (Length) in fencing				Condition of the fencing			Effectiveness of fencing	
				0-10%	11-20%	21 % & above	Total	0-10%	11-20%	21 % & above	Total	Intact	Not Intact	Total	Low	Total
11	Bharatpur	Karauli	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
13	Bharatpur	NCS Dholpur	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		30	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Grand Total		77	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	5 (100.0)	0 (0.0)	0 (0.0)	5 (100.0)	0 (0.0)	6 (100.0)	6 (100.0)	6 (100.0)	6 (100.0)

Note: Figures in the brackets are the percentages

(d) Hedge & Dola fencing

The mix of Hedge fencing was reported only in Jaipur Sambhg at 06 plantation sites (12.8 percent). In terms of hedge fencing, across 06 sites, only one site (in Alwar) showed any shortfall (more than 20 percent), whereas 05 sites showed additional (length) against MB (up to 10 percent). The status of hedge fencing was not intact in all the 06 sites. However, the overall effectiveness of hedge fencing remained low across the board, with 100% of sites reporting poor performance.

The Dola fencing was reported only in Bharatpur Sambhag (Dholpur & NCS Dholpur division) at 07 plantation sites (23.3 percent). Dola fencing exhibited a similar pattern of limited intervention. There was additional (volume) against MB in dola fencing in all the 07 plantation sites (100 percent). Regarding range of additional (volume) in dola fencing, the same was reported up to 10 percent & between 11-20 percent in 01 plantation site (14.3 percent) each & more than 20 percent in 05 plantation sites (71.4 percent). The dola fencing was found not intact in 04 sites (57.1 percent), whereas the same was found intact in 03 sites (42.9 percent). The effectiveness ranged between moderate and low. Overall, only 3 sites (42.9 percent) across both divisions had intact dola fencing, and the effectiveness was still below optimal, with just 42.9% categorized as moderately effective.



Conclusion

Across various fencing types (ditch, loose stone wall, barbed wire, hedge & dola), the data reveals persistent problems in structural integrity, functional effectiveness, and volumetric & length accuracy. Most fences were found either not intact or ineffective, and both under-construction (shortfall) and over-construction (additional volume). The absence of “High” effectiveness ratings in various fencing types is particularly notable and reinforces the need for stricter quality control, improved supervision, and training at the site level.

The physical integrity of ditch fencing was weak & its functional performance is also extremely limited, with the vast majority falling into the ineffective category. The ditch fencing was either filled with soil or damaged by Neel gai, stray animals & cattles. Sometimes it was damaged by local community/encroachers for their vested interest. The volume-related discrepancies in ditch fencing further highlight implementation inconsistencies. Even where ditch fencing has been implemented, it lacks volumetric accuracy. Jaipur Sambhag consistently records higher instances of both shortfall and surplus, indicating fluctuating field-level execution. Also, loose stone wall fencing is not only structurally compromised in most sites but also functionally inadequate, particularly in Bharatpur Sambhag. Volume discrepancies in loose stone wall fencing reinforce the trend of inconsistent implementation. The fluctuations in both shortfall and excess suggest measurement or execution lapses during field implementation. In case of barbed wire fencing in majority of sites (76.5 percent) the effectiveness of barbed wire fencing performed at a “Low” level. The wire of barbed wire fencing was either damaged & fallen on the ground or its wire remains loose at many places. The poles of the barbed wire fencing were broken & were lying on the ground. The status of hedge fencing was not intact in all the 06 sites. However, the overall effectiveness of hedge fencing remained low across the board, with 100% of sites reporting poor performance. The effectiveness of dola fencing ranged between moderate and low. Overall, only 3 sites (42.9 percent) across both divisions had intact dola fencing, and the effectiveness was still below optimal, with just 42.9% categorized as moderately effective.



Table 4.5: Status of Dola fencing

S. No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Shortfall (volume)in fencing				Additional (Volume) in fencing				Condition of the fencing			Effectiveness of fencing		
				0-10%	11-20%	21 & above	Total	0-10%	11-20%	21 & above	Total	Intact	Not Intact	Total	Low	Moderate	Total
1	Jaipur	Alwar	9	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2	Jaipur	Dausa	12	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
3	Jaipur	Jaipur	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	Jaipur	Jaipur (North)	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	8	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	Jaipur	Sariska Alwar	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Sub total (A)			47	0	0	0	0	0	0	0	0	0	0	0	0	0	0

S. No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Shortfall (volume)in fencing				Additional (Volume) in fencing				Condition of the fencing			Effectiveness of fencing		
				0-10%	11-20%	21 & above	Total	0-10%	11-20%	21 & above	Total	Intact	Not Intact	Total	Low	Moderate	Total
9	Bharatpur	Bharatpur	5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	6	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (20.0)	1 (20.0)	3 (60.0)	5 (100.0)	2 (40.0)	3 (60.0)	5 (100.0)	3 (60.0)	2 (40.0)	5 (100.0)
11	Bharatpur	Karauli	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
13	Bharatpur	NCS Dholpur	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)	1 (50.0)	1 (50.0)	2 (100.0)	1 (50.0)	1 (50.0)	2 (100.0)
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Sub total (B)			30	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (14.3)	1 (14.3)	5 (71.4)	7 (100.0)	3 (42.9)	4 (57.1)	7 (100.0)	4 (57.1)	3 (42.9)	7 (100.0)
	Grand Total		77	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (14.3)	1 (14.3)	5 (71.4)	7 (100.0)	3 (42.9)	4 (57.1)	7 (100.0)	4 (57.1)	3 (42.9)	7 (100.0)

Note: Figures in the brackets are the percentage

Table 4.5A: Details of Ditch Fencing (Site-wise)

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Ditch Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
1	Jaipur	Alwar	Thanagazi	Jhiri-A	ANR	2020-21	50	Fifth	1030	1082	990	1425.6	40	-343.6	Intact	High
2	Jaipur	Alwar	Thanagazi	Dudu Ki Dhani	ANR	2021-22	50	Fourth	410	482	380	547.2	30	-65.2	Intact	Medium
3	Jaipur	Alwar	Thanagazi	Lotawas-A	ANR	2022-23	50	Third	2191	2337	2080	2995.2	111	-658.2	Not Intact	Low
4	Jaipur	Alwar	Thanagazi	Hanuman Ka Gwada	RDF-II	2023-24	50	Second	1520	2302	1500	2160	20	142	Intact	High
5	Jaipur	Alwar	Rajgarh	Jogiyon ki Dhani	ANR	2023-24	50	Second	295	401	279	401.76	16	-0.76	Not Intact	Low
6	Jaipur	Alwar	Rajgarh	Dera	ANR	2023-24	50	Second	2127	2420	2000	2880	127	-460	Intact	High
7	Jaipur	Alwar	Tijara	Balouj	ANR	2023-24	100	Second	3280	4672.45	3050	4392	230	280.45	Intact	Medium
8	Jaipur	Alwar	Alwar	Todiyar	RDF-II	2023-24	50	Second	1940	2450	1895	2728	45	-278	Intact	Medium
9	Jaipur	Alwar	Kishangar was	Lisadi	RDF-II	2023-24	50	Second	2430	2643	2400	3456	30	-813	Intact	Medium
10	Jaipur	Dausa	Sikrai	Moroli	ANR	2020-21	50	Fifth	1235	1545.7	1220	1756.8	15	-211.1	Not Intact	Low
11	Jaipur	Dausa	Sikrai	Lanka-B	RDF-II	2023-24	50	Second	2894	4914.58	2868	4129.9	26	784.66	Not Intact	Low
12	Jaipur	Dausa	Sikrai	Amor Moroli	PCA	2023-24	50	Second	3803	5501.86	3740	5385.6	63	116.26	Not Intact	Low
13	Jaipur	Dausa	Lalsot	PLP Sanwasa	Other	2021-22	25	Fourth	3930	3440.85	3900	5616	30	-2175.1	Not Intact	Low

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Ditch Fencing							
									Length (Evaluate)	Volume (Cum Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
														5		
14	Jaipur	Dausa	Lalsot	Dholi-B	ANR	2021-22	50	Fourth	3503	3701.05	3429	4937.76	74	-1236.71	Not Intact	Low
15	Jaipur	Dausa	Lalsot	Padol-A	ANR	2023-24	50	Second	1080	1433.1	960	1382.4	120	50.7	Not Intact	Low
16	Jaipur	Dausa	Mahuwa	Padla -A	ANR	2023-24	50	Second	2040	2063.25	2008	2900	32	-836.75	Not Intact	Low
17	Jaipur	Dausa	Mahuwa	Gagwana-A	RDF-II	2023-24	50	Second	2060	2031.08	2050	3170.3	10	-1139.17	Not Intact	Low
18	Jaipur	Dausa	Dausa	Lahadiwala	RDF-II	2022-23	55	Third	2045	1685.27	2000	2880	45	-1194.73	Not Intact	Low
19	Jaipur	Dausa	Dausa	EOP Ganshpura	EOP	2023-24	50	Second	1080	1339.2	1000	1440	80	-100.8	Not Intact	Low
20	Jaipur	Dausa	Bandikui	Dalalpura	ANR	2022-23	50	Third	1475	2083	1430	2059.2	45	23.8	Not Intact	Low
21	Jaipur	Dausa	Bandikui	Anantwara	RDF-II	2023-24	40	Second	3565	4977.93	3400	4896	165	81.93	Not Intact	Low
22	Jaipur	Jaipur	Amer	Jain Mandir Kukas	ANR	2021-22	50	Fourth	2245	3089.36	2240	3225.6	5	-136.24	Not intact	Low
23	Jaipur	Jaipur	Amer	Mundota	ACA	2023-24	11	Second	1586	1870.51	1600	2304	-14	-433.49	Not intact	Low
24	Jaipur	Jaipur	Amer	Kukas park ke Piche	RDF-II	2023-24	50	Second	4357	5723.18	4100	5904	257	-180.82	Not intact	Low
25	Jaipur	Jaipur	Phagi	Pahadiya	RDF	2022-	50	Thir	3640	5010	3400	4896	240	114	Intact	Medium

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Ditch Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
				Main	-II	23		d								
26	Jaipur	Jaipur (North)	Achrol	Bilochi-A	ANR	2021-22	50	Fourth	3603	4993.47	2700	3888	903	1105.47	Not intact	Low
27	Jaipur	Jaipur (North)	Achrol	Foot ka Baas	RDF-II	2023-24	50	Second	1445	2080.8	1052.5	1515.6	392.5	565.2	Not intact	Low
28	Jaipur	Jaipur (North)	Shahpura	Malera Kumbhawas-III	ANR	2022-23	50	Third	2774	3329.65	2536	3651.84	238	-322.19	Not intact	Low
29	Jaipur	Jaipur (North)	Shahpura	Lobadawas	NFL	2023-24	4	Second	1180	1542.7	1050	1512	130	30.7	Not intact	Low
30	Jaipur	Jaipur (Wildlife)	Ajabgarh	Billu Ki Khan	ANR	2023-24	40	Second	2582	3718.08	2503	3604.32	79	113.76	Intact	High
31	Jaipur	Jhunjhunu	Jhunjhunu	Ladsar	SDS	2021-22	14	Third	1065	1558.6	1062	1529	3	29.6	Intact	Medium
32	Jaipur	Jhunjhunu	Chirawa	Urika	SDS	2023-24	20	Second	1912	2302.57	1900	2736	12	-433.43	Intact	Medium
33	Jaipur	Jhunjhunu	Khetri	Chirani-I	RDF-I	2022-23	50	Third	2764	4140	2050	2952	714	1188	Intact	Medium
34	Jaipur	Jhunjhunu	Khetri	Mehar Ki Dhani	ANR	2022-23	50	Third	1785	2571.6	1750	2520	35	51.6	Intact	Medium
35	Jaipur	Jhunjhunu	Khetri	Bansiyal	RDF-II	2023-24	50	Second	1117	1608	1100	1584	17	24	Not Intact	Low
36	Jaipur	Jhunjh	Khetri	Nalpur-III	AN	2023-	50	Seco	1542	2711.8	1500	2160	42	551.89	Not	Low

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Ditch Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
		unu			R	24		nd		9					Intact	
37	Jaipur	Sikar	Srimadhapur	Nare-IV	SDS	2023-24	25	Second	3227	3687.33	3225	4644	2	-956.67	Not Intact	Low
38	Jaipur	Sikar	Srimadhapur	Mangarh	SDS	2023-24	25	Second	1400	1928.65	1400	2016	0	-87.35	Not Intact	Low
39	Jaipur	Sikar	Neem Ka Thana	Palasala-I	RDF-II	2023-24	50	Second	445	655.5	435	626.4	10	29.1	Not Intact	Low
40	Jaipur	Sikar	Neem Ka Thana	Deepawas-II	RDF-II	2023-24	50	Second	100.1	81.08	100	144	0.1	-62.92	Not Intact	Low
41	Jaipur	Sikar	Patan	Baorikala Kota-I	RDF-I	2023-24	50	Second	2775	3856.63	1539.45	2217	1235.55	1639.83	Not Intact	Low
42	Jaipur	Sikar	Danta	Manda Surera	ANR	2023-24	50	Second	1975	3249.8	1937.5	2790	37.5	459.8	Not Intact	Low
43	Jaipur	Sariska Alwar	Tehla	Nadoli	NFL	2017-18	85	Fourth	7032	9882.11	6979	10049.76	53	-167.65	Not Intact	Low
44	Jaipur	Sariska Alwar	Sariska	Kharrika	RDF-II	2022-23	50	Third	2700	3683.45	2650	3816	50	-132.55	Not Intact	Low
45	Bharatpur	Bharatpur	Bayana	Jarkhor-2	RDF-II	2023-24	50	Second	55	45	50	72	5	-27	Not Intact	Low
46	Bharatpur	Bharatpur	Deeg	Pahadtal-3	ANR	2023-24	50	Second	1780	2146	1775	2556	5	-410	Not Intact	Low
47	Bharatpur	Bharatpur	Nadbai	Kamalpur	Other	2022-23	25	Third	1890	2414	1800	2592	90	-178	Not Intact	Low
48	Bharatpur	Dholpur	Dholpur	Hatiyakhar-A	ANR	2023-24	50	Second	3050	4392	2970	4276.8	80	115.2	Intact	Medium

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Ditch Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
49	Bharatpur	Karauli	Karauli	Tal Ke Upar Soraya Kosra	PCA	2023-24	5	Second	1300	1577	1000	1444	300	133	Not Intact	Low
50	Bharatpur	Karauli	Sapotra	Masavta	ANR	2023-24	50	Second	3200	3100	3040	4377.6	160	-1277.6	Not Intact	Low
51	Bharatpur	Karauli	Sapotra	Lediya	RDF-I	2023-24	50	Second	1655	2147	1650	2376	5	-229	Not Intact	Low
52	Bharatpur	Karauli	Sapotra	Adadugar	RDF-II	2023-24	50	Second	2610	4020	2443	3517.9	167	502.08	Not Intact	Low
53	Bharatpur	Karauli	Hindon	Medkapura	RDF-II	2023-24	50	Second	4080	5741	4050	5832	30	-91	Not Intact	Low
54	Bharatpur	Sawai Madhopur	Gangapur City	Bucholai 2nd	RDF-II	2021-22	50	Fourth	430	577	400	576	30	1	Not Intact	Low
55	Bharatpur	Sawai Madhopur	Gangapur City	Safeda Ki Khan	RDF-II	2023-23	50	Third	2460	3677.32	2370	3412.8	90	264.52	Not Intact	Low
56	Bharatpur	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri	RDF-II	2023-23	50	Third	1630	1772.2	1350	1944	280	-171.8	Not Intact	Low
57	Bharatpur	Sawai Madhopur	Sawai Madhopur	Khedli-1	ANR	2023-23	50	Third	3535	4762.53	3530	5083.2	5	-320.67	Not Intact	Low
58	Bharatpur	Sawai Madhopur	Sawai Madhopur	Todolai- 2nd	RDF-II	2023-24	50	Second	586	742.13	570	820.8	16	-78.67	Not Intact	Low
59	Bharatpur	Sawai Madhopur	Sawai Madhopur	Isarda Balajist	RDF-II	2023-24	50	Second	1635	2730.48	1550	2232	85	498.48	Not Intact	Low

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Ditch Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
60	Bharatpur	Sawai Madhopur	Bonli	Jailalpura	ANR	2023-24	50	Second	2442	5095.32	2270	3268.8	172	1826.52	Not Intact	Low
61	Bharatpur	NCS Dholpur	Itawa	Amalda	ANR	2021-22	50	Fourth	3303	3336.27	3121	4494.2	182	-1157.93	Not Intact	Low
62	Bharatpur	NCS Dholpur	WL Chambal, Dholpur	Datilo	RDF-II	2023-24	50	Second	3467	3869	3395	4896	72	-1027	Not Intact	Low
63	Bharatpur	NCS Dholpur	WL Chambal, Dholpur	Acheleshwar Mahavev	RDF-II	2023-24	50	Second	3400	3892	3400	4896	0	-1004	Not Intact	Low
64	Bharatpur	RTR - II, Karauli	Mandrayal	Toda Ki Puliya	ANR	2023-24	50	Second	3100	3861.25	2910	4190.4	190	-329.15	Not Intact	Low

Table 4.5B: Details of Loose Stone Wall Fencing (Site-wise)

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Loose Stone wall Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
1	Jaipur	Alwar	Thanagazi	Jhiri-A	ANR	2020-21	50	Fifth	1730	1286	1465	1230.6	265	55.4	Intact	Medium
2	Jaipur	Alwar	Thanagazi	Dudu Ki Dhani	ANR	2021-22	50	Fourth	3136	2223	3030	2545.2	106	-322.2	Not Intact	Low
3	Jaipur	Alwar	Thanagazi	Lotawas-A	ANR	2022-23	50	Third	2007	1268	2000	1680	7	-412	Not Intact	Low
4	Jaipur	Alwar	Thanagazi	Hanuman Ka Gwada	RDF-II	2023-24	50	Second	1227	793	1100	924	127	-131	Intact	Medium
5	Jaipur	Alwar	Rajgarh	Jogiyon ki Dhani	ANR	2023-24	50	Second	2180	1465	2100	1764	80	-299	Not Intact	Low
6	Jaipur	Alwar	Rajgarh	Dera	ANR	2023-24	50	Second	2860	667	2500	2100	360	-1433	Not Intact	Low
7	Jaipur	Alwar	Tijara	Balouj	ANR	2023-24	100	Second	2135	962	1500	1260	635	-298	Not Intact	Low
8	Jaipur	Alwar	Alwar	Todiyar	RDF-II	2023-24	50	Second	2425	1544	2310	1940.4	115	-396.4	Not Intact	Low
9	Jaipur	Alwar	Kishangar was	Lisadi	RDF-II	2023-24	50	Second	1264	664	1150	966	114	-302	Not Intact	Low
10	Jaipur	Dausa	Sikrai	Moroli	ANR	2020-21	50	Fifth	2355	1522.5	2350	1974	5	-451.5	Not Intact	Low
11	Jaipur	Dausa	Sikrai	Lanka-B	RDF-II	2023-24	50	Second	597	492.98	525	402.3	72	90.68	Not Intact	Low
12	Jaipur	Dausa	Sikrai	Amor Moroli	PCA	2023-24	50	Second	958	568.29	890	677.85	68	-109.56	Not Intact	Low

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Loose Stone wall Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
13	Jaipur	Dausa	Lalsot	Padol-A	ANR	2023-24	50	Second	2340	1839.6	2280	1915.2	60	-75.6	Not Intact	Low
14	Jaipur	Dausa	Mahuwa	Padla -A	ANR	2023-24	50	Second	1468	1033.78	1125	1127.25	343	-93.47	Not Intact	Low
15	Jaipur	Dausa	Mahuwa	Gagwana-A	RDF-II	2023-24	50	Second	1325	808.6	1300	1045.5	25	-236.9	Not Intact	Low
16	Jaipur	Dausa	Dausa	Lahadiwala	RDF-II	2022-23	55	Third	1241	922.75	1150	966	91	-43.25	Not Intact	Low
17	Jaipur	Dausa	Bandikui	Dalalpura	ANR	2022-23	50	Third	550	395.5	500	420	50	-24.5	Not Intact	Low
18	Jaipur	Jaipur	Amer	Jain Mandir Kukas	ANR	2021-22	50	Fourth	1215	875.93	1210	1742.4	5	-866.47	Not intact	Low
19	Jaipur	Jaipur	Phagi	Pahadiya Main	RDF-II	2022-23	50	Third	480	403.2	410	344.4	70	58.8	Not Intact	Low
20	Jaipur	Jaipur (North)	Achrol	Bilochi-A	ANR	2021-22	50	Fourth	755	361	500	420	255	-59	Intact	Medium
21	Jaipur	Jaipur (North)	Achrol	Foot ka Baas	RDF-II	2023-24	50	Second	2700	1573.13	2260	1898.4	440	-325.27	Not intact	Low
22	Jaipur	Jaipur (North)	Shahpura	Malera Kumbhawas-III	ANR	2022-23	50	Third	970	744.8	600	504	370	240.8	Intact	Medium
23	Jaipur	Jaipur (Wildlife)	Ajabgarh	Billu Ki Khan	ANR	2023-24	40	Second	108.6	91.224	108	90.72	0.6	0.504	Intact	Medium
24	Jaipur	Jhunjh	Khetri	Chirani-I	RDF	2022-	50	Thir	300	231	300	252	0	-21	Not	Low

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Loose Stone wall Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
		unu			-I	23		d							Intact	
25	Jaipur	Jhunjhunu	Khetri	Mehar Ki Dhani	ANR	2022-23	50	Third	820	625.43	800	672	20	-46.57	Not Intact	Low
26	Jaipur	Jhunjhunu	Khetri	Bansiyal	RDF-II	2023-24	50	Second	233	179	400	336	-167	-157	Not Intact	Low
27	Jaipur	Jhunjhunu	Khetri	Nalpur-III	ANR	2023-24	50	Second	708	351	250	210	458	141	Not Intact	Low
28	Jaipur	Sikar	Neem Ka Thana	Palasala-I	RDF-II	2023-24	50	Second	1115	893.55	1100	924	15	-30.45	Not Intact	Low
29	Jaipur	Sikar	Neem Ka Thana	Deepawas-II	RDF-II	2023-24	50	Second	1980.1	1383.26	3200	2688	-1219.9	-1304.74	Not Intact	Low
30	Jaipur	Sikar	Patan	Baorikala Kota-I	RDF-I	2023-24	50	Second	1045	860.65	1000	840	45	20.65	Not Intact	Low
31	Jaipur	Sikar	Sikar	Pandora-I	RDF-II	2022-23	50	Third	1860	1530.9	1830	1537.2	30	-6.3	Not Intact	Low
32	Jaipur	Sikar	Danta	Manda Surera	ANR	2023-24	50	Second	925	770	900	756	25	14	Not Intact	Low
33	Jaipur	Sariska Alwar	Tehla	Nadoli	NFL	2017-18	85	Fourth	1363	947.32	1350	1134	13	-186.68	Not Intact	Low
34	Jaipur	Sariska Alwar	Sariska	Kharrika	RDF-II	2022-23	50	Third	285	234.15	250	181.87	35	52.28	Not Intact	Low
35	Bharatpur	Bharatpur	Bayana	Jarkhor	ANR	2020-21	50	Fifth	3701	3085	3696	3104	5	-19	Not Intact	Low
36	Bharatpur	Bharatpur	Bayana	Jarkhor-2	RDF-II	2023-24	50	Second	2565	2034	2500	2100	65	-66	Not Intact	Low
37	Bharatpur	Bharat	Deeg	Pahadtal-3	AN	2023-	50	Second	1065	860	1035	869.4	30	-9.4	Not	Low

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Loose Stone wall Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
	ur	pur			R	24		nd							Intact	
38	Bharatpur	Dholpur	Sarmathra	Hariyawali	ANR	2021-22	50	Fourth	810	695	800	672	10	23	Not Intact	Low
39	Bharatpur	Dholpur	Van Vihar	Karas Ka Dada	ANR	2023-24	50	Second	1855	1043	1800	1512	55	-469	Not Intact	Low
40	Bharatpur	Karauli	Karauli	Gandhiji Ateva	RDF-I	2020-21	50	Fifth	4295	3441	4280	3595	15	-154	Not Intact	Low
41	Bharatpur	Karauli	Sapotra	Masavta	ANR	2023-24	50	Second	140	74	200	168	-60	-94	Not Intact	Low
42	Bharatpur	Karauli	Sapotra	Lediya	RDF-I	2023-24	50	Second	1510	1056	1500	1260	10	-204	Not Intact	Low
43	Bharatpur	Karauli	Sapotra	Adadugar	RDF-II	2023-24	50	Second	860	1369	838	703.92	22	665.08	Not Intact	Low
44	Bharatpur	Karauli	Masalpur	Jhamri Mata	ANR	2023-24	50	Second	3505	2810.85	3500	2940	5	-129.15	Not Intact	Low
45	Bharatpur	Sawai Madhopur	Gangapur City	Bucholai 2nd	RDF-II	2021-22	50	Fourth	1730	1228.6	1560	1310.4	170	-81.8	Not Intact	Low
46	Bharatpur	Sawai Madhopur	Gangapur City	Safeda Ki Khan	RDF-II	2023-23	50	Third	150	119.5	150	126	0	-6.5	Not Intact	Low
47	Bharatpur	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri	RDF-II	2023-23	50	Third	1485	907.2	1405.76	1124.6	79.24	-217.4	Not Intact	Low
48	Bharatpur	Sawai Madhopur	Bonli	Jailalpura	ANR	2023-24	50	Second	510	436.1	470	394.8	40	41.3	Not Intact	Low

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Loose Stone wall Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
49	Bharatpur	NCS Dholpur	WL Chambal, Dholpur	Bharka Baba-2	RDF-II	2023-24	50	Second	500	384	500	420	0	-36	Not Intact	Low
50	Bharatpur	RTR - II, Karauli	Mandrayal	Toda Ki Puliya	ANR	2023-24	50	Second	300	246.75	440	369.6	-140	-122.85	Not Intact	Low

Table 4.5C: Details of Barbed wire & Hedge Fencing (Site-wise)

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Barbed wire Fencing					Hedge Fencing				
									Evaluate Length	Length as per MB	Difference Length	Condition of the fencing	Effectiveness of fencing	Evaluate Length	Length as per MB	Difference Length	Condition of the fencing	Effectiveness of fencing
1	Jaipur	Alwar	Alwar	Todiyar	RD F-II	2023-24	50	Second						0	600	-600	Not Intact	Low
2	Jaipur	Dausa	Sikrai	Amor Moroli	PC A	2023-24	50	Second						425	420	5	Not Intact	Low
3	Jaipur	Dausa	Lalsot	Padol-A	AN R	2023-24	50	Second						540	520	20	Not Intact	Low
4	Jaipur	Dausa	Mahuwa	Gagwana-A	RD F-II	2023-24	50	Second						700	700	0	Not Intact	Low
5	Jaipur	Dausa	Bandikui	Dalalpura	AN R	2022-23	50	Third						700	660	0	Not Intact	Low
6	Jaipur	Jaipur	Phagi	Pahadiya Main	RD F-II	2022-23	50	Third	140	300	-160	Not Intact	Low					
7	Jaipur	Jaipur (North)	Achrol	Bilochi-A	AN R	2021-22	50	Fourth						360	360	0	Not Intact	Low
8	Jaipur	Jhunjhunu	Jhunjhunu	Ladsar	SD S	2021-22	14	Third	650	650	0	Intact	Medium					
9	Jaipur	Jhunjhunu	Chirawa	Urika	SD S	2023-24	20	Second	908	900	8	Intact	Medium					
10	Jaipur	Jhunjhunu	Khetri	Bansiyal	RD F-II	2023-24	50	Second	93	150	-57	Not Intact	Low					
11	Jaipur	Jhunjhunu	Khetri	Burak	SD S	2023-24	25	Second	13500	13200	300	Intact	Medium					
12	Jaipur	Jhunjhunu	Khetri	Nalpur-III	AN R	2023-24	50	Second	150	150	0	Not Intact	Low					

Sl. no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Barbed wire Fencing					Hedge Fencing				
									Evaluate Length	Length as per MB	Difference Length	Condition of the fencing	Effectiveness of fencing	Evaluate Length	Length as per MB	Difference Length	Condition of the fencing	Effectiveness of fencing
13	Jaipur	Sikar	Srimadhopur	Jhadali-III	SDS	2019-20	50	Fourth	2750	2750	0	Not Intact	Low					
14	Jaipur	Sikar	Srimadhopur	Nare-IV	SDS	2023-24	25	Second	250	250	0	Not Intact	Low					
15	Jaipur	Sikar	Srimadhopur	Mangarh	SDS	2023-24	25	Second	808	802	6	Not Intact	Low					
16	Jaipur	Sikar	Sikar	Pandora-I	RD F-II	2022-23	50	Third	1940	1905	35	Not Intact	Low					
17	Jaipur	Sikar	Danta	Manda Surera	ANR	2023-24	50	Second	780	780	0	Not Intact	Low					
18	Bharatpur	Bharatpur	Deeg	Madhera-4	ANR	2022-23	50	Third	2480	2474	6	Intact	Medium					
19	Bharatpur	Sawai Madhopur	Gangapur City	Bucholai 2nd	RD F-II	2021-22	50	Fourth	195	180	15	Not Intact	Low					
20	Bharatpur	Sawai Madhopur	Gangapur City	Safeda Ki Khan	RD F-II	2023-23	50	Third	55	18	37	Not Intact	Low					
21	Bharatpur	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri	RD F-II	2023-23	50	Third	60	60	0	Not Intact	Low					
22	Bharatpur	Sawai Madhopur	Sawai Madhopur	Isarda Balajist	RD F-II	2023-24	50	Second	280	250	30	Not Intact	Low					
23	Bharatpur	Sawai Madhopur	Bonli	Jailalpura	ANR	2023-24	50	Second	135	125	10	Not Intact	Low					

Table 4.5D: Details of Dola Fencing (Site-wise)

Sl.no	Division (Sambhag)	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Dola Fencing							
									Length (Evaluate)	Volume (Cum) (Evaluate)	Length (MB)	Volume (Cum) as per MB	Difference Length	Difference Volume	Condition of the fencing	Effectiveness of fencing
1	Bharatpur	Dholpur	Sarmatara	Hariyawali	ANR	2021-22	50	Fourth	2500	5101	2400	3984	100	1117	Intact	Medium
2	Bharatpur	Dholpur	Badi	Sagar	RDF-II	2023-24	50	Second	3200	6532	3185	5287.1	15	1244.9	Not Intact	Low
3	Bharatpur	Dholpur	Badi	Kans Ki Nari-A	RDF-II	2022-23	50	Third	3733	7327	3700	6142	33	1185	Intact	Medium
4	Bharatpur	Dholpur	Van Vihar	Karas Ka Dada	ANR	2023-24	50	Second	2270	4601	1450	2871	820	1730	Not Intact	Low
5	Bharatpur	Dholpur	Van Vihar	Layakpura-II	RDF-I	2023-24	50	Second	3650	7179	3450	6831	200	348	Not Intact	Low
6	Bharatpur	NCS Dholpur	WL Chambal, Dholpur	Acheleshwar Mahavev	RDF-II	2023-24	50	Second	40	98	40	66.4	0	31.6	Intact	Medium
7	Bharatpur	NCS Dholpur	WL Chambal, Dholpur	Bharka Baba-2	RDF-II	2023-24	50	Second	2610	5552	2636	4376	-26	1176	Not Intact	Low

4.2 Soil Water Conservation works in the Second Stage

Shortfall & additional (volume) in SGT/CCT

Soil and moisture conservation (SMC) works at the plantation sites in forest areas is crucial for maintaining the long-term health and sustainability of both the ecosystem and the plantation itself. These practices help to ensure that the trees and plants have the necessary resources to grow, thrive, and maintain biodiversity, while also preventing environmental degradation. Without proper SMC techniques, rainwater can wash away the upper fertile layers of soil, which are essential for plant growth. Conservation techniques like contour trench/SGT/Deep CCT/ V-Ditch & contour dykes increase the soil's ability to retain moisture. SMC works like loose stone check dams & gabion slow down the water flow, reducing its ability to carry away soil particles.

The assessment of shortfall and additional volume against MB across three types of structures - Loose Stone Check Dams, Deep CCTs, and SGT/CCTs - reveal significant variations between Jaipur and Bharatpur Sambhag. The SGT/CCT was found at 19 plantation sites (67.9 percent) in Jaipur Sambhag. In Bharatpur Sambhag, the SGT/CCT was found at 17 plantation sites (89.5 percent). SGT/CCT structures displayed the most widespread shortfall (volume) against MB, with the highest number of 10 sites (37.0 percent) facing 11–20% shortfall volume, and 8 sites (29.6 percent) experiencing shortfall volume above 21%. Notably, Bharatpur Sambhag had higher shortfall volume i.e. 07 sites (46.7 percent) in the lower percentage range (0–20%), while Jaipur again showed dominance in the highest shortfall volume range i.e. 06 sites (50.0 percent) in above 20% range . In terms of remedial action, additional volume in SGT/CCTs was observed particularly in Jaipur Sambhag. Overall, Jaipur Sambhag consistently exhibited higher levels of volume shortfall across all structure types, especially in the most severe category (21% and above), highlighting the need for focused corrective measures in the Sambhag.

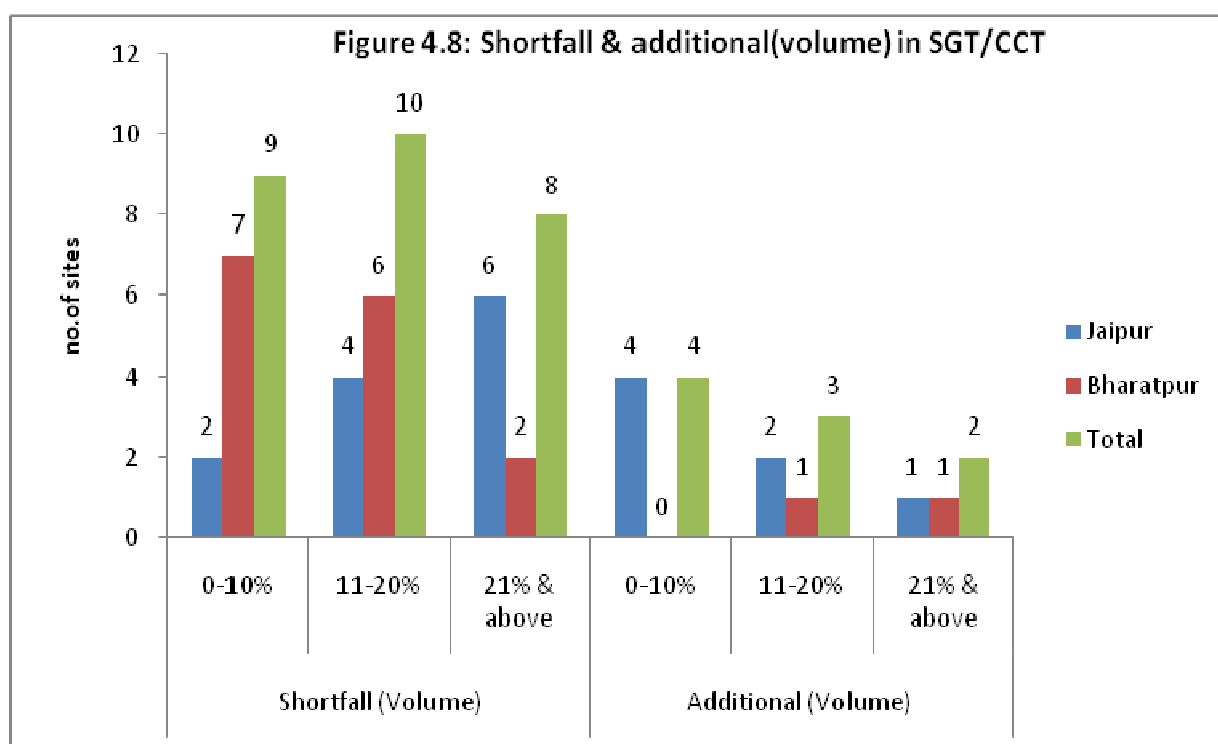


Table 4.6: Status of SGT/CCT at the Plantation site

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in SGT/CCT				Additional (Volume) in SGT/CCT			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
1	Jaipur	Alwar	6	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
2	Jaipur	Dausa	7	1 (14.3)	2 (28.6)	4 (57.1)	7 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
3	Jaipur	Jaipur	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)
4	Jaipur	Jaipur (North)	2	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
6	Jaipur	Jhunjhunu	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)
7	Jaipur	Sikar	6	0 (0.0)	2 (50.0)	2 (50.0)	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	Jaipur	Sariska Alwar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		28	2 (16.7)	4 (33.3)	6 (50.0)	12 (100.0)	4 (57.1)	2 (28.6)	1 (14.3)	7 (100.0)
9	Bharatpur	Bharatpur	2	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
10	Bharatpur	Dholpur	4	3 (75.0)	1 (25.0)	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
11	Bharatpur	Karauli	6	4 (80.0)	1 (20.0)	0 (0.0)	5 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	3	0 (0.0)	3 (100.0)	0 (0.0)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
13	Bharatpur	NCS Dholpur	3	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in SGT/CCT				Additional (Volume) in SGT/CCT			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
	Sub total (B)		19	7 (46.7)	6 (40.0)	2 (13.3)	15 (100.0)	0 (0.0)	1 (50.0)	1 (50.0)	2 (100.0)
	Grand Total		47	9 (33.3)	10 (37.0)	8 (29.6)	27 (100.0)	4 (44.4)	3 (33.3)	2 (22.2)	9 (100.0)

Note: Figures in the brackets are the percentages



Shortfall & additional (volume) in Deep CCT

The Deep CCT was reported at 13 plantation sites (46.4 percent) in Jaipur Sambhag. In Bharatpur Sambhag, the DCCT was reported at 08 plantation sites (42.1 percent). In the case of Deep CCTs, shortfall volume against MB were more evenly distributed across the 0–10% (07 sites) and 11–20% categories (06 sites), with a relatively lower number (04 sites) of high shortfalls volume (21% and above) observed only in Jaipur. Bharatpur showed better performance in this category, with no structures falling in the highest shortfall bracket. However, additional (volume) in DCCT against MB was found in 03 sites (75.0 percent) in 0-10% categories & 01 site (25.0 percent) in 11-20% categories.

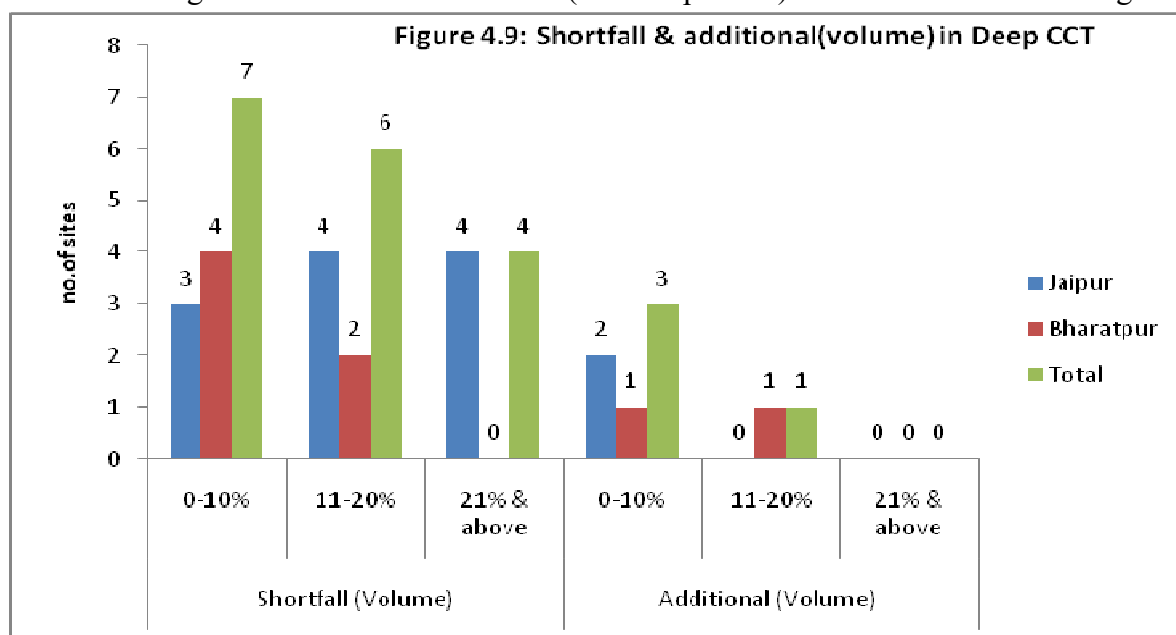


Table 4.7: Status of Deep CCT at the Plantation site

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in Deep CCT				Additional (Volume) in Deep CCT			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
1	Jaipur	Alwar	6	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2	Jaipur	Dausa	7	0 (0.0)	2 (33.3)	4 (66.7)	6 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
3	Jaipur	Jaipur	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	Jaipur	Jaipur (North)	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)
7	Jaipur	Sikar	6	3 (75.0)	1 (25.0)	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	Jaipur	Sariska Alwar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		28	3 (27.3)	4 (36.4)	4 (36.4)	11 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)
9	Bharatpur	Bharatpur	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
11	Bharatpur	Karauli	6	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
12	Bharatpur	Sawai Madhopur	3	2 (66.7)	1 (33.3)	0 (0.0)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
13	Bharatpur	NCS Dholpur	3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume)in Deep CCT				Additional (Volume) in Deep CCT			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
14	Bharatpur	RTR -II, Karauli	1	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		19	4 (66.7)	2 (33.3)	0 (0.0)	6 (100.0)	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)
	Grand Total		47	7 (41.2)	6 (35.3)	4 (23.5)	17 (100.0)	3 (75.0)	1 (25.0)	0 (0.0)	4 (100.0)

Note: Figures in the brackets are the percentages

Table 4.8: Status of SGT/CCT/Deep CCT

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in SGT/CCT/Deep CCT				Additional (Volume) in SGT/CCT/Deep CCT			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
1	Jaipur	Alwar	6	0 (0.0)	1 (25.0)	3 (75.0)	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2	Jaipur	Dausa	7	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
3	Jaipur	Jaipur	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	Jaipur	Jaipur (North)	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	6	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	Jaipur	Sariska Alwar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		28	0 (0.0)	1 (25.0)	3 (75.0)	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
9	Bharatpur	Bharatpur	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
11	Bharatpur	Karauli	6	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
13	Bharatpur	NCS Dholpur	3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in SGT/CCT/Deep CCT				Additional (Volume) in SGT/CCT/Deep CCT			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		19	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Grand Total		47	0 (0.0)	1 (20.0)	4 (80.0)	5 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Note: Figures in the brackets are the percentages

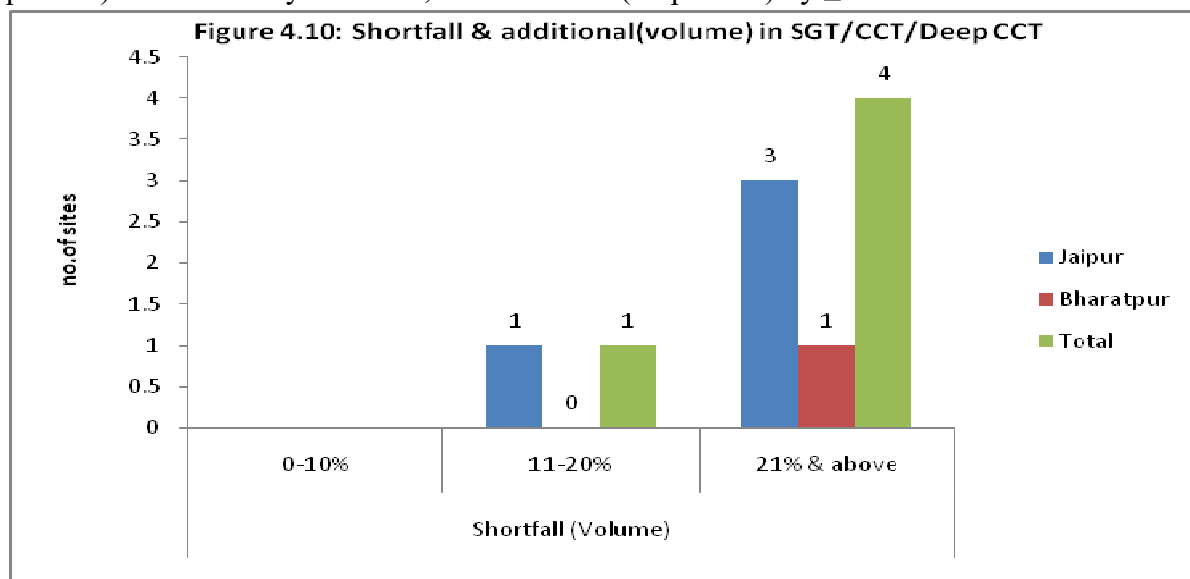


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Shortfall & additional (volume) in SGT/CCT/Deep CCT

Specialized trench variants exhibited no minimal shortfall volume against MB; one site (20 percent) under-built by 11–20 %, and four sites (80 percent) by ≥ 21 %.



Shortfall & additional (volume) in Earthen Check Dam (ECD)

Volume control in earthen check-dam construction was highly erratic. For shortfall volume in earthen check dam against MB, 16 sites (76.2 percent) under-built by ≥ 21 %, only 03 sites (14.3 percent) fell below a 10 % deficit, and 02 sites at 11–20 % (9.5 percent). Over-builds were also non-trivial: four sites (44.4 percent) overshoot volume by ≥ 21 %, three sites (33.3 percent) by 0–10 % and 02 sites at 11–20 % (22.2 percent).

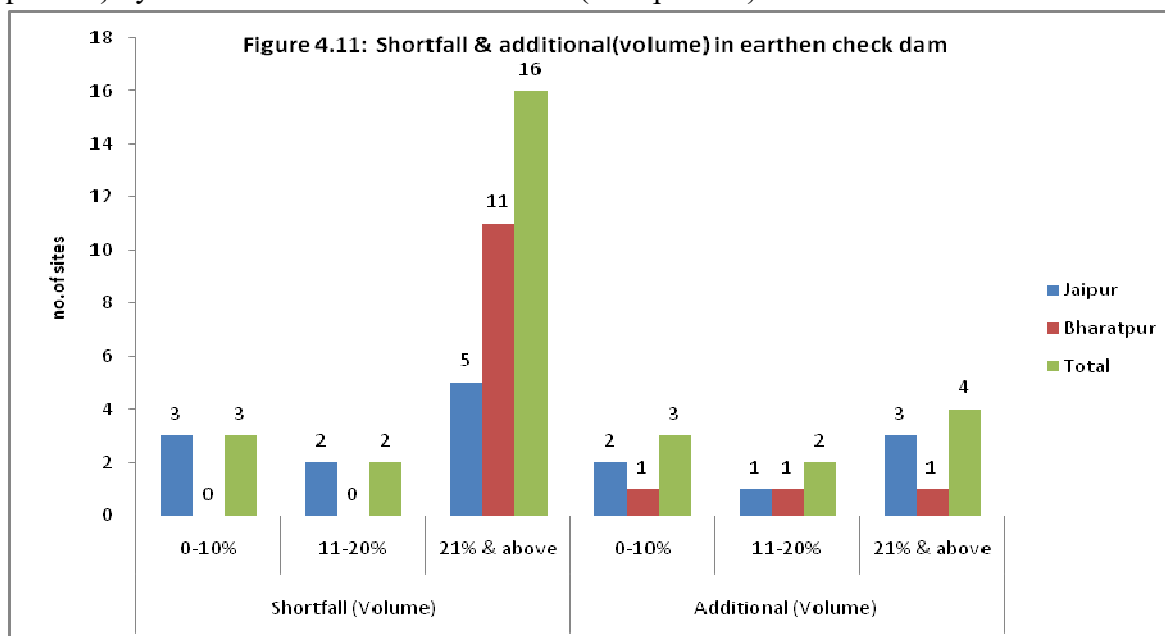


Table 4.9: Short fall & Additional volume in Earthen Check dam

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in Earthen Check dam				Additional (Volume) in Earthen Check dam			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
1	Jaipur	Alwar	6	0 (0.0)	2 (50.0)	2 (50.0)	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2	Jaipur	Dausa	7	1 (50.0)	0 (0.0)	1 (50.0)	2 (100.0)	2 (50.0)	0 (0.0)	2 (50.0)	4 (100.0)
3	Jaipur	Jaipur	2	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	Jaipur	Jaipur (North)	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	4	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	6	1 (50.0)	0 (0.0)	1 (50.0)	2 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
8	Jaipur	Sariska Alwar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		28	3 (30.0)	2 (20.0)	5 (50.0)	10 (100.0)	2 (33.3)	1 (16.7)	3 (50.0)	6 (100.0)
9	Bharatpur	Bharatpur	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	4	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
11	Bharatpur	Karauli	6	0 (0.0)	0 (0.0)	4 (100.0)	4 (100.0)	1 (50.0)	0 (0.0)	1 (50.0)	2 (100.0)
12	Bharatpur	Sawai Madhopur	3	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in Earthen Check dam				Additional (Volume) in Earthen Check dam			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
13	Bharatpur	NCS Dholpur	3	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		19	0 (0.0)	0 (0.0)	11 (100.0)	11 (100.0)	1 (33.3)	1 (33.3)	1 (33.3)	3 (100.0)
	Grand Total		47	3 (14.3)	2 (9.5)	16 (76.2)	21 (100.0)	3 (33.3)	2 (22.2)	4 (44.4)	9 (100.0)

Note: Figures in the brackets are the percentages



Table 4.10: Short fall & Additional volume in Loose Stone Check Dam (LSCD)

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in Loose stone check dam				Additional (Volume) in Loose stone check dam			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
1	Jaipur	Alwar	6	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)	0 (0.0)	1 (33.3)	2 (66.7)	3 (100.0)
2	Jaipur	Dausa	7	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
3	Jaipur	Jaipur	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	Jaipur	Jaipur (North)	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	4	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	6	2 (66.7)	0 (0.0)	1 (33.3)	3 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
8	Jaipur	Sariska Alwar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		28	2 (22.2)	0 (0.0)	7 (77.8)	9 (100.0)	0 (0.0)	1 (25.0)	3 (75.0)	4 (100.0)
9	Bharatpur	Bharatpur	2	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	4	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
11	Bharatpur	Karauli	6	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
12	Bharatpur	Sawai Madhopur	3	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

S.No.	Division (Sambhag)	Division	Total No. of sample sites of second stage	Shortfall (Volume) in Loose stone check dam				Additional (Volume) in Loose stone check dam			
				0-10%	11-20%	21% & above	Total	0-10%	11-20%	21% & above	Total
13	Bharatpur	NCS Dholpur	3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		19	1 (16.7)	0 (0.0)	5 (83.3)	6 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
	Grand Total		47	3 (20.0)	0 (0.0)	12 (80.0)	15 (100.0)	0 (0.0)	1 (20.0)	4 (80.0)	5 (100.0)

Note: Figures in the brackets are the percentages

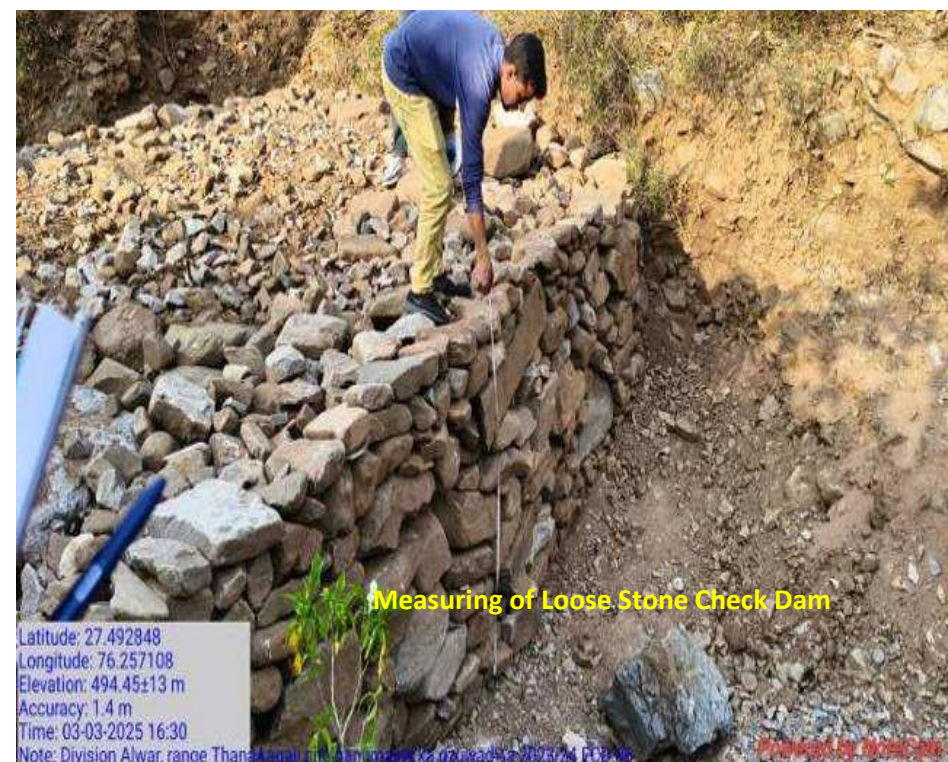


Table 4.10A: Details of SGT/CCT & Deep CCT (Site-wise)

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	SGT/CCT			Deep CCT			SGT/CCT/Deep CCT		
								Volume (Evaluated)	Volume (MB)	Difference Volume	Volume (Evaluated)	Volume (MB)	Difference Volume	Volume (Evaluated)	Volume (MB)	Difference Volume
1	Alwar	Thanagazi	Hanuman Ka Gwada	RDF-II	2023-24	50	Second							4491	7489	-2998
2	Alwar	Rajgarh	Jogiyon ki Dhani	ANR	2023-24	50	Second							470	1199	-729
3	Alwar	Rajgarh	Dera	ANR	2023-24	50	Second							1085.07	2160	-1074.93
4	Alwar	Tijara	Balouj	ANR	2023-24	100	Second	3513.38	2970	543.38						
5	Alwar	Alwar	Todiyar	RDF-II	2023-24	50	Second							628.65	551.66	76.99
6	Alwar	Kishangar was	Lisadi	RDF-II	2023-24	50	Second				1320	1500	-180			
7	Dausa	Sikrai	Lanka-B	RDF-II	2023-24	50	Second	2458.06	3300	-841.94	3478.9	5000	-1521.1			
8	Dausa	Sikrai	Amor Moroli	PCA	2023-24	50	Second	1807.25	2025	-217.75						
9	Dausa	Lalsot	Padol-A	ANR	2023-24	50	Second	3749.9	4620	-870.1	807.5	1000	-192.5			
10	Dausa	Mahuwa	Padla -A	ANR	2023-24	50	Second	3273.95	4610	-1336.05	1700.9	2300	-599.10			
11	Dausa	Mahuwa	Gagwana-A	RDF-II	2023-24	50	Second	3127.82	5280	-2152.18	1412.89	2000	-587.11			
12	Dausa	Dausa	EOP Ganshpura	EOP	2023-24	50	Second	7867.96	8250	-382.04	1740.01	2000	-259.99			
13	Dausa	Bandikui	Anantwara	RDF-II	2023-24	40	Second	2131.32	2775	-643.68	2383.08	3000	-616.92			

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	SGT/CCT			Deep CCT			SGT/CCT/Deep CCT		
								Volume (Evaluate)	Volume (MB)	Difference Volume	Volume (Evaluate)	Volume (MB)	Difference Volume	Volume (Evaluate)	Volume (MB)	Difference Volume
14	Jaipur	Amer	Mundota	ACA	2023-24	11	Second	428.22	405	23.22						
15	Jaipur	Amer	Kukas park ke Piche	RDF-II	2023-24	50	Second	4999	4687.5	311.5						
16	Jaipur (North)	Achrol	Foot ka Baas	RDF-II	2023-24	50	Second	7812.77	4164.13	3648.64						
17	Jaipur (North)	Shahpura	Lobadawas	NFL	2023-24	4	Second	321.97	324.04	-2.07						
18	Jaipur (Wildlife)	Ajabgarh	Billu Ki Khan	ANR	2023-24	40	Second	1491	1453.71	37.29						
19	Jhunjhunu	Chirawa	Urika	SDS	2023-24	20	Second									
20	Jhunjhunu	Khetri	Bansiyal	RDF-II	2023-24	50	Second	6056.3	5930	126.3	1040	1000	40			
21	Jhunjhunu	Khetri	Burak	SDS	2023-24	25	Second									
22	Jhunjhunu	Khetri	Nalpur-III	ANR	2023-24	50	Second	5678.48	4890	788.48	654.44	600	54.44			
23	Sikar	Srimadhampur	Nare-IV	SDS	2023-24	25	Second									
24	Sikar	Srimadhampur	Mangarh	SDS	2023-24	25	Second									
25	Sikar	Neem Ka Thana	Palasala-I	RDF-II	2023-24	50	Second	4080.98	4890	-809.02	901.4	1000	-98.60			
26	Sikar	Neem Ka Thana	Deepawas-II	RDF-II	2023-24	50	Second	4109.98	4890	-780.02	474.8	500	-25.20			

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	SGT/CCT			Deep CCT			SGT/CCT/Deep CCT		
								Volume (Evaluate)	Volume (MB)	Difference Volume	Volume (Evaluate)	Volume (MB)	Difference Volume	Volume (Evaluate)	Volume (MB)	Difference Volume
27	Sikar	Patan	Baorikala Kota-I	RDF-I	2023-24	50	Second	4439.16	7340.39	-2901.23	898.6	1000	-101.40			
28	Sikar	Danta	Manda Surera	ANR	2023-24	50	Second	880.14	1254	-373.86	2101.88	2400	-298.12			
29	Bharatpur	Bayana	Jarkhor-2	RDF-II	2023-24	50	Second	3552	5290	-1738						
30	Bharatpur	Deeg	Pahadtal-3	ANR	2023-24	50	Second	5352	4440	912						
31	Dholpur	Badi	Sagar	RDF-II	2023-24	50	Second	4264	4500	-236.00						
32	Dholpur	Dholpur	Hatihakhar-A	ANR	2023-24	50	Second	3032.56	3046.5	-13.94	235.67	230	5.67			
33	Dholpur	Van Vihar	Karas Ka Dada	ANR	2023-24	50	Second	3628	4500	-872.00						
34	Dholpur	Van Vihar	Layakpura-II	RDF-I	2023-24	50	Second	4368	4500	-132.00						
35	Karauli	Karauli	Tal Ke Upar Soraya Kosra	PCA	2023-24	5	Second				287	250	37.00			
36	Karauli	Sapotra	Masavta	ANR	2023-24	50	Second	5067	5580	-513.00	709	750	-41.00			
37	Karauli	Sapotra	Lediya	RDF-I	2023-24	50	Second	4859	5140	-281.00						
38	Karauli	Sapotra	Adadugar	RDF-II	2023-24	50	Second	4981	5460	-479.00						
39	Karauli	Hindon	Medkapur	RDF	2023-24	50	Second	5113	5550	-437.00	813	1000	-187.00			

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	SGT/CCT			Deep CCT			SGT/CCT/Deep CCT		
								Volume (Evaluate)	Volume (MB)	Difference Volume	Volume (Evaluate)	Volume (MB)	Difference Volume	Volume (Evaluate)	Volume (MB)	Difference Volume
			a	-II	3-24		nd									
40	Karauli	Masalpur	Jhamri Mata	ANR	2023-24	50	Second	4095.48	4920	-824.52						
41	Sawai Madhopur	Sawai Madhopur	Todolai-2nd	RDF-II	2023-24	50	Second	4143.76	4950	-806.24	1327.4	1500	-172.60			
42	Sawai Madhopur	Sawai Madhopur	Isarda Balajist	RDF-II	2023-24	50	Second	4409.11	5280	-870.89	1816.9	2000	-183.10			
43	Sawai Madhopur	Bonli	Jailalpura	ANR	2023-24	50	Second	2690.45	3210	-519.55	4057.9	4500	-442.10			
44	NCS Dholpur	WL Chambal, Dholpur	Datilo	RDF-II	2023-24	50	Second	3557	5200	-1643.00						
45	NCS Dholpur	WL Chambal, Dholpur	Acheleshwar Mahavev	RDF-II	2023-24	50	Second							3963	5890	-1927
46	NCS Dholpur	WL Chambal, Dholpur	Bharkababa-2	RDF-II	2023-24	50	Second	5052	4500	552.00						
47	RTR - II, Karauli	Mandrayal	Toda Ki Puliya	ANR	2023-24	50.00	Second	3708.68	4440	-731.32	1790.7	2000	-209.30			

Table 4.10B: Details of Dykes, V-ditch & Gabion (Site-wise)

Sl. no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Dykes			V-ditch			Gabion		
								Volume (Evaluate)	Volume (MB)	Difference Volume	Length Evaluate	Length (MB)	Difference Length	Volume (Evaluate)	Volume (MB)	Difference
1	Alwar	Tijara	Balouj	ANR	2023-24	100	Second	616	405	211						
2	Alwar	Kishangarwas	Lisadi	RDF-II	2023-24	50	Second	651.37	607.5	43.87						
3	Jhunjhunu	Chirawa	Urika	SDS	2023-24	20	Second				4014	4000	14			
4	Sawai Madhopur	Sawai Madhopur	Isarda Balajist	RDF-II	2023-24	50	Second							7.2	7.2	0

Table 4.10 C: Details of Earthen Check dam, Loose Stone Check dam& Talai/Nadi (Site-wise)

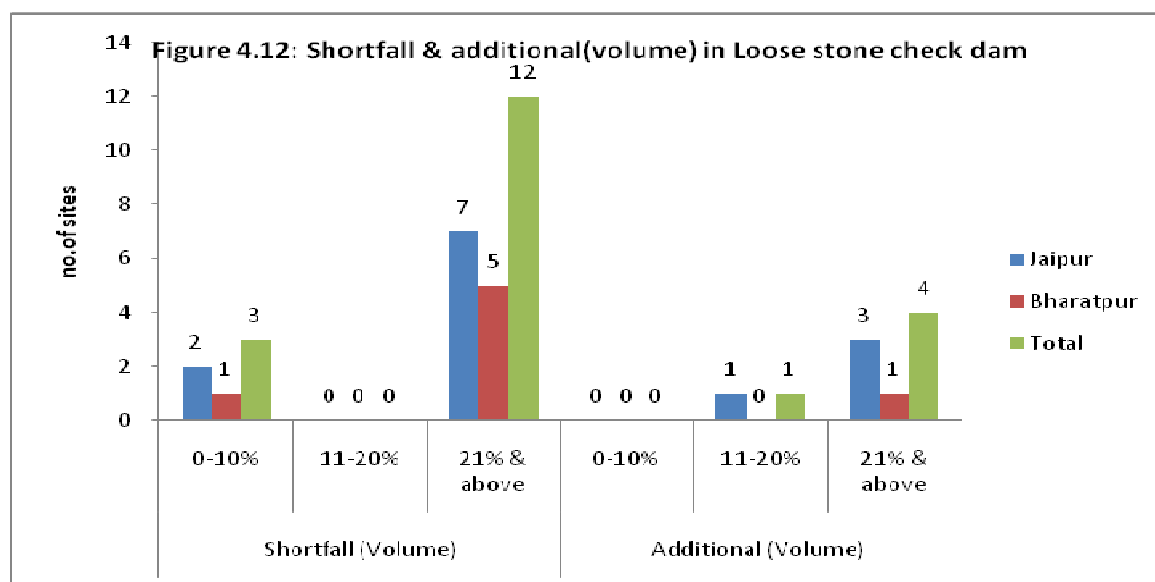
Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Earthen Check dam			Loose Stone Check dam			Talai/ Nadi		
								Volume (Evaluate)	Volume (MB)	Difference	Volume (Evaluate)	Volume (MB)	Difference	Volume (Evaluate)	Volume (MB)	Difference
1	Alwar	Thanagazi	Hanuman Ka Gwada	RDF-II	2023-24	50	Second				135.8	400	-264.2	1393.31	600	793.31
2	Alwar	Rajgarh	Jogiyon ki Dhani	ANR	2023-24	50	Second	1112.26	2057	-944.74	343.7	800	-456.3			
3	Alwar	Rajgarh	Dera	ANR	2023-24	50	Second				324.4	433	-108.6			
4	Alwar	Tijara	Balouj	ANR	2023-24	100	Second	6807.1	8446	-1638.9	468.9	400	68.9			
5	Alwar	Alwar	Todiyar	RDF-II	2023-24	50	Second	2857.2	4485.6	-1628.4	87.9	60	27.9			
6	Alwar	Kishangar was	Lisadi	RDF-II	2023-24	50	Second	3279	4000	-721	1183.4	700	483.4			
7	Dausa	Sikrai	Lanka-B	RDF-II	2023-24	50	Second	2341.88	2370.95	-29.07	344.18	443.29	-99.11			
8	Dausa	Sikrai	Amor Moroli	PCA	2023-24	50	Second	3281.45	3100	181.45						
9	Dausa	Lalsot	Padol-A	ANR	2023-24	50	Second							3281.45	3100	181.45
10	Dausa	Mahuwa	Padla -A	ANR	2023-24	50	Second	2576.46	4000	-1423.54						
11	Dausa	Mahuwa	Gagwana-A	RDF-II	2023-24	50	Second	2421.07	1450	971.07						
12	Dausa	Dausa	EOP Ganshpura	EOP	2023-24	50	Second	1447.7	1200	247.7						
13	Dausa	Bandikui	Anantwar	RDF	202	40	Second	1516.84	1500	16.84						

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Earthen Check dam			Loose Stone Check dam			Talai/ Nadi		
								Volume (Evaluated)	Volume (MB)	Difference	Volume (Evaluated)	Volume (MB)	Difference	Volume (Evaluated)	Volume (MB)	Difference
			a	-II	3-24		nd									
14	Jaipur	Amer	Kukas park ke Piche	RDF -II	2023-24	50	Second	1839.16	5000	-3160.84				899.56	2600	-1700.44
15	Jaipur (North)	Achrol	Foot ka Baas	RDF -II	2023-24	50	Second	606	540	66						
16	Jaipur (Wildlife)	Ajabgarh	Billu Ki Khan	ANR	2023-24	40	Second							1304.13	1579.17	-275.04
17	Jhunjhunu	Khetri	Bansiyal	RDF -II	2023-24	50	Second				287.22	724	-436.78			
18	Jhunjhunu	Khetri	Burak	SDS	2023-24	25	Second	2322	2200	122						
19	Jhunjhunu	Khetri	Nalpur-III	ANR	2023-24	50	Second				0	580	-580	0	1539.19	-1539.19
20	Sikar	Srimadhampur	Nare-IV	SDS	2023-24	25	Second	595.76	200	395.76				836.78	600	236.78
21	Sikar	Srimadhampur	Mangarh	SDS	2023-24	25	Second	734.3	2699	-1964.7						
22	Sikar	Neem Ka Thana	Palasala-I	RDF -II	2023-24	50	Second				1345.83	1462	-116.17	2037.54	2499.84	-462.3
23	Sikar	Neem Ka Thana	Deepawas -II	RDF -II	2023-24	50	Second				165.2	526	-360.8	0	898.6	-898.6
24	Sikar	Patan	Baorikala Kota-I	RDF -I	2023-24	50	Second				158.85	60	98.85			

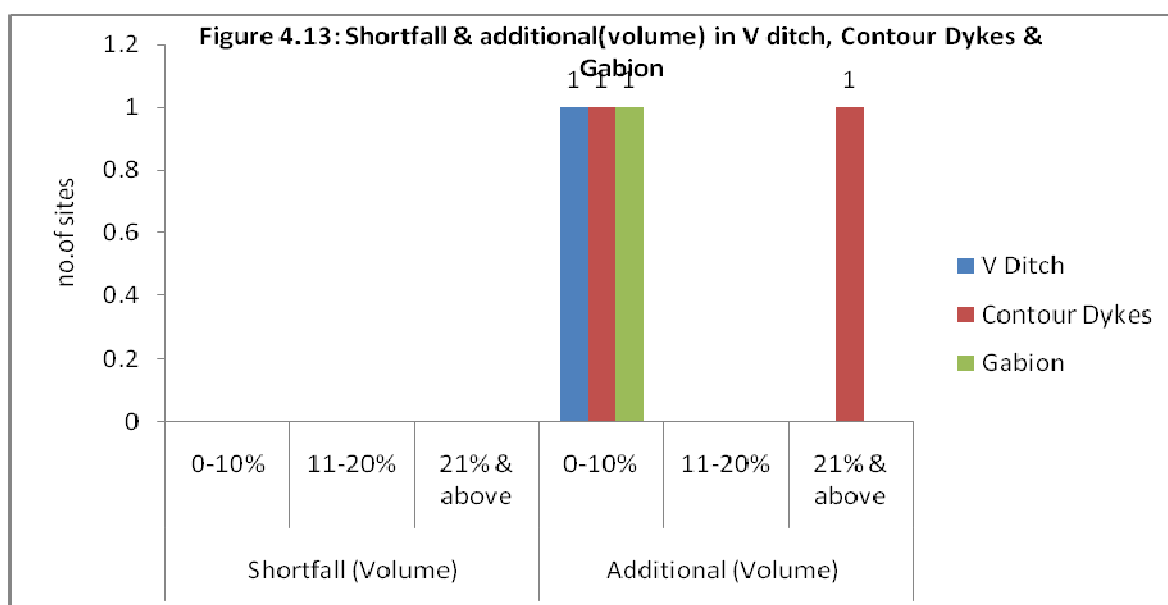
Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Earthen Check dam			Loose Stone Check dam			Talai/ Nadi		
								Volume (Evaluate)	Volume (MB)	Difference	Volume (Evaluate)	Volume (MB)	Difference	Volume (Evaluate)	Volume (MB)	Difference
25	Sikar	Danta	Manda Surera	ANR	2023-24	50	Second	6640.61	6962.7	-322.09	1426.37	1503.67	-77.3			
26	Bharatpur	Bayana	Jarkhor-2	RDF-II	2023-24	50	Second				337	520	-183	3167	5000	-1833
27	Bharatpur	Deeg	Pahadtal-3	ANR	2023-24	50	Second							2990.24	3000	-9.76
28	Dholpur	Badi	Sagar	RDF-II	2023-24	50	Second							936	2000	-1064
29	Dholpur	Dholpur	Hatiyakhar-A	ANR	2023-24	50	Second	2453.16	6050	-3596.84						
30	Dholpur	Van Vihar	Karas Ka Dada	ANR	2023-24	50	Second	1150	3300	-2150						
31	Dholpur	Van Vihar	Layakpura-II	RDF-I	2023-24	50	Second				78.9	250	-171.1	1693	3200	-1507
32	Karauli	Karauli	Tal Ke Upar Soraya Kosra	PCA	2023-24	5	Second	690	160	530						
33	Karauli	Sapotra	Masavta	ANR	2023-24	50	Second	5928	5532	396	157	300	-143			
34	Karauli	Sapotra	Lediya	RDF-I	2023-24	50	Second	944	2602	-1658	288	500	-212			
35	Karauli	Sapotra	Adadugar	RDF-II	2023-24	50	Second	1566	2468	-902	375	290	85			
36	Karauli	Hindon	Medkapura	RDF-II	2023-24	50	Second	2858	6597	-3739						
37	Karauli	Masalpur	Jhamri Mata	ANR	2023-24	50	Second	878.76	1430	-551.24	71.9	125	-53.1			

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Earthen Check dam			Loose Stone Check dam			Talai/ Nadi		
								Volume (Evaluated)	Volume (MB)	Difference	Volume (Evaluated)	Volume (MB)	Difference	Volume (Evaluated)	Volume (MB)	Difference
38	Sawai Madhopur	Sawai Madhopur	Todolai-2nd	RDF-II	2023-24	50	Second							3225.18	3750	-524.82
39	Sawai Madhopur	Sawai Madhopur	Isarda Balajist	RDF-II	2023-24	50	Second	4711.01	7143	-2431.99						
40	Sawai Madhopur	Bonli	Jailalpura	ANR	2023-24	50	Second	5693.74	4850	843.74	180	200	-20			
41	NCS Dholpur	WL Chambal, Dholpur	Datilo	RDF-II	2023-24	50	Second	1720	2345	-625						
42	NCS Dholpur	WL Chambal, Dholpur	Acheleshwar Mahavev	RDF-II	2023-24	50	Second	655.03	2345	-1689.97						
43	NCS Dholpur	WL Chambal, Dholpur	Bharkababa-2	RDF-II	2023-24	50	Second	385	5800	-5415						
44	RTR - II, Karauli	Mandrayal	Toda Ki Pudia	ANR	2023-24	50.00	Second	1562.58	4658.73	-3096.15						

With regards to Loose Stone Check Dams, the concerning observation is that 12 sites (80 percent) experienced a volume shortfall against MB of 21% and above, with Jaipur contributing to 7 sites (77.8 percent) of these cases, whereas 03 sites (20 percent) experienced a loose stone check dams volume shortfall against MB of below 10 %. Conversely, additional volume against MB in LSCD was limited, with only 4 sites (80 percent) showing additions above 21% & 01 site (20 percent) showing additional volume between 11-20%.



Only one site each showing additional volume against MB below 10% in V Ditch & Gabion, whereas one site each showing additional volume against MB below 10% & 21% & above in Contour Dykes.



Conclusion

Various SMC structures viz. CCT/SGT, Deep CCT, loose stone check dam, earthen check dam found at the plantation sites missed their target volumes by over 20 % in many sites. The shortfall volume of soil water conservation works minimizes soil moisture retention capacity, removal of fertile soil which had an impact on survival & growth of planted seedling & also on plant grown through natural regeneration. The assessment of shortfall and additional volume against MB across various types of structures - Loose Stone Check Dams, earthen check dam, Deep CCTs, and SGT/CCTs - reveal significant variations between Jaipur and Bharatpur Sambhag. SGT/CCT structures displayed the most widespread shortfall (volume) against MB with the highest number of 10 sites (37.0 percent) facing 11–20% shortfall volume, 8 sites (29.6 percent) experiencing shortfall volume above 21% and 9 sites (33.3 percent) experiencing shortfall volume up to 10%. In terms of remedial action, additional volume in SGT/CCTs was observed particularly in Jaipur Sambhag.

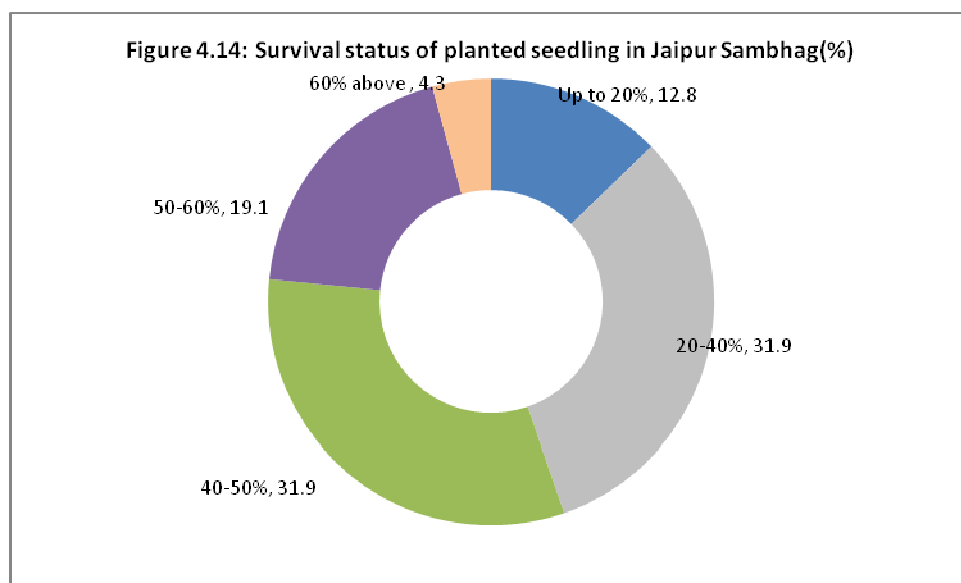
4.3 Afforestation – Plantations Survival (Factors affecting survival and growth)

The survival of planted stock in a forest is critically important for several ecological, environmental, economic, and social reasons. Ensuring the survival of planted stock is not just about growing trees - it's about rebuilding resilient ecosystems, supporting communities, fighting climate change, and securing long-term environmental health. Without high survival rates, reforestation efforts lose impact and sustainability.

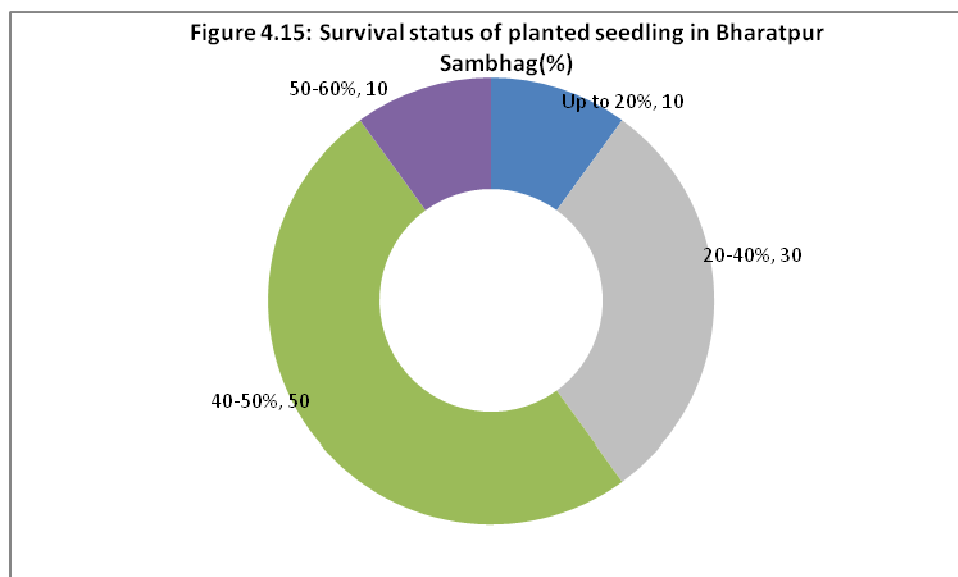
The analysis of seedling survival status in Bharatpur and Jaipur Sambhag shows that the majority of plantation sites in both Sambhag fall within the 40–50% survival range.

Sambhag-wise,

in Bharatpur, 50% of the plantation sites fall in this band, followed by 30% sites in the 20–40% range and only 10% sites each with survival up to 20% & in the 50–60% range. Jaipur Sambhag shows a similar pattern, with 31.9% of plantation sites each in the 40–50% range and 20–40% range. 19.1% of the plantation sites fall in 50–60% survival range. However, Jaipur records slightly more underperforming areas (12.8% sites up to 20% survival) and a small presence (4.3% sites) of high survival above 60%, which was completely absent in Bharatpur. The overall survival status across both divisions aligns with these trends — 39% sites in the 40–50% range, 31.2% sites in the 20–40% range, 15.6% sites in the 50–60%



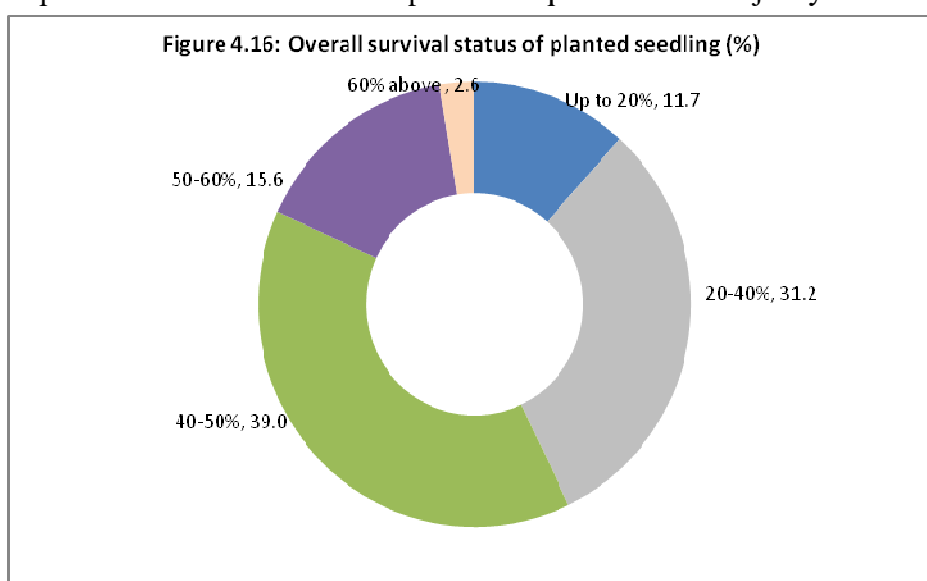
range, 11.7% sites up to 20%, and just 2.6% exceeding 60%. These figures reflect a generally stable performance concentrated around average survival rates, with few outliers at either end.



While extreme underperformance is limited, high-performing plantations are rare, suggesting the need for strategies that not only maintain current standards but also push more areas into the higher survival bracket.

Conclusion

In summary, while seedling survival rates across Jaipur and Bharatpur Sambhag indicate moderately successful plantation efforts with scope for improvement. Majority of the plantation sites saw average survival, with about 39 % of the sites having 40–50 % survival rate, only a tiny share i.e. 2.6% of the sites doing much better (above 60% survival rate), 15.6% of the sites having 50–60 % survival rate & 42.9 % of the sites



having either 20–49 % or up to 20% survival rate. These figures reflect a generally stable performance concentrated around average survival rates, with few outliers at either end. While extreme underperformance is limited, high-performing plantations are rare, suggesting the need for strategies that not only maintain current standards but also push more areas into the higher survival bracket. Heavy growth of weeds, grass & bush obstructs the growth of planted seedling. Grazing by stray animals & cattle and destruction by Neel gai, sehi and rat was reported at the site. Poor protection due to damaged fencing & guarding affect the survival rate of planted stock. The quality of soil was not conducive for survival of planted seedling.

Table 4.11: Survival Status of Planted Stock (Sambhag & Division-wise)

S.No.	Division (Sambhag)	Name of Division	Survival range					Total No. of Sites
			Up to 20%	20-40%	40-50%	50-60	Above 60%	
1	Jaipur	Alwar	1 (11.1)	0 (0.0)	5 (55.6)	2 (22.2)	1 (11.1)	9 (100.0)
2	Jaipur	Dausa	4 (33.3)	4 (33.3)	4 (33.3)	0 (0.0)	0 (0.0)	12 (100.0)
3	Jaipur	Jaipur	1 (25.0)	2 (50.0)	1 (25.0)	0 (0.0)	0 (0.0)	4 (100.0)
4	Jaipur	Jaipur (North)	0 (0.0)	3 (75.0)	1 (25.0)	0 (0.0)	0 (0.0)	4 (100.0)
5	Jaipur	Jaipur (Wildlife)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
6	Jaipur	Jhunjhunu	0 (0.0)	1 (14.3)	2 (28.6)	3 (42.9)	1 (14.3)	7 (100.0)
7	Jaipur	Sikar	0 (0.0)	4 (50.0)	2 (25.0)	2 (25.0)	0 (0.0)	8 (100.0)
8	Jaipur	Sariska Alwar	0 (0.0)	1 (50.0)	0 (0.0)	1 (50.0)	0 (0.0)	2 (100.0)
	Sub total (A)		6 (12.8)	15 (31.9)	15 (31.9)	9 (19.1)	2 (4.3)	47 (100.0)
9	Bharatpur	Bharatpur	0 (0.0)	3 (60.0)	2 (40.0)	0 (0.0)	0 (0.0)	5 (100.0)
10	Bharatpur	Dholpur	0 (0.0)	3 (50.0)	2 (33.3)	1 (16.7)	0 (0.0)	6 (100.0)
11	Bharatpur	Karauli	1 (14.3)	1 (14.3)	4 (57.1)	1 (14.3)	0 (0.0)	7 (100.0)
12	Bharatpur	Sawai Madhopur	0 (0.0)	2 (28.6)	4 (57.1)	1 (14.3)	0 (0.0)	7 (100.0)
13	Bharatpur	NCS Dholpur	1 (25.0)	0 (0.0)	3 (75.0)	0 (0.0)	0 (0.0)	4 (100.0)

S.No.	Division (Sambhag)	Name of Division	Survival range					Total No. of Sites
			Up to 20%	20-40%	40-50%	50-60	Above 60%	
14	Bharatpur	RTR -II, Karauli	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
	Sub total (B)		3 (10.0)	9 (30.0)	15 (50.0)	3 (10.0)	0 (0.0)	30 (100.0)
	Grand Total		9 (11.7)	24 (31.2)	30 (39.0)	12 (15.6)	2 (2.6)	77 (100.0)

Note: Figures in the brackets are the percentages



Table 4.11 A: Survival Status of Planted Stock (Site-wise)

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
1	Alwar	Thanagazi	Jhiri-A	ANR	2020-21	50	Fifth	4152	141	6717	10000	41.5
2	Alwar	Thanagazi	Dudu Ki Dhani	ANR	2021-22	50	Fourth	4218	343	5439	10000	42.2
3	Alwar	Thanagazi	Lotawas-A	ANR	2022-23	50	Third	4054	366	5580	10000	40.5
4	Alwar	Thanagazi	Hanuman Ka Gwada	RDF-II	2023-24	50	Second	5865	149	3986	10000	58.7
5	Alwar	Rajgarh	Jogiyon ki Dhani	ANR	2023-24	50	Second	1241	167	8592	10000	12.4
6	Alwar	Rajgarh	Dera	ANR	2023-24	50	Second	6027	213	3760	10000	60.3
7	Alwar	Tijara	Balouj	ANR	2023-24	100	Second	8447	171	11382	20000	42.2
8	Alwar	Alwar	Todiyar	RDF-II	2023-24	50	Second	5467	246	4287	10000	54.7
9	Alwar	Kishangarwas	Lisadi	RDF-II	2023-24	50	Second	4635	171	5194	10000	46.4
10	Dausa	Sikrai	Moroli	ANR	2020-21	50	Fifth	2641	13	7346	10000	26.4
11	Dausa	Sikrai	Lanka-B	RDF-II	2023-24	50	Second	1940	41	8019	10000	19.4
12	Dausa	Sikrai	Amor Moroli	PCA	2023-24	50	Second	6900	53	28047	35000	19.7
13	Dausa	Lalsot	PLP Sanwasa	Other	2021-22	25	Fourth	5448	42	14510	20000	27.2
14	Dausa	Lalsot	Dholi-B	ANR	2021-22	50	Fourth	1920	13	8067	10000	19.2
15	Dausa	Lalsot	Padol-A	ANR	2023-24	50	Second	4126	27	5847	10000	41.3
16	Dausa	Mahuwa	Padla -A	ANR	2023-24	50	Second	4223	141	5636	10000	42.2
17	Dausa	Mahuwa	Gagwana-A	RDF-II	2023-24	50	Second	2237	181	7582	10000	22.4
18	Dausa	Dausa	Lahadiwala	RDF-II	2022-23	55	Third	1938	13	9049	11000	17.6
19	Dausa	Dausa	EOP Ganshpura	EOP	2023-24	50	Second	2290	28	3219	5537	41.4
20	Dausa	Bandikui	Dalalpura	ANR	2022-23	50	Third	3252	27	6721	10000	32.5
21	Dausa	Bandikui	Anantwara	RDF-II	2023-24	40	Second	3310	13	4677	8000	41.4
22	Jaipur	Amer	Jain Mandir Kukas	ANR	2021-22	50	Fourth	572	150	9278	10000	5.7

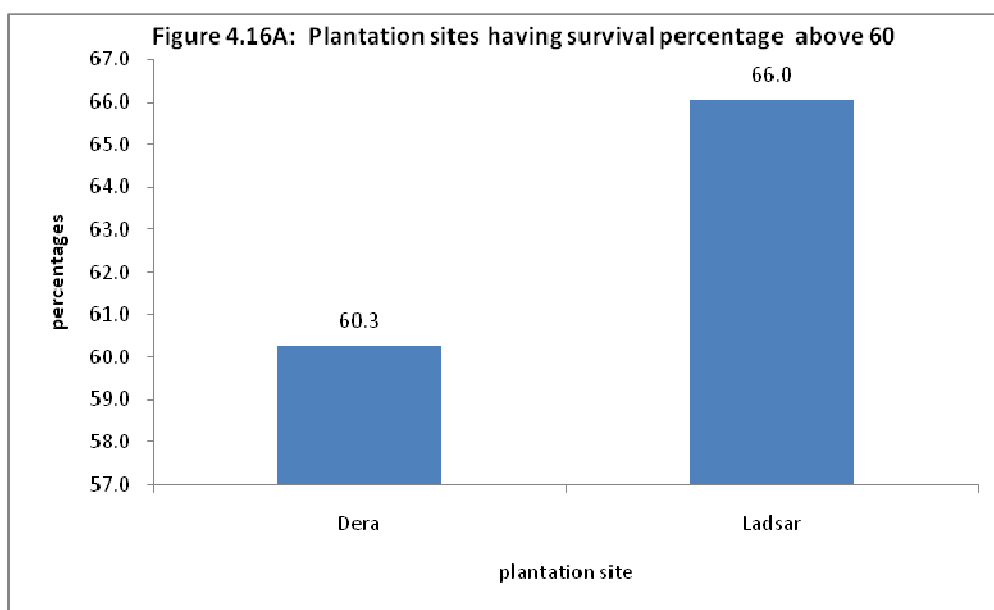
Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
23	Jaipur	Amer	Mundota	ACA	2023-24	11	Second	2630	26	5037	7693	34.2
24	Jaipur	Amer	Kukas park ke Piche	RDF-II	2023-24	50	Second	2575	763	6662	10000	25.8
25	Jaipur	Phagi	Pahadiya Main	RDF-II	2022-23	50	Third	4189	16	5795	10000	41.9
26	Jaipur (North)	Achrol	Bilochi-A	ANR	2021-22	50	Fourth	4235	112	5653	10000	42.4
27	Jaipur (North)	Achrol	Foot ka Baas	RDF-II	2023-24	50	Second	2780	255	6965	10000	27.8
28	Jaipur (North)	Shahpura	Malera Kumbhawas-III	ANR	2022-23	50	Third	3236	38	6726	10000	32.4
29	Jaipur (North)	Shahpura	Lobadawas	NFL	2023-24	4	Second	1048	43	3309	4400	23.8
	Jaipur (Wildlife)	Ajabgarh	Billu Ki Khan	ANR	2023-24	40	Second	4117	533	3350	8000	51.5
30	Jhunjhunu	Jhunjhunu	Ladsar	SDS	2021-22	14	Third	5548	39	2813	8400	66.0
31	Jhunjhunu	Chirawa	Urika	SDS	2023-24	20	Second	6409	57	5534	12000	53.4
32	Jhunjhunu	Khetri	Chirani-I	RDF-I	2022-23	50	Third	14580	120	10300	25000	58.3
33	Jhunjhunu	Khetri	Mehar Ki Dhani	ANR	2022-23	50	Third	5130	20	4850	10000	51.3
34	Jhunjhunu	Khetri	Bansiyal	RDF-II	2023-24	50	Second	4920	11	5069	10000	49.2
35	Jhunjhunu	Khetri	Burak	SDS	2023-24	25	Second	3482	57	11461	15000	23.2
36	Jhunjhunu	Khetri	Nalpur-III	ANR	2023-24	50	Second	4110	21	5869	10000	41.1
37	Sikar	Srimadhopur	Jhadali-III	SDS	2019-20	50	Fourth	9240	37	20723	30000	30.8
38	Sikar	Srimadhopur	Nare-IV	SDS	2023-24	25	Second	8670	17	6313	15000	57.8
39	Sikar	Srimadhopur	Mangarh	SDS	2023-24	25	Second	4542	42	10416	15000	30.3
40	Sikar	Neem Ka Thana	Palasala-I	RDF-II	2023-24	50	Second	5230	25	4745	10000	52.3
41	Sikar	Neem Ka Thana	Deepawas-II	RDF-II	2023-24	50	Second	2510	10	3300	5820	43.1
42	Sikar	Patan	Baorikala Kota-I	RDF-I	2023-24	50	Second	7767	30	17203	25000	31.1
43	Sikar	Sikar	Pandora-I	RDF-II	2022-23	50	Third	4130	25	5845	10000	41.3

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
44	Sikar	Danta	Manda Surera	ANR	2023-24	50	Second	2621	18	7361	10000	26.2
46	Sariska Alwar	Tehla	Nadoli	NFL	2017-18	85	Fourth	15565	51	39384	55000	28.3
47	Sariska Alwar	Sariska	Kharrika	RDF-II	2022-23	50	Third	5850	20	4130	10000	58.5
48	Bharatpur	Bayana	Jarkhor	ANR	2020-21	50	Fifth	2983	119	6898	10000	29.8
49	Bharatpur	Bayana	Jarkhor-2	RDF-II	2023-24	50	Second	4687	297	5016	10000	46.9
50	Bharatpur	Deeg	Madhera-4	ANR	2022-23	50	Third	2243	236	7521	10000	22.4
51	Bharatpur	Deeg	Pahadtal-3	ANR	2023-24	50	Second	4863	148	4989	10000	48.6
52	Bharatpur	Nadbai	Kamalpur	Other	2022-23	25	Third	6093	52	13855	20000	30.5
53	Dholpur	Sarmathra	Hariyawali	ANR	2021-22	50	Fourth	4291	321	5388	10000	42.9
54	Dholpur	Badi	Sagar	RDF-II	2023-24	50	Second	3340	7	6653	10000	33.4
55	Dholpur	Badi	Kans Ki Nari-A	RDF-II	2022-23	50	Third	2584	21	7395	10000	25.8
56	Dholpur	Dholpur	Hatiyakhar-A	ANR	2023-24	50	Second	5862	243	3895	10000	58.6
57	Dholpur	Van Vihar	Karas Ka Dada	ANR	2023-24	50	Second	3230	29	6741	10000	32.3
58	Dholpur	Van Vihar	Layakpura-II	RDF-I	2023-24	50	Second	10485	7	14508	25000	41.9
59	Karauli	Karauli	Gandhiji Ateva	RDF-I	2020-21	50	Fifth	10773	472	13755	25000	43.1
60	Karauli	Karauli	Tal Ke Upar Soraya Kosra	PCA	2023-24	5	Second	1789	37	1674	3500	51.1
61	Karauli	Sapotra	Masavta	ANR	2023-24	50	Second	4676	131	5193	10000	46.8
62	Karauli	Sapotra	Lediya	RDF-I	2023-24	50	Second	5721	111	4168	25000	22.9
63	Karauli	Sapotra	Adadugar	RDF-II	2023-24	50	Second	4982	137	4881	10000	49.8
64	Karauli	Hindon	Medkapura	RDF-II	2023-24	50	Second	1603	6	8391	10000	16.0
65	Karauli	Masalpur	Jhamri Mata	ANR	2023-24	50	Second	4187	122	5691	10000	41.9
66	Sawai Madhopur	Gangapur City	Bucholai 2nd	RDF-II	2021-22	50	Fourth	4468	21	5511	10000	44.7

Sl.no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
67	Sawai Madhopur	Gangapur City	Safeda Ki Khan	RDF-II	2023-23	50	Third	4510	86	5404	10000	45.1
68	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri	RDF-II	2023-23	50	Third	4582	109	5309	10000	45.8
69	Sawai Madhopur	Sawai Madhopur	Khedli-1	ANR	2023-23	50	Third	3208	117	6675	10000	32.1
70	Sawai Madhopur	Sawai Madhopur	Todolai- 2nd	RDF-II	2023-24	50	Second	5113	173	4714	10000	51.1
71	Sawai Madhopur	Sawai Madhopur	Isarda Balaji ist	RDF-II	2023-24	50	Second	4691	13	5296	10000	46.9
72	Sawai Madhopur	Bonli	Jailalpura	ANR	2023-24	50	Second	2321	17	7662	10000	23.2
73	NCS Dholpur	Itawa	Amalda	ANR	2021-22	50	Fourth	406	940	8654	10000	4.1
74	NCS Dholpur	WL Chambal, Dholpur	Datilo	RDF-II	2023-24	50	Second	4362	132	5506	10000	43.6
75	NCS Dholpur	WL Chambal, Dholpur	Acheleshwar Mahavev	RDF-II	2023-24	50	Second	4338	282	5380	10000	43.4
76	NCS Dholpur	WL Chambal, Dholpur	Bharka Baba-2	RDF-II	2023-24	50	Second	4369	365	5266	10000	43.7
77	RTR -II, Karauli	Mandrayal	Toda Ki Pudia	ANR	2023-24	50	Second	1634	167	8199	10000	16.3

Table 4.11 B: Table: Plantation sites having survival above 60%

Sl. no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
1	Alwar	Rajgarh	Dera	ANR	2023-24	50	Second	6027	213	3760	10000	60.3
2	Jhunjhunu	Jhunjhunu	Ladsar	SDS	2021-22	14	Third	5548	39	2813	8400	66.0



The survival percentage was above 60 of 2 sites of 2 Ranges of 2 Divisions (table 4.11B & figure 4.16A).

Table 4.11 C: Plantation sites having survival % between 50-60%

Sl. no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
1	Alwar	Thanagazi	Hanuman Ka Gwada	RD F-II	2023-24	50	Second	5865	149	3986	10000	58.7
2	Alwar	Alwar	Todiyar	RD F-II	2023-24	50	Second	5467	246	4287	10000	54.7
3	Jaipur (Wild life)	Ajabgarh	Billu Ki Khan	ANR	2023-24	40	Second	4117	533	3350	8000	51.5
4	Jhunjhunu	Chirawa	Urika	SDS	2023-24	20	Second	6409	57	5534	12000	53.4

5	Jhunj hunu	Khetri	Chirani-I	RD F-I	202 2-23	50	Thir d	145 80	120	103 00	2500 0	58.3
6	Jhunj hunu	Khetri	Mehar Ki Dhani	AN R	202 2-23	50	Thir d	513 0	20	485 0	1000 0	51.3
7	Sikar	Srimadh pur	Nare-IV	SD S	202 3-24	25	Sec ond	867 0	17	631 3	1500 0	57.8
8	Sikar	Neem Ka Thana	Palasala-I	RD F-II	202 3-24	50	Sec ond	523 0	25	474 5	1000 0	52.3
9	Saris ka Alwa r	Sariska	Kharrika	RD F-II	202 2-23	50	Thir d	585 0	20	413 0	1000 0	58.5
10	Dhol pur	Dholpur	Hatihakhar-A	AN R	202 3-24	50	Sec ond	586 2	243	389 5	1000 0	58.6
11	Karau li	Karauli	Tal Ke Upar Soraya Kosra	PC A	202 3-24	5	Sec ond	178 9	37	167 4	3500	51.1
12	Sawai Madh opur	Sawai Madhopu r	Todolai-2nd	RD F-II	202 3-24	50	Sec ond	511 3	173	471 4	1000 0	51.1

The survival percentage was between 50-60 % of 12 sites of 11 Ranges of 8 Divisions (table 4.11C & figure 4.16B).

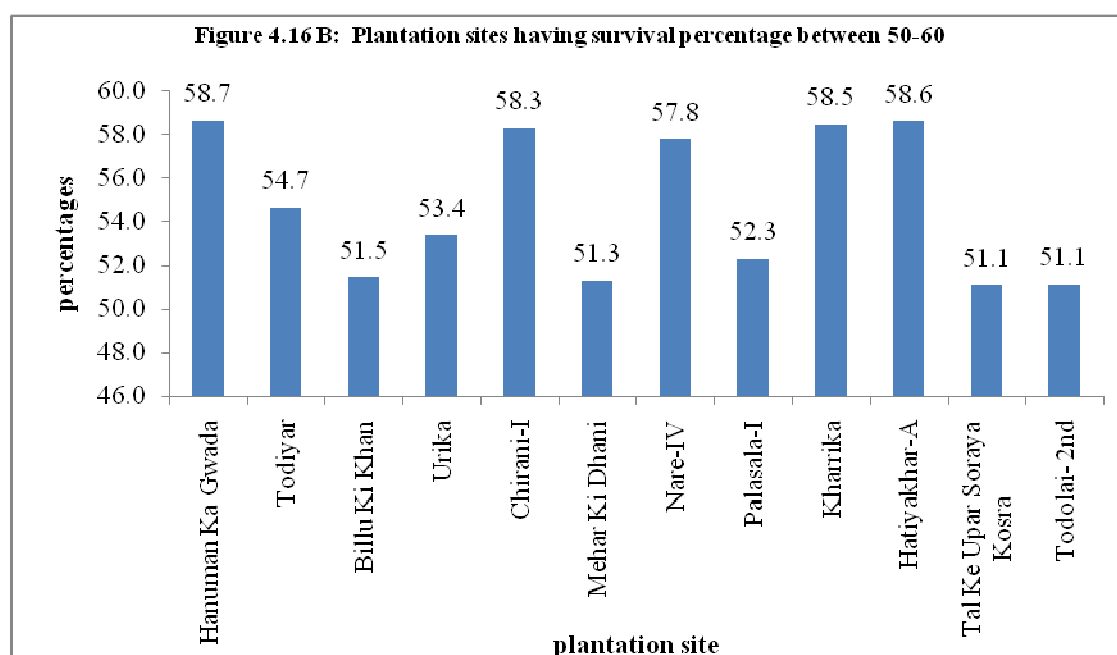


Table 4.11 D: Plantation sites having survival % between 40-50%

Sl. no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
1	Alwar	Thanagazi	Jhiri-A	ANR	2020-21	50	Fifth	4152	141	6717	10000	41.5
2	Alwar	Thanagazi	Dudu Ki Dhani	ANR	2021-22	50	Fourth	4218	343	5439	10000	42.2
3	Alwar	Thanagazi	Lotawas-A	ANR	2022-23	50	Third	4054	366	5580	10000	40.5
4	Alwar	Tijara	Balouj	ANR	2023-24	100	Second	8447	171	11382	20000	42.2
5	Alwar	Kishangarwas	Lisadi	RD F-II	2023-24	50	Second	4635	171	5194	10000	46.4
6	Dausa	Lalsot	Padol-A	ANR	2023-24	50	Second	4126	27	5847	10000	41.3
7	Dausa	Mahuwa	Padla -A	ANR	2023-24	50	Second	4223	141	5636	10000	42.2
8	Dausa	Dausa	EOP Ganshpura	EOP	2023-24	50	Second	2290	28	3219	5537	41.4
9	Dausa	Bandikui	Anantwara	RD F-II	2023-24	40	Second	3310	13	4677	8000	41.4
10	Jaipur	Phagi	Pahadiya Main	RD F-II	2022-23	50	Third	4189	16	5795	10000	41.9
11	Jaipur (North)	Achrol	Bilochi-A	ANR	2021-22	50	Fourth	4235	112	5653	10000	42.4
12	Jhunjhunu	Khetri	Bansiyal	RD F-II	2023-24	50	Second	4920	11	5069	10000	49.2
13	Jhunjhunu	Khetri	Nalpur-III	ANR	2023-24	50	Second	4110	21	5869	10000	41.1
14	Sikar	Neem Ka Thana	Deepawas-II	RD F-II	2023-24	50	Second	2510	10	3300	5820	43.1
15	Sikar	Sikar	Pandora-I	RD F-II	2022-23	50	Third	4130	25	5845	10000	41.3
16	Bharatpur	Bayana	Jarkhor-2	RD F-II	2023-24	50	Second	4687	297	5016	10000	46.9
17	Bharatpur	Deeg	Pahadtal-3	ANR	2023-24	50	Second	4863	148	4989	10000	48.6
18	Dholpur	Sarmathra	Hariyawali	ANR	2021-22	50	Fourth	4291	321	5388	10000	42.9
19	Dholpur	Van Vihar	Layakpura-II	RD F-I	2023-24	50	Second	10485	7	14508	25000	41.9
20	Karauli	Karauli	Gandhiji Ateva	RD F-I	2020-21	50	Fifth	10773	472	13755	25000	43.1
21	Karauli	Sapotra	Masavta	ANR	2023-24	50	Second	4676	131	5193	10000	46.8

22	Karauli	Sapotra	Adadugar	RD F-II	202 3-24	50	Sec ond	498 2	137	488 1	1000 0	49.8
23	Karauli	Masalpur	Jhamri Mata	AN R	202 3-24	50	Sec ond	418 7	122	569 1	1000 0	41.9
24	Sawai Madho pur	Gangapur City	Bucholai 2nd	RD F-II	202 1-22	50	Fou rth	446 8	21	551 1	1000 0	44.7
25	Sawai Madho pur	Gangapur City	Safeda Ki Khan	RD F-II	202 3-23	50	Thir d	451 0	86	540 4	1000 0	45.1
26	Sawai Madho pur	Gangapur City	Kuagaw Bichpuri	RD F-II	202 3-23	50	Thir d	458 2	109	530 9	1000 0	45.8
27	Sawai Madho pur	Sawai Madhopu r	Isarda Balaji ist	RD F-II	202 3-24	50	Sec ond	469 1	13	529 6	1000 0	46.9
28	NCS Dholpu r	WL Chambal, Dholpur	Datilo	RD F-II	202 3-24	50	Sec ond	436 2	132	550 6	1000 0	43.6
29	NCS Dholpu r	WL Chambal, Dholpur	Achelesh war Mahavev	RD F-II	202 3-24	50	Sec ond	433 8	282	538 0	1000 0	43.4
30	NCS Dholpu r	WL Chambal, Dholpur	Bharka baba-2	RD F-II	202 3-24	50	Sec ond	436 9	365	526 6	1000 0	43.7

The survival percentage was between 40-50 % of 30 sites of 22 Ranges of 11 Divisions (table 4.11D & figure 4.16C).

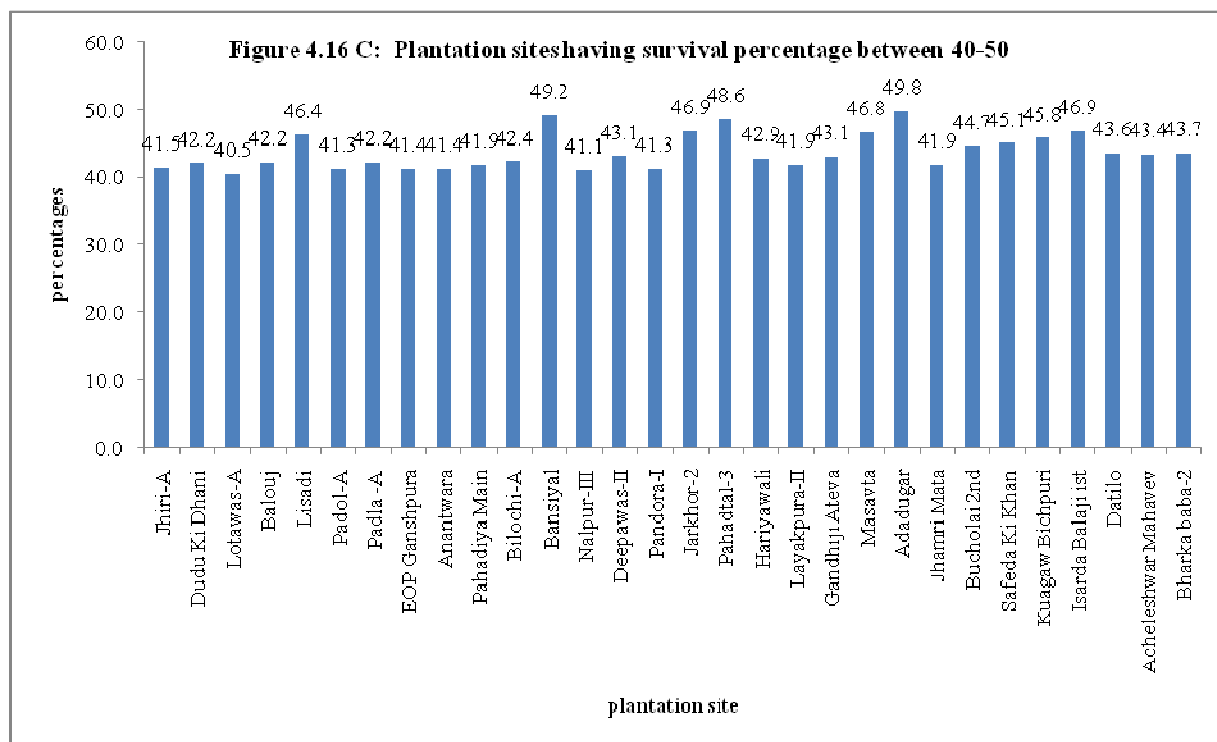
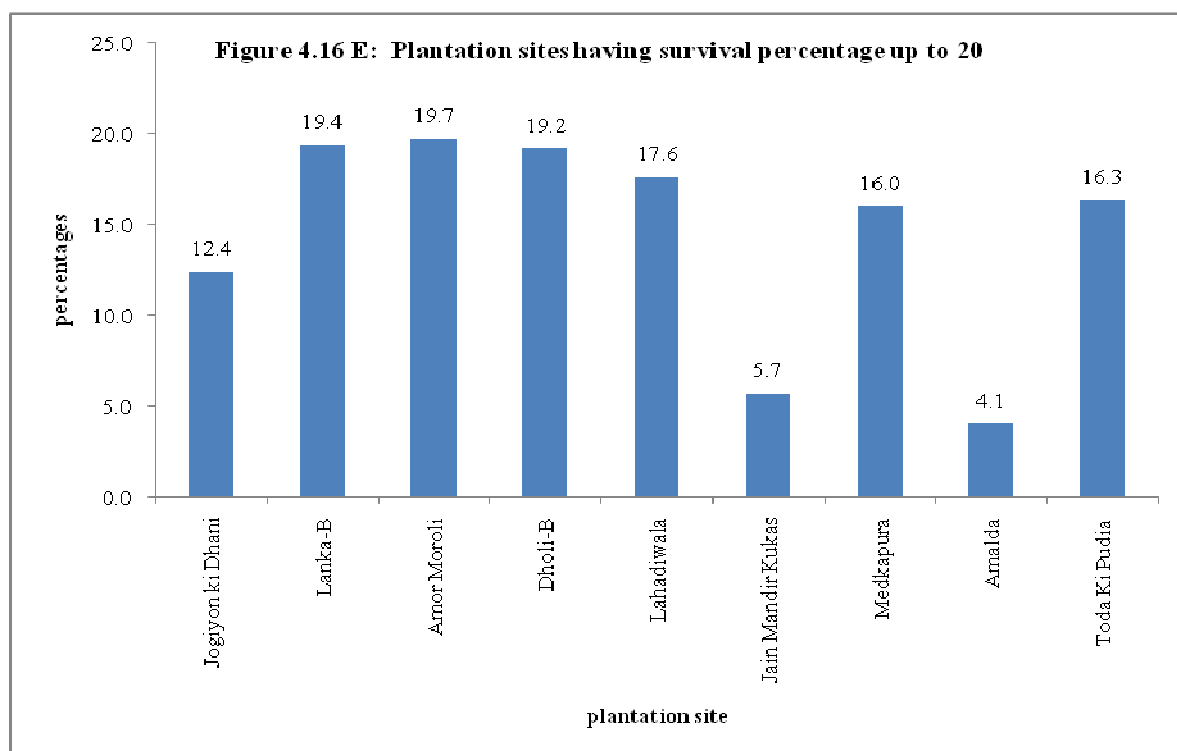
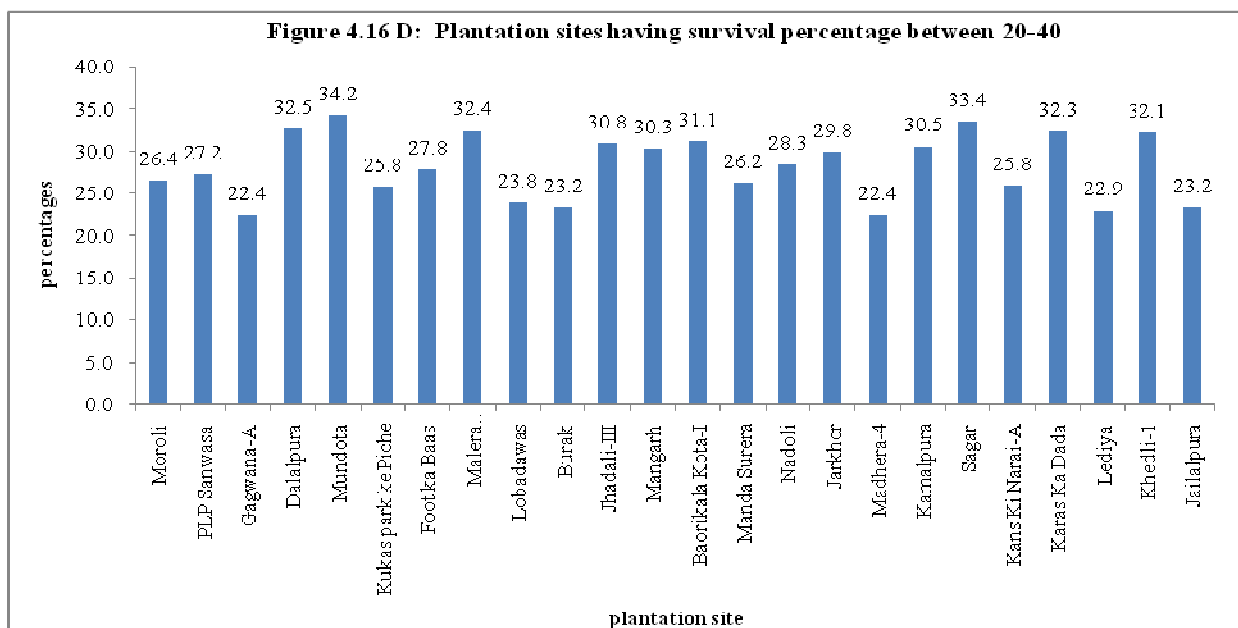


Table 4.11 E: Plantation sites having survival % between 20-40%

Sl. no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
1	Dausa	Sikrai	Moroli	ANR	2020-21	50	Fifth	2641	13	7346	10000	26.4
2	Dausa	Lalsot	PLP Sanwasa	Other	2021-22	25	Fourth	5448	42	14510	20000	27.2
3	Dausa	Mahuwa	Gagwana-A	RD F-II	2023-24	50	Second	2237	181	7582	10000	22.4
4	Dausa	Bandikui	Dalalpura	ANR	2022-23	50	Third	3252	27	6721	10000	32.5
5	Jaipur	Amer	Mundota	ACA	2023-24	11	Second	2630	26	5037	7693	34.2
6	Jaipur	Amer	Kukas park ke Piche	RD F-II	2023-24	50	Second	2575	763	6662	10000	25.8
7	Jaipur (North)	Achrol	Foot ka Baas	RD F-II	2023-24	50	Second	2780	255	6965	10000	27.8
8	Jaipur (North)	Shahpura	Malera Kumbhawas-III	ANR	2022-23	50	Third	3236	38	6726	10000	32.4
9	Jaipur (North)	Shahpura	Lobadawas	NFL	2023-24	4	Second	1048	43	3309	4400	23.8
10	Jhunjhunu	Khetri	Burak	SDS	2023-24	25	Second	3482	57	11461	15000	23.2
11	Sikar	Srimadhapur	Jhadali-III	SDS	2019-20	50	Fourth	9240	37	20723	30000	30.8
12	Sikar	Srimadhapur	Mangarh	SDS	2023-24	25	Second	4542	42	10416	15000	30.3
13	Sikar	Patan	Baorikala Kota-I	RD F-I	2023-24	50	Second	7767	30	17203	25000	31.1
14	Sikar	Danta	Manda Surera	ANR	2023-24	50	Second	2621	18	7361	10000	26.2
15	Sariska Alwar	Tehla	Nadoli	NFL	2017-18	85	Fourth	15565	51	39384	55000	28.3
16	Bharatpur	Bayana	Jarkhor	ANR	2020-21	50	Fifth	2983	119	6898	10000	29.8
17	Bharatpur	Deeg	Madhera-4	ANR	2022-23	50	Third	2243	236	7521	10000	22.4
18	Bharatpur	Nadbai	Kamalpura	Other	2022-23	25	Third	6093	52	13855	20000	30.5
19	Dholpur	Badi	Sagar	RD F-II	2023-24	50	Second	3340	7	6653	10000	33.4
20	Dholpur	Badi	Kans Ki	RD	2022	50	Third	258	21	739	1000	25.8

	pur		Nari-A	F-II	-23		d	4		5	0	
21	Dholpur	Van Vihar	Karas Ka Dada	AN R	2023-24	50	Sec ond	3230	29	6741	10000	32.3
22	Karauli	Sapotra	Lediya	RD F-I	2023-24	50	Sec ond	5721	111	4168	25000	22.9
23	Sawai Madhopur	Sawai Madhopur	Khedli-1	AN R	2023-23	50	Thir d	3208	117	6675	10000	32.1
24	Sawai Madhopur	Bonli	Jailalpura	AN R	2023-24	50	Sec ond	2321	17	7662	10000	23.2

The survival percentage was between 20-40 % of 24 sites of 20 Ranges of 10 Divisions (table 4.11E & figure 4.16D).



The survival percentage was up to 20% of 09 sites of 08 Ranges of 0 Divisions (table 4.11F & figure 4.16E).

Table 4.11 F: Plantation sites having survival % between up to 20%

Sl. no	Division	Range	Site name	Model	Year	Area (Ha)	Stage	Number of plants/pits				
								Pits with live plants	Pits with dead plants	Empty Pits	Total Number of plants	Survival %
1	Alwar	Rajgarh	Jogiyon ki Dhani	ANR	2023-24	50	Second	1241	167	8592	10000	12.4
2	Dausa	Sikrai	Lanka-B	RD F-II	2023-24	50	Second	1940	41	8019	10000	19.4
3	Dausa	Sikrai	Amor Moroli	PCA	2023-24	50	Second	6900	53	28047	35000	19.7
4	Dausa	Lalsot	Dholi-B	ANR	2021-22	50	Fourth	1920	13	8067	10000	19.2
5	Dausa	Dausa	Lahadiwala	RD F-II	2022-23	55	Third	1938	13	9049	11000	17.6
6	Jaipur	Amer	Jain Mandir Kukas	ANR	2021-22	50	Fourth	572	150	9278	10000	5.7
7	Karauli	Hindon	Medkapura	RD F-II	2023-24	50	Second	1603	6	8391	10000	16.0
8	NCS Dholpur	Itawa	Amalda	ANR	2021-22	50	Fourth	406	940	8654	10000	4.1
9	RTR - II, Karauli	Mandrayal	Toda Ki Pudia	ANR	2023-24	50	Second	1634	167	8199	10000	16.3



Confidence Level of the Sample on Overall Projection to the Population (all Plantations)/ Universe

The confidence level of the sample studied under Third Party Evaluation Study is to assess the survival percentage has been calculated in order to project the sample result of survival on the overall populations.

Statistical Methods Used

Half width of 95% Confidence Limit method has been used to calculate the confidence level of the sample survival percentage of plants in the plantation sites on overall populations. The Upper and Lower level of 95% Confidence Limit has been calculated. If the half width of 95% Confidence Limit is 0 then it can be said that the confidence level is close to the sample result.

The point estimate, i.e., the best estimate of the proportion of the survival of plants with the survival of plants against the planted calculated for 14 forest divisions. The 95% confidence interval computed for each forest division.

95% confidence interval = effect size $\pm$ 1.96 x standard error of the effect size

Thus, we are 95% confident that the true proportion of survival of plants is between 4.1% and 66.0%. The half width of 95% confidence interval of 77 sites shows that the confidence level is close to the sample result. In terms of range of half width of 95% confidence interval 06 sites (7.8 percent) falls in up to 0.5 range, 64 sites (83.1 percent) falls in 0.6-1.0 categories & 07 sites (9.1 percent) in 1.1-1.7 range.

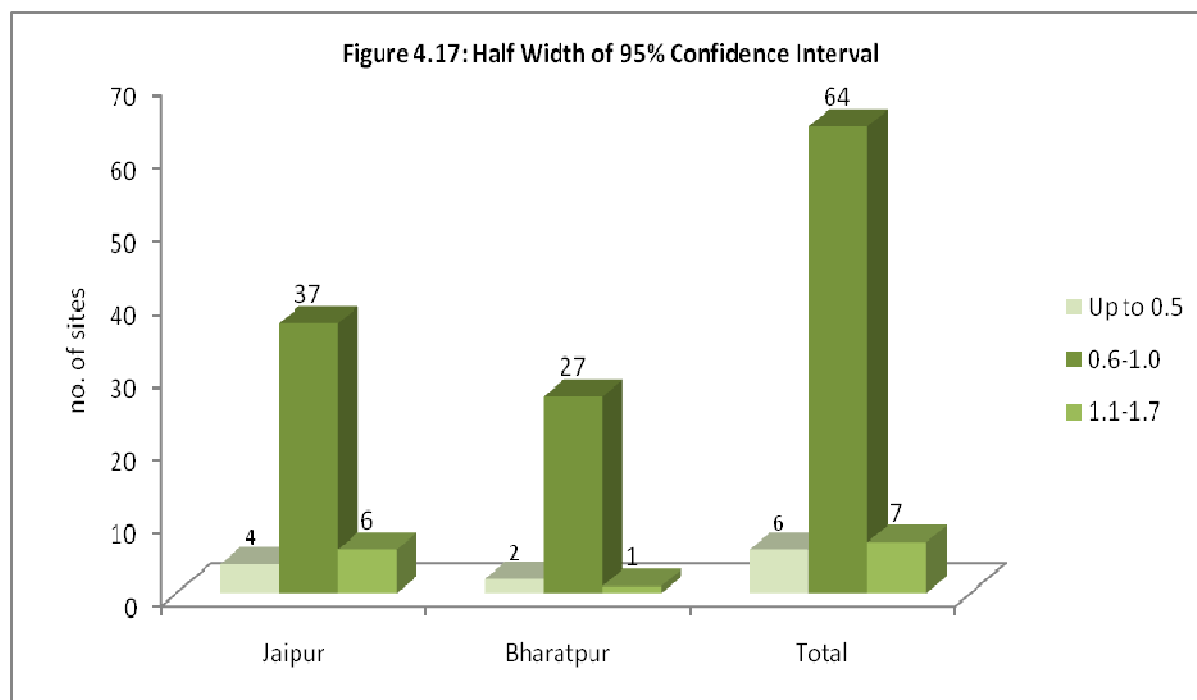


Table 4.12: Showing the Confidence level of Sample result to Universe (Overall Plantation sites)

Sl. No.	Sambhag	Division	Name of Range	Name of Site	Year	Model	Stage	Planted Area (ha.)	Planted Plants	Sample plants (n)	Live plants	Survival %	sample mean (p)	(1-p)	p (1-p)/n	Square root (margin error)	95% Confidence limit		Half width of 95% CI
																	Upper limit	Lower limit	
1	Jaipur	Alwar	Thanagazi	Jhiri-A	2020-21	ANR	Fifth	50.0	10000	10000	4152	41.5	0.4152	0.5848	0.00002428	0.004928	42.4858	40.5542	0.97
2	Jaipur	Alwar	Thanagazi	Dudu Ki Dhani	2021-22	ANR	Fourth	50.0	10000	10000	4218	42.2	0.4218	0.5782	0.00002439	0.004938	43.14794	41.21206	0.97
3	Jaipur	Alwar	Thanagazi	Lotawas-A	2022-23	ANR	Third	50.0	10000	10000	4054	40.5	0.4054	0.5946	0.00002411	0.00491	41.5023	39.5777	0.96
4	Jaipur	Alwar	Thanagazi	Hanuman Ka Gwada	2023-24	RDF-II	Second	50.0	10000	10000	5865	58.7	0.5865	0.4135	0.00002425	0.004925	59.61522	57.68478	0.97
5	Jaipur	Alwar	Rajgarh	Jogiyon ki Dhani	2023-24	ANR	Second	50.0	10000	10000	1241	12.4	0.1241	0.8759	0.00001087	0.003297	13.0562	11.7638	0.65
6	Jaipur	Alwar	Rajgarh	Dera	2023-24	ANR	Second	50.0	10000	10000	6027	60.3	0.6027	0.3973	0.00002395	0.004893	61.2291	59.3109	0.96
7	Jaipur	Alwar	Tijara	Balouj	2023-24	ANR	Second	100.0	20000	20000	8447	42.2	0.42235	0.57765	0.00001220	0.003493	42.91956	41.55044	0.68
8	Jaipur	Alwar	Alwar	Todiyar	2023-24	RDF-II	Second	50.0	10000	10000	5467	54.7	0.5467	0.4533	0.00002478	0.004978	55.64572	53.69428	0.98
9	Jaipur	Alwar	Kishangar was	Lisadi	2023-24	RDF-II	Second	50.0	10000	10000	4635	46.4	0.4635	0.5365	0.00002487	0.004987	47.32739	45.37261	0.98
10	Jaipur	Dausa	Sikrai	Moroli	2020-21	ANR	Fifth	50.0	10000	10000	2641	26.4	0.2641	0.7359	0.00001944	0.004409	27.27407	25.54593	0.86
11	Jaipur	Dausa	Sikrai	Lanka-B	2023-24	RDF-II	Second	50.0	10000	10000	1940	19.4	0.194	0.806	0.00001564	0.003954	20.17504	18.62496	0.78
12	Jaipur	Dausa	Sikrai	Amor Moroli	2023-24	PCA	Second	50.0	35000	35000	6900	19.7	0.1971	0.802857	0.00000452	0.002127	20.13109	19.29748	0.42
13	Jaipur	Dausa	Lalsot	PLP Sanwasa	2021-22	Other	Fourth	25.0	20000	20000	5448	27.2	0.2724	0.7276	0.00000991	0.003148	27.85701	26.62299	0.62
14	Jaipur	Dausa	Lalsot	Dholi-B	2021-22	ANR	Fourth	50.0	10000	10000	1920	19.2	0.192	0.808	0.00001551	0.003939	19.97199	18.42801	0.77
15	Jaipur	Dausa	Lalsot	Padol-A	2023-	ANR	Seco	50.0	1000	1000	412	41.3	0.412	0.587	0.0000	0.004	42.22	40.29	0.96

Sl. No.	Sambhag	Division	Name of Range	Name of Site	Year	Model	Stage	Planted Area (ha.)	Planted Plants	Sample plants (n)	Live plants	Survival %	sample mean (p)	(1-p)	p (1-p)/n	Square root (margin error)	95% Confidence limit		Half width of 95% CI
																	Upper limit	Lower limit	
					24		nd		0	0	6		6	4	2424	923	491	509	
16	Jaipur	Dausa	Mahuwa	Padla -A	2023-24	ANR	Second	50.0	10000	10000	4223	42.2	0.4223	0.5777	0.00002440	0.004939	43.19809	41.26191	0.97
17	Jaipur	Dausa	Mahuwa	Gagwana -A	2023-24	RDF-II	Second	50.0	10000	10000	2237	22.4	0.2237	0.7763	0.00001737	0.004167	23.18678	21.55322	0.82
18	Jaipur	Dausa	Dausa	Lahadiwala	2022-23	RDF-II	Third	55.0	11000	11000	1938	17.6	0.176182	0.823818	0.00001319	0.003632	18.33014	16.90622	0.71
19	Jaipur	Dausa	Dausa	EOP Ganshpura	2023-24	Enrichment of Old Plantation	Second	50.0	5537	5537	2290	41.4	0.413581	0.586419	0.00004380	0.006618	42.65532	40.06095	1.30
20	Jaipur	Dausa	Bandikui	Dalalpur a	2022-23	ANR	Third	50.0	10000	10000	3252	32.5	0.3252	0.6748	0.00002194	0.004684	33.43816	31.60184	0.92
21	Jaipur	Dausa	Bandikui	Anantwara	2023-24	RDF-II	Second	40.0	8000	8000	3310	41.4	0.41375	0.58625	0.00003032	0.005506	42.45425	40.29575	1.08
22	Jaipur	Jaipur	Amer	Jain Mandir Kukas	2021-22	ANR	Fourth	50.0	10000	10000	5720	5.7	0.0572	0.9428	0.00000539	0.002322	6.17516	5.26484	0.46
23	Jaipur	Jaipur	Amer	Mundota	2023-24	ACA	Second	11.0	7693	7693	2630	34.2	0.341869	0.658131	0.00002925	0.005408	35.24689	33.12695	1.06
24	Jaipur	Jaipur	Amer	Kukas park ke Piche	2023-24	RDF-II	Second	50.0	10000	10000	2575	25.8	0.2575	0.7425	0.00001912	0.004373	26.60702	24.89298	0.86
25	Jaipur	Jaipur	Phagi	Pahadiya Main	2022-23	RDF-II	Third	50.0	10000	10000	4189	41.9	0.4189	0.5811	0.00002434	0.004934	42.85702	40.92298	0.97
26	Jaipur	Jaipur (North)	Achrol	Bilochi-A	2021-22	ANR	Fourth	50.0	10000	10000	4235	42.4	0.4235	0.5765	0.00002441	0.004941	43.31846	41.38154	0.97
27	Jaipur	Jaipur (North)	Achrol	Foot ka Baas	2023-24	RDF-II	Second	50.0	10000	10000	2780	27.8	0.278	0.722	0.00002007	0.00448	28.67811	26.92189	0.88

Sl. No.	Sambhag	Division	Name of Range	Name of Site	Year	Model	Stage	Planted Area (ha.)	Planted Plants	Sample plants (n)	Live plants	Survival %	sample mean (p)	(1-p)	p (1-p)/n	Square root (margin error)	95% Confidence limit		Half width of 95% CI
																	Upper limit	Lower limit	
28	Jaipur	Jaipur (North)	Shahpura	Malera Kumbhas-III	2022-23	ANR	Third	50.0	10000	10000	3236	32.4	0.3236	0.6764	0.00002189	0.004678	33.27698	31.44302	0.92
29	Jaipur	Jaipur (North)	Shahpura	Lobadawas	2023-24	NFL	Second	4.0	4400	4400	1048	23.8	0.238182	0.761818	0.00004124	0.006422	25.07685	22.55952	1.26
30	Jaipur	Jaipur (Wildlife)	Ajabgarh	Billu Ki Khan	2023-24	ANR	Second	40.0	8000	8000	4117	51.5	0.514625	0.485375	0.00003122	0.005588	52.5577	50.3673	1.10
31	Jaipur	Jhunjhunu	Jhunjhunu	Ladsar	2021-22	SDS	Third	14.0	8400	8400	5548	66.0	0.660476	0.339524	0.00002670	0.005167	67.06032	65.03492	1.01
32	Jaipur	Jhunjhunu	Chirawa	Urika	2023-24	SDS	Second	20.0	12000	12000	6409	53.4	0.534083	0.465917	0.00002074	0.004554	54.30087	52.5158	0.89
33	Jaipur	Jhunjhunu	Khetri	Chirani-I	2022-23	RDF-I	Third	50.0	25000	25000	14580	58.3	0.5832	0.4168	0.00000972	0.003118	58.93117	57.70883	0.61
34	Jaipur	Jhunjhunu	Khetri	Mehar Ki Dhani	2022-23	ANR	Third	50.0	10000	10000	5130	51.3	0.513	0.487	0.00002498	0.004998	52.27967	50.32033	0.98
35	Jaipur	Jhunjhunu	Khetri	Bansiyal	2023-24	RDF-II	Second	50.0	10000	10000	4920	49.2	0.492	0.508	0.00002499	0.004999	50.17987	48.22013	0.98
36	Jaipur	Jhunjhunu	Khetri	Burak	2023-24	SDS	Second	25.0	15000	15000	3482	23.2	0.232133	0.767867	0.00001188	0.003447	23.88898	22.53768	0.68
37	Jaipur	Jhunjhunu	Khetri	Nalpur-III	2023-24	ANR	Second	50.0	10000	10000	4110	41.1	0.411	0.589	0.00002421	0.00492	42.06435	40.13565	0.96
38	Jaipur	Sikar	Srimadhopur	Jhadali-III	2019-20	SDS	Fourth	50.0	30000	30000	9240	30.8	0.308	0.692	0.00000710	0.002665	31.32242	30.27758	0.52
39	Jaipur	Sikar	Srimadhopur	Nare-IV	2023-24	SDS	Second	25.0	15000	15000	8670	57.8	0.578	0.422	0.00001626	0.004033	58.59037	57.00963	0.79
40	Jaipur	Sikar	Srimadhopur	Mangarh	2023-24	SDS	Second	25.0	15000	15000	4542	30.3	0.3028	0.6972	0.00001407	0.003752	31.0153	29.5447	0.74
41	Jaipur	Sikar	Neem Ka Thana	Palasala-I	2023-24	RDF-II	Second	50.0	10000	10000	5230	52.3	0.523	0.477	0.00002495	0.004995	53.27896	51.32104	0.98
42	Jaipur	Sikar	Neem Ka Thana	Deepawas-II	2023-24	RDF-II	Second	50.0	5820	5820	2510	43.1	0.431271	0.568729	0.00004214	0.006492	44.39954	41.85475	1.27

Sl. No.	Sambhag	Division	Name of Range	Name of Site	Year	Model	Stage	Planted Area (ha.)	Planted Plants	Sample plants (n)	Live plants	Survival %	sample mean (p)	(1-p)	p (1-p)/n	Square root (margin error)	95% Confidence limit		Half width of 95% CI
																	Upper limit	Lower limit	
43	Jaipur	Sikar	Patan	Baorikal a Kota-I	2023-24	RDF-I	Second	50.0	25000	25000	7767	31.1	0.31068	0.68932	0.00000857	0.002927	31.64166	30.49434	0.57
44	Jaipur	Sikar	Sikar	Pandora-I	2022-23	RDF-II	Third	50.0	10000	10000	4130	41.3	0.413	0.587	0.00002424	0.004924	42.26505	40.33495	0.97
45	Jaipur	Sikar	Danta	Manda Surera	2023-24	ANR	Second	50.0	10000	10000	2621	26.2	0.2621	0.7379	0.00001934	0.004398	27.07196	25.34804	0.86
46	Jaipur	Sariska Alwar	Tehla	Nadoli	2017-18	NFL	Fourth	85.4	55000	55000	15565	28.3	0.283	0.717	0.00000369	0.001921	28.67647	27.92353	0.38
47	Jaipur	Sariska Alwar	Sariska	Kharrika	2022-23	RDF-II	Third	50.0	10000	10000	5850	58.5	0.585	0.415	0.00002428	0.004927	59.46574	57.53426	0.97
48	Bharatpur	Bharatpur	Bayana	Jarkhor	2020-21	ANR	Fifth	50.0	10000	10000	2983	29.8	0.2983	0.7017	0.00002093	0.004575	30.72672	28.93328	0.90
49	Bharatpur	Bharatpur	Bayana	Jarkhor-2	2023-24	RDF-II	Second	50.0	10000	10000	4687	46.9	0.4687	0.5313	0.00002490	0.00499	47.84808	45.89192	0.98
50	Bharatpur	Bharatpur	Deeg	Madhera-4	2022-23	ANR	Third	50.0	10000	10000	2243	22.4	0.2243	0.7757	0.00001740	0.004171	23.24756	21.61244	0.82
51	Bharatpur	Bharatpur	Deeg	Pahadtal-3	2023-24	ANR	Second	50.0	10000	10000	4863	48.6	0.4863	0.5137	0.00002498	0.004998	49.60963	47.65037	0.98
52	Bharatpur	Bharatpur	Nadbai	Kamalpur	2022-23	Other	Third	25.0	20000	20000	6093	30.5	0.30465	0.69535	0.00001059	0.003255	31.10289	29.82711	0.64
53	Bharatpur	Dholpur	Sarmathra	Hariyawali	2021-22	ANR	Fourth	50.0	10000	10000	4291	42.9	0.4291	0.5709	0.00002450	0.004949	43.8801	41.9399	0.97
54	Bharatpur	Dholpur	Badi	Sagar	2023-24	RDF-II	Second	50.0	10000	10000	3340	33.4	0.334	0.666	0.00002224	0.004716	34.32441	32.47559	0.92
55	Bharatpur	Dholpur	Badi	Kans Ki Nari-A	2022-23	RDF-II	Third	50.0	10000	10000	2584	25.8	0.2584	0.7416	0.00001916	0.004378	26.698	24.982	0.86
56	Bharatpur	Dholpur	Dholpur	Hatiyakh-ar-A	2023-24	ANR	Second	50.0	10000	10000	5862	58.6	0.5862	0.4138	0.00002426	0.004925	59.58533	57.65467	0.97
57	Bharatpur	Dholpur	Van Vihar	Karas Ka Dada	2023-24	ANR	Second	50.0	10000	10000	3230	32.3	0.323	0.677	0.00002187	0.004676	33.21654	31.38346	0.92

Sl. No.	Sambhag	Division	Name of Range	Name of Site	Year	Model	Stage	Planted Area (ha.)	Planted Plants	Sample plants (n)	Live plants	Survival %	sample mean (p)	(1-p)	p (1-p)/n	Square root (margin error)	95% Confidence limit		Half width of 95% CI
																	Upper limit	Lower limit	
58	Bharatpur	Dholpur	Van Vihar	Layakpura-II	2023-24	RDF-I	Second	50.0	25000	25000	10485	41.9	0.4194	0.5806	0.00000974	0.003121	42.5517	41.3283	0.61
59	Bharatpur	Karauli	Karauli	Gandhiji Ateva	2020-21	RDF-I	Fifth	50.0	25000	25000	10773	43.1	0.43092	0.56908	0.00000981	0.003132	43.70586	42.47814	0.61
60	Bharatpur	Karauli	Karauli	Tal Ke Upar Soraya Kosra	2023-24	PCA	Second	5.0	3500	3500	1789	51.1	0.511143	0.488857	0.00007139	0.008449	52.77038	49.45819	1.66
61	Bharatpur	Karauli	Sapotra	Masavta	2023-24	ANR	Second	50.0	10000	10000	4676	46.8	0.4676	0.5324	0.00002490	0.004989	47.73794	45.78206	0.98
62	Bharatpur	Karauli	Sapotra	Lediya	2023-24	RDF-I	Second	50.0	25000	25000	5721	22.9	0.22884	0.77116	0.00000706	0.002657	23.40474	22.36326	0.52
63	Bharatpur	Karauli	Sapotra	Adadugar	2023-24	RDF-II	Second	50.0	10000	10000	4982	49.8	0.4982	0.5018	0.00002500	0.005	50.79999	48.84001	0.98
64	Bharatpur	Karauli	Hindon	Medkapura	2023-24	RDF-II	Second	50.0	10000	10000	1603	16.0	0.1603	0.8397	0.00001346	0.003669	16.74909	15.31091	0.72
65	Bharatpur	Karauli	Masalpur	Jhamri Mata	2023-24	ANR	Second	50.0	10000	10000	4187	41.9	0.4187	0.5813	0.00002434	0.004933	42.83696	40.90304	0.97
66	Bharatpur	Sawai Madhopur	Gangapur City	Bucholai 2nd	2021-22	RDF-II	Fourth	50.0	10000	10000	4468	44.7	0.4468	0.5532	0.00002472	0.004972	45.65444	43.70556	0.97
67	Bharatpur	Sawai Madhopur	Gangapur City	Safeda Ki Khan	2023-23	RDF-II	Third	50.0	10000	10000	4510	45.1	0.451	0.549	0.00002476	0.004976	46.07528	44.12472	0.98
68	Bharatpur	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri	2023-23	RDF-II	Third	50.0	10000	10000	4582	45.8	0.4582	0.5418	0.00002483	0.004982	46.79657	44.84343	0.98
69	Bharatpur	Sawai Madhopur	Sawai Madhopur	Khedli-1	2023-23	ANR	Third	50.0	10000	10000	3208	32.1	0.3208	0.6792	0.00002179	0.004668	32.9949	31.1651	0.91

Sl. No.	Sambhag	Division	Name of Range	Name of Site	Year	Model	Stage	Planted Area (ha.)	Planted Plants	Sample plants (n)	Live plants	Survival %	sample mean (p)	(1-p)	p (1-p)/n	Square root (margin error)	95% Confidence limit		Half width of 95% CI
																	Upper limit	Lower limit	
70	Bharatpur	Sawai Madhopur	Sawai Madhopur	Todolai-2nd	2023-24	RDF-II	Second	50.0	10000	10000	5113	51.1	0.5113	0.4887	0.00002499	0.004999	52.10975	50.15025	0.98
71	Bharatpur	Sawai Madhopur	Sawai Madhopur	Isarda Balajist	2023-24	RDF-II	Second	50.0	10000	10000	4691	46.9	0.4691	0.5309	0.00002490	0.00499	47.88813	45.93187	0.98
72	Bharatpur	Sawai Madhopur	Bonli	Jailalpur a	2023-24	ANR	Second	50.0	10000	10000	2321	23.2	0.2321	0.7679	0.00001782	0.004222	24.03746	22.38254	0.83
73	Bharatpur	NCS Dholpur	Itawa	Amalda	2021-22	ANR	Fourth	50.0	10000	10000	4060	4.1	0.0406	0.9594	0.00000390	0.001974	4.446829	3.673171	0.39
74	Bharatpur	NCS Dholpur	WL Chambal, Dholpur	Datilo	2023-24	RDF-II	Second	50.0	10000	10000	4362	43.6	0.4362	0.5638	0.00002459	0.004959	44.59199	42.64801	0.97
75	Bharatpur	NCS Dholpur	WL Chambal, Dholpur	Acheleshwar Mahavev	2023-24	RDF-II	Second	50.0	10000	10000	4338	43.4	0.4338	0.5662	0.00002456	0.004956	44.35137	42.40863	0.97
76	Bharatpur	NCS Dholpur	WL Chambal, Dholpur	Bharkababa-2	2023-24	RDF-II	Second	50.0	10000	10000	4369	43.7	0.4369	0.5631	0.00002460	0.00496	44.66216	42.71784	0.97
77	Bharatpur	RTR -II, Karauli	Mandrayal	Toda Ki Pudia	2023-24	ANR	Second	50.0	10000	10000	1634	16.3	0.1634	0.8366	0.00001367	0.003697	17.06467	15.61533	0.72

Table 4.13: Half width of 95% Confidence Interval

S.No.	Division (Sambhag)	Division	Total No. of sample sites	Range			Total
				Up to 0.5	0.6-1.0	1.1-1.7	
1	Jaipur	Alwar	9	0 (0.0)	9 (100.0)	0 (0.0)	9 (100.0)
2	Jaipur	Dausa	12	1 (8.3)	9 (75.0)	2 (16.7)	12 (100.0)
3	Jaipur	Jaipur	4	1 (25.0)	2 (50.0)	1 (25.0)	4 (100.0)
4	Jaipur	Jaipur (North)	4	0 (0.0)	3 (75.0)	1 (25.0)	4 (100.0)
5	Jaipur	Jaipur (Wildlife)	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
6	Jaipur	Jhunjhunu	7	0 (0.0)	7 (100.0)	0 (0.0)	7 (100.0)
7	Jaipur	Sikar	8	1 (12.5)	6 (75.0)	1 (12.5)	8 (100.0)
8	Jaipur	Sariska Alwar	2	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)
	Sub total (A)		47	4 (8.5)	37 (78.7)	6 (12.8)	47 (100.0)
9	Bharatpur	Bharatpur	5	0 (0.0)	5 (100.0)	0 (0.0)	5 (100.0)
10	Bharatpur	Dholpur	6	0 (0.0)	6 (100.0)	0 (0.0)	6 (100.0)
11	Bharatpur	Karauli	7	1 (14.3)	5 (71.4)	1 (14.3)	7 (100.0)
12	Bharatpur	Sawai Madhopur	7	0 (0.0)	7 (100.0)	0 (0.0)	7 (100.0)
13	Bharatpur	NCS Dholpur	4	1 (25.0)	3 (75.0)	0 (0.0)	4 (100.0)
14	Bharatpur	RTR -II, Karauli	1	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
	Sub total (B)		30	2 (6.7)	27 (90.0)	1 (3.3)	30 (100.0)
	Grand Total		77	6 (7.8)	64 (83.1)	7 (9.1)	77 (100.0)

4.4 Impact of seed sowing (Factors affecting survival and growth)

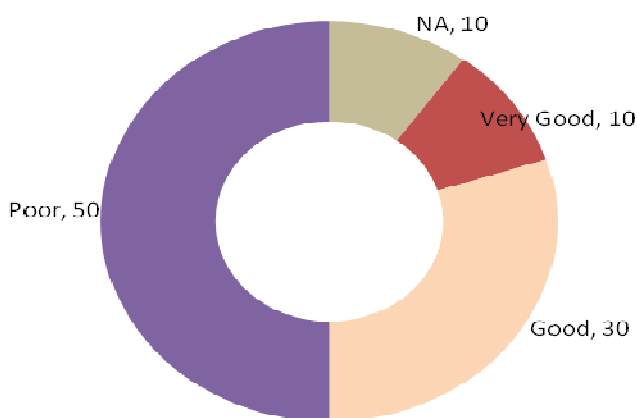
Result of Seed sowing on Mound of Dola/Ditch fencing

Third Stage

The analysis of seed sowing results on the mound of ditch/dola fencing during the third plantation stage presents a mixed picture. In Jaipur, 50% of the sites were rated as “Poor,” while the remaining were distributed as 30% sites “Good,” & 10% sites “Very Good. At 01 site (10 percent) in Sikar division viz. Pandora I plantation site the result of seed sowing on mound of the ditch/dola fencing was not applicable as only loose stone fencing & barbed wire fencing was reported at the site. In Bharatpur third stage showed similar proportions, with 50% sites “Poor” outcomes, and the remaining 50% sites evenly divided across the other three categories (each at 16.7%). At 01 site(16.7 percent) in Bharatpur division viz. Madhera 4 plantation site the result of seed sowing on mound of the Dola/Ditch fencing was not applicable as only barbed wire fencing was reported at the site. When viewed collectively,

the overall third stage performance indicates that half of the efforts were unsuccessful, but 37.5% of the plantation sites did show good or very good outcomes. The presence of

Figure 4.18: Result of seed sowing on mound of ditch/dola fencing in Third Stage in Jaipur Sambhag(%)



“Very Good” results - though limited - suggests that with the right conditions and implementation, effective results are achievable. Moreover, 12.5 percent of the plantation sites lacked any intervention for seed sowing. This stage highlights both the potential and inconsistency of outcomes, likely influenced by site-level variation in preparation, weather, or execution quality.

Table 4.14: Result of sowing on mound of the Dola/Ditch fencing in Third Stage

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-3	Result of sowing on mound of the Dola/Ditch fencing				
				NA	Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
2	Jaipur	Dausa	2	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)
3	Jaipur	Jaipur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	3	0 (0.0)	1 (33.3)	2 (66.7)	0 (0.0)	3 (100.0)
7	Jaipur	Sikar	1	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
8	Jaipur	Sariska Alwar	1	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
	Sub total (A)		10	1 (10.0)	1 (10.0)	3 (30.0)	5 (50.0)	10 (100.0)
9	Bharatpur	Bharatpur	2	1 (50.0)	0 (0.0)	0 (0.0)	1 (50.0)	2 (100.0)
10	Bharatpur	Dholpur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
11	Bharatpur	Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	3	0 (0.0)	1 (33.3)	1 (33.3)	1 (33.3)	3 (100.0)

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-3	Result of sowing on mound of the Dola/Ditch fencing				
				NA	Very Good	Good	Poor	Total
13	Bharatpur	NCS Dholpur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		6	1 (16.7)	1 (16.7)	1 (16.7)	3 (50.0)	6 (100.0)
	Grand Total		16	2 (12.5)	2 (12.5)	4 (25.0)	8 (50.0)	16 (100.0)

Note: Figures in the brackets are the percentages

Figure 4.19: Result of seed sowing on mound of ditch/dola fencing in Third Stage in Bharatpur Sambhag(%)

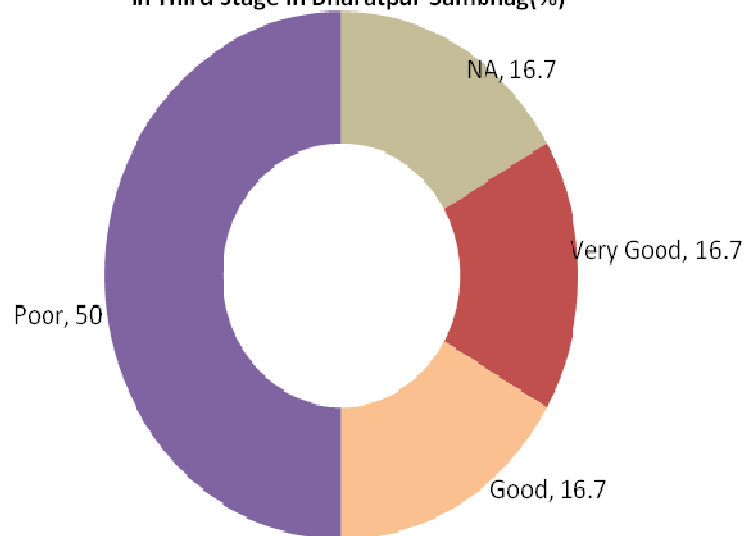
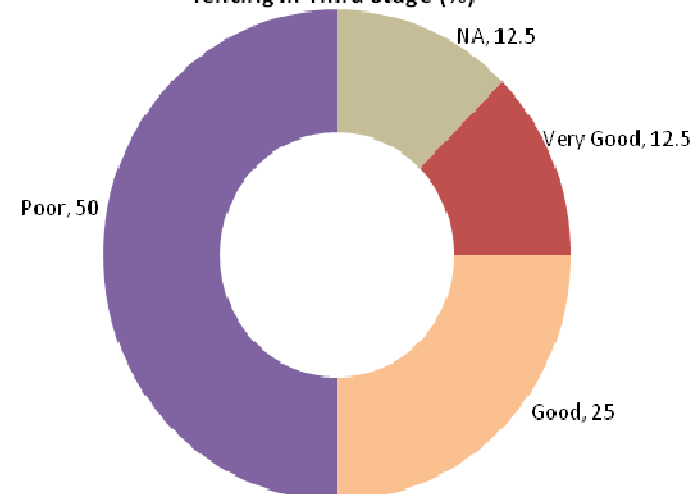


Figure 4.20: Overall result of seed sowing on mound of ditch/dola fencing in Third Stage (%)



Fourth Stage

The fourth stage results are significantly more concerning. In Jaipur, a staggering 71.4% of plantation sites were rated “Poor,” with no “Very Good” results reported and only 14.3% each under “Good” and “lacked any intervention of seed sowing.” At 01 site (14.3 percent) in Sikar division viz. Jhadali III plantation site the result of seed sowing on mound of the Dola/Ditch fencing was not applicable as only barbed wire fencing was reported at the site.

Bharatpur

Sambhag

fares only slightly better, with 66.7% of the sites in the “Poor”

category and 33.3% marked as “Good.”

Again, no high-performing

sites were recorded. When combined, the overall fourth stage data shows 70% “Poor” outcomes, 20% “Good,” and 10% lacked any intervention of seed sowing with a complete absence of any “Very Good” ratings. This stark deterioration from the third stage suggests serious limitations either in the ditch/dola method during this period, environmental constraints, or lapses in field execution. The fourth stage results emphasize the urgent need to reassess implementation strategies and explore what went wrong compared to the third stage, where at least a few sites managed to achieve high standards.

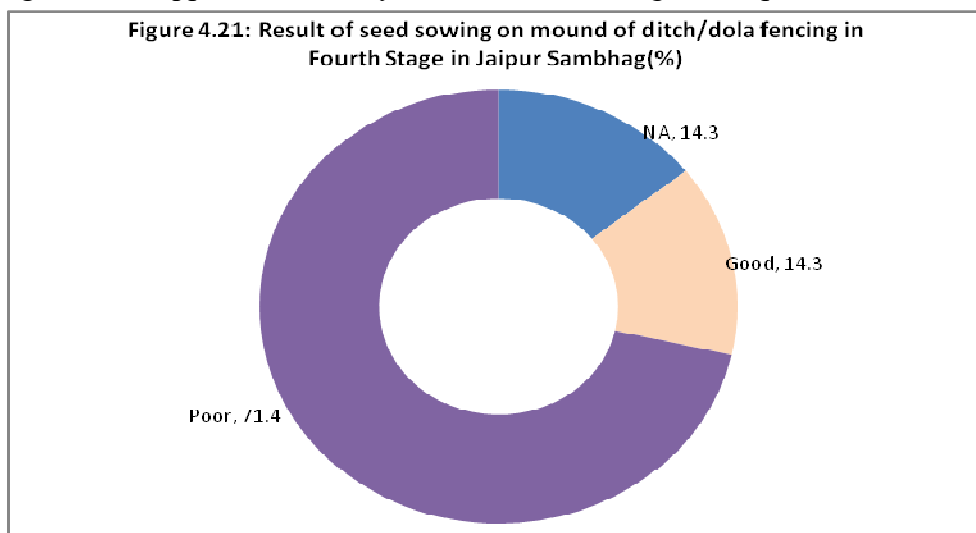


Table 4.15: Result of sowing on mound of the Dola/Ditch fencing in Fourth Stage

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-4	Result of sowing on mound of Dola/Ditch fencing				
				NA	Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
2	Jaipur	Dausa	2	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)
3	Jaipur	Jaipur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	1	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
8	Jaipur	Sariska Alwar	1	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
	Sub total (A)		7	1 (14.3)	0 (0.0)	1 (14.3)	5 (71.4)	7 (100.0)
9	Bharatpur	Bharatpur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	1	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
11	Bharatpur	Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
13	Bharatpur	NCS Dholpur	1	0	0	0	1	1

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-4	Result of sowing on mound of Dola/Ditch fencing				
				NA	Very Good	Good	Poor	Total
				(0.0)	(0.0)	(0.0)	(100.0)	(100.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		3	0 (0.0)	0 (0.0)	1 (33.3)	2 (66.7)	3 (100.0)
	Grand Total		10	1 (10.0)	0 (0.0)	2 (20.0)	7 (70.0)	10 (100.0)

Note: Figures in the brackets are the percentages

Figure 4.22: Result of seed sowing on mound of ditch/dola fencing in Fourth Stage in Bharatpur Sambhag(%)

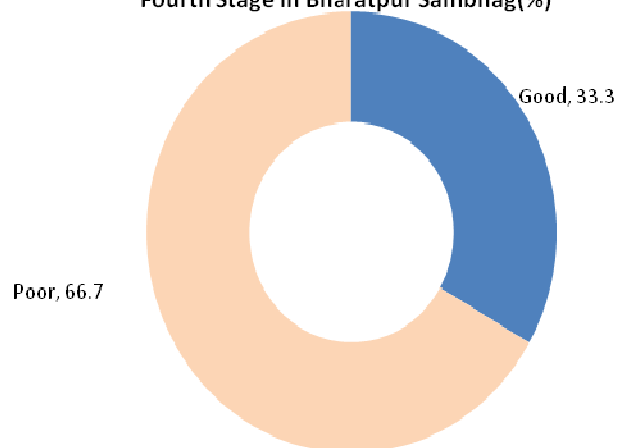


Figure 4.23: Overall result of seed sowing on mound of ditch/dola fencing in Fourth Stage (%)

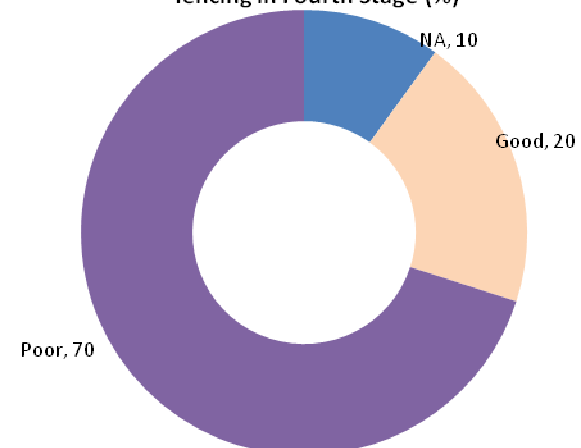


Table 4.16: Result of sowing on mound of the Dola/Ditch fencing in Fifth Stage

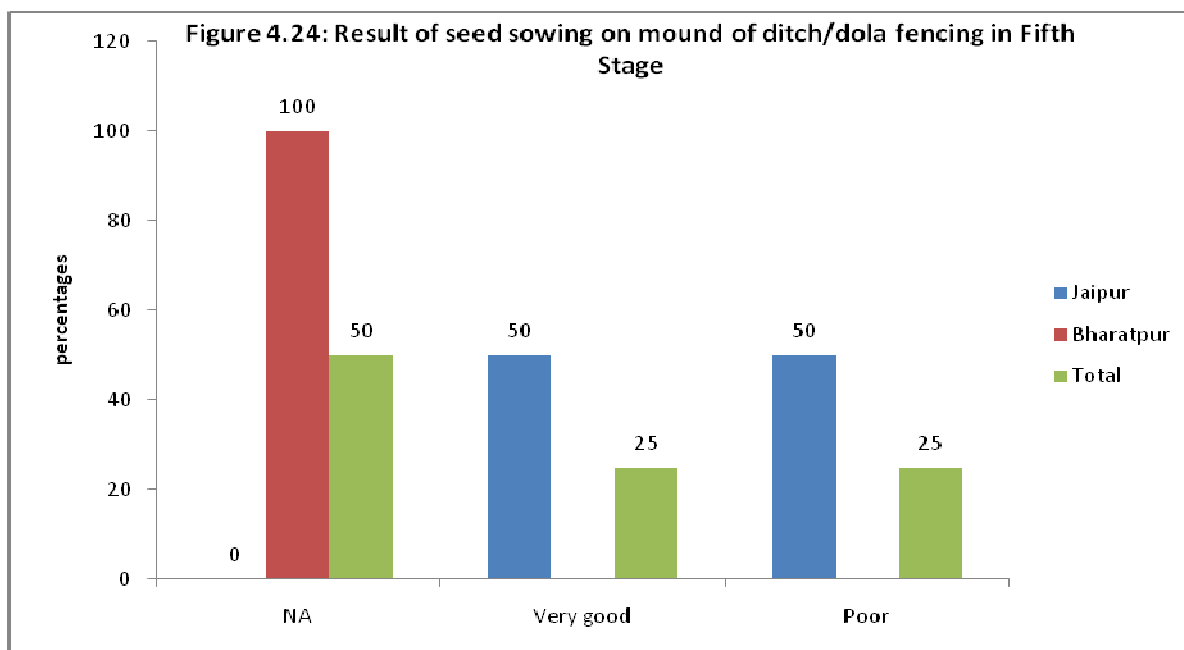
S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-5	Result of sowing on mound of Dola/Ditch fencing				
				NA	Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
2	Jaipur	Dausa	1	0 (0.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
3	Jaipur	Jaipur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	Jaipur	Jaipur (North)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	Jaipur	Sariska Alwar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		2	0 (0.0)	1 (50.0)	0 (0.0)	1 (50.0)	2 (100.0)
9	Bharatpur	Bharatpur	1	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
10	Bharatpur	Dholpur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
11	Bharatpur	Karauli	1	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
12	Bharatpur	Sawai Madhopur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
13	Bharatpur	NCS Dholpur	0	0	0	0	0	0

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-5	Result of sowing on mound of Dola/Ditch fencing				
				NA	Very Good	Good	Poor	Total
				(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		2	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)
	Grand Total		4	2 (50.0)	1 (25.0)	0 (0.0)	1 (25.0)	4 (100.0)

Note: Figures in the brackets are the percentages

Fifth Stage

The result of the seed sowing on mound of ditch/dola fencing in the fifth stage revealed stark data gaps in Bharatpur - 100 % of sites were lacked any intervention of seed sowing - while it shows split evenly between “Very Good” (50 %) and “Poor” (50 %). Overall, half the sites (50 %) lacked any intervention of seed sowing; just 25 % reached “Very Good,” and 25 % “Poor”. In Bharatpur Sambhag, result of seed sowing was not applicable in 02 sites (100 percent). One site each in Bharatpur (Jarkhor site) & Karauli (Gandhiji Ateva site) division the result of seed sowing on mound of the Dola/Ditch fencing was not applicable as only loose stone wall fencing was reported at the site.



Conclusion

The third stage results of sowing on dich/dola fencing, though uneven, offer a model for partial success and lessons that can be scaled. The overall third stage performance indicates that half of the efforts were unsuccessful, but 37.5% of the plantation sites did show good or very good outcomes. The presence of “Very Good” results - though limited- suggests that with the right conditions and implementation, effective results are achievable. This stage highlights both the potential and inconsistency of outcomes, likely influenced by site-level variation in preparation, weather, or execution quality. The overall fourth stage data shows 70% “Poor” outcomes, 20% “Good,” and 10% “lacked any intervention of seed sowing,” with a complete absence of any “Very Good” ratings. This stark deterioration from the third stage suggests serious limitations either in the ditch/dola method during this period, environmental constraints, or lapses in field execution. The fourth stage results emphasize the urgent need to reassess implementation strategies and explore what went wrong compared to the third stage, where at least a few sites managed to achieve high standards. The fifth stage data shows just 25 % reached “Very Good,” and 25 % “Poor” & half the sites (50 %) lacked intervention related to seed sowing.

Table 4.17: Result of sowing on mound of Contour trench in Third Stage

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-3	Result of sowing on mound of Contour trench				
				NA	Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
2	Jaipur	Dausa	2	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)
3	Jaipur	Jaipur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	3	1 (33.3)	1 (33.3)	1 (33.3)	0 (0.0)	3 (100.0)
7	Jaipur	Sikar	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
8	Jaipur	Sariska Alwar	1	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
	Sub total (A)		10	1 (10.0)	1 (10.0)	3 (30.0)	5 (50.0)	10 (100.0)
9	Bharatpur	Bharatpur	2	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)
10	Bharatpur	Dholpur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
11	Bharatpur	Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	3	0 (0.0)	0 (0.0)	3 (100.0)	0 (0.0)	3 (100.0)

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-3	Result of sowing on mound of Contour trench				
				NA	Very Good	Good	Poor	Total
13	Bharatpur	NCS Dholpur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		6	0 (0.0)	0 (0.0)	3 (50.0)	3 (50.0)	6 (100.0)
	Grand Total		16	1 (6.3)	1 (6.3)	6 (37.5)	8 (50.0)	16 (100.0)

Note: Figures in the brackets are the percentages

Figure 4.25: Result of seed sowing on mound of contour trench in Third Stage in Jaipur Sambhag(%)

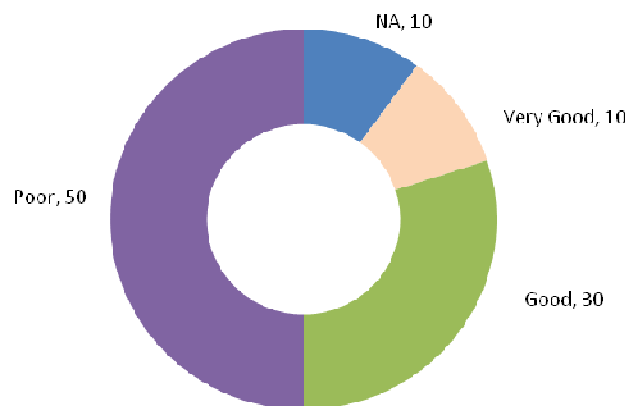
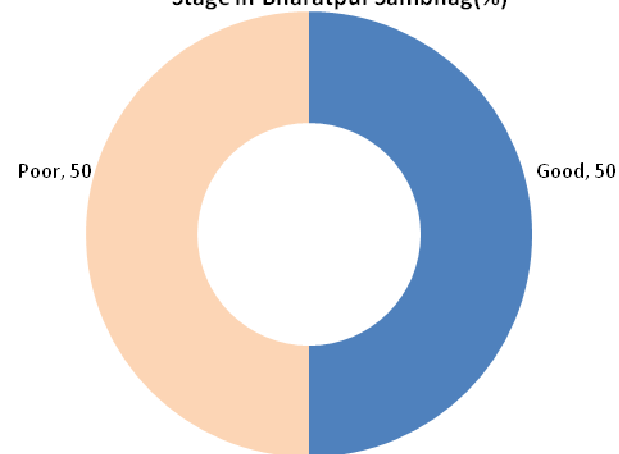


Figure 4.26: Result of seed sowing on mound of contour trench in Third Stage in Bharatpur Sambhag(%)

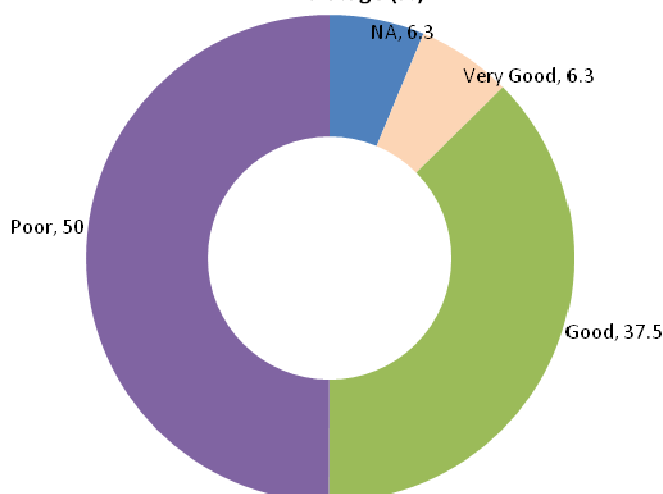


Result of Seed sowing on Mound of Contour Trench

Third Stage

In the third stage of result of sowing on contour-trench, overall germination was weak: half the sites (50 %) failed (“Poor”), only 37.5 % sites reached a “Good” rating, and a mere 6.3 % sites achieved “Very Good.” An additional 6.3 % sites went unassessed (lacked intervention related to seed sowing). In Jaipur Sambhag, result of seed sowing was reported poor on mound of the contour trench at 05 plantation sites (50 percent), good at 03 plantation sites (30 percent) & very good at 01 plantation site (10 percent). In Jhunjhunu division at SDS Ladsar plantation site contour trench was not reported at the site. Within Bharatpur Sambhag, the

Figure 4.27: Overall result of seed sowing on mound of contour trench in Third Stage (%)



split was razor-even - 50% “Poor” and 50 % “Good” - with no sites rated “Very Good”. These results suggest uneven trench preparation or seed handling at inception.



Table 4.18: Result of Seed sowing on mound of Contour trench in Fourth Stage

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-4	Result of sowing on mound of a Contour trench				
				NA	Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
2	Jaipur	Dausa	2	0 (0.0)	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)
3	Jaipur	Jaipur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	1	1 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)
8	Jaipur	Sariska Alwar	1	0 (0.0)	0 (0.0)	1 (100.0)	0	1 (100.0)
	Sub total (A)		7	1 (14.3)	0 (0.0)	1 (14.3)	5 (71.4)	7 (100.0)
9	Bharatpur	Bharatpur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	1	0 (0.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
11	Bharatpur	Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-4	Result of sowing on mound of a Contour trench				
				NA	Very Good	Good	Poor	Total
13	Bharatpur	NCS Dholpur	1	0 (0.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		3	0 (0.0)	0 (0.0)	1 (33.3)	2 (66.7)	3 (100.0)
	Grand Total		10	1 (10.0)	0 (0.0)	2 (20.0)	7 (70.0)	10 (100.0)

Note: Figures in the brackets are the percentages

Figure 4.28: Result of seed sowing on mound of contour trench in Fourth Stage in Jaipur Sambhag(%)

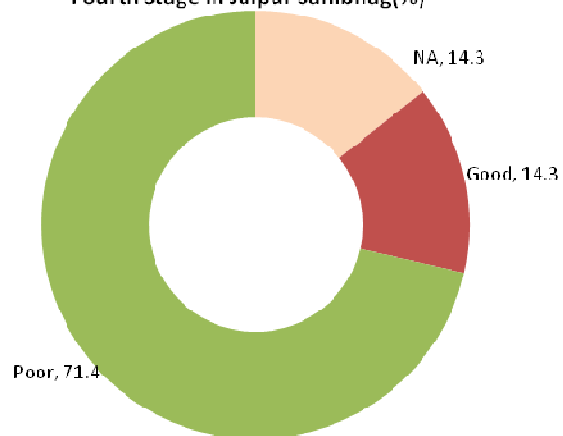
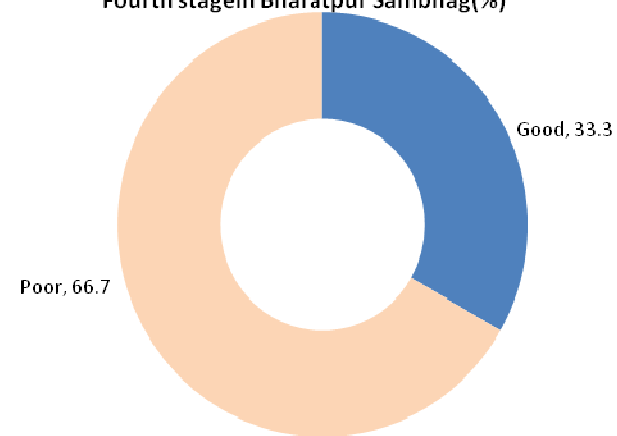


Figure 4.29: Result of seed sowing on mound of contour trench in Fourth stage in Bharatpur Sambhag(%)



Fourth Stage

The performance of sowing on contour trenches deteriorated further in stage IV. Aggregating both divisions, in 70 % sites result of sowing on trenches were “Poor,” only 20 % sites “Good,” and 10 % sites unassessed (lacked intervention related to seed sowing). Jaipur Sambhag share skewed still lower: 71.4 % sites “Poor,” 14.3 % sites “Good,” and 14.3 % sites NA, with zero “Very Good” outcomes. In Sikar division at Jhadali III plantation site (SDS model)

contour trench was not reported at the site. Bharatpur fared marginally better on the positive side - 66.7 % sites “Poor” and 33.3 % sites “Good” - but likewise saw no top-tier germination.

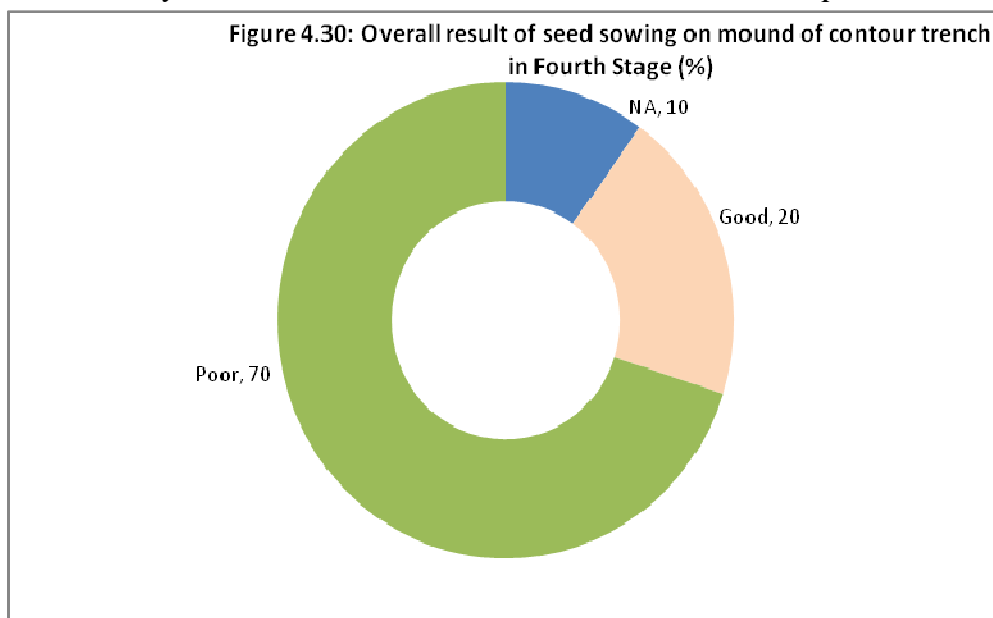


Table 4.19: Result of Seed sowing on mound of Contour trench in Fifth Stage

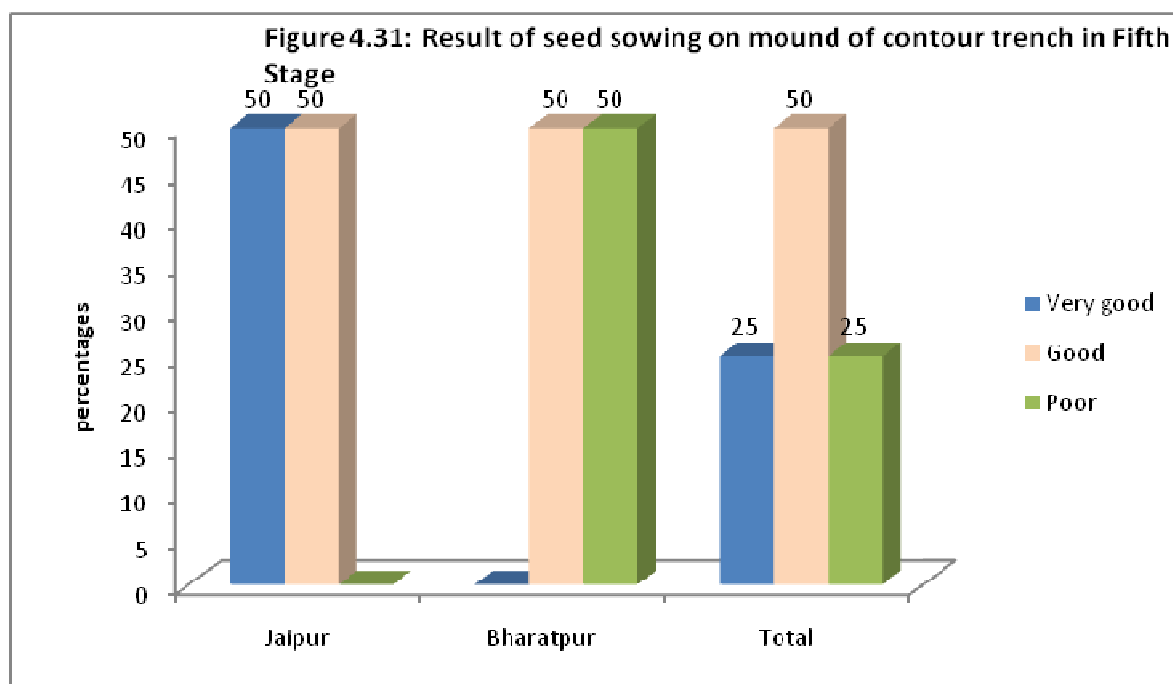
S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-5	Result of sowing on mound of a Contour trench			
				Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
2	Jaipur	Dausa	1	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
3	Jaipur	Jaipur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
4	Jaipur	Jaipur (North)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	Jaipur	Sariska Alwar	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		2	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)
9	Bharatpur	Bharatpur	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
10	Bharatpur	Dholpur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
11	Bharatpur	Karauli	1	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
12	Bharatpur	Sawai Madhopur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
13	Bharatpur	NCS Dholpur	0	0	0	0	0

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites stage-5	Result of sowing on mound of a Contour trench			
				Very Good	Good	Poor	Total
				(0.0)	(0.0)	(0.0)	(0.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		2	0 (0.0)	1 (50.0)	1 (50.0)	2 (100.0)
	Grand Total		4	1 (25.0)	2 (50.0)	1 (25.0)	4 (100.0)

Note: Figures in the brackets are the percentages

Fifth Stage

In the fifth stage, the result of sowing on trenches was “Very Good” in 50 % sites and the remaining 50% sites achieved “Good” germination with virtually no failures in Jaipur Sambhag. Conversely, Bharatpur Sambhag remained split evenly between “Good” (50 %) and “Poor” (50 %), with negligible “Very Good” results. When combined, the result of sowing on mound of the contour trenches were rated “Good” in 50% sites, approximately 25 % sites “Very Good,” and 25 % site still underperformed with poor rating. This division-level divergence underscores that local execution practices or site conditions heavily influence final outcomes.



Conclusion

In the third stage of result of sowing on contour-trench, overall germination was weak: half the sites (50 %) failed (“Poor”), only 37.5 % sites reached a “Good” rating, and a mere 6.3 % sites achieved “Very Good.” An additional 6.3 % sites went ¹unassessed (lacked intervention related to seed sowing). The performance of sowing on contour trenches deteriorated further in stage IV. In 70 % sites result of sowing on trenches were “Poor,” only 20 % sites “Good,” and 10 % sites unassessed. In fifth stage, the result of sowing on mound of the contour trenches were rated “Good” in 50% sites, approximately 25 % sites “Very Good,” and 25 % site still underperformed with poor rating. As compared to result of sowing on ditch/dola fencing, the result of sowing on contour-trench was far better with having “Good” & “Very Good” rating in all the stage i.e. third, fourth & fifth.

¹ means - lacked intervention related to seed sowing

Table 4.20: Result of Seed sowing on Thawalas in Third Stage

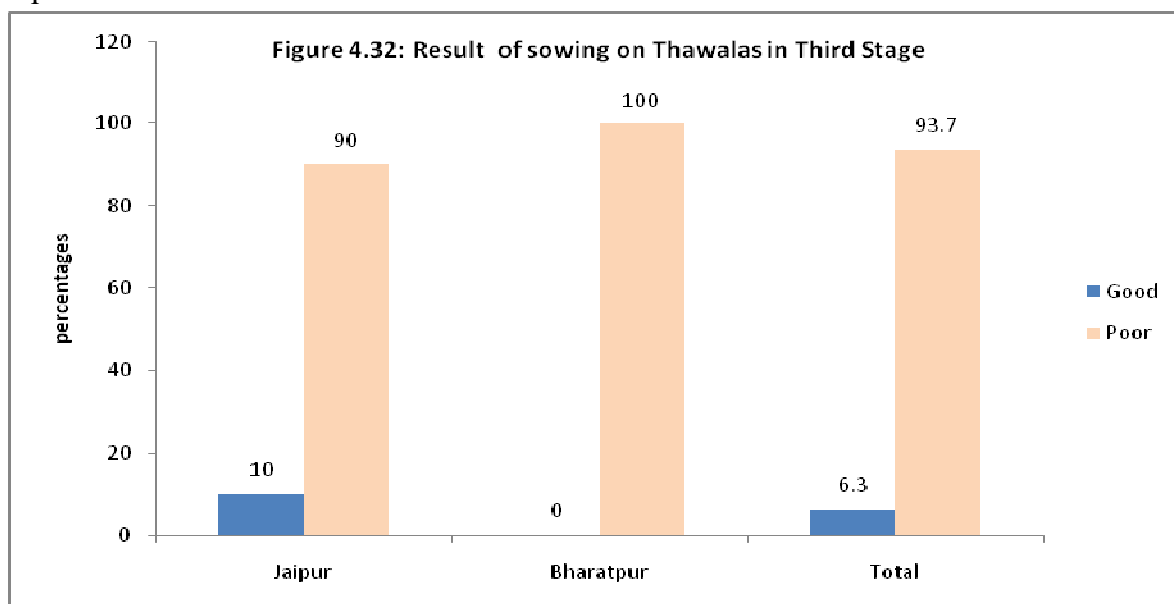
S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites	Result of sowing on Thawalas			
				Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
2	Jaipur	Dausa	2	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)
3	Jaipur	Jaipur	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	3	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)
7	Jaipur	Sikar	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
8	Jaipur	Sariska Alwar	1	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
	Sub total (A)		10	0 (0.0)	1 (10.0)	9 (90.0)	10 (100.0)
9	Bharatpur	Bharatpur	2	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)
10	Bharatpur	Dholpur	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
11	Bharatpur	Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	3	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites	Result of sowing on Thawalas			
				Very Good	Good	Poor	Total
13	Bharatpur	NCS Dholpur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		6	0 (0.0)	0 (0.0)	6 (100.0)	6 (100.0)
	Grand Total		16	0 (0.0)	1 (6.3)	15 (93.7)	16 (100.0)

Note: Figures in the brackets are the percentages

Result of sowing on thawalas

Sowing on thawalas proved the least effective method in the third stage. 93.7 % of total sites yielded “Poor” germination, with only 6.3 % sites rated “Good.” Jaipur Sambhag managed 10 % sites “Good” rate against 90 % “Poor,” whereas Bharatpur Sambhag recorded 100 % failures with poor rating. These near-universal shortcomings suggest that Thawala micro-basins may be unsuited to local soil or moisture regimes and merit either technical revision or replacement.



The assessment of sowing on thanwalas in both the fourth and fifth stages reveals a consistently poor outcome across all observed sites. In the fourth stage, all 10 sample sites (100 percent) - 7 sample sites from Jaipur Sambhag and 3 sample sites from Bharatpur division -showed 100% poor results, with no instances of “good” or “very good” sowing. The situation remained unchanged in the fifth stage, where all 4 evaluated sites (2 from each Sambhag) also recorded poor results. This reflects a systemic issue in sowing practices, indicating the need for immediate review of seed quality, timing, or field conditions.

Conclusion

Sowing on thawalas proved the least effective method in the third, fourth & fifth stage. 93.7 % of total sites yielded “Poor” germination, with only 6.3 % sites rated “Good.” These near-universal shortcomings suggest that Thawala micro-basins may be unsuited to local soil or moisture regimes and merit either technical revision or replacement. The assessment of sowing on thanwalas in both the fourth and fifth stages reveals a consistently poor outcome across all observed sites. Overall, the result of sowing on thawalas was poor.

Table 4.21: Result of Seed sowing on thawalas in Fourth Stage

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites	Result of sowing on Thawalas			
				Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
2	Jaipur	Dausa	2	0 (0.0)	0 (0.0)	2 (100.0)	2 (100.0)
3	Jaipur	Jaipur	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
8	Jaipur	Sariska Alwar	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
	Sub total (A)		7	0 (0.0)	0 (0.0)	7 (100.0)	7 (100.0)
9	Bharatpur	Bharatpur	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
11	Bharatpur	Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai Madhopur	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites	Result of sowing on Thawalas			
				Very Good	Good	Poor	Total
13	Bharatpur	NCS Dholpur	1	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		3	0 (0.0)	0 (0.0)	3 (100.0)	3 (100.0)
	Grand Total		10	0 (0.0)	0 (0.0)	10 (100.0)	10 (100.0)

Note: Figures in the brackets are the percentages

Table 4.22: Result of Seed sowing on thawalas in Fifth Stage

S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites	Result of sowing on Thawalas			
				Very Good	Good	Poor	Total
1	Jaipur	Alwar	1	0 (100.0)	0 (100.0)	1 (100.0)	1 (100.0)
2	Jaipur	Dausa	1	0 (100.0)	0 (100.0)	1 (100.0)	1 (100.0)
3	Jaipur	Jaipur	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)
4	Jaipur	Jaipur (North)	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)
6	Jaipur	Jhunjhunu	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)
7	Jaipur	Sikar	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)
8	Jaipur	Sariska Alwar	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)
	Sub total (A)		2	0 (100.0)	0 (100.0)	2 (100.0)	2 (100.0)
9	Bharatpur	Bharatpur	1	0 (100.0)	0 (100.0)	1 (100.0)	1 (100.0)
10	Bharatpur	Dholpur	0	0 (100.0)	0 (100.0)	0 (100.0)	0
11	Bharatpur	Karauli	1	0 (100.0)	0 (100.0)	1 (100.0)	1 (100.0)
12	Bharatpur	Sawai Madhopur	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)
13	Bharatpur	NCS Dholpur	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)

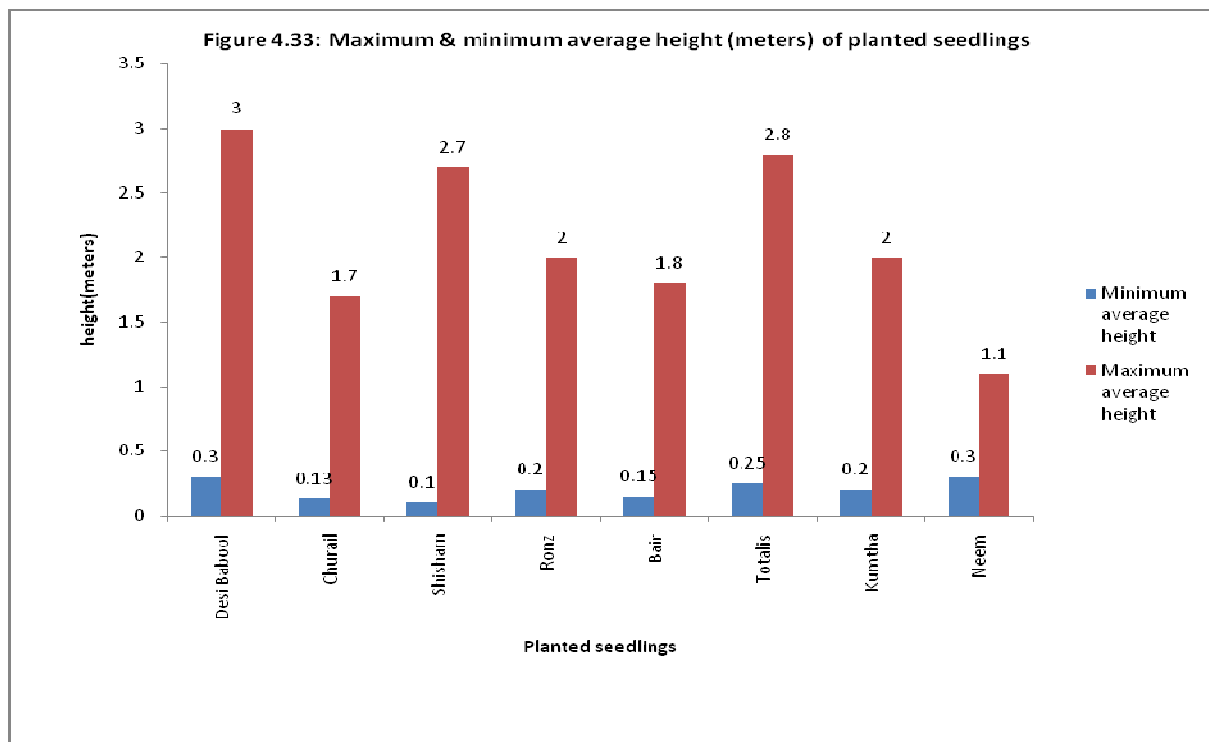
S.No.	Division (Sambhag)	Name of Division	Total No. of sample sites	Result of sowing on Thawalas			
				Very Good	Good	Poor	Total
14	Bharatpur	RTR -II, Karauli	0	0 (100.0)	0 (100.0)	0 (100.0)	0 (100.0)
	Sub total (B)		2	0 (100.0)	0 (100.0)	2 (100.0)	2 (100.0)
	Grand Total		4	0 (100.0)	0 (100.0)	4 (100.0)	4 (100.0)

Note: Figures in the brackets are the percentages



4.5 Growth Assessment of Planted stock (Factors affecting Survival and Growth)

The growth of planted stock varies from average to poor. In terms of average minimum & maximum height of planted stock in thirty plantation sites of third, fourth & fifth stage, minimum & maximum average height of desi babool varies from 0.3 meters to 3.0 meters. The minimum & maximum average height of Churail varies from 0.13 meters to 1.7 meters. Plants of Desi Babool (3meter), Totalis (2.8 meter) & Shisham (2.7 meter) show maximum average height, whereas plants of Bair (0.15 meter), Churail (0.13 meter) & Shisham (0.1 meter) show minimum average height.



Like-wise, plants of Bair (6 mm), Ronj (13mm) & Neem (13mm) show minimum average collar girth, whereas plants of Totalis (534 mm), Churail (314 mm), Desi Babool, Shisham & Kumtha (251 mm each) shows maximum average collar girth. The reason behind poor growth of planted seedling was heavy growth of bush & weed at the site. Also, hoeing & pruning was not reported at the site. Grazing by cattles, stray animals & Neel gai was seen during the Third Party Evaluation. Poor guarding, protection & soil quality affect the growth of planted stock.

Conclusion

The growth of planted stock varies from average to poor. The reason behind poor growth of planted seedling was heavy growth of bush & weed at the site. Also, hoeing & pruning was not reported at the site. Grazing by cattles, stray animals & Neel gai was seen during the Third Party Evaluation. Poor guarding, protection & soil quality affect the growth of planted stock.

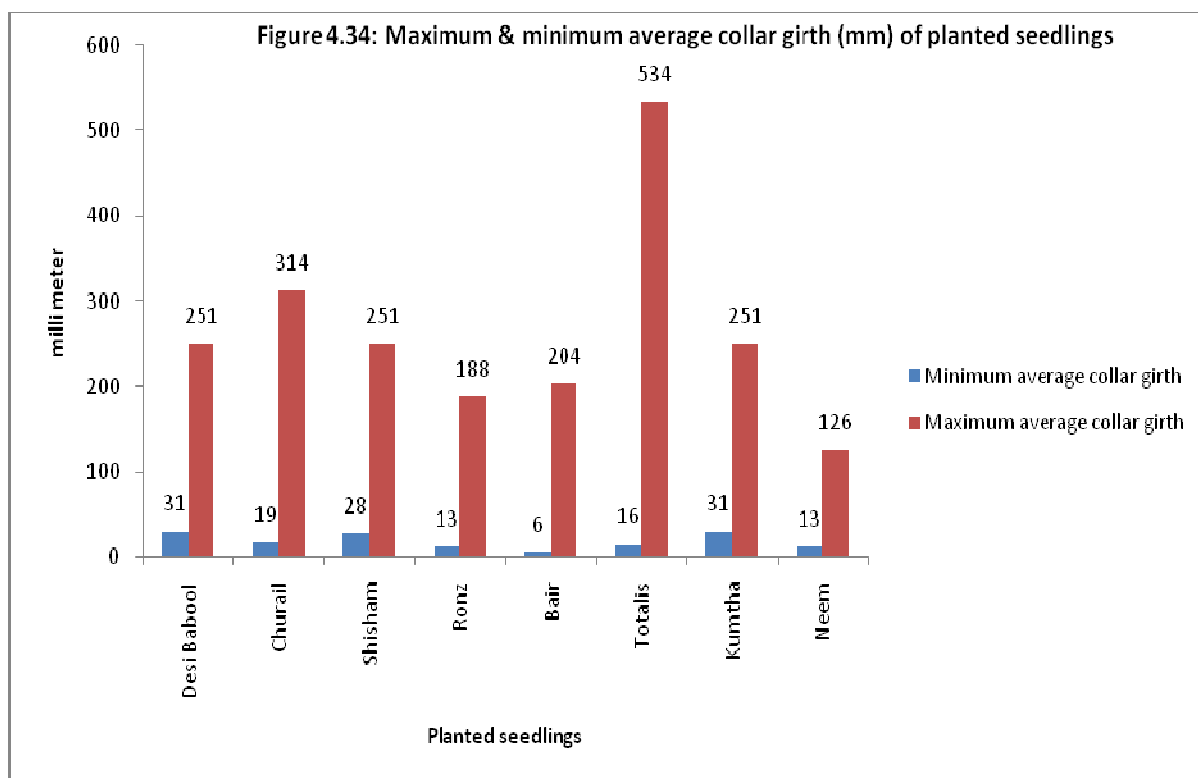


Table 4.25: Average height of planted stock (meters)

Sl.no	Division	Range	Site	Desi Babool	Churail	Shisham	Ronz	Bair	Khair	Totalis	Rohida	Kumtha	Khejri	Neem	Ardu	Jungle Jalebi	Gular	Siras
1	Alwar	Thanagazi	Jhiri-A	1.86	1.46	1.45												
2	Alwar	Thanagazi	Dudu Ki Dhani	1.28	1.52		1.6											
3	Alwar	Thanagazi	Lotawas-A	1.7	1.4	1.52												
4	Dausa	Sikrai	Moroli	0.9	0.8		0.7	0.6	0.85									
5	Dausa	Lalsot	PLP Sanwasa	0.6	0.7	0.1		0.5		0.6	0.1							
6	Dausa	Lalsot	Dholi-B				0.3	0.3		0.4		0.3						
7	Dausa	Dausa	Lahadiwala		0.6	0.5	0.3	0.3		0.25		0.2						
8	Dausa	Bandikui	Dalalpura		0.6	0.5	0.3	0.3		0.25		0.2						
9	Jaipur	Amer	Jain Mandir Kukas	0.3	0.3	0.3		0.25										
10	Jaipur	Phagi	Pahadiya Main	0.45				0.3				0.3						
11	Jaipur (North)	Achrol	Bilochi-A		1			0.3		0.9								
12	Jaipur (North)	Shahpura	Malera Kumbhawwas-III		0.4		0.2	0.15		0.3								
13	Jhunjhunu	Jhunjhunu	Ladsar			2.7		1.1		1.7			0.5					
14	Jhunjhunu	Khetri	Mehar Ki Dhani	1.3			0.6			1.6								
15	Jhunjhunu	Khetri	Chirani-I	0.9	0.5		1.2	0.6										
16	Sikar	Srimadhopur	Jhadali-III		0.9	0.7	0.3	0.3		1.6				0.6				
17	Sikar	Sikar	Pandora-I		0.8	1.0		0.8		2.0				0.3				
18	Sariska Tiger	Tehla	Nadoli	3.0			2.0	1.5				2.0						

Sl.no	Division	Range	Site	Desi Babool	Churail	Shisham	Ronz	Bair	Khair	Totalis	Rohida	Kumtha	Khejri	Neem	Ardu	Jungle Jalebi	Gular	Siras
	Project																	
19	Sariska Tiger Project	Sariska	Kharrika	2.5	0.7		0.7	1.8		2.8								
20	Bharatpur	Bayana	Jarkhor	0.55	0.45													
21	Bharatpur	Deeg	Madhera-4	0.6	0.6			0.3							1.2			
22	Bharatpur	Nadbai	Kamalपुरा	1.53	0.64	0.79		1.27		1.82						1.24		
23	Dholpur	Sarmathra	Hariyawali	0.95			0.4											
24	Dholpur	Badi	Kans Ki Narai-A	0.35	0.13			0.15										
25	Karauli	Karauli	Gandhiji Ateva	1.2	0.84			1.6						1.1				
26	Sawai Madhopur	Gangapur City	Bucholai 2nd	1.1	0.45		0.4	0.3										
27	Sawai Madhopur	Gangapur City	Safeda Ki Khan	0.4			0.3	0.3		0.35								
28	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri	1.9	1.7												2.25	2.5
29	Sawai Madhopur	Sawai Madhopur	Khedli-1	1.75	0.6	1.2	0.6	0.5										
30	NCS Dholpur	Itawa	Amalda	0.55														

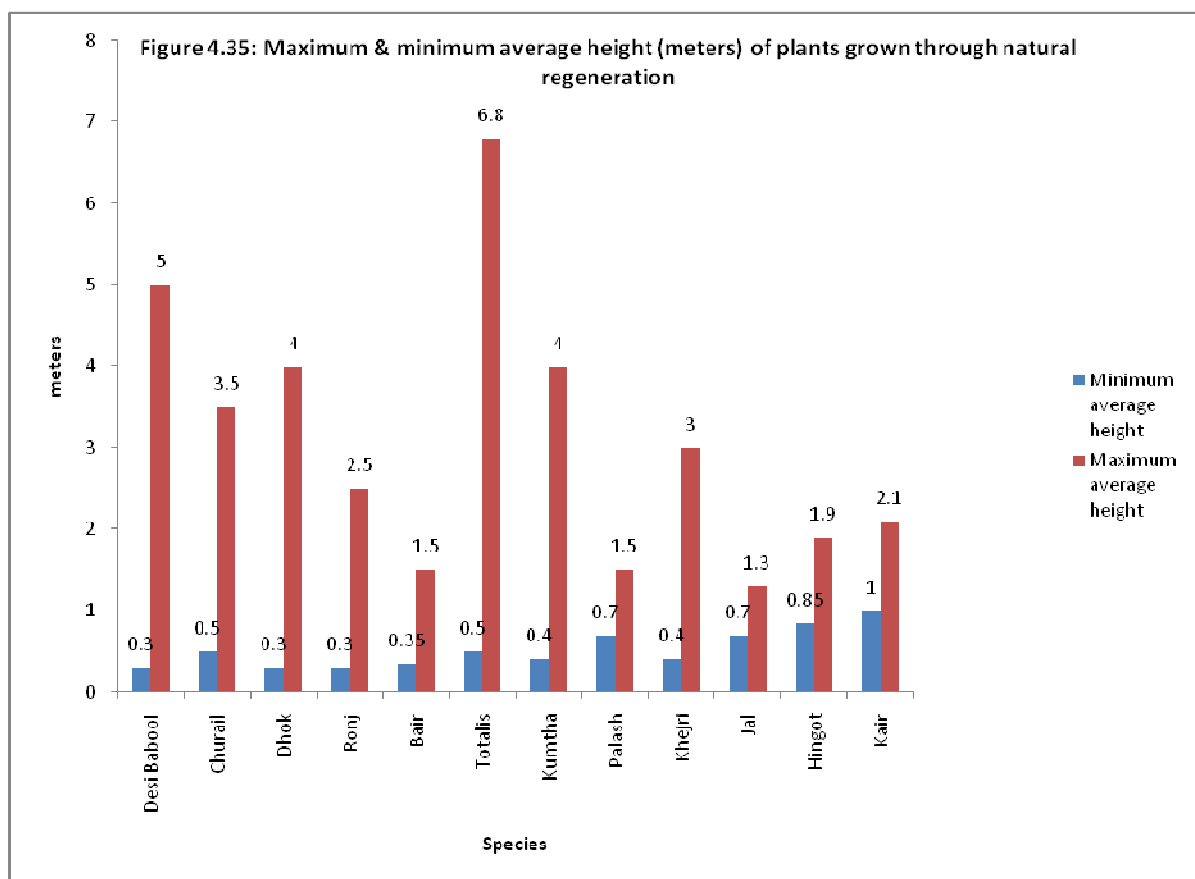
Table 4.26: Average collar girth/ DBH of planted stock (mm)

Sl.no	Division	Range	Site	Desi Babool	Churail	Shisham	Ronz	Bair	Khair	Totalis	Rohida	Kumtha	Khejri	Neem	Ardu	Jungle Jalebi	Gular	Siras
1	Alwar	Thanagazi	Jhiri-A	82	100	69												
2	Alwar	Thanagazi	Dudu Ki Dhani	69	88		94											
3	Alwar	Thanagazi	Lotawas-A	88	107	63												
4	Dausa	Sikrai	Moroli	226	220		188	204	188									
5	Dausa	Lalsot	PLP Sanwasa	79	63	94		94		63	31							
6	Dausa	Lalsot	Dholi-B				31	31		63		31						
7	Dausa	Dausa	Lahadiwala		126	126	31	31		31		31						
8	Dausa	Bandikui	Dalalpura		126	126	31	31		31		31						
9	Jaipur	Amer	Jain Mandir Kukas	63	63	63		63										
10	Jaipur	Phagi	Pahadiya Main	204				110				63						
11	Jaipur (North)	Achrol	Bilochi-A		19			6		16								
12	Jaipur (North)	Shahpura	Malera Kumbhawas-III		94		47	50		69								
13	Jhunjhunu	Jhunjhunu	Ladsar			163		60		94			31					
14	Jhunjhunu	Khetri	Mehar Ki Dhani	94			63			534								
15	Jhunjhunu	Khetri	Chirani-I	88	79		94	66										
16	Sikar	Srimadhampur	Jhadali-III		314	251	94	63		534				126				
17	Sikar	Sikar	Pandora-I		31	47		31		157				13				
18	Sariska	Tehla	Nadoli	251			126	126				251						

Sl.no	Division	Range	Site	Desi Babool	Churail	Shisham	Ronz	Bair	Khair	Totalis	Rohida	Kumtha	Khejri	Neem	Ardu	Jungle Jalebi	Gular	Siras
	Tiger Project																	
19	Sariska Tiger Project	Sariska	Kharrika	126	31		31	94		157								
20	Bharatpur	Bayana	Jarkhor	38	69													
21	Bharatpur	Deeg	Madhera-4	41	38			25							57			
22	Bharatpur	Nadbai	Kamalपुरा	50	31	28		44		63						41		
23	Dholpur	Sarmathra	Hariyawali	79				21										
24	Dholpur	Badi	Kans Ki Narai-A	63	67			46										
25	Karauli	Karauli	Gandhiji Ateva	63	79			63						79				
26	Sawai Madhopur	Gangapur City	Bucholai 2nd	79	47		47	22										
27	Sawai Madhopur	Gangapur City	Safeda Ki Khan	31			13	18		22								
28	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri	88	88												100	69
29	Sawai Madhopur	Sawai Madhopur	Khedli-1	88	94	50	50	31										
30	NCS Dholpur	Itawa	Amalda	41														

4.6 Growth Assessment of Natural vegetation (Factors affecting survival and growth)

The growth of plant grown through natural regeneration varies from good to satisfactory. In terms of average minimum & maximum height of plant grown through natural regeneration in thirty plantation sites of third, fourth & fifth stage, minimum & maximum average height of desi babool varies from 0.3 meters to 5.0 meters. Plants of Totalis (6.8 meters) show maximum average height, whereas plants of Dhok, Ronj, Desi Babool & Bair (0.3 meters each) show minimum average height.



In terms of minimum & maximum average collar girth of plant grown through natural regeneration at the plantation sites, plants of Totalis (628 mm) show maximum average collar girth, whereas plants of Dhok(16 mm) & Jal(15 mm) show minimum average collar girth.

Conclusion

The growth of plant grown through natural regeneration varies from good to satisfactory. Plants of Totalis (6.8 meters) show maximum average height, whereas plants of Dhok, Ronj, Desi Babool & Bair (0.3 meters each) show minimum average height. In terms of minimum & maximum average collar girth of plant grown through natural regeneration at the plantation sites, plants of Totalis (628 mm) show maximum average collar girth, whereas plants of Dhok(16 mm) & Jal(15 mm) show minimum average collar girth. The growth of plants grown through natural regeneration was better than the growth of planted stock.

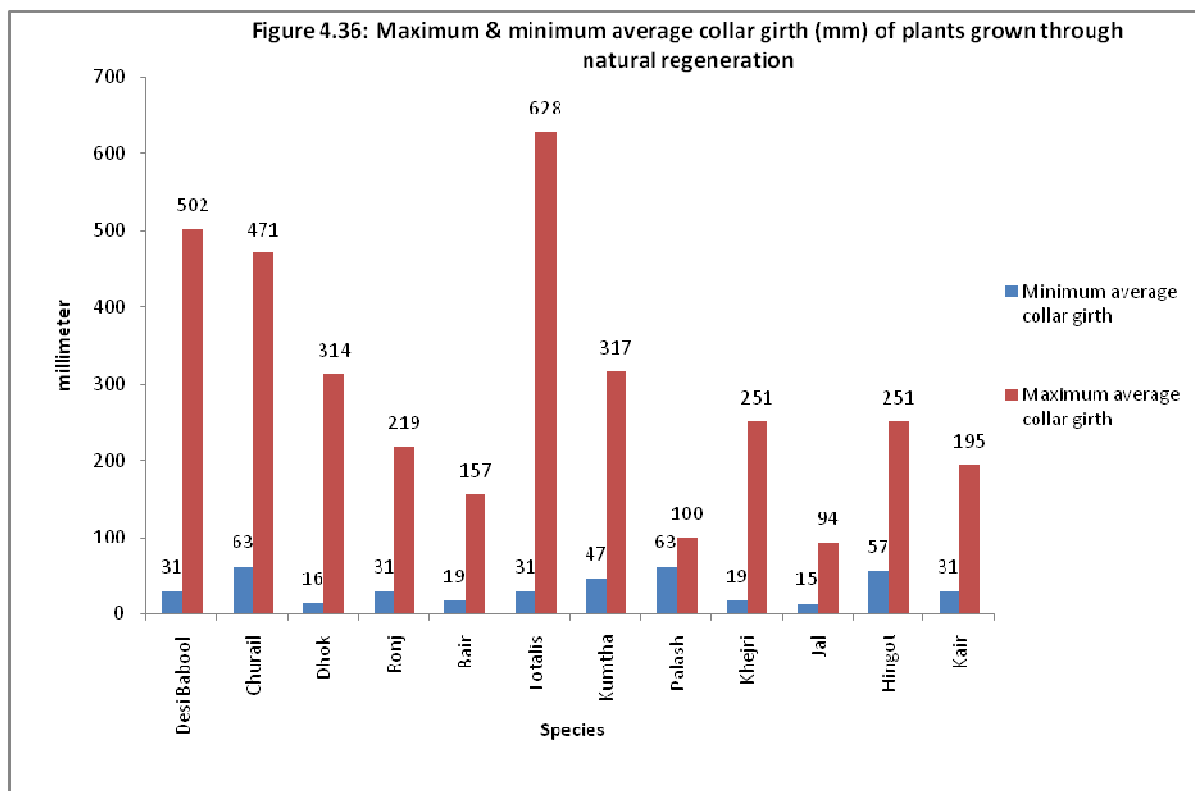


Table 4.27: Average height of plant grown through natural regeneration (meters)

Sl.no	Division	Range	Site	Desi Babool	Churail	Dhok	Ronz	Bair	Khair	Totalis	Palash	Kumtha	Khejri	Neem	Kakeda	Jal	Hingot	Arusta	Ardu	Shisham	Kair	Peelu	Kaith	Goya Khair	Khakod	Barbara	Chepni	Amaltas	Khirmi
1	Alwar	Thanagazi	Jhiri-A			1.2	1.4		1			1.1				1.2													
2	Alwar	Thanagazi	Dudu Ki Dhani	1.4	1.6		1.7																						
3	Alwar	Thanagazi	Lotawas-A		1.35	1.4					0.7						1.6												
4	Dausa	Sikrai	Moroli	0.9	0.8		0.5	1																					
5	Dausa	Lalsot	PLP Sanwasa	0.5						0.6																			
6	Dausa	Lalsot	Dholi-B	0.3			0.3			0.5																			
7	Dausa	Dausa	Lahadiwala	0.8	0.5	0.6				1		0.6																	
8	Dausa	Bandikui	Dalalpura	0.8	0.5	0.6				1		0.6																	
9	Jaipur	Amer	Jain Mandir Kukas	5	3.5	4	2.5	2		3.0		4	3	4	4			1											
10	Jaipur	Phagi	Pahadiya Main	1.5						2		1									1								

Sl.no	Division	Range	Site	Desi Babool	Churail	Dhok	Ronz	Bair	Khair	Totalis	Palash	Kumtha	Khejri	Neem	Kakeda	Jal	Hingot	Arusta	Ardu	Shisham	Kair	Peelu	Kaith	Goya Khair	Khakod	Barbara	Chepni	Amaltas	Khirmi
11	Jaipur (North)	Achrol	Bilochi-A		3.05			1		6.8		3.4																	
12	Jaipur (North)	Shahpura	Malera Kumbhaw as-III	2	1					2.5									1.5	2									
13	Jhunjhunu	Jhunjhunu	Ladsar									0.4	0.7																
14	Jhunjhunu	Khetri	Mehar Ki Dhani	1.3		0.8	0.5					0.6																	
15	Jhunjhunu	Khetri	Chirani-I				0.6	0				0.5																	
16	Sikar	Srimadhapur	Jhadali-III							1.4		0.9																	
17	Sikar	Sikar	Pandora-I			2.0	1			1.5		3			3														
18	Sariska Tiger Project	Tehla	Nadoli									1.2				1.3	1.5				1.5								
19	Sariska Tiger Project	Sariska	Kharrika							1.5		1.8				0.7	1.5												
20	Bharatpur	Bayana	Jarkhor	2.8		2.1	2.3			2.1																			
21	Bharatpur	Deeg	Madhera-4														1.9				2.1	3.2	5.8						

Sl.no	Division	Range	Site	Desi Babool	Churail	Dhok	Ronz	Bair	Khair	Totalis	Palash	Kumtha	Khejri	Neem	Kakeda	Jal	Hingot	Arusta	Ardu	Shisham	Kair	Peelu	Kaith	Goya Khair	Khakod	Barbara	Chepni	Amaltas	Khirmi
22	Bharatpur	Nadbai	Kamalपुर	1.68	1.78					1.9				2															
23	Dholpur	Sarmathra	Hariyawali																					0.6					
24	Dholpur	Badi	Kans Ki Narai-A																					0.4					
25	Karauli	Karauli	Gandhiji Ateva			2.9																							
26	Sawai Madhopur	Gangapur City	Bucholai 2nd	0.95						0.9						0.8									0.55				
27	Sawai Madhopur	Gangapur City	Safeda Ki Khan			0.3		0					0.4													0.2	0.3		
28	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri		0.95	1	0.8				1.5																	1.2	0.75
29	Sawai Madhopur	Sawai Madhopur	Khedli-1	1.15													1.1		0.8			0.9							
30	NCS Dholpur	Itawa	Amalda	0.6													0.85												

Table 4.28: Average collar girth /DBH of plant grown through natural regeneration (mm)

Sl.no	Division	Range	Site	Desi Babool	Churail	Dhok	Ronz	Bair	Khair	Totalis	Palash	Kumtha	Khejri	Neem	Kakeda	Jal	Hingot	Arusta	Ardu	Shisham	Kair	Peelu	Kaith	Goya	Khakod	Barbara	Chepni	Amaltas	Khirni
1	Alwar	Thanagazi	Jhiri-A			100	88		69			75				69													
2	Alwar	Thanagazi	Dudu Ki Dhani	88	100		100																						
3	Alwar	Thanagazi	Lotawas-A		100	119					63						82												
4	Dausa	Sikrai	Moroli	157	188		94	78																					
5	Dausa	Lalsot	PLP Sanwasa	47						63																			
6	Dausa	Lalsot	Dholi-B	31			31			31																			
7	Dausa	Dausa	Lahadiwala	63	63	31				63	63																		
8	Dausa	Bandikui	Dalalpura	63	63	31				63	63																		
9	Jaipur	Amer	Jain Mandir Kukas	502	471	188	219	157		314		251	251	502	314			31											
10	Jaipur	Phagi	Pahadiya Main	63						126		63									31								

Sl.no	Division	Range	Site	Desi Babool	Churail	Dhok	Ronz	Bair	Khair	Totalis	Palash	Kumtha	Khejri	Neem	Kakeda	Jal	Hingot	Arusta	Ardu	Shisham	Kair	Peelu	Kaith	Goya	Khakod	Barbara	Chepni	Amaltas	Khirmi
11	Jaipur (North)	Achrol	Bilochi-A		188			63		628		377																	
12	Jaipur (North)	Shahpura	Malera Kumbhaw as-III	126	63					126									94	126									
13	Jhunjhunu	Jhunjhunu	Ladsar									63	126																
14	Jhunjhunu	Khetri	Mehar Ki Dhani	94		63	63					63																	
15	Jhunjhunu	Khetri	Chirani-I				53	47				47																	
16	Sikar	Srimadhpor	Jhadali-III							408		283																	
17	Sikar	Sikar	Pandora-I			314	63			126		314			440														
18	Sariska Tiger Project	Tehla	Nadoli									94				94	94				63								
19	Sariska Tiger Project	Sariska	Kharrika							63		188				15	251												
20	Bharatpur	Bayana	Jarkhor	113		126	119			100																			
21	Bharatpur	Deeg	Madhera-4														180				195	205	240						

Sl.no	Division	Range	Site	Desi Babool	Churail	Dhok	Ronz	Bair	Khair	Totalis	Palash	Kumtha	Khejri	Neem	Kakeda	Jal	Hingot	Arusta	Ardu	Shisham	Kair	Peelu	Kaith	Goya	Khakod	Barbara	Chepni	Amaltas	Khirmi
22	Bharatpur	Nadbai	Kamalपुरा	57	63					69				53															
23	Dholpur	Sarmathra	Hariyawali																					31					
24	Dholpur	Badi	Kans Ki Narai-A																					67					
25	Karauli	Karauli	Gandhiji Ateva			226																							
26	Sawai Madhopur	Gangapur City	Bucholai 2nd	69						75						94									63				
27	Sawai Madhopur	Gangapur City	Safeda Ki Khan			16		19					19													31	19		
28	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri		88	113	50				100																	88	44
29	Sawai Madhopur	Sawai Madhopur	Khedli-1	88													57		69			82							
30	NCS Dholpur	Itawa	Amalda	51													60												

4.7 Assessment of Impact of the Soil Water Conservation (SWC) works and Water Harvesting structures in Third, Fourth & Fifth Stage

The assessment of water harvesting structures across Jaipur and Bharatpur Sambhag in the third, fourth, and fifth stages reveals mixed trends in structural integrity, intervention needs, and functional effectiveness. In case of Contour Trenches, the data suggests considerable deterioration: in 23 sites (82.1 percent) contour trenches were found “Not Intact” and in 22 sites (78.6 percent) contour trenches required repairs due to siltation, indicating serious structural challenges. The number of sites with no intervention stands at 6 (21.4 percent). In terms of performance, contour trenches were reported with low effectiveness in 20 sites (71.4 percent), suggesting limited water retention benefits. Contour trenches showed moderate effectiveness in 07 sites (25.0 percent) and only in 01 site (3.6 percent) contour trenches achieved high effectiveness - pointing to the need for urgent intervention and upkeep.

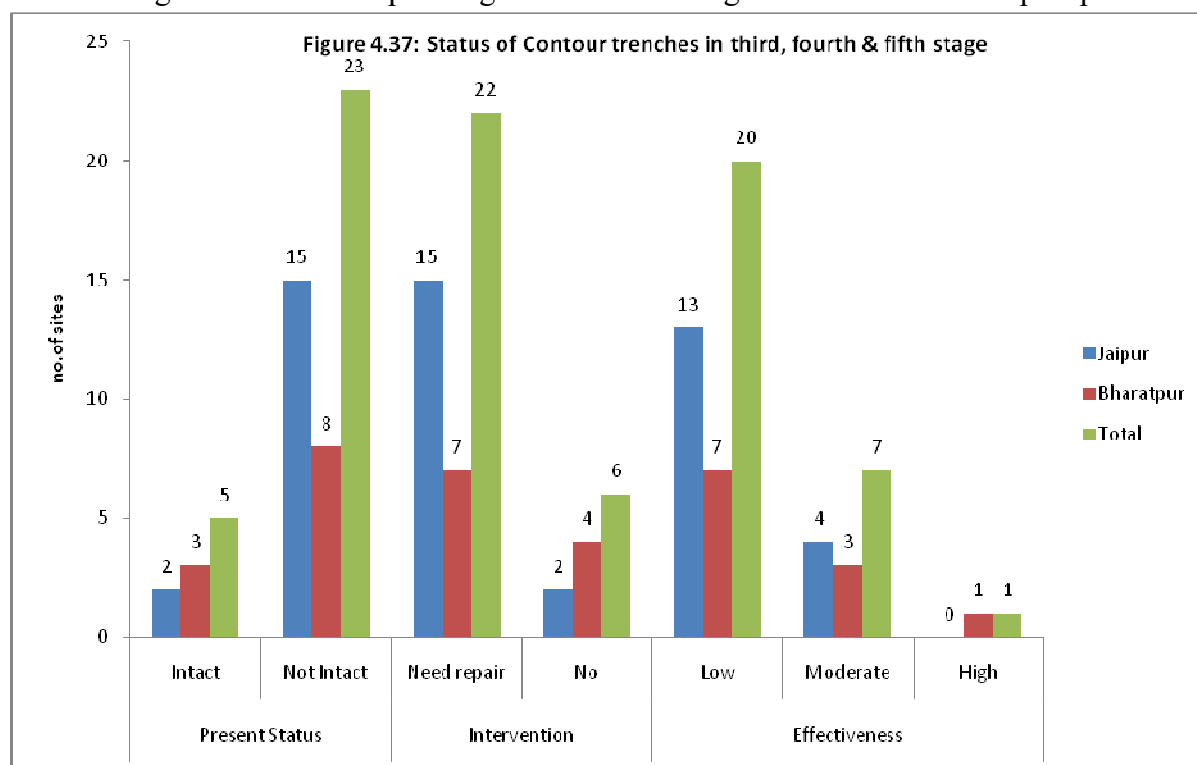


Table 4.29: Status of Contour trench in Third, Fourth & Fifth Stage

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Contour trench									
				Present status			Intervention			Effectiveness			
				Intact	Not Intact	Total	Need repair	No	Total	Low	Moderate	High	Total
1	Jaipur	Alwar	3	0 (0.0)	3 (100.0)	3 (100.0)	3 (100.0)	0 (0.0)	3 (100.0)	3 (100.0)	0 (0.0)	0 (0.0)	3 (100.0)
2	Jaipur	Dausa	5	2 (40.0)	3 (60.0)	5 (100.0)	3 (60.0)	2 (40.0)	5 (100.0)	3 (60.0)	2 (40.0)	0 (0.0)	5 (100.0)
3	Jaipur	Jaipur	2	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0	2 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)
4	Jaipur	Jaipur (North)	2	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0	2 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	3	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)
7	Jaipur	Sikar	2	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
8	Jaipur	Sariska Alwar	2	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)
	Sub total (A)		19	2 (11.8)	15 (88.2)	17 (100.0)	15 (88.2)	2 (11.8)	17 (100.0)	13 (76.5)	4 (23.5)	0 (0.0)	17 (100.0)
9	Bharatpur	Bharatpur	3	1 (33.3)	2 (66.7)	3 (100.0)	2 (66.7)	1 (33.3)	3 (100.0)	2 (66.7)	1 (33.3)	0 (0.0)	3 (100.0)
10	Bharatpur	Dholpur	2	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)	0 (0.0)	2 (100.0)
11	Bharatpur	Karauli	1	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Contour trench									
				Present status			Intervention			Effectiveness			
12	Bharatpur	Sawai Madhopur	4	2 (50.0)	2 (50.0)	4 (100.0)	2 (50.0)	2 (50.0)	4 (100.0)	2 (50.0)	2 (50.0)	0 (0.0)	4 (100.0)
13	Bharatpur	NCS Dholpur	1	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		11	3 (27.3)	8 (72.7)	11 (100.0)	7 (63.6)	4 (27.3)	11 (100.0)	7 (63.6)	3 (27.3)	1 (9.1)	11 (100.0)
	Grand Total		30	5 (17.9)	23 (82.1)	28 (100.0)	22 (78.6)	6 (21.4)	28 (100.0)	20 (21.4)	7 (25.6)	1 (3.6)	28 (100.0)

Note: Figures in the brackets are the percentages



Table 4.30: Status of Earthen check dam in Third, Fourth & Fifth Stages

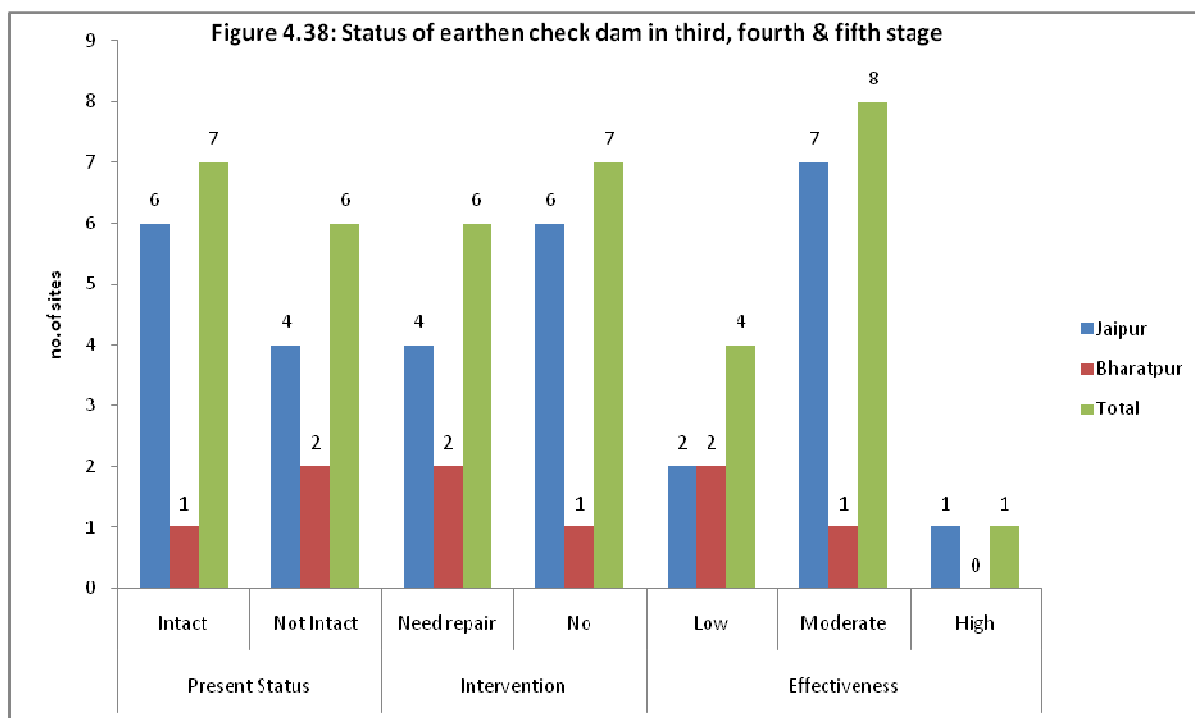
S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Earthen check dam									
				Present status			Intervention			Effectiveness			
				Intact	Not Intact	Total	Need repair	No	Total	Low	Moderate	High	Total
1	Jaipur	Alwar	3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
2	Jaipur	Dausa	5	0 (0.0)	3 (100.0)	3 (100.0)	3 (100.0)	0 (0.0)	3 (100.0)	1 (3.3)	2 (66.7)	0 (0.0)	3 (100.0)
3	Jaipur	Jaipur	2	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	2	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
7	Jaipur	Sikar	2	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)
8	Jaipur	Sariska Alwar	2	1 (50.0)	1 (50.0)	2 (100.0)	1 (50.0)	1 (50.0)	2 (100.0)	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)
	Sub total (A)		19	6 (60.0)	4 (40.0)	10 (100.0)	4 (40.0)	6 (60.0)	10 (100.0)	2 (20.0)	7 (70.0)	1 (100.0)	10 (100.0)
9	Bharatpur	Bharatpur	3	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
10	Bharatpur	Dholpur	2	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
11	Bharatpur	Karauli	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
12	Bharatpur	Sawai	4	0	1	1	1	0	1	1	0	0	1

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Earthen check dam									
				Present status			Intervention			Effectiveness			
		Madhopur		(0.0)	(100.0)	(100.0)	(100.0)	(0.0)	(100.0)	(100.0)	(0.0)	(0.0)	(100.0)
13	Bharatpur	NCS Dholpur	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		11	1 (33.3)	2 (66.7)	3 (100.0)	2 (66.7)	1 (33.3)	3 (100.0)	2 (66.7)	1 (33.3)	0 (0.0)	3 (100.0)
	Grand Total		30	7 (53.8)	6 (46.2)	13 (100.0)	6 (46.2)	7 (53.8)	13 (100.0)	4 (30.8)	8 (61.5)	1 (7.7)	13 (100.0)

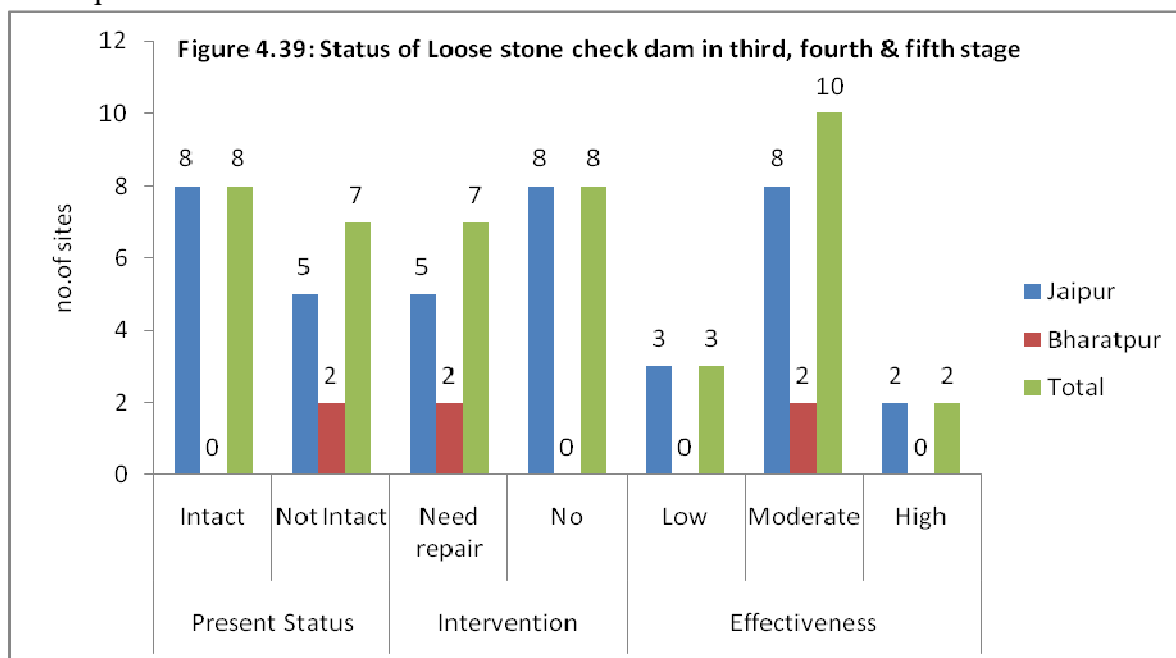
Note: Figures in the brackets are the percentages



The condition of earthen check dams is relatively better. In 07 sites (53.8 percent) the earthen check dam was found intact, whereas in 06 sites (46.2 percent) the earthen check dam



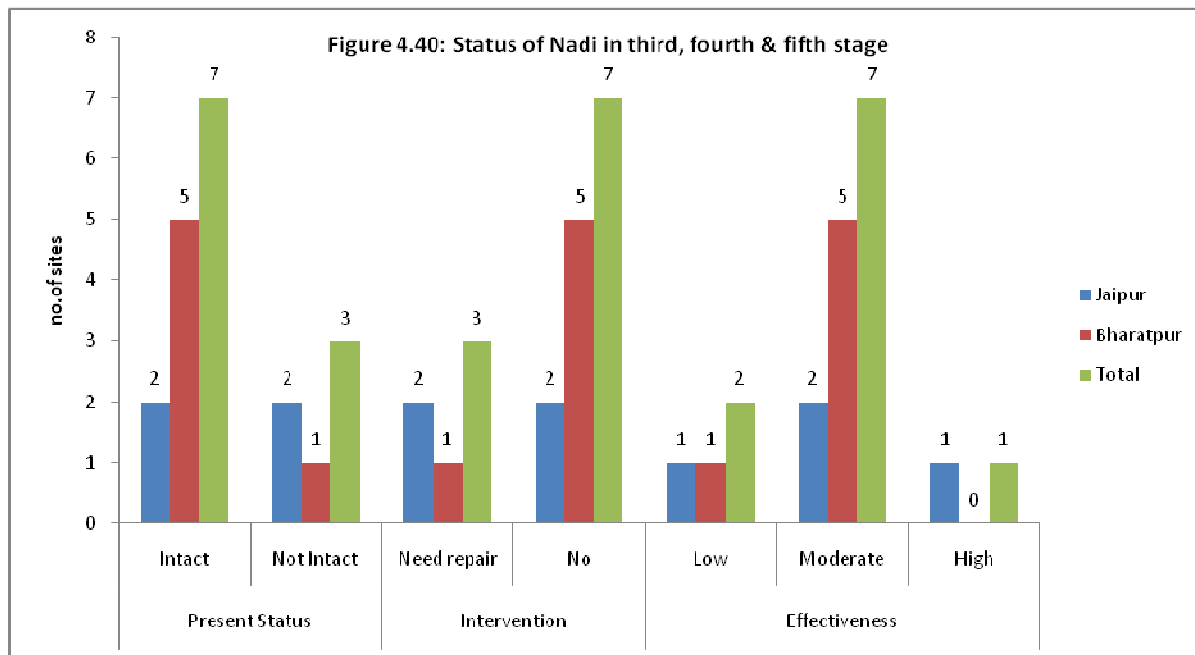
needed repair. In 07 sites (53.8 percent) the earthen check dam had no intervention, implying relatively prompt responses. In terms of effectiveness, moderate effectiveness of earthen check dam was observed in 8 sites (61.5 percent) - mainly from Jaipur - and high effectiveness in only one site (7.7 percent). The low effectiveness of earthen check dams was seen in 4 sites (30.8 percent), with equal distribution between the two Sambhag, suggests mixed performance outcomes.



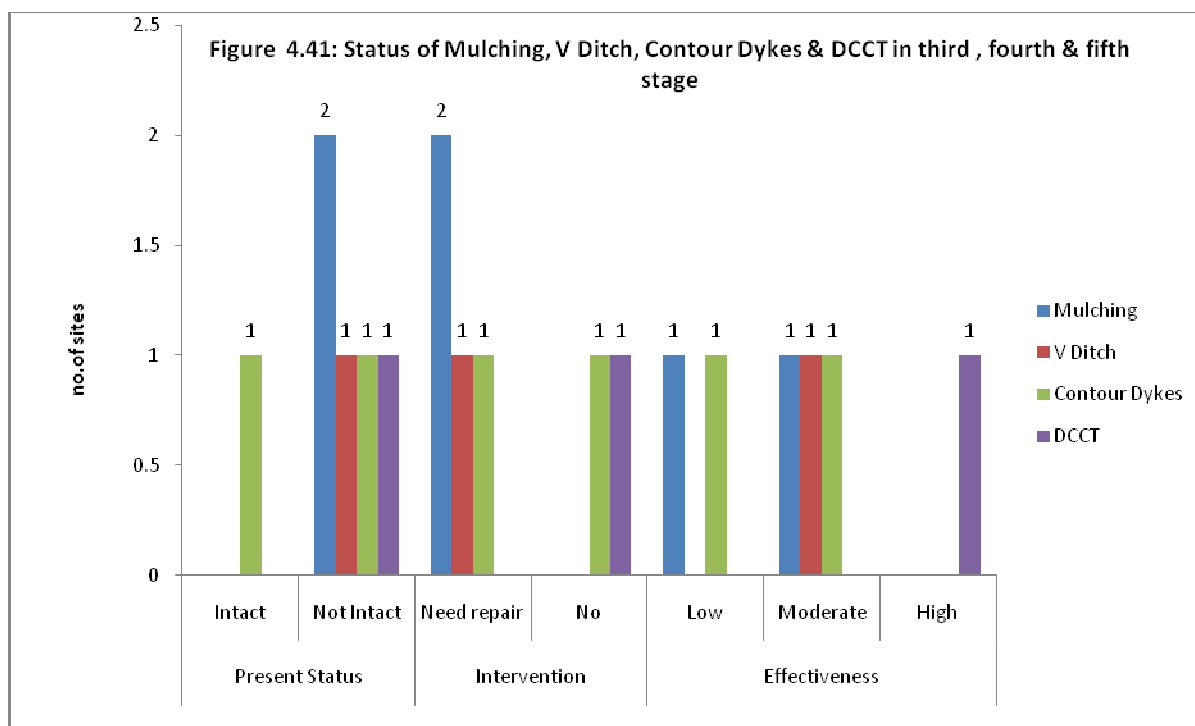
For Loose Stone Check Dams, Jaipur Sambhag emerged dominant with intact structures was found in 08 sites (53.3 percent), whereas Bharatpur Sambhag had none in this category, suggesting a disparity in maintenance. In significant number of sites (07 nos.) (46.7 percent)

loose stone check dam still required repairs; in 08 sites (53.3 percent) structures had not received any intervention. Regarding effectiveness, in 10 sites (66.7 percent) loose stone check dam were rated as moderately effective, low in 3 sites (20.0 percent) & high effectiveness was found in 02 sites(13.3 percent).

In the case of Nadis, in 7 sites (70.0 percent) the structures were found intact, with Bharatpur contributing the majority (83.3 percent), indicating better structural preservation. However, in 3 sites (30.0 percent) structures were marked as “Not Intact” and required repair, suggesting moderate degradation. Notably, in 7 sites (70.0 percent) structures required no intervention and showed moderate effectiveness, while in only 1 site (10 percent) the structure was found to be highly effective. In 02 sites (20 percent) the structure of Nadi showed low effectiveness.



Apart from the above SMC structures, Mulching was also found in 02 plantation sites (one each in Sikar & Jhunjhunu division). Both the Mulching structures were in non-intact condition, need repair & low in effectiveness. V Ditch was found in 01 site in Jhunjhunu division. The V Ditch structure was in non-intact condition, need repair & low in effectiveness. Contour Dykes was found in 02 plantation sites (one each in Sawai Madhopur & Jhunjhunu division). One site each of contour dykes was intact & non-intact condition with one site each need repair & no intervention. Interm of functionality, one site each of contour dykes was low & moderat effective. One Deep CCT was found in Karauli division with non-intact condition (up to 25 percent siltation).The effectiveness of DCCT was high as it largely followed the slope.



Conclusion

The assessment of water harvesting structures across Jaipur and Bharatpur Sambhag in the third, fourth, and fifth stages reveals mixed trends in structural integrity, intervention needs, and functional effectiveness. In terms of performance, contour trenches were reported with low effectiveness in 20 sites (71.4 percent), suggesting limited water retention benefits. Contour trenches showed moderate effectiveness in 07 sites (25.0 percent) and only in 01 site (3.6 percent) contour trenches achieved high effectiveness - pointing to the need for urgent intervention and upkeep. In terms of effectiveness of earthen check dam, moderate effectiveness of earthen check dam was observed in 8 sites (61.5 percent) - mainly from Jaipur - and high effectiveness in only one site (7.7 percent). The low effectiveness of earthen check dams was seen in 4 sites (30.8 percent), with equal distribution between the two Sambhag, suggests mixed performance outcomes. In case of effectiveness of loose stone check dam, in 10 sites (66.7 percent) loose stone check dam were rated as moderately effective, low in 3 sites (20.0 percent) & high effectiveness was found in 02 sites (13.3 percent). In case of Nadi, in 07 sites (70.0 percent) structures required no intervention and showed moderate effectiveness, while in only 1 site (10 percent) the structure was found to be highly effective. In 02 sites (20 percent) the structure of Nadi showed low effectiveness.

Table 4.31: Status of Loose stone check dam in Third, Fourth & Fifth Stage

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Loose stone check dam									
				Present status			Intervention			Effectiveness			
				Intact	Not Intact	Total	Need repair	No	Total	Low	Moderate	High	Total
1	Jaipur	Alwar	3	3 (100.0)	0 (0.0)	3 (100.0)	0 (0.0)	3 (100.0)	3 (100.0)	0 (0.0)	2 (66.7)	1 (33.3)	3 (100.0)
2	Jaipur	Dausa	5	0 (0.0)	3 (100.0)	3 (100.0)	3 (100.0)	0 (0.0)	3 (100.0)	2 (66.7)	1 (33.3)	0 (0.0)	3 (100.0)
3	Jaipur	Jaipur	2	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	2	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	3	1 (50.0)	1 (50.0)	2 (100.0)	1 (50.0)	1 (50.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)
7	Jaipur	Sikar	2	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
8	Jaipur	Sariska Alwar	2	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
	Sub total (A)		19	8 (61.5)	5 (38.5)	13 (100.0)	5 (38.5)	8 (61.5)	13 (100.0)	3 (23.1)	8 (61.5)	2 (15.4)	13 (100.0)
9	Bharatpur	Bharatpur	3	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
10	Bharatpur	Dholpur	2	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
11	Bharatpur	Karauli	1	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Loose stone check dam									
				Present status			Intervention			Effectiveness			
				Intact	Not Intact	Total	Need repair	No	Total	Low	Moderate	High	Total
12	Bharatpur	Sawai Madhopur	4	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
13	Bharatpur	NCS Dholpur	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		11	0 (0.0)	2 (100.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)
	Grand Total		30	8 (53.3)	7 (46.7)	15 (100.0)	7 (46.7)	8 (53.3)	15 (100.0)	3 (20.0)	10 (66.7)	2 (13.3)	15 (100.0)

Table 4.32: Status of Nadi in Third, Fourth & Fifth Stage

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Nadi/Talai									
				Present status			Intervention			Effectiveness			
				Intact	Not Intact	Total	Need repair	No	Total	Low	Moderate	High	Total
1	Jaipur	Alwar	3	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
2	Jaipur	Dausa	5	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
3	Jaipur	Jaipur	2	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)	1 (100.0)
4	Jaipur	Jaipur (North)	2	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	0 (0.0)	1 (100.0)
5	Jaipur	Jaipur (Wildlife)	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
6	Jaipur	Jhunjhunu	3	0 (0.0)	1 (100.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
7	Jaipur	Sikar	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
8	Jaipur	Sariska Alwar	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (A)		19	2 (50.0)	2 (50.0)	4 (100.0)	2 (50.0)	2 (50.0)	4 (100.0)	1 (25.0)	2 (50.0)	1 (25.0)	4 (100.0)
9	Bharatpur	Bharatpur	3	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	0 (0.0)	2 (100.0)
10	Bharatpur	Dholpur	2	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
11	Bharatpur	Karauli	1	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Nadi/Talai									
				Present status			Intervention			Effectiveness			
				Intact	Not Intact	Total	Need repair	No	Total	Low	Moderate	High	Total
12	Bharatpur	Sawai Madhopur	4	2 (66.7)	1 (33.3)	3 (100.0)	1 (33.3)	2 (66.7)	3 (100.0)	1 (33.3)	2 (66.7)	0 (0.0)	3 (100.0)
13	Bharatpur	NCS Dholpur	1	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)	1 (100.0)	0 (0.0)	1 (100.0)	0 (0.0)	1 (100.0)
14	Bharatpur	RTR -II, Karauli	0	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
	Sub total (B)		11	5 (83.3)	1 (16.7)	6 (100.0)	1 (16.7)	5 (83.3)	6 (100.0)	1 (16.7)	5 (83.3)	0 (0.0)	6 (100.0)
	Grand Total		30	7 (70.0)	3 (30.0)	10 (100.0)	3 (30.0)	7 (70.0)	10 (100.0)	2 (20.0)	7 (70.0)	1 (10.0)	10 (100.0)



4.8 Regression Analysis of Survival of Plantations at the Sample sites

A. Regression Analysis of survival of Plantations at the sample sites

Regression analysis is a powerful statistical tool for quantifying the relationship between a dependent variable and one or more independent predictors. By fitting a mathematical model to observed data, we can estimate how changes in each predictor are associated with changes in the outcome of interest—and assess whether those associations are likely to be genuine rather than the result of random variation. In environmental and ecological applications, regression helps disentangle the relative importance of management practices or site characteristics on measures of success, such as plant survival or growth.

In this third-party evaluation of plantation sites established under various schemes between 2013–14 to 2023–24, we apply linear regression to understand how two core management interventions—fencing and soil-water-moisture conservation—affect sapling survival. Drawing on 77 sample plots across 14 forest divisions in the Jaipur and Bharatpur regions, our models treat sapling survival rate as the dependent variable and incorporate quantitative measures of fencing condition, fencing effectiveness, and the extent of soil-conservation works as independent variables. By doing so, we can answer questions such as:

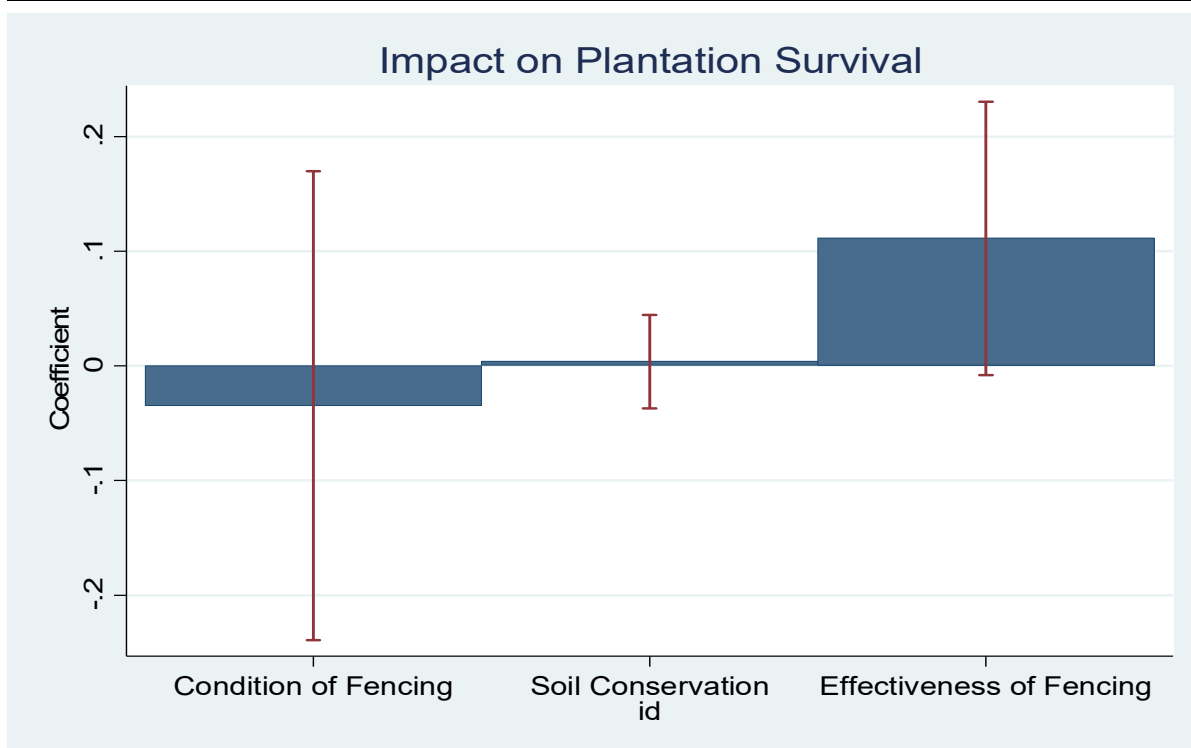
- 🌍 Does simply having a fence in place translate into higher survival, or must that fence also be well-maintained and effective at excluding grazers?
- 🌍 To what extent do water-harvesting or moisture-retention measures on these sites contribute to young-tree survival?

Through this analysis, we aim not only to test the statistical significance of each factor but also to gauge their practical impact—providing forest managers and policy-makers with evidence-based guidance on which investments (e.g., fencing upgrades versus soil-moisture interventions) are most likely to improve plantation outcomes under field conditions.

B. Stage 2 plantation sites (N= 47) vis-à-vis the Soil Water & Moisture conservation works, Fencing condition and Fencing Effectiveness

Source	SS	df	MS	Number of obs	=	47
				F(3, 43)	=	2.43
Model	.114294547	3	.038098182	Prob > F	=	0.0785
Residual	.675152233	43	.015701215	R-squared	=	0.1448
				Adj R-squared	=	0.0851
Total	.78944678	46	.017161887	Root MSE	=	.1253

survival_rate	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
condition_of_fencing	-.0346762	.1013595	-0.34	0.734	-.2390871 .1697348
soil_conservation	.0036767	.0202097	0.18	0.856	-.0370800 .0444335
effectiveness_of_fencing	.1110950	.0589722	1.88	0.066	-.0078338 .2300238
cons	.2831647	.0715480	3.96	0.000	.1388744 .4274551



Findings: Factors Influencing Plantation Survival Rate

A linear regression analysis was conducted on data from 47 plantation sites to identify the key factors influencing the survival rate of saplings. The independent variables assessed were:

-  Condition of Fencing
-  Soil Conservation
-  Effectiveness of Fencing

The regression model yields an R-squared value of 0.1448, indicating that approximately 14.5% of the variation in survival rate is explained by the model. Although the overall model is marginally significant ($F(3,43) = 2.43$, $p = 0.0785$), only one variable demonstrates a meaningful individual effect.

◆ Key Insights from the Table and Graph

Effectiveness of Fencing emerged as the most influential factor, with a positive coefficient of 0.1111, implying that a one-unit improvement in fencing effectiveness is associated with an 11.1% increase in sapling survival. This effect is marginally statistically significant ($p = 0.066$), and visually supported by the graph — where the coefficient bar lies above zero and the confidence interval narrowly includes it.

Condition of Fencing showed a slightly negative coefficient (-0.0347) with a very high p-value (0.734), indicating no statistically meaningful relationship with survival rate. The graph also confirms this with a wide confidence interval crossing zero, reflecting a high degree of uncertainty.

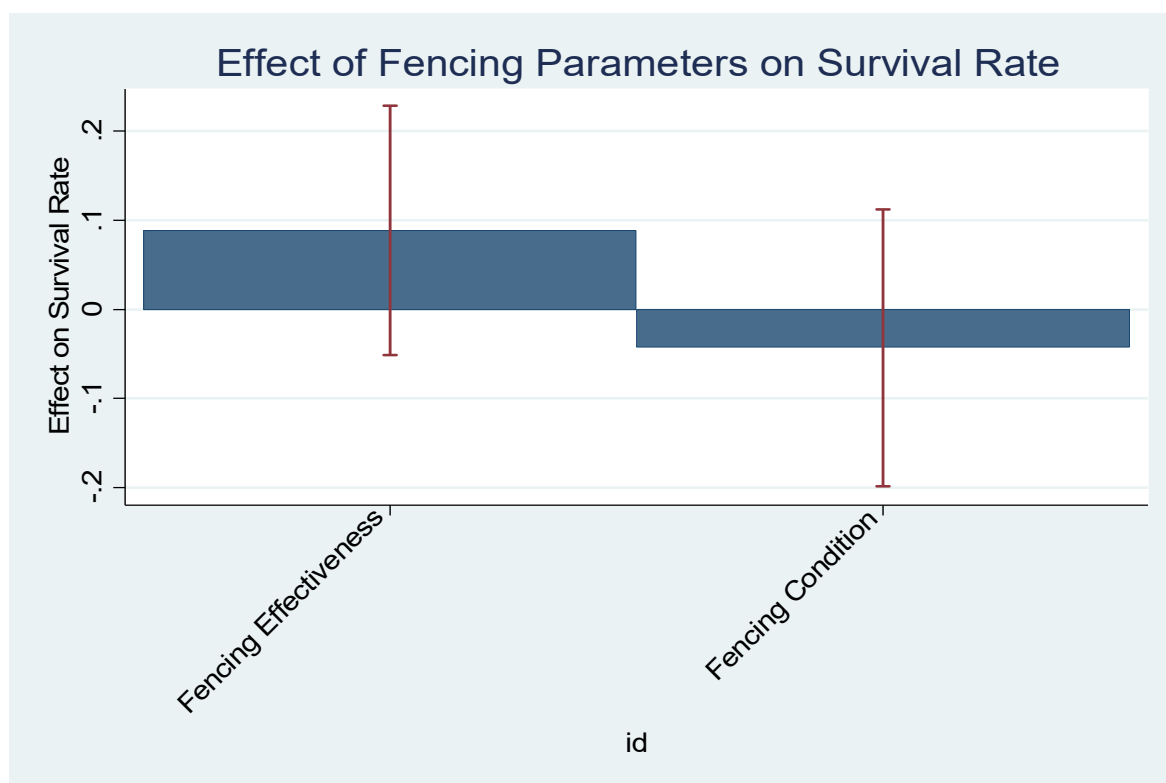
Soil Conservation had a near-zero coefficient (0.0037) and a p-value of 0.856, clearly suggesting that its effect on survival rate is negligible and statistically insignificant. This is further reinforced by the flat visual representation in the coefficient plot.

Conclusion:

The analysis suggests that while general fencing infrastructure or soil conservation measures do not independently drive survival outcomes, the perceived effectiveness of fencing — possibly linked to its design, durability, or maintenance — plays a critical role in enhancing sapling survival. However, since the model explains only a fraction of the variation, it indicates that additional factors (e.g., post-plantation care, species selection, local climate, role of cattle guard, periodic maintenance of site, watering, village cattle's pressure at plantation site and VFPMC participation & monitoring community involvement) must be explored in future assessments to improve plantation success comprehensively.

C. Regression Analysis of survival of Plantations at the 77 sample sites of Stage 2, 3,4 and 5 plantation sites (N= 77) vis-à-vis the Fencing condition and Fencing Effectiveness

Source	SS	df	MS	Number of obs = 77		
-----+-----				F(2, 74) = 6.87		
			Model	.219209175	2	.109604587
						Prob > F = 0.0018
Residual	1.1797726	74	.015942873	R-squared = 0.1567		
				-----+-----		
			Total	1.39898177	76	.018407655
						Adj R-squared = 0.1339
						Root MSE = .12627
-----+-----						
survival_rate	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
-----+-----						
fencing_effectiveness	.0885844	.070168	1.26	0.211	-.0512284	.2283971
fencing_condition	-.0434194	.077974	-0.56	0.579	-.1987860	.1119473
_cons	.2720470	.0380014	7.16	0.000	.1963276	.3477663
-----+-----						



- **Fencing Effectiveness** has a **positive coefficient** (+0.089), suggesting that greater effectiveness is associated with higher sapling survival. However, the result is **not statistically significant** ($p = 0.211$), and the confidence interval includes zero.
- **Fencing Condition** shows a **slightly negative effect** (-0.043), also statistically insignificant ($p = 0.579$).
- The **constant** term is strongly significant ($p < 0.001$), indicating a baseline survival rate of ~27.2% when fencing variables are held constant.

The bar chart visually represents the regression coefficients along with their **confidence intervals**:

- The **bar for fencing effectiveness** is above zero, consistent with a **positive but uncertain** impact. The confidence interval crosses zero, indicating **statistical insignificance**, even if the trend is positive.
- The **bar for fencing condition** lies **below zero**, with error bars again crossing zero - reinforcing that its effect is both minimal and statistically unreliable.
- The visual further emphasizes that **neither predictor has a strong standalone effect**, and more influential factors may lie outside fencing infrastructure alone.

Conclusion for Report

Although the model demonstrates statistical significance and explains a modest share of the variation in sapling survival, **neither fencing condition nor effectiveness alone show a statistically significant impact**. The trend suggests that **improving fencing effectiveness may contribute positively**, but the current evidence is inconclusive. Therefore, additional variables such as soil type, species choice, role of cattle guard, periodic maintenance of site, cattle's pressure at plantation site, watering, and VFPMC participation & monitoring should be explored in future analyses to better explain survival outcomes.

Chapter 5

Overall Impact Assessment of the Works Executed at the Plantation Sites

The primary objective of the plantations in the Forest Divisions' forest sites within the State was to restore degraded landscapes, enhance biodiversity, and improve the ecological balance at the plantation sites in the Jaipur and Bharatpur Sambhag. The key purposes include increasing green cover through afforestation and reforestation, mitigating soil erosion and improving soil health, promoting groundwater recharge and enhancing water conservation, creating sustainable livelihoods for local communities through eco-restoration activities, and encouraging community participation and environmental stewardship.

The plantation works were executed across forest divisions by the Forest Divisions, where forests were degraded or reduced in terms of vegetal cover. In the whole process, priority was given to ecologically sensitive and erosion-prone forest areas to maximize environmental impact. Throughout the evaluation study, the impact assessment of the work carried out at the plantation sites was crucial for determining the suitability of the plantation sites and the project's success and sustainability.

The plantation works were executed across forest divisions by the Forest Divisions, where forests were degraded or reduced in terms of vegetal cover. In the whole process, priority was given to ecologically sensitive and erosion-prone forest areas to maximize environmental impact. Throughout the evaluation study, the impact assessment of work carried out at the plantation sites was crucial for determining the suitability of the plantation sites and the project's success and sustainability. The key factors evaluated were to ensure that sites chosen were ecologically viable and aligned with project objectives, namely,

● Soil Quality and Topography

The evaluation team assessed the plantation sites for soil texture, fertility, and drainage capacity. The evaluation team at sample plantation sites reported the soil depth with moderate to good water-holding capacity. In sloped or erosion-prone areas, additional soil conservation measures were incorporated to support plantation efforts. The soil reported at the sample plantation sites were sandy, sandy loam,

● Climatic Conditions

Local climate, including rainfall patterns and temperature ranges, was considered to match species with site conditions. Drought-resistant and climate-resilient species were selected for arid and semi-arid areas to improve survival rates.

● Land Use and Degradation Status

The sites largely consisted of **degraded forest lands, community wastelands, and ravines**, that were underutilized or at risk of further degradation. Their restoration was seen as an opportunity to enhance ecosystem services and community value.

● Accessibility and Protection

Accessibility was also evaluated to ensure that maintenance teams and local communities could monitor and care for the saplings regularly. Sites with natural barriers or fencing options were preferred to reduce grazing pressure and human interference.

● Community Acceptance and Participation Potential

Sites where local communities expressed interest and willingness to participate in plantation and maintenance activities were prioritized by the department. The participation of local communities will increase the likelihood of long-term care and reduce vandalism or neglect.

5.1 Assessment of Plantation sites in terms of the suitability of sites for plantations

The suitability of the site has been assessed based on factors, namely, Environmental (Climate, Soil Characteristics, Topography and Soil moisture content, etc.), Ecological considerations (Biodiversity, existing vegetation and erosion risk), Socio-economic factors (proximity to habitations and villages, Availability of labors, community dependence on forests and community conflicts).

Hence, choosing the proper location for tree planting is crucial for ensuring the long-term health, growth, and survival of the trees. Site selection considers various factors that influence a tree's ability to thrive, including soil type, climate, soil moisture availability, rainfall, water availability, and sunlight. A suitable site provides the necessary conditions for root establishment, nutrient uptake, and overall growth, while unsuitable sites can lead to stunted development, disease, or even death.

The plantation sites were classified into four classes, which are presented hereunder,

Sites have been classified into four categories

Class	Description
Highly Suitable (S1)	Ideal conditions with minimal limitations.
Moderately Suitable (S2)	Some limitations exist but are manageable.
Marginally Suitable (S3)	Significant limitations: requires high inputs.
Not Suitable (N)	Severe limitations; not feasible for plantations.

Note: Score- Highly Suitable - 76-100 %; Moderately Suitable – 51-75%; Marginally Suitable – 26-50%; Not Suitable – 0-25%;

In terms of determining the suitability of the site, the study uses the matrix by giving weights to the various factors categorized into four categories, which are suitable for plantations, namely, (1) Rainfall, (2) Soil Fertility, (3) Slope, and (4) Village Cattle pressure at the site.

Plantation Suitability Matrix

Factor	Weight
Rainfall (High-3, Medium-2, Low-1)	20%
Soil fertility (Good-3, Moderate-2, Poor-1)	30%
Slope (Gentle-3, Moderate-2, Steep-1)	25%
Cattle pressure (Low-3, Medium-2, High-1)	25%
Total Suitability	100%

Note: The assessment methods used are - GIS mapping, Field survey and National Metrological data

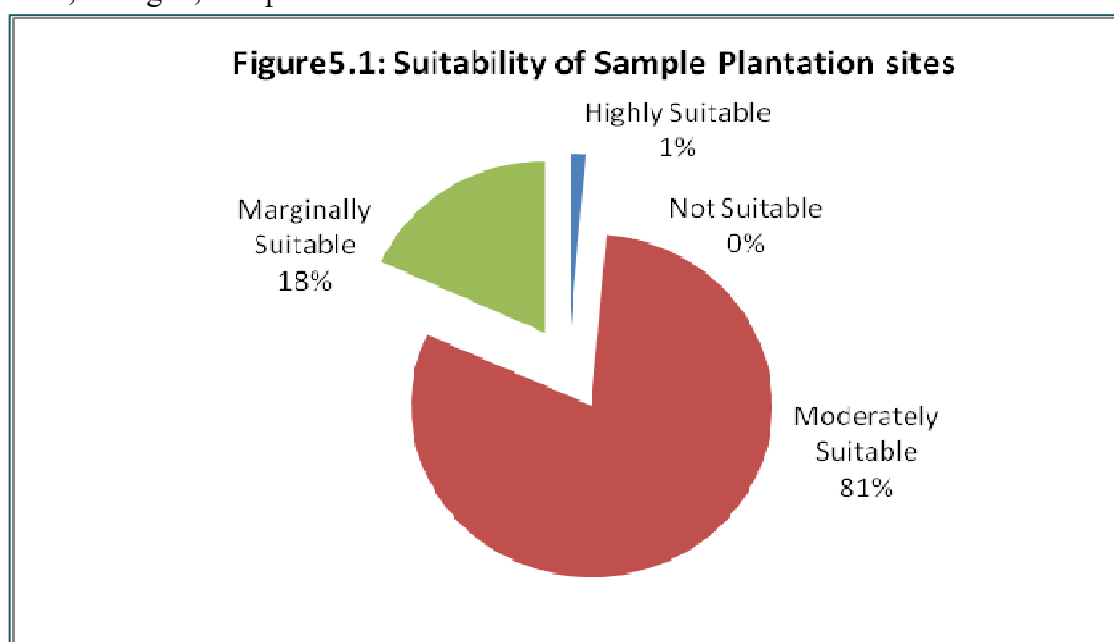
Table 5.1: Suitability of sample Plantation sites division-wise

Sambhag	S.No.	Forest Divisions	Total sample Plantation sites	Plantation sites			
				Highly Suitable	Moderately Suitable	Marginally Suitable	Not Suitable
Bharatpur	1.	Bharatpur	5	0	5	0	0
	2.	Dholpur	6	0	6	0	0
	3.	Karauli	7	0	5	2	0
	4.	Sawai Madhopur	7	0	6	1	0
	5.	NCS Dholpur	4	0	3	1	0
	6.	RTR -II, Karauli	1	0	0	1	0
		Sub-total (A)	30	0	25	5	0
Jaipur	1	Alwar	9	0	8	1	0
	2	Dausa	12	0	7	5	0
	3	Jaipur	4	0	4	0	0
	4	Jaipur (North)	4	0	3	1	0
	5	Jhunjhunu	7	1	6	0	0
	6	Sikar	8	0	7	1	0
		Sub-total (B)	44	1	35	8	0
Sariska Alwar	1	Jaipur WL	1	0	1	0	0
	2	Sariska Tiger Reserve, Alwar	2	0	1	1	0
		Sub-total (C)	3	0	2	1	0
		Grand Total	77	1	62	14	0

The Bharatpur region in Rajasthan primarily features deep, medium, and shallow alluvial soils, with textures ranging from clay loam to clay. The soils are predominantly alluvial and were formed by the deposition of sediments by rivers. Looking at the soil texture, it varies from sandy loam to clay loam, and even clay in some areas. The soils range from shallow to very deep.

In the Karauli division, the soils are sandy and light clayey soils. The plains are known for being fertile with sandy soil, while the eastern part of the district has alluvial soils prone to water logging. The district also has areas with deep black clayey soil and medium to deep brown loamy soil. There is Deep Black Clayey Soil to Medium to Deep Brown Loamy Soil present in some areas of the district.

In the Dholpur division, soil ranges from loam to clay, and from sand to loam, with low organic matter. Sandy clayey soil is the most prevalent type found in Dholpur. The ravine soils in Dholpur, Karauli, and Sawai Madhopur divisions indicate they are sandy, with low water holding capacity and low organic matter. Also, the nutrient level shows a low level of organic carbon, nitrogen, and potassium.



Similarly, in the Jaipur region, sandy loam is the most common soil texture. Loam and heavier soils are also present in certain areas. With regards to nutrient content, Nitrogen is often lacking in these soils, while phosphorus and potash are generally adequate. In some places, lime concretions or lime-encrusted gravels affect soil depth. The Dausa, Jaipur, and Alwar regions are associated with new alluvial soil, which is yellowish-brown to brown.

In the forest areas of Sikar and Jhunjhunu Divisions, the soil is predominantly sandy, with some areas also featuring sandy loam and red desertic soils. These are typically yellowish-brown, sandy to sandy loam, loose, structure less, and well-drained. These soils are generally shallow in depth, especially in depressions, and can be prone to salinity and alkalinity issues.

Thus, looking to the soil availability at the plantation sites, in nutshell, it can be inferred that, sample sites have varied soil types and soil depth with low level of organic matter in Forest divisions of both Sambhag, namely, Jaipur and Bharatpur, which is less supportive for the plantations survival of the planted saplings.

5.2 Assessment of Plantation sites in terms of vegetal cover

The improvement of vegetative cover at a plantation site can have a profound impact, as evaluated by the evaluation team through various ecological, environmental, and socio-economic lenses. This transformation brings numerous benefits, including: Enhanced Soil Health and Fertility: By increasing organic matter, improving erosion control, and fostering robust microbial activity, we can significantly boost soil vitality.

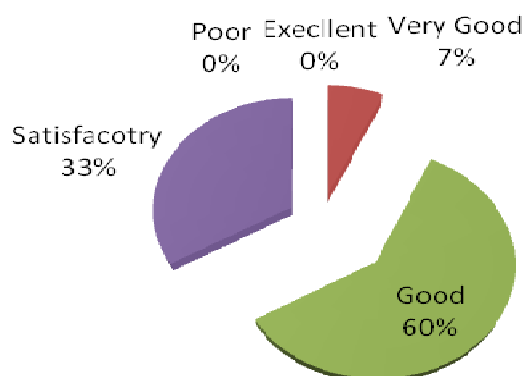
- **Biodiversity Enrichment:** Establishing diverse habitats for organisms not only restores local ecosystems but also strengthens the resilience of the environment.
- **Microclimate Regulation:** Effective vegetative cover can moderate temperatures and promote moisture retention, creating a more balanced ecosystem.
- **Water Cycle Improvement:** By enhancing water infiltration and minimizing runoff, which contributes to a more efficient water cycle, crucial for sustaining plant and animal life.
- **Carbon Sequestration:** Acting as a vital carbon sink, improved vegetative cover helps capture and store carbon long-term, which is essential in combating climate change.

To quantitatively assess these impactful changes, this study has measured key indicators, including:

- Improvement in vegetation cover percentage (field surveys)
- Increases in species richness
- Soil organic content (encompassing leaf litter and root biomass)
- Rising water levels - Reduction in erosion.

Throughout this evaluation process, we are committed to employing strategies and tools aligned with the requirements outlined in the RFP document, ensuring a thorough and practical assessment of our plantation sites.

Fig. 5.2: Vegetal cover rating at the sample plantation sites at stage 3, stage 4 and stage 5



The assessment of 30 sample plantation sites out of a total sample of 77 sites at stages 3, 4, and 5 has been done objectively. It was to assess the increase in the vegetation cover as a result of exhaustive Soil Water Conservation (SWC), protection, maintenance, and management activities (weeding and hoeing, repair and maintenance, etc.) works undertaken at the plantation sites over the period. Overall, the plantation sites have shown improvement in terms of vegetal cover. The rating of the plantation sites varies from very good (7 percent), Good (60 percent), and satisfactory (33 percent). Moreover, the above data and figure show a healthy situation as Soil Water conservation works have a positive relation at the plantation sites in terms of improving the vegetal cover. It also shows that there has been a positive relationship between soil condition and soil cover in improving the vegetation at the plantation sites.

Table 5.2: Rating of Plantation sites (Stage 3, 4, &5) as per vegetal covers

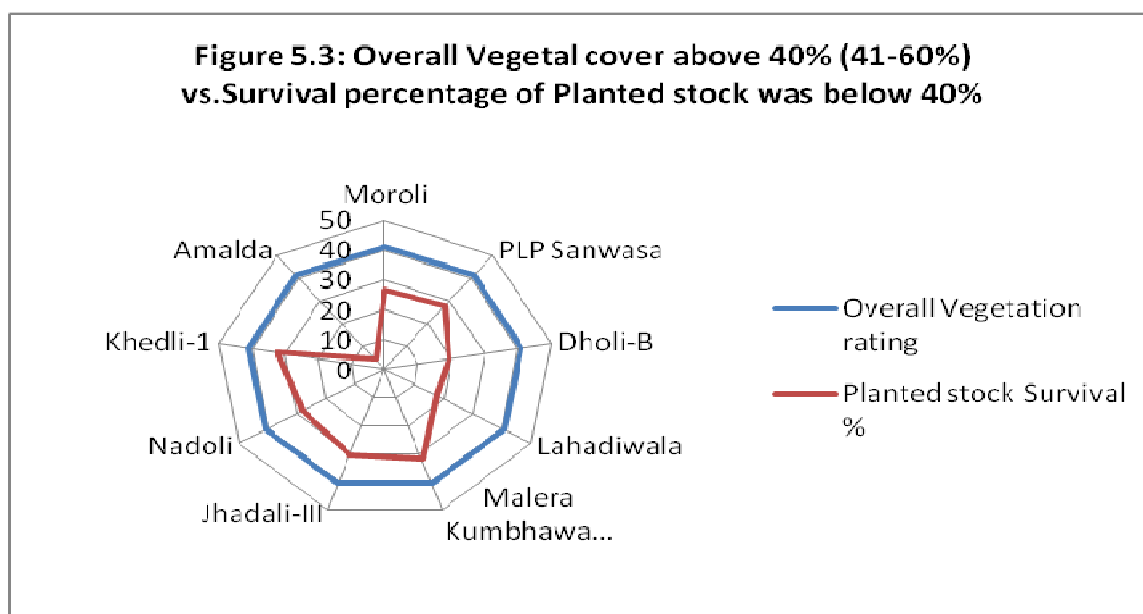
Sl. No	Forest Division	Range	Site name	Model	Area (Ha)	Stage	Survival %	Overall Vegetation rating
1	Alwar	Thanagazi	Jhiri-A	ANR	50	Fifth	41.52	Good
2	Alwar	Thanagazi	Dudu Ki Dhani	ANR	50	Fourth	42.18	Good
3	Alwar	Thanagazi	Lotawas-A	ANR	50	Third	40.54	Good
4	Dausa	Sikrai	Moroli	ANR	50	Fifth	26.41	Good
5	Dausa	Lalsot	PLP Sanwasa	Other	25	Fourth	27.24	Good
6	Dausa	Lalsot	Dholi-B	ANR	50	Fourth	19.20	Good
7	Dausa	Dausa	Lahadiwala	RDF-II	55	Third	17.62	Good
8	Dausa	Bandikui	Dalalpura	ANR	50	Third	32.52	Satisfactory
9	Jaipur	Amer	Jain Mandir Kukas	ANR	50	Fourth	5.72	Satisfactory
10	Jaipur	Phagi	Pahadiya Main	RDF-II	50	Third	41.89	Very Good
11	Jaipur (North)	Achrol	Bilochi-A	ANR	50	Fourth	42.35	Good
12	Jaipur (North)	Shahpura	Malera Kumbhawas-III	ANR	50	Third	32.36	Good
13	Jhunjhunu	Jhunjhunu	Ladsar	SDS	14	Third	66.04	Good
14	Jhunjhunu	Khetri	Chirani-I	RDF-I	50	Third	58.32	Good
15	Jhunjhunu	Khetri	Mehar Ki Dhani	ANR	50	Third	51.3	Satisfactory
16	Sikar	Srimadhampur	Jhadali-III	SDS	50	Fourth	30.80	Good
17	Sikar	Sikar	Pandora-I	RDF-II	50	Third	41.30	Good
18	Sariska Alwar	Tehla	Nadoli	NFL	85	Fourth	28.30	Good
19	Sariska Alwar	Sariska	Kharrika	RDF-II	50	Third	58.50	Very Good
20	Bharatpur	Bayana	Jarkhor	ANR	50	Fifth	29.83	Satisfactory

21	Bharatpur	Deeg	Madhera-4	ANR	50	Third	22.43	Satisfactory
22	Bharatpur	Nadbai	Kamalpur	Other	25	Third	30.47	Satisfactory
23	Dholpur	Sarmathra	Hariyawali	ANR	50	Fourth	42.91	Satisfactory
24	Dholpur	Badi	Kans Ki Narai-A	RDF-II	50	Third	25.84	Satisfactory
25	Karauli	Karauli	Gandhiji Ateva	RDF-I	50	Fifth	43.09	Good
26	Sawai Madhopur	Gangapur City	Bucholai 2nd	RDF-II	50	Fourth	44.68	Satisfactory
27	Sawai Madhopur	Gangapur City	Safeda Ki Khan	RDF-II	50	Third	45.10	Good
28	Sawai Madhopur	Gangapur City	Kuagaw Bichpuri	RDF-II	50	Third	45.82	Satisfactory
29	Sawai Madhopur	Sawai Madhopur	Khedli-1	ANR	50	Third	32.08	Good
30	NCS Dholpur	Itawa	Amalda	ANR	50	Fourth	4.06	Good

Note: Excellent-5 (Vegetation coverage-81-100%); Very Good-4 (Vegetation coverage-61-80%); Good-3 (Vegetation coverage-41-60%), Satisfactory-2 (Vegetation coverage-21-40%), Poor-1 (Vegetation coverage-0-20%)

Conclusion

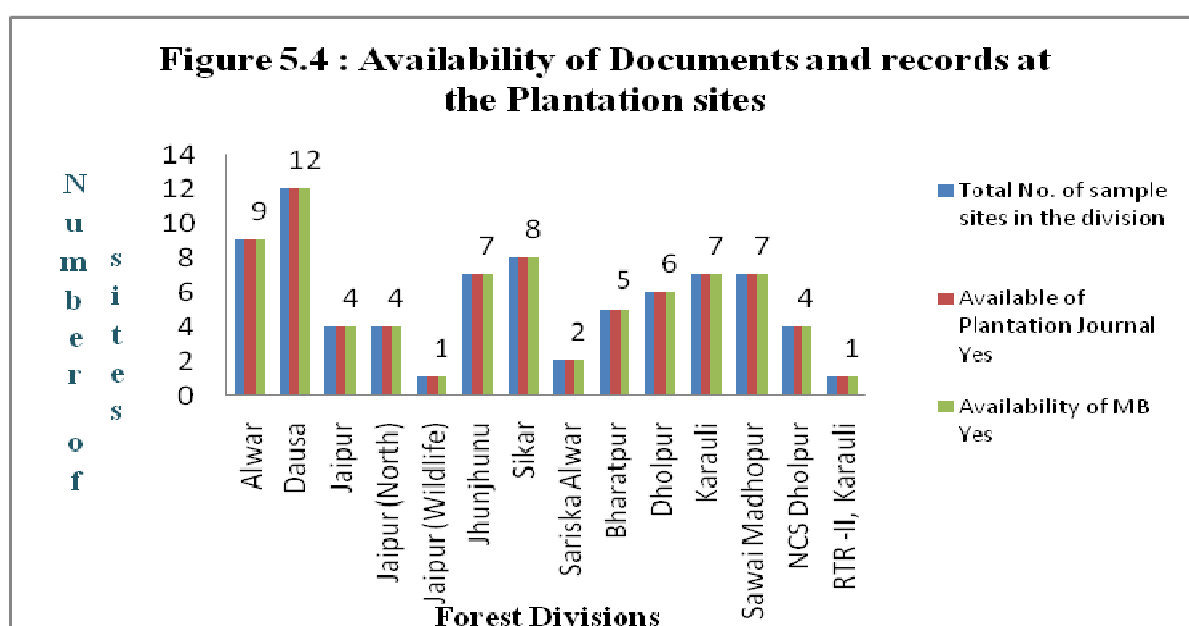
There were plantation sites where the survival rate of planted stock was lower, ranging between 20 percent and below 40 percent. However, the plantation sites have been reported to have grown a good amount of vegetative cover naturally or even from seed sown, namely, Dholi B, Lahadiwala, Malera Kumbhawas–III, Amalda, Nadoli, Jhadali-III, and Khedali-1.



Also, it has been reported that the plantation of saplings at many places was done on the shed of vegetation on thanwalas. It can be avoided. Certainly, for plantation the pit can be dug in open areas where the growth of plants can be affected due to canopy of existing trees/ vegetation. It means the digging of plantation pits during advance stage can be in planned manner in the plantation models namely, ANR, RDF-II, where the proper open space is limited as per the site condition.

5.3 Documentation, Record keeping, & Reports relating to the plantation sites

Documentation and maintaining records of plantation sites is crucial for effective management, monitoring & evaluation, and long-term sustainability. Records provide valuable insights into past practices, enabling informed decision-making for future operations and conservation efforts. They also support accountability, transparency, and the sharing of knowledge within the scientific and conservation communities. According to the State Forest Department's direction, every plantation site will maintain a Plantation journal, a plantation card, a survey map, a treatments map, a Micro-plan, and a Measurement Book (MB). The third-party evaluation study of the plantation site focuses on assessing the various records available at the plantation sites and their quality of updation.



The study reported that the availability of required documents and records, namely, Plantation journal, plantation card, survey map, treatments map, and Measurement Book (MB), was reported at all 77 (100 percent) plantation sites across Jaipur and Bharatpur Sambhag. In terms of record updates, the MB was reported updated. A plantation journal was reported as a kind of base document that informs about the plantation sites, climatic conditions, soil type, and plantation status of various species. Mostly, it has been observed that the plantation journal is maintained for about 2 years when financial inputs are available. But at the plantation sites beyond the second year, the updation of the plantation journal in terms of all sections of the plantation journal was not proper. Therefore, it is difficult to understand from the available records that how the plantation sites have been affected badly or not performed as per the required parameters. Also, it was difficult to understand the various inputs and processes that have supported better survival and an increase in vegetal cover as per the requirements.

It is important to mention that the section of Supervision and Monitoring by the stakeholders was mostly not reported after the first year of plantation in the plantation journal of the sites, or even the same was not followed during the advance work and planting year's phases.

We have tried to discuss on the Key benefits of availability of records and documentation at the plantation sites which certainly help in better result of the inputs made under plantation at the sites from various projects (i.e. CAMPA, NABRAD, RFBPD and State Plan etc.):

- **Improved Management practices**

Documents and Records help in tracking planting details, growth patterns, and yields, allowing for better planning, resource management, and optimization of plantation and conservation practices.

- **Supervision, Monitoring & Evaluation**

Detailed records of plant species, locations, and environmental conditions are essential for studying plant behavior, climate change impacts, and the effectiveness of SWC conservation efforts.

- **Ensure Accountability and Transparency**

Records and Documents ensures that planting activities are carried out responsibly and ethically, contributing to accountability and transparency.

- **Conservation Efforts**

Records at the plantation sites are vital for tracking rare and endangered plant species, supporting reintroduction programs, and contributing to the long-term survival of plant species.

- **Protect from Natural Disaster Recovery**

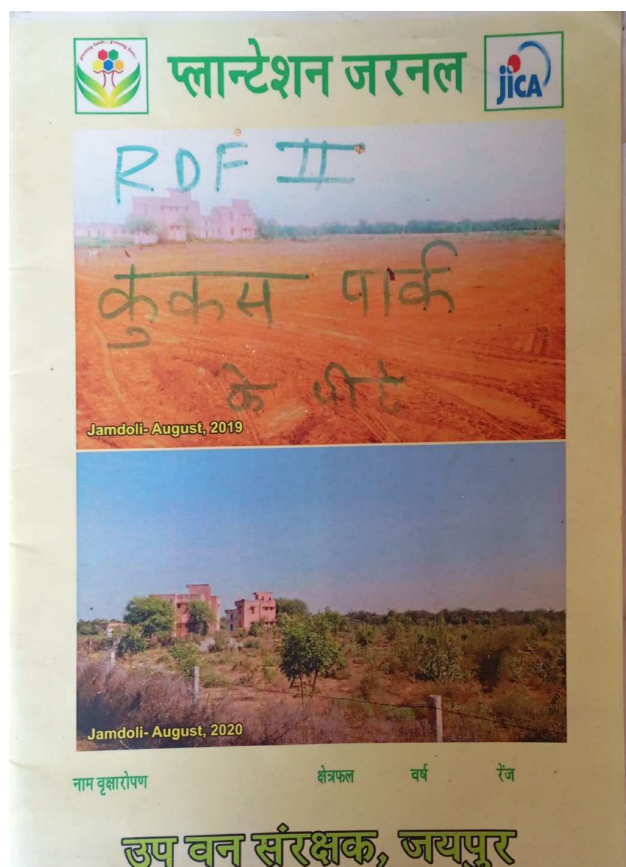
In case of natural disasters or other disruptions, such as fire, frost, etc., the available records can be used to assess damage and support recovery efforts, potentially enabling access to departments' rehabilitation inputs.

- **Update Information's availability**

Well-maintained records facilitate the sharing of knowledge and best practices among officials and staff of the department posted at the forest division, Ranger office, Beat, Sub-Beat, and plantation site levels.

Plantation records provide a historical context for understanding the site. The department officials can use records to demonstrate compliance with environmental regulations and standards, as per the guidelines and State Forest Policy.

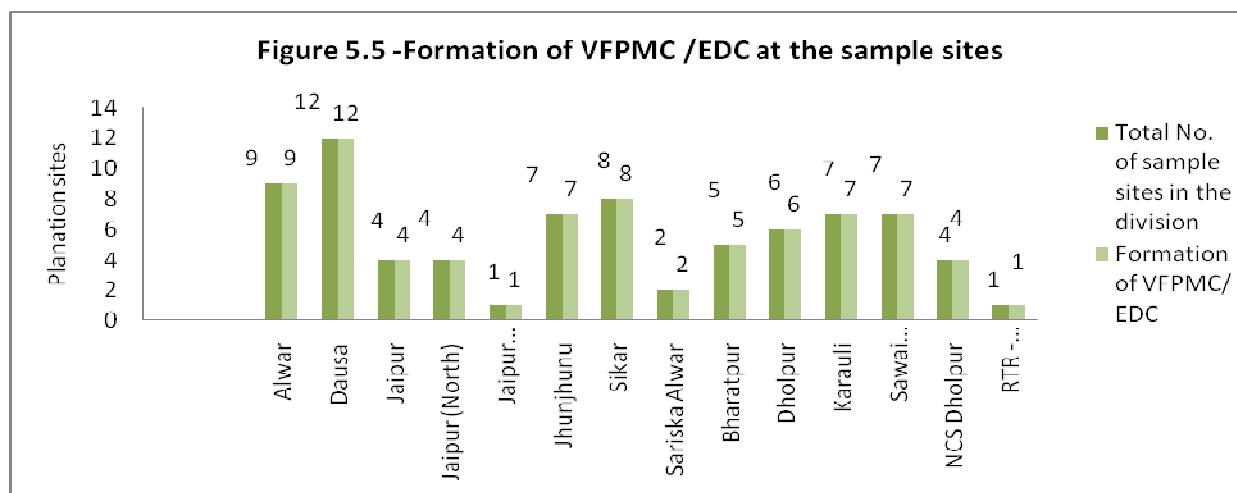
Thus, by investing in proper documentation and record-keeping, plantation sites can be managed more effectively, contributing to both environmental sustainability and scientific advancement and also easier for the Officials and stakeholders at various levels to understand the real



dynamics of plantation sites in terms of increasing the forest vegetal cover and effective management contributing to the State Forest Policy.

5.4 Participation of villagers under Joint Forest Management and Eco-development activities

The participation of villagers in the Village Forest Protection & Management Committee (VFPMC) /Eco-Development Committee under Joint Forest Management (JFM) is crucial to achieving sustainable forest management, biodiversity conservation, and livelihood



improvement in forest-dependent communities. JFM is a collaborative management strategy where local communities (from Forest fringe villages) and the Forest Department share responsibilities and benefits of forest protection and regeneration. It talks about the villagers partnering to form VFPMC to partner with forest officials. The key responsibility is of planning, implementing, and monitoring forest activities. Community members help patrol forests, prevent illegal logging, forest fires, and encroachments, and assist in afforestation and enrichment planting. It has also been envisaged that the villagers contribute to preparing micro-plans for their local forest area, prioritizing needs and management strategies.

In addition to responsibility, there is provision of benefits sharing as villagers receive a share of non-timber forest produce (NTFPs), and revenue from forest products, access to fuel wood, fodder, and other forest resources is regulated but assured.

Key Benefits of Villager Participation

- Empowers communities and builds trust with forest officials.
- Community-level initiatives lead to better protection and regeneration of forests.
- Reduces conflicts between forest officials and villagers.
- Enhances livelihood security and reduces poverty.
- Promotes long-term sustainability of forest ecosystems.

In the evaluation study, it has been reported that VFPMC/EDC has been formed at all 77 plantation sites (100 percent) in the 14 Forest divisions of Jaipur and Bharatpur Sambhag. However, the participation of VFPMC /EDC members in the plantation activities has been recorded on a work basis at large during the advance work and the plantation phase at the site. It has been recorded that the real participation of VFPMC/EDC members in terms of formation of

VFPMC/EDC, involvement in Planning and management is at the marginal level, which indeed required to be executed in stronger way to have effective interventions at the plantation sites in terms of better protection of plantation site, advocacy with villagers to protect the forest at the plantation site, care and management.

Challenges to Participation

- Giving less space than expected. The VFPMC members are followers, not the partners,
- Inequitable benefit-sharing.
- Lack of genuine decision-making power for villagers.
- Gender and caste-based exclusion in committee functioning.
- Dependence on project-based funding.

5.5 Adherence /Compliance of official circulars/ orders by the implementing authorities

At the plantation sites, the adherence to official circulars and orders by implementing authorities (e.g., forest Range Officers, Beat guards, Contractors) is essential to ensure quality, transparency, and sustainability of Afforestation efforts. These directives typically cover site selection, species choice, spacing, protection, labor engagement, fund utilization, and monitoring.

In the evaluation study, it has been reported that the implementing authorities at all 77 plantation sites (100 percent) in the 14 Forest divisions of Jaipur and Bharatpur Sambhag adhere to official circulars/orders. However, a difference in the magnitude of Adherence/Compliance of official circulars/orders by the implementing authorities has been observed at the site. The same has been reflected at the plantation sites in various works carried out, namely, Soil Water conservation/SMC works, Plantation, Hoeing and weeding, and protection, etc.

S.No.	Division (Sambhag)	Division	Total No. of sample sites in the division	Adherence/ Compliance of official circulars/ orders	
				Yes	No
1	Jaipur	Alwar	9	9	0
2	Jaipur	Dausa	12	12	0
3	Jaipur	Jaipur	4	4	0
4	Jaipur	Jaipur (North)	4	4	0
5	Jaipur	Jaipur (Wildlife)	1	1	0
6	Jaipur	Jhunjhunu	7	7	0
7	Jaipur	Sikar	8	8	0
8	Jaipur	Sariska Alwar	2	2	0
9	Bharatpur	Bharatpur	5	5	0
10	Bharatpur	Dholpur	6	6	0
11	Bharatpur	Karauli	7	7	0
12	Bharatpur	Sawai Madhopur	7	7	0
13	Bharatpur	NCS Dholpur	4	4	0
14	Bharatpur	RTR -II, Karauli	1	1	0
	Grand Total		77	77	0

Chapter - 6

Joint Verification of Sample Plantation sites

As per RFP documents of the Office of PCCF (HoFF), there is provision for Joint verification of 10 percent allotted sample of 77 plantation sites in each of the 14 Forest Divisions of Jaipur and Bharatpur Sambhag.

Joint verification of evaluated site is a critical step in ensuring data authentication and helps clarify discrepancies between reported data and actual conditions particularly in research, monitoring, environmental assessments, development projects, and regulatory inspections. In general sense, joint verification confirms that the data collected is real, accurate, and unaltered. It reduces the risk of fabrication, falsification, or misrepresentation of field data. In broader sense, Joint site visits and evaluations demonstrate openness in data collection and analysis and also build trust among stakeholders, such as project funders, regulatory agencies, and affected communities.

To an extent, Joint verification ensures that data collection aligns with regulatory, ethical, or scientific standards and it also encourages accountability of field teams and data handlers.

6.1 The Process of Joint verification of the sample Plantation sites

The report for joint verification has been prepared after undertaking an evaluation study at the allotted sample of 77 plantation sites by the Evaluation agency from all the allotted sample 77 sites (in the prescribed formats, site-wise) from 14 Forest Divisions of Jaipur and Bharatpur Sambhag was submitted to the Office of PCCF (HoFF) on 21 April, 2025. Based on the direction and official orders ((i) Letter No. F.1(192)/514 (Bharatpur Sambhag) & F.1(192)/512 (Jaipur Sambhag) dated 25/04/2025, (ii) Letter No. F.1(192)No. 687 (Bharatpur Sambhag) & Letter No. F.1(192)/685 (Jaipur Sambhag) dated 12/05/2025, and (iii) Letter No. F.1(192)/1075 dated 09/07/2025), the evaluation agency has participated and supported in the process of Joint verification of 10% of the sites randomly selected for joint verification of the data collected by PCCF (M&E), Office of PCCF (HoFF) as per the RFP.

6.2 Result of Joint verification vis-a-vis the Data validation of Third Party Evaluation of the plantation sites

The Result of Joint Verification vis-a-vis Data Validation of Third Party Evaluation of the Plantation Sites suggests a comparison or alignment between two separate evaluation processes of plantation sites:

1. **Joint Verification** – It was conducted by two stakeholders –(1) third Party Evaluation agency (CDECS), and (2) Thee Joint verification appointed by PCCF (M&E), Office of PCCF (HoFF) (e.g., implementing agency and monitoring authority).
2. **Data Validation of Third Party Evaluation** – It involve cross-checking the data provided by the third Party Evaluation agency.

The key objective is to compare and assess the consistency, accuracy, and credibility of plantation data as obtained from joint verification against the findings of a third-party evaluator.

The result of joint verification is stated hereunder showing the data reported by the evaluation



agency (CDECS) vis-à-vis the data collected during joint verification.

6.3 Summary of Findings of result of Joint verification vis-a-vis Data validation of Third Party Evaluation of the plantation sites

Out of 8 sample sites allotted for Joint verification, the agreement has been recorded at all plantation sites (100 percent of the plantation sites). It means alignment of data within a range of +/- 10 percent as per the RFP was reported at all 8 sample sites on various parameters of third-party evaluation, namely, Fencing, Soil Water Conservation Works (SWCs)/Water Harvesting Structures, and Enumeration of Planted stock.

Fencing

The result of fencing at all 08 sample sites of Joint verification shows that the difference in evaluation results is within the permissible limit of +/- 10 percent as per the RFP.

Table 6.1 : Percentage of Difference of Fencing of Third Party Evaluation agency & Joint evaluation team of P&M

Name of Division	Jaipur	Jaipur North	Sikar	Jhunjhunu	Sawai Madhopur	Karauli	Bharatpur	Dholpur
Name of Sites	Pahadiya Main	Bilochi-A	SDS Mangarh	SDS Ladsar	Isarda Balaji 1st	Masawata	Jarkhor-2	Hariyawali
Ditch Fencing	-0.055	0.055	0.709	0.000	-0.307	0.031	-5.769	-0.160
Loose Stone wall	0.000	0.000	0.000	0.000	0.000	0.709	-0.195	-0.124
Barbed wire	0.000	0.000	0.615	-7.438	-1.818	0.000	0.000	0.000

Soil Water Conservation Works (SWCs)/ Water Harvesting Structures

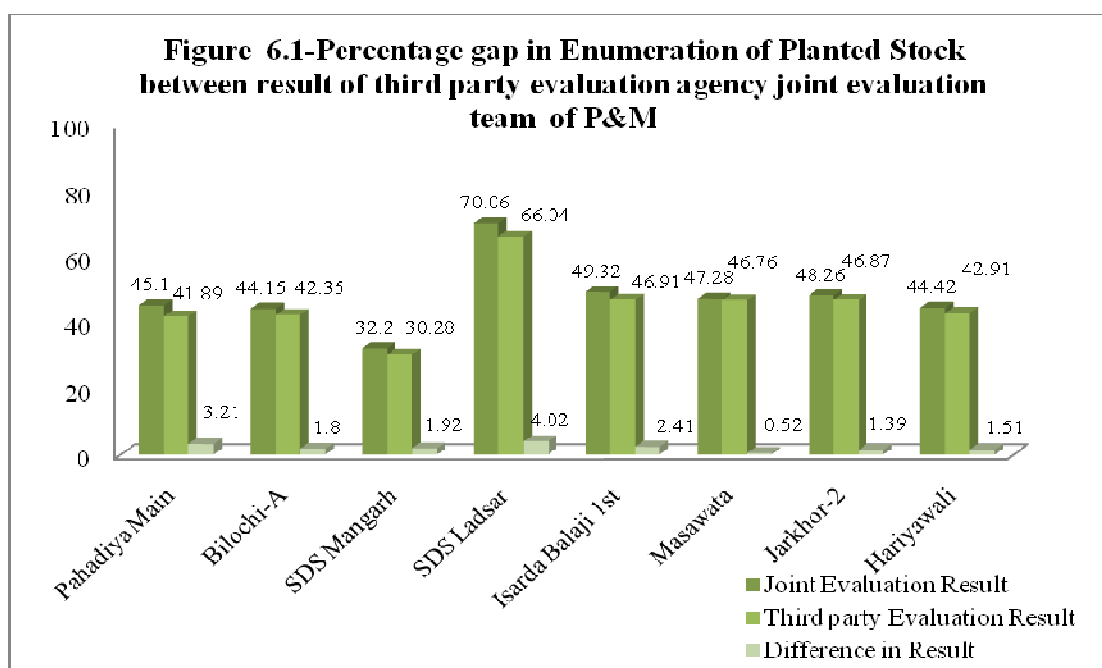
The results of **Soil Water Conservation Works (SWCs)/Water Harvesting Structures** at all 8 sample sites of Joint verification showed that the difference in evaluation results is within the permissible limit of +/- 10 percent as per the RFP.

Table 6.2 : Percentage of Difference of Soil Moisture Conservation works of Third Party Evaluation agency & Joint Evaluation team of P&M

SMC Structure	Unit	Name of Division	Jaipur	Jaipur North	Sikar	Jhunjhunu	Sawai Madhopur	Karauli	Bharatpur	Dholpur
		Name of Sites	Pahadiya Main	Bilochi-A	SDS Mangarh	SDS Ladsar	Isarda Balaji 1st	Masawata	Jarkhor-2	Hariyawali
Contours - SGT/CCT	Length (RMT)	NA	NA	NA	NA	NA	-0.14	0.01	2.27	NA
	Volume (Cum)	NA	NA	NA	NA	NA	-0.15	0.00	0.00	NA
Dykes	Length (RMT)	NA	NA	NA	NA	NA	0.00	0.00	0.00	NA
	Volume (Cum)						0.00	0.00	0.00	
DCCT	Length (RMT)	NA	NA	NA	NA	NA	0.47	NA	NA	NA
	Volume (Cum)	NA	NA	NA	NA	NA	-0.36	NA	NA	NA
Loose stone Check Dam	Volume (Cum)	NA	NA	NA	NA	NA	0.00	0.00	0.00	NA
Water Harvesting Structure (Masonry)	Volume (Cum)	NA	NA	NA	NA	NA	0.00	0.00	0.00	NA
Percolation Ponds/ Nadi /ECD	Volume (Cum)	NA	NA	NA	NA	NA	-0.22	-1.02	-0.86	NA
V-ditch	Length (RMT)	NA	NA	NA	NA	NA	0.00	0.00	0.00	NA

Enumeration of Planted stock

The enumeration results of the planted stock at all eight sample sites during the joint verification indicate that the evaluation differences are within the permissible limit of +/- 10 percent as outlined in the RFP.



Chapter - 7

Key Findings, Conclusions & Recommendations

In the recent years, the State has taken on a clear and compelling responsibility to integrate sustainable forest management into its environmental and developmental agenda. This includes key elements such as ecosystem conservation, ecological security, climate change mitigation and adaptation, promotion of urban forestry, and alignment with the Sustainable Development Goals (SDGs). The various funds in the State namely, State Plan, NABARD, CAMPA, and Externally Aided projects played a pivotal role in supporting these efforts - particularly in advancing SDG 13: Climate Action.

The Key interventions funded under State Plan, NABARD, CAMPA, and Externally Aided projects (RFBDP) includes afforestation and plantation activities, Soil Water Conservation (SWC) works etc..

During the financial years 2013-14 to 2023-24 various funded plantation activities were implemented across 14 forest divisions in 02 Sambhag (Bharatpur and Jaipur).

The State Plan, NABARD, CAMPA, and Externally Aided projects (RFBDP) Fund supported a broad spectrum of forest and wildlife-related initiatives, including:

- Afforestation and plantation
- Assisted natural regeneration
- Soil Water Conservation (SWC) works
- Fencing and Protection

As part of the third-party evaluation process, a comprehensive review was conducted covering the following focus areas:

1. Conditions and effectiveness of Protection/Fencing
2. Status and Effectiveness of Soil Water Conservation (SWC) works in Second Stage
3. Survival rate of plantations
4. Soil and moisture conservation structures
5. Impact of seed sowing on mound of ditch/dola fencing, contour trenches & thawalas
6. Growth Assessment of Planted stock (Factors affecting survival and growth)
7. Growth Assessment of Natural vegetation (Factors affecting survival and growth)
8. Assessment of Impact of the Soil Water Conservation (SWC) works and Water Harvesting structures in third, fourth & fifth Stage
9. Documentation, Record keeping, & Reports relating to plantation sites
10. Participation of villagers under Joint Forest Management and Eco-development activities
11. Adherence /Compliance of official circulars/ orders by the implementing authorities

12. Wildlife management

13. Policy-level issues

The evaluation assessed the relevance, efficiency, effectiveness, impact, and sustainability of State Plan, NABARD, CAMPA, and Externally Aided projects (RFBDP) funded interventions. It has also highlighted innovative practices and key lessons learned. The outcome and overall effectiveness of State Plan, NABARD, CAMPA, and Externally Aided projects (RFBDP) funded activities were gauged by reviewing Plantation survival and growth, SWC works,/SMC activities, Water Harvesting structures and protection measures across both forest and wildlife domains.

While encouraging progress was observed in several areas, certain aspects of the program showed signs of lagging and call for targeted improvements. These insights, detailed in the evaluation findings, offer a critical perspective for guiding future implementation and policy refinement to ensure that State Plan, NABARD, CAMPA, and Externally Aided projects (RFBDP) funded initiatives continue to contribute meaningfully toward sustainable forest governance and climate resilience in Rajasthan.

The findings of the Third Party Evaluation study have been reviewed on the following performance indicators namely, Relevance, Efficiency, Effectiveness, Impact, Sustainability, Key innovative initiatives, and lessons learned are stated below on various parameters.

7.1 Strengths & Weaknesses

The key findings in terms of Strengths & Weaknesses are stated hereunder,

Strengths	Weaknesses
1. The Plantation Fund from various projects activities have supported to save forest at the plantation sites from further degradations and increase in the forest cover on new diverted land allotted by the administration in lieu of forest land used for development project purpose in the Forest divisions. 2. Increased plantation of local species at the afforestation sites. 3. SMC activities were	1. The forest areas were facing extreme climate conditions in the area. Also, the soil depth is low and the Forest divisions in Bharatpur and Jaipur Sambhag experienced variations in temperatures. The temperatures hike during summer up to 45⁰C to 48⁰C and in winter temperature fell to the minimum 6⁰C to 0⁰C. 2. The plantation site specific requirement has not been assessed and the whole initiatives gone with the model estimates and available budgetary provisions. For example, the need to deep CCT is at the periphery, but, it has been constructed in the middle of plantations. Also, the distance (horizontal internal i:e HI) between the 2 consecutive CCT/SGT is not as per norms and available land slopes and accordingly the water availability during rainy seasons in the available catchment. 3. Berm and Waste weirs are the grey areas at Soil Water structures at majority of plantation sites, including the Ditch fencing in order to have better utilization of structure for long time. 4. Moderate to Low level of technical knowhow amongst field functionaries and officials namely, Forester, Asst Forester,

executed in proper manner including selection of right sites at majority of places. The quality of construction has been reported from satisfactory to good and very Good in most of the cases. 4. Increase in forest and vegetal cover added value to overall process and system of forestry development. 5. SMC related activities at the afforestation/ plantation sites impacted conservation of soil and water. 6. The impact of SMC works were visible in most of sites helping in increasing the vegetative cover of the sites. The natural vegetation was better reported than the planting saplings on thanwalas. 7. Contour bunding works were done largely in a proper way. 8. LSCD resulted into reduction of soil erosion and checked the water flow velocity. At most of plantation sites, it was reported	SBO (Forest Guard) etc. on the various technical issues of plantations, fencing and soil and moisture conservation measures/ structures –its purpose, design and selection of suitable sites. 5. The soil cover on rocky area of Alwar, RTR-II, Sawai Madhopur, Karauli Dholpur, STR, Jaipur, Bharatpur is low resulting into limited survival of planted plants. 6. The plantation sites largely drive towards plantation only i.e. completing the activity. The element of ‘People’ was kept at lower level. People’s participation was reported less at the plantation sites. 7. The VFPMCs were considered less important for better protection and management of initiatives under the project. 8. Monitoring and supervision by Forest Division and Range officials was reported limited and not regular for supporting the execution of works/ activities at sites specially the plantation and for the purpose of improving the better utilization of fund for quality execution of works/ activities. 9. At the most of the sample sites, micro-plan was not the base document for execution of works. 10. Protection & care of plantation/ activities sites being beyond project phase was reported limited or almost nil and it causes nullifying the investments due to heavy grazing by the cattle/local livestock. 11. No provisions of operation and maintenance of SMC work have been made. Also, in some cases the site selection for SWCs was not very strong resulting in underutilization of the constructed structure (ECD/MPT). 12. There were weak VFPMCs in the area and they were reported active only for execution of activities as the whole plan has been made for taking up forestry and plantation works and the expenditures were made by VFPMC. 13. Less expertise amongst forest officials/ functionaries to undertake related activities mainly the SMC works – both in terms of calculating the requirements at the site and the right place in response to the catchment area available. Rather, it has been observed the Soil Water Conservation works done as per the model estimates and not as per the plantation site demand. 14. Low level of proactive initiatives by the local stakeholders/ community people for better utilization and management of plantation fund related activities / work for better development of forest cover and improvement of forest
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constructed at proper site and with proper quality.	related initiatives.
9. Construction of WHSs at the plantation sites/ near plantation sites helped in checking the soil erosion.	15. Gap observed in the Protection & Patrolling at the site in the present circumstances.. 16. Less visibility of efforts related to Pruning and hoeing and which affected growth of seedling planted and seed sown at the site. 17. Grazing by stray animals & cattle and destruction by Neelgai, rat and porcupine was reported at the site. 18. The destruction to planted seedlings by termite was observed during third party evaluation.

7.2 Key Findings & Conclusions

7.2.1 Fencing & Guarding of Plantation sites boundaries (Protection & Management)

- The physical integrity of ditch fencing was weak & its functional performance is also extremely limited, with the vast majority falling into the ineffective category. The ditch fencing was either filled with soil or damaged by Neel gai, stray animals & cattle's. Sometimes it was damaged by local community/encroachers for their vested interest.
- The volume-related discrepancies in ditch fencing further highlight implementation inconsistencies. In terms of shortfall volume against MB, the highest category was "0–10% shortfall," observed in 17 sites (44.7 percent). Jaipur & Sawai Madhopur division recorded maximum number of sites (03 each) with 0-10% shortfall volume in ditch fencing. The "11–20%" shortfall was seen in 6 sites (15.8 percent). Alwar division recorded maximum number of sites (02) with 11-20% shortfall volume in ditch fencing. The most severe category — "21% & above" — affected 15 sites (39.5 percent) with Dausa division contributing maximum number of sites (05) in this category.
- On the other hand, additional volume in ditch fencing was reported in 16 sites (61.5 percent) with a "0–10%" excess, again majorly from Jaipur 12 sites (63.2 percent) and a few from Bharatpur 4 sites (57.1 percent). Higher excesses were less common but still present: the "11–20%" additional volume was reported in 3 sites (11.5 percent), and "21% & above" in 7 sites (26.9 percent) — 5 sites (26.3 percent) from Jaipur and 2 sites (28.6 percent) from Bharatpur. These figures suggest that even where ditch fencing has been implemented, it lacks volumetric accuracy. Jaipur Sambhag consistently records higher instances of both shortfall and surplus, indicating fluctuating field-level execution.
- The loose stone wall fencing is not only structurally compromised in most sites but also functionally inadequate, particularly in Bharatpur Sambhag. Volume discrepancies in loose stone wall fencing reinforce the trend of inconsistent implementation. For shortfall, the highest count falls in the "0–10%" range — 16 sites (47.1percent) with Dausa division contributing maximum number of sites (04) in this category. The "11–20%" range affected 9 sites (26.5 percent). Alwar division recorded maximum number of sites (03) with 11-20% shortfall volume in loose stone wall fencing. The most severe category — "21% & above" — accounted for another 9 sites (26.5 percent) with Dausa division contributing maximum number of sites (02) in this category. In terms of additional volume, the majority again fell

into the highest band (21% & above), with 9 sites (56.3 percent) showing this issue. Lower excess volumes i.e. "0–10%" range was observed in 05 sites (31.3 percent), whereas 2 sites (12.5 percent) fell in the "11–20%" range. These fluctuations in both shortfall and excess suggest measurement or execution lapses during field implementation.

- In case of barbed wire fencing in majority of sites (76.5 percent) the effectiveness of barbed wire fencing performed at a “Low” level. The wire of barbed wire fencing was either damaged & fallen on the ground or its wire remains loose at many places. The poles of the barbed wire fencing were broken & were lying on the ground.
- Length discrepancies as per field evaluation of barbed-wire fencing against MB further revealed precision issues: two sites(100 percent) under-built by ≥ 21 % with one site each from Jaipur (Pahadiya main site) & Jhunjhunu (Bansiyal site) while 13 sites(86.7percent) over-built by 0–10 %, 01 site(6.7 percent) each by 11–20 %, & by ≥ 21 %.
- The status of hedge fencing was not intact in all the 06 sites. However, the overall effectiveness of hedge fencing remained low across the board, with 100% of sites reporting poor performance.
- The effectiveness of dola fencing ranged between moderate and low. Overall, only 3 sites (42.9 percent) across both divisions (NCS Dholpur & Dholpur) had intact dola fencing, and the effectiveness was still below optimal, with just 42.9% categorized as moderately effective. There was additional (volume) against MB in dola fencing in all the 07 plantation sites (100 percent). Regarding range of additional (volume) in dola fencing, the same was reported up to 10 percent & between 11-20 percent in 01 plantation site (14.3 percent) each & more than 20 percent in 05 plantation sites (71.4 percent).

7.2.2 Assessment of Soil Water Conservation Works in Second Stage

- Various SMC structures viz. CCT/SGT, Deep CCT, loose stone check dam, earthen check dam found at the plantation sites missed their target volumes by over 20 % in many sites. The shortfall volume of soil water conservation works minimizes soil moisture retention capacity, removal of top fertile soil which had an impact on survival & growth of planted seedling & also on plant grown through natural regeneration.
- The SGT/CCT was found at 19 plantation sites (67.9 percent) in Jaipur Sambhag. In Bharatpur Sambhag, the SGT/CCT was found at 17 plantation sites (89.5 percent). SGT/CCT structures displayed the most widespread shortfall (volume) against MB, with the highest number of 10 sites (37.0 percent) facing 11–20% shortfall volume. Sawai Madhopur division contributing maximum number of sites (03) facing 11–20% shortfall volume. 8 sites (29.6 percent) experiencing shortfall volume above 21%. Dausa division recorded maximum number of sites (04) facing above 20% shortfall volume. Notably, 09 sites (33.3 percent) facing shortfall volume in the lower percentage range (0–10%). Dholpur division recorded maximum number of sites (03) facing shortfall volume in the lower percentage range (0–10%).
- In the case of Deep CCTs, shortfall volume against MB were more evenly distributed across the 0–10% (07 sites) and 11–20% categories (06 sites), with a relatively lower number (04 sites) of high shortfalls volume (21% and above) observed only in Jaipur Sambhag. Sikar division contributing maximum number of sites (03) with shortfall volume in Deep CCT in

lowest range (0-10%). Dausa division contributing maximum number of sites (02) & (04) with shortfall volume in Deep CCT in 11-20% & 21% & above categories respectively. However, additional (volume) in DCCT against MB was found in 03 sites (75.0 percent) in 0-10% categories & 01 site (25.0 percent) in 11-20% categories.

- Volume control in earthen check-dam construction was highly erratic. For shortfall volume in earthen check dam against MB, 16 sites (76.2 percent) under-built by ≥ 21 %, only 03 sites (14.3 percent) fell below a 10 % deficit, and 02 sites at 11–20 % (9.5 percent). Karauli division contributing maximum number of sites (04) with shortfall volume in earthen check dam in highest range (21% & above). Alwar division recorded maximum number of sites (02) with shortfall volume in earthen check dam in 11-20% categories. Sikar, Dausa & Jhunjhunu division contributing 01 site each in shortfall volume in 0-10% categories. Over-builds were also non-trivial: four sites (44.4 percent) overshoot volume by ≥ 21 %, three sites (33.3 percent) by 0–10 % and 02 sites at 11–20 % (22.2 percent).
- In Loose Stone Check Dams, the most concerning observation is that 12 sites (80 percent) experienced a volume shortfall against MB of 21% and above, whereas 03 sites (20 percent) experienced a loose stone check dams volume shortfall against MB of below 10 %. Karauli & Alwar division recorded maximum number of sites (03 each) with shortfall volume in highest range (21% & above) whereas Sikar division recorded maximum number of sites (02) with shortfall volume in lowest range (0-10%). The additional volume against MB in LSCD was limited, with only 4 sites (80 percent) showing additions above 21% & 01 site (20 percent) showing additional volume between 11-20%.

7.2.3 Afforestation- Plantations Survival (Factors affecting Growth & survival)

- The seedling survival rates across Jaipur and Bharatpur Sambhag indicate moderately successful plantation efforts with scope for improvement. Majority of the plantation sites reported average survival, with about 56 % of the sites having 40–60 % survival rate, only a tiny share i.e. 1% of the sites doing much better (above 60% survival rate) & 43 % of the sites having either 21–39 % or up to 20% survival rate. These figures reflect a generally stable performance concentrated around average survival rates, with few outliers at either end. While extreme underperformance is limited, high-performing plantations are rare, suggesting the need for strategies that not only maintain current standards but also push more areas into the higher survival bracket.
- Dausa division had maximum number of sites (04 each) where survival rate was either up to 20% or 21–39 % viz. Lahadiwala-17.6%, Dholi B- 19.2%, Amol Moroli-19.7 & Lanka B- 19.4%. PLP Sanwasa-27.2%, Dalalpura-32.5, Moroli-26.4% & Gagwana A-22.4%.
- Karauli, Jhunjhunu & Sawai Madhopur had maximum number of sites (05 each) where survival rate was average (40-60%). Only one site in Jhunjhunu division (Ladsar-66%) had above 60% survival rate
- Heavy growth of weeds, grass & bush obstructs the growth of planted seedling. Grazing by stray animals & cattle and destruction by Neel gai, sehi and rat was reported at the site. Poor protection due to damaged fencing & guarding affects the survival rate of planted seedling. The quality of soil was not conducive for survival of planted seedling.

- The dependency of villagers on forests produce for personal, family needs and family income.
- Growth of termite affects the growth of planted seedling.
- Ditch/Loose stone wall/ Barbed wire/Dola/Hedge fencing reported damaged at the plantation sites. At some places, the locals made route across Ditch/Loose stone wall/ Barbed wire/Dola/Hedge fencing to plantation site for cattle grazing. Village and wild animals affect the planted species. Loose stone wall fencing was damaged at many places. The stones of loose stone fencing were removed from many places and route to plantation site was made by the locals.
- Soil quality obstructs the growth of planted seedling. The soil was rocky at many plantation sites. The chances of survival of seedlings in rocky soil are low.

7.2.4 Impact of seed sowing on mound of ditch/dola fencing, contour trenches & thawalas

- The third stage results of sowing on mound of ditch/dola fencing, though uneven, offer a model for partial success and lessons that can be scaled. The overall third stage performance indicates that half of the efforts were unsuccessful, but 37.5% of the plantation sites did show good or very good outcomes. The presence of “Very Good” results — though limited — suggests that with the right conditions and implementation, effective results are achievable. This stage highlights both the potential and inconsistency of outcomes, likely influenced by site-level variation in preparation, weather, or execution quality.
- The overall fourth stage results of seed sowing on mound of ditch/dola fencing shows 70% “Poor” outcomes, 20% “Good,” and 10% “lacked any intervention of seed sowing,” with a complete absence of any “Very Good” ratings. This stark deterioration from the third stage suggests serious limitations either in the ditch/dola method during this period, environmental constraints, or lapses in field execution. The fourth stage results emphasize the urgent need to reassess implementation strategies and explore what went wrong compared to the third stage, where at least a few sites managed to achieve high standards.
- The fifth stage results of sowing on mound of ditch/dola fencing shows just 25 % reached “Very Good,” and 25 % “Poor” & half the sites (50 %) lacked any intervention of seed sowing.
- In the third stage of result of sowing on contour-trench, overall germination was weak: half the sites (50 %) failed (“Poor”), only 37.5 % sites reached a “Good” rating, and a mere 6.3 % sites achieved “Very Good.” An additional 6.3 % sites went unassessed (lack in seed sowing). The performance of sowing on contour trenches deteriorated further in stage IV. In 70 % sites result of sowing on trenches were “Poor,” only 20 % sites “Good,” and 10 % sites lacked any intervention of seed sowing. In fifth stage, the result of sowing on mound of the contour trenches were rated “Good” in 50% sites, approximately 25 % sites “Very Good,” and 25 % site still underperformed with poor rating. As compared to result of sowing on ditch/dola fencing, the result of sowing on contour-trench was far better with having “Good” & “Very Good” rating in all the stage i.e. third, fourth & fifth.
- Sowing on thawalas proved the least effective method in the third, fourth & fifth stage. 93.7 % of total sites yielded “Poor” germination, with only 6.3 % sites rated “Good.” These near-universal shortcomings suggest that Thawala micro-basins may be unsuited to local soil or

moisture regimes and merit either technical revision or replacement. The assessment of sowing on thanwalas in both the fourth and fifth stages reveals a consistently poor outcome across all observed sites. Overall, the result of sowing on thawalas was poor.

7.2.5 Growth assessment of planted stock

- The growth of planted seedlings varies from average to poor. The reason behind poor growth of planted seedling was heavy growth of bush & weed at the site. Also, hoeing & pruning was not reported at the site. Grazing by cattles, stray animals & Neel gai was seen during the Third Party Evaluation. Poor guarding, protection & soil quality affect the growth of planted seedlings.
- Plants of Desi Babool (3meter), Totalis (2.8 meter) & Shisham (2.7 meter) show maximum average height, whereas plants of Bair (0.15 meter), Churail (0.13 meter) & Shisham (0.1 meter) show minimum average height.
- Plants of Bair (6 mm), Ronj(13mm) & Neem(13mm) show minimum average collar girth, whereas plants of Totalis(534 mm), Churail(314 mm), Desi Babool, Shisham & Kumtha(251 mm each) shows maximum average collar girth.

7.2.6 Growth assessment of Natural vegetation

- The growth of plant grown through natural regeneration varies from good to satisfactory. Plants of Totalis (6.8 meters) show maximum average height, whereas plants of Dhok, Ronj, Desi Babool & Bair (0.3 meters each) show minimum average height. In terms of minimum & maximum average collar girth of plant grown through natural regeneration at the plantation sites, plants of Totalis (628 mm) show maximum average collar girth, whereas plants of Dhok(16 mm) & Jal(15 mm) show minimum average collar girth. The growth of plants grown through natural regeneration was better than the growth of planted seedlings.

7.2.7 Impact of the Soil Water Conservation works (SWC Works) and Water Harvesting structures in Third, Fourth & Fifth Stage

- The assessment of water harvesting structures in the third, fourth, and fifth stages reveals mixed trends in structural integrity, intervention needs, and functional effectiveness. In terms of performance, contour trenches were reported with low effectiveness in 20 sites (71.4 percent), suggesting limited water retention benefits. Contour trenches showed moderate effectiveness in 07 sites (25.0 percent) and only in 01 site (3.6 percent) contour trenches achieved high effectiveness—pointing to the need for urgent intervention and upkeep.
- In terms of effectiveness of earthen check dam, moderate effectiveness of earthen check dam was observed in 8 sites (61.5 percent) and high effectiveness in only one site (7.7 percent). The low effectiveness of earthen check dams was seen in 4 sites site (30.8 percent).
- In case of effectiveness of loose stone check dam, in 10 sites (66.7 percent) loose stone check dam were rated as moderately effective, low in 3 sites (20.0 percent) & high effectiveness was found in 02 sites (13.3 percent).
- In case of Nadi, in 07 sites (70.0 percent) structures required no intervention and showed moderate effectiveness, while in only 1 site (10 percent) the structure was found to be highly effective. In 02 sites (20 percent) the structure of Nadi showed low effectiveness.

7.2.8 Assessment of plantation site in terms of suitability for plantation

- Looking to the soil availability at the plantation sites, in nutshell, it can be inferred that, sample sites have varied soil types and soil depth with low level of organic matter in Forest divisions of both Sambhag, namely, Jaipur and Bharatpur, which is less supportive for the plantations survival of the planted saplings.

7.2.9 Assessment of plantation site in terms of vegetal cover

- Overall, the thirty plantation sites of 3, 4, and 5 stage have shown improvement in terms of vegetal cover. The rating of the plantation sites varies from very good (7 percent), Good (60 percent), and satisfactory (33 percent). It shows a healthy situation as Soil Water conservation works have a positive relation at the plantation sites in terms of improving the vegetal cover. It also shows that there has been a positive relationship between soil condition and soil cover in improving the vegetation at the plantation sites.
- There was plantation sites where the survival rate of planted stock was lower, ranging between 20 percent and below 40 percent. However, the plantation sites have been reported to have grown a good amount of vegetative cover naturally or even from seed sown, namely, Dholi B, Lahadiwala, Malera Kumbhawas–III, Amalda, Nadoli, Jhadali-III, and Khedali-1.
- Also, it has been reported that the plantation of saplings at many places was done on the shed of vegetation on thanwalas. It can be avoided. Certainly, for plantation the pit can be dug in open areas where the growth of plants can be affected due to canopy of existing trees/vegetation. It means the digging of plantation pits during advance stage can be in planned manner in the plantation models namely, ANR, RDF-II, where the proper open space is limited as per the site condition.

7.2.10 Assessment of documentation, Record keeping & reports

- The study reported that the availability of required documents and records, namely, Plantation journal, plantation card, survey map, treatments map, and Measurement Book (MB), was reported at all 77 (100 percent) plantation sites across Jaipur and Bharatpur Sambhag. In terms of record updates, the MB was reported updated. A plantation journal was reported as a kind of base document that informs about the plantation sites, climatic conditions, soil type, and plantation status of various species. Mostly, it has been observed that the plantation journal is maintained for about 2 years when financial inputs are available. But at the plantation sites beyond the second year, the updation of the plantation journal in terms of all sections of the plantation journal was not proper. Therefore, it is difficult to understand from the available records that how the plantation sites have been affected badly or not performed as per the required parameters. Also, it was difficult to understand the various inputs and processes that have supported better survival and an increase in vegetal cover as per the requirements.
- It is important to mention that the section of Supervision and Monitoring by the stakeholders was mostly not reported after the first year of plantation in the plantation journal of the sites, or even the same was not followed during the advance work and planting year's phases.

7.2.11 Participation of villagers under Joint Forest Management & Eco-development activities

- In the evaluation study, it has been reported that VFPMC/EDC has been formed at all 77 plantation sites (100 percent) in the 14 Forest divisions of Jaipur and Bharatpur Sambhags. However, the participation of VFPMC /EDC members in the plantation activities has been recorded on a work basis at large during the advance work and the plantation phase at the site. It has been recorded that the real participation of VFPMC/EDC members in terms of formation of VFPMC/EDC, involvement in Planning and management is at the marginal level, which indeed required to be executed in stronger way to have effective interventions at the plantation sites in terms of better protection of plantation site, advocacy with villagers to protect the forest at the plantation site, care and management.

7.2.12 Adherence /Compliance of official circulars/ orders by the implementing authorities

- In the evaluation study, it has been reported that the implementing authorities at all 77 plantation sites (100 percent) in the 14 Forest divisions of Jaipur and Bharatpur Sambhag adhere to official circulars/orders. However, a difference in the magnitude of Adherence/Compliance of official circulars/orders by the implementing authorities has been observed at the site. The same has been reflected at the plantation sites in various works carried out, namely, Soil Water conservation/SMC works, Plantation, Hoeing and weeding, and protection, etc.

7.2.13 Result of the Third Party Evaluation study - Precision and Accuracy (adherence to the RFP norms)

- The basic data collected from all sites (in the prescribed formats, site-wise) has been compiled and submitted to the Department. Based on the direction and official order, the evaluation agency also participated in the joint verification of 10% of the sites randomly selected for joint verification of the data collected by the Office of PCCF (HoFF). Results from 8 sample sites showed data alignment within a $\pm 10\%$ variation, indicating the evaluation study's data is both precise and accurate.

Concluding remarks

Across various fencing types (ditch, loose stone wall, barbed wire, hedge & dola), the data reveals persistent problems in structural integrity, functional effectiveness, and volumetric & length accuracy. Most fences were found either not intact or ineffective, and both under-construction (shortfall) and over-construction (additional volume). The absence of “High” effectiveness ratings in various fencing types is particularly notable and reinforces the need for stricter quality control, improved supervision, and training at the site level.

Although the model demonstrates statistical significance and explains a modest share of the variation in sapling survival, neither fencing condition nor effectiveness alone shows a statistically significant impact. The trend suggests that improving fencing effectiveness may contribute positively, but the current evidence is inconclusive. Therefore, additional variables such as soil type, species choice, role of cattle guard, periodic maintenance of site, cattle's pressure at plantation site, watering, and VFPMC participation & monitoring should be explored in future analyses to better explain survival outcomes.

7.3 Recommendations & Suggestions

7.3.1 Afforestation, Growth & Survival

- To ensure effective protection at the plantation sites, first, it needs to combine **physical fencing** with **social fencing** (community involvement who are dependent on local forest), secondly, prefer **low-maintenance** fencing types (e.g., live fences) for long-term cost savings, third, ensure **periodic inspection** and prompt repairs of fencing, fourth, involve local institutions (VFPMC/EDC) for shared responsibility and lastly, maintain **records of guarding schedules** and incident reports.
- To combat the extreme climatic conditions of hot and cold during the year, the plantation sites require attention. The watering of the plantations may be allowed for the initial years to cope with the extreme temperature crisis. In ANR, NFL, RDF-II, and DFL plantation models, watering may be provided at least 3-4 times a year on non-rainy days. This provision may be included in Models for at least 3 initial years, from November to June, or as required based on climatic and site conditions. The plantation model needs to be revised based on the real-time and site-specific requirements.
- The system of casualty replacement (gap filling) may be ensured for years, provided that maintenance is sanctioned for 3-5 years, so that the casualty can be reduced and more care can be given at the plantation sites by the forest department team. This additional input will help improve the vegetative cover and further address the issue of promoting forestry, which certainly adds value for Climate change (Sustainable Development Goals-13 (SDGs-13)).
- After a complete assessment of the site, the selection of tree species for plantation at the particular site may be taken up, considering its topography, Agro climatic zone, existing vegetation, local species of trees, etc., to ensure better productivity and survival of the planting stock.
- The initiatives of protection and guarding (*the protection from destruction by porcupine (Sevli), Termite, and Roze*) may be planned as per the demand of the plantation site in order to have proper growth and development of the plantation site plants.
- There is a strong need to place round-the-clock cattle guards, i.e., placing cattle guards for 24 hours on a turn basis. It will help reduce destruction at night. The VFPMC should ensure regular payments of honorarium to the Cattle guard at the plantation site. This practice will certainly help in ensuring their responsibility and responsiveness. Moreover, there is a need to enhance the role of cattle guard by incorporating their inputs in thinning and pruning during their duty at 40-50 live plants every day at the plantation site, which will undoubtedly add to ensuring better survival, growth, and a sense of responsibility at the site.
- Seed sowing should be promoted and it should be sown properly not haphazardly. The chances of survival of plants from the seed sown were better than the planted seedling. The result of seed sowing was good to average at the site. There should be provision and practice of thinning of plants grown from seed sown regularly.

- The analysis of the successes and failures of plantation sites and interaction with forest officials, PRIs, local functionaries, and VFPMC members led them to think that the services of Cattle guard (Chowkidar) appointed at the plantation sites may be extended for 8-10 years to have better results and achieving the goals /maximum results of the whole investment. The department may extend the period of the cattle guard at the plantation site, which may hardly require an additional 10-15% budget in the next 3-4 years.
- There is a need to revise the unit size of the plantation for ANR and DFL models based on site conditions. It may be a unit of 5 to 20 hectares. This certainly will improve the coverage and success of the plantation work. In addition, the plantation sites should prefer the local species to ensure a better response to plantation activities. Site-specific seedlings should be planted (as per topography & soil condition) at the plantation site.
- The plantation model needs to be revised now, and it should be site-specific rather than a single statewide model. The components of plantation, protection, and development of SMC structures need to be site-specific. Also, the plantation activities should ensure that plants planted at the site are at least one year old and have experienced all four seasons, namely, summer, winter, and rainy seasons. In one complete year, the plants at the nursery will ensure hardening, adaptability, and resistance to a greater extent.
- The NFL model requires site-specific planning and may require a specific budget. It needs to have a customized budget based on its site and soil conditions. It has also reported the destruction by the local people, as local people use the land in some cases. These issues need special attention and may require budgetary provisions.
- The Berm space given on the contour trenches, ditch fencing, etc., can also be used for plantation. This shall ensure adequate moisture to the planted saplings.
- For better survival results, there should be provision for watering (with Aldrin etc for termite treatment) the plants viz. at least 4-5 times in a year for first 3 years.
- Provision for Cutback operations, cleaning, Weeding and Hoeing should be exercised properly so that the growth of seedling planted is not hampered.
- Protection & Patrolling at the site need to be proper and should be improved in the present circumstances so that the same could be beneficial.
- Pruning and hoeing and should be exercised at the site properly so that the growth of seedling planted may be good.
- Grazing by stray animals & cattle and destruction by Neelgai, rat and porcupine was reported at the site, remedial measures should be undertaken.
- The destruction to planted seedlings by termite was observed during third party evaluation. It needs proper treatment so that the huge investment on plantation can be meaningful in improving the forest cover.

7.3.2 Soil Water Conservation and Improvement in Soil & Moisture Content

- The site selection for various soil and water conservation activities need homework and proper technical and effective planning in order to saturate the area in terms of soil and moisture conservation and better use of financial resources available.

- The initial level planning for water conservation structures, namely, Contour bunding (CBD), Check dam, trenches, LSCD, contour trenches, V-Ditch, PCT and MPT/Nadi etc., with required plan and estimate, definitely would help in creating quality and purposeful structures.
- The timely and proper maintenance of Soil and water conservation structures should be taken up at the plantation sites, namely, Contour bunding (CBD), Check dam, trenches, LB with Gabion, contour trenches, V-Ditch, PCT, MPT/Nadi, and contour bunds, etc., in order to keep them functional for an extended period.
- During construction of Percolation tank (PT)/Talai/ECD, Quarry rabish/Murum should be spread over top of the bund to protect it from formation of rills. Side slopes to be protected by Munja plantation, seed sowing or pitching on upstream side slope, proper base width (at least 3 times of height + top width) is also essential.
- Proper Compaction of excavated earth/soil with tractor/roller along with watering for making embankment (percolation tank, talai/Nadi , big ECDs) is also very essential.
- Berm and Waste weirs are essentially to be provided to all Soil & Water harvesting structures including the Ditch fencing in order to have better utilization of structure for long time.
- Proper training for layout, use of A-frame (An A-frame is a simple tool used in construction and land management for marking contour lines. It helps in creating level lines on slopes) for contour layout, mode of measurements and MB entries must also be imparted to concern field staff.
- The ‘Berm’ between the mound of trench and ditch fencing need to be maintained in order to protect the structure from getting it filled. After digging of ditch fencing and contour trenches by machines, the dug up soil should be dressed properly to make a good mound so that seed sowing can be done properly.
- The details of SMC works and other works details, namely, name of work, year of construction, project fund, expenditures, and sanctions, etc., need to be taken up to locate the works at the site. Nevertheless, the importance of site-level display of information cannot be negated. However, it will be helpful too.

7.3.3. Strengthening formation & Functioning of VFPMC/EDC/JFMC (Village Level Institution)

- The sample project, Forest Divisions, did an excellent job in fulfilling their responsibility of undertaking plantation and construction activities with the help of VFPMC at the project sites. However, the fundamental requirement is to create a system and institutions at the village level, which should undertake their responsibilities properly by their involvement and feeling of ownership. At all the plantation sites, the role of VFPMC is pivotal. Hence, there is a stronger need to activate the VFPMC, which should take an active role in the protection and management of forest-related initiatives and plantations.
- There is a need to review and support the various activities undertaken beyond the Afforestation/Plantation and SMC works, namely, the VFPMC institution building and capacity building at the Forest division level. Regular reviews and facilitative support will

be instrumental in understanding the local problems. Then it will be possible to provide the required & timely support irrespective of financial releases.

- The Forest Division should perform its role as per the whole plan of action associated with various plantations. It is also true that stakeholders at Forest Division/Range should understand their importance and develop better coordination with the project team. They should also understand their role rather than completing the project activities anyhow.
- The Quality of records keeping needs to be improved, especially meeting records of VFPMC. It was also observed that the active participation of members in the VFPMC meeting is the real need, which has to be thought of urgently. Only the Chairman & a few members of VFPMC were found active. There is a strong need to work on institutional building and mobilizing local institutions.
- The VFPMC meetings need to be adequately planned and should be treated as fundamental to the intervention of plantation activities. The fixed date, adequate time suited to the community/ EC members, and deciding the venue of the meeting are some crucial elements. In addition, the meeting agenda needs to be prepared for every meeting of VFPMC.

7.3.4 Records & Documentations of Plantation works

- Every Plantation site should have updated records namely, Plantation Journal, Plantation card, survey and treatment map, MB, Estimates, Micro-plan, drawings and designs of the SWC structures as per the plantation site condition.
- Work- wise details of the measurement as per site should be entered in the MB instead of directly mentioning the quantities (as per plantation Journal) and accounts wing should also check 100% calculations along with details of Qty, and rates as per schedule G of contract agreement.
- It will be commendable for the plantation sites when the officers visiting the site should mention observations in the Plantation Journal and action taken for its compliance.

7.3.5 Community Mobilization – Awareness camps & Meetings

- VFPMC meetings should be organized regularly. This will ensure the involvement/ participation of VFPMC members in various other activities. The role of VFPMC members should be recognized by the local forest functionaries, too.
- The visit to the sample plantation sites and project villages to assess various activities executed under the various plantations fund suggests that community mobilization efforts might be improved. Hence, it is recommended to plan the activities related to community mobilization and awareness in advance.
- The effective community mobilization capsule has a powerful influence on individual and VFPMC members. The necessity is to have effective planning and management of the intervention related to community mobilization.
- The intervention of forestry development work, namely, plantation, construction of SMC works, and forest protection measures, etc., should be taken up in a holistic way so that the forest growth and the development of people should also be ensured in terms of social and economic development. Then only the association of people and real 'People's

Participation' can be ensured. It is essential for future activities and initiatives, which the local level stakeholders will support.

- The involvement of local people, both men and women, in the process of forest development should be made right from the stage of planning, designing, implementation, and monitoring and evaluation of various activities and initiatives at VFPMC.
- The department should ensure to educate the local community about positive role of forest development to compensate the bad effect of climate change.

7.3.6 Capacitate with Right Knowledge and Skill to the field functionaries

- There is urgent need to train the field functionaries and officials namely, Forester, Asst Forester, SBO (Forest Guard) etc. on the various technical issues of plantations, fencing and soil and moisture conservation measures/ structures –its purpose, design and selection of suitable sites. The training may include the proper planning of SWC and water harvesting structures on the basis of slope, catchment area, runoff, yield and provision of waste weirs for safe disposal of excess water from structures.
- While visiting the sample plantation sites, it has been experienced that site specific requirement has not been assessed and the whole initiatives gone with the model estimates and available budgetary provisions. For example, the need to deep CCT is at the periphery, but, it has been constructed in the middle of plantations and along the valley at one site. Also, the distance (horizontal internal i.e HI) between the 2 consecutive CCT/SGT is not as per norms and available land slopes and accordingly the water availability during rainy seasons in the available catchment. Similarly, at the plantation site of Kukkas Park ke peeche, there has been ECD constructed in series and across one and another. It shows that the runoff yield from the catchment has not been ascertained.
- The importance of capacity building inputs is instrumental in shaping the right skill at the right time. It has been reported that various capacity-building trainings were undertaken for Forest Division, Range, and VFPMC officials under the project.

7.3.7 Ensuring Quality & Quantity of Work – Monitoring & Supervision

- Each of the Forest Division/Ranges should play an essential role in ensuring the quality and quantity of work under the various plantation fund activities. The role of the Forest Division is vital to ensuring quality works, namely, plantation and Afforestation, etc. The monthly review meeting at the Forest Division level may be organized with the whole team to discuss the various inputs, processes, and outputs, as well as strengths and challenges.
- The project has a component of monitoring and supervision. However, it needs to be taken up regularly and adequately at the division and range level as per the state norms and guidelines to strengthen project expenditures and deliver quality work.
- It has been reported that the monitoring, supervision, and guidance by DCFs/ACFs at the field level were lagging periodically in order to ensure quality interventions. The plantation journal bearing the page for officials to record their note/observations in the column does not bear the observations/note. It is difficult to assess that to an extent the directions given and practically were followed at the site.

- The monitoring should be done in real-time using advanced GIS applications and mobile Apps by the Department Monitoring Unit, involving the VFPMCs.

7.3.8 Policy Issues

- The protection in terms of cattle guards may be extended by 3-5 years to achieve better results. In other words, the whole investment may be made worth by ensuring additional services of cattle guards for an additional 3-5 years to achieve better results.
- Seed sowing should be promoted at the plantation sites. It should be appropriately sown, not haphazardly. A plant grown from a seed sown had a higher chance of survival at some places than the planted seedling. There should be a provision for thinning of plants grown from seed sown in a regular way to ensure proper growth of trees and formation of canopy.
- The interventions of ANR should also be extended up to 8-10 years, like NFL and DFL sites, to achieve better results.
- The beat and sub-beat level functionaries have limited orientation in ensuring the quality and standards, which are certainly adhered to through regular monitoring and handholding support by Range officers during the execution of plantation activities at the site level.

Annexure

Site-wise report of Plantation Sites

Sl.no	Sambhag	Division	Page No.
1.	Jaipur	Alwar	189-212
2.	Jaipur	Dausa	213-243
3.	Jaipur	Jaipur	244-254
4.	Jaipur	Jaipur (North)	255-265
5.	Jaipur	Jaipur (Wildlife)	266-268
6.	Jaipur	Jhunjhunu	269-286
7.	Jaipur	Sikar	287-306
8.	Jaipur	Sariska Alwar	307-313
9.	Bharatpur	Bharatpur	314-327
10.	Bharatpur	Dholpur	328-342
11.	Bharatpur	Karauli	343-358
12.	Bharatpur	Sawai Madhopur	359-376
13.	Bharatpur	NCS Dholpur	377-387
14.	Bharatpur	RTR -II, Karauli	388-390

Jaipur Sambhag

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Jaipur Sambhag, in Alwar division 09 plantation sites were covered for second, third, fourth & fifth stage evaluation. This Forest Division with 6 Forest Ranges namely Behror, Alwar Kishangarhbas, Thanagazi, Laxmangarh & Rajgarh has territorial jurisdiction over the entire Alwar District.



Figure: Location of Alwar district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Alwar Forest Division are given as per table for evaluation.

Table 1: Plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Thanagazi	Jhiri-A	2020-21	50	ANR	CAMPA	V
2.	Thanagazi	Dudu Ki Dhani	2021-22	50	ANR	CAMPA	IV
3.	Thanagazi	Lotawas-A	2022-23	50	ANR	CAMPA	III
4.	Thanagazi	Hanuman Ka Gwada	2023-24	50	RDF-II	RDF	II
5.	Rajgarh	Jogiyon ki Dhani	2023-24	50	ANR	NABARD	II
6.	Rajgarh	Dera	2023-24	50	ANR	CAMPA	II
7.	Tijara	Balouj	2023-24	100	ANR	NABARD	II
8.	Alwar	Todiyar	2023-24	50	RDF-II	NABARD	II
9.	Kishangarwas	Lisadi	2023-24	50	RDF-II	RDF	II

3. Report of Evaluation of Plantation Site

3.1 Jhiri A site in Thanagazi range -N 27°14'2" and E 76°13'47"

A. About Jhiri A Site

The selected plantation was carried out on 50 ha of land at Jhiri A site in Thanagazi range during the year 2020-21. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was fifth.



B. Fencing Status

Table 3.2: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RM T) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1030	1082	990	1425.6	40	-343.6	Intact	Medium
2.	Loose stone wall fencing	1730	1286	1465	1230.6	265	55.4	Intact	Medium



C. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4152	141	6717	10000	41.5

The survival of planted seedling was reported poor(41.5 percent). The reasons for poor survival at the plantation site were heavy growth of bush viz. Lantana & Dancer at the site. The growth of bush obstructs the growth of planted seedling at the site. Also, removal of weed & pruning was required for proper growth of planted seedling. Guarding & protection at the site was reported poor.



Measuring height of Plants



Natural vegetation

D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
1.	Yes/No	No	Yes	Yes	No	Yes
2.	No. of rows sown		3	2		3
3.	Length (in Metres)		2970	9400		30000
4.	Approximate No. of Plants as per enumeration		410	4692		Not seen
5.	Species used		Kumtha, Desi babool	Kumtha, Desi babool		Kumtha, Desi babool
6.	Result*		Poor	Good		Poor

E. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Desi Babool	1.85	82
2.	Churail	1.46	100
3.	Shisham	1.45	69

F. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

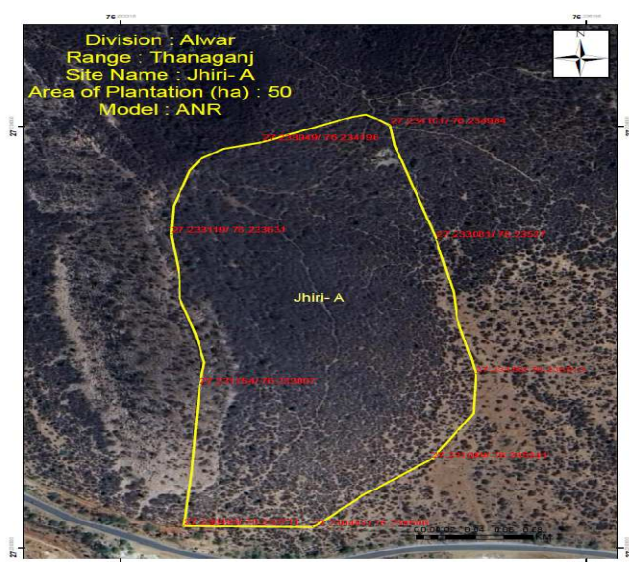
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Kumtha	1.1	75
2.	Khair	1.2	69
3.	Ronz	1.35	88
4.	Dhok	1.15	100
5.	Jaal	1.2	69

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

Sl.no	Particulars	LSCD	Contour trenches	Nadi
a	Present Status*	Intact	Silted	Intact
b	Intervention**	No action required	Need Repair	No action required
c	Effectiveness***	Medium	Low	Medium

H. GPS Location and KML file: The selected ANR model plantation site measured 50 hectare as per KML map.



3.2 Dudu Ki Dhani site in Thanagazi range -N 27.335417 and E 76.197828

A. About Dudu Ki Dhani Site

The selected plantation was carried out on 50 ha of land at Dudu Ki Dhani site in Thanagazirange during the year 2021-22. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was fourth.



B. Fencing Status

Table 3.8: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	410	482	380	547.2	30	-65.2	Intact	Medium
2.	Loose Stone wall	3136	2223	3030	2545.2	106	-322.2	Not Intact	Low



Enumeration of Planted Stocks

Table 3.9: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4218	343	5439	10000	42.2

The survival of planted seedling was reported poor (42.2 percent). Grazing by cattles & stray animals due to human habitation situated close to the plantation site was reported at the site. Also, protection (damaged loose stone wall fencing) & guarding was reported poor at the site.

C. Enumeration of Sowing

Table 3.10: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of the Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
A	Yes/No	No	Yes	Yes	No	Yes
C	No. of rows sown		3	2		3
D	Length (in Metres)		1140	8880		30000
E	Approximate No. of Plants as per enumeration		697	4438		Not seen
F	Species used		Kumtha, Desi Babool	Kumtha, Desi Babool		Kumtha, Desi Babool
G	Result*		Poor	Poor		Poor

D. Growth Assessment of Planted Stock

Table 3.11: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Desi Babool	1.28	69	1. Grazing by cattles, stray animals & Neel gai 2. Protection & guarding poor
2.	Churail	1.52	88	
3.	Ronz	1.6	94	



E. Growth Assessment of Plant through Natural Regeneration

Table 3.12: Growth Assessment of Plant through Natural Regeneration

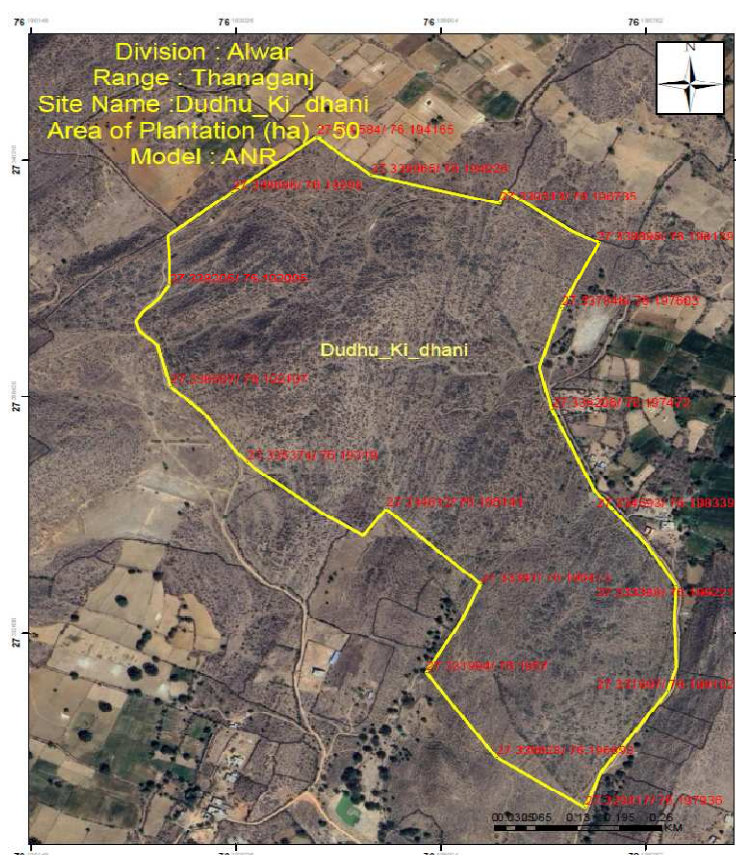
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Ronz	1.7	100
2.	Churail	1.6	100
3.	Desi Babool	1.4	88

F. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.13: Assessment of SWC works & WHS

Sl.no	Particulars	Loose stone Check Dams	Contour trenches
a	Present Status*	Intact	Silted
b	Intervention**	No action required	Need Repair
c	Fund Requirement (in Rs.)		
d	Effectiveness***	High	Low

H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectare as per KML map.



3.3 Lotawas A site in Thanagazi range -N 27.219028 and E 76.169005

A. About Lotawas A Site

The selected plantation was carried out on 50 ha of land at Lotawas A site in Thanagazi range during the year 2022-23. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.14: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2191	2337	2080	2995.2	111	-658.2	Not Intact	Low
2.	Loose Stone wall	2007	1268	2000	1680	7	-412	Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.15: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4054	366	5580	10000	40.5

The survival of planted seedling was reported poor (40.5 percent). Grazing by cattles & stray animals due to damaged ditch & loose stone wall fencing was reported at the site. Protection & guarding was reported poor at the site.

D. Enumeration of Sowing

Table 3.16: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of the Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a	Yes/No	No	Yes	Yes	No	Yes
c	No. of rows sown		3	2		3

d	Length (in Metres)		6240	7000		30000
e	Approximate No. of Plants as per enumeration		1267	1010		Not seen
f	Species used		Kumtha, Desi Babool	Kumtha, Desi Babool		Kumtha, Desi Babool
g	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.17: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Desi Babool	1.7	28	1. Grazing by cattles, stray animals & Neel gai 2. Protection & guarding was reported poor
2.	Churail	1.4	34	
3.	Shisham	1.52	20	



F. Growth Assessment of Plant through Natural Regeneration

Table 3.18: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Dhok	1.4	119
2.	Hingot	1.6	82
3.	Churail	1.35	100
4.	Palas	0.7	63

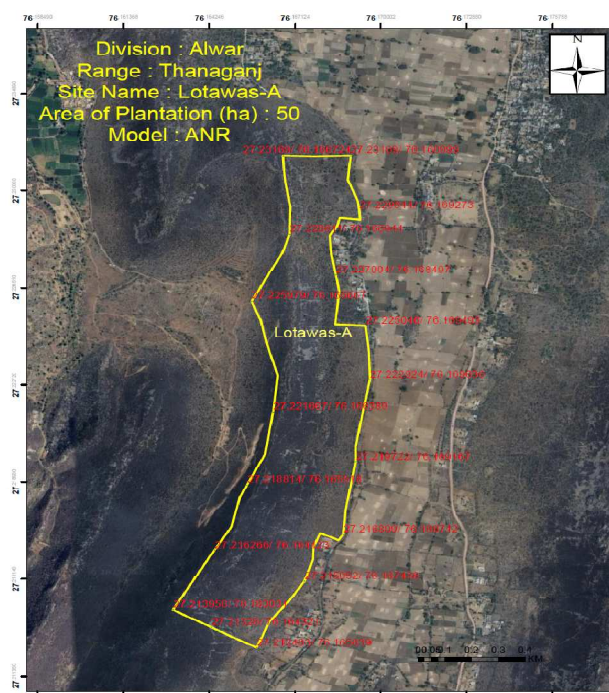
G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.19: Assessment of SWC works & WHS

Sl.no	Particulars	Loose stone Check Dams	Contour trenches
a	Present Status*	Intact	Silted
b	Intervention**	No action required	Need Repair

c	Effectiveness***	Medium	Low
d	Remarks		

H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectare as per KML map.



3.4 Hanuman Ka Gwada site in Thanagazi range -N 27.495468 and E 76.252347

A. About Hanuman Ka Gwada Site

The selected plantation was carried out on 50 ha of land at Hanuman Ka Gwada site in Thanagazi range during the year 2023-24. The activities were done under the RDF (Regeneration of Degraded Forest) model. The site was a forest land and stage of evaluation was second.

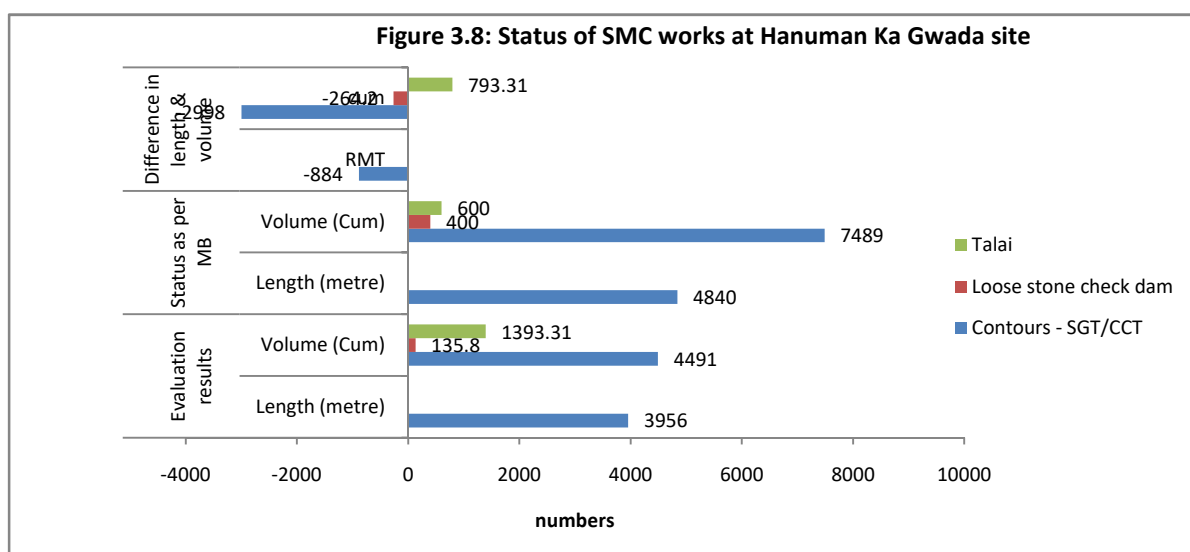
B. Fencing Status

Table 3.20: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1520	2302	1500	2160	20	142	Intact	Medium
2.	Loose stone wall fencing	1227	793	1100	924	127	-131	Intact	Medium



C. Soil Moisture Conservation Works Status



Under SMC structure, CCT, LSCD & Talai was reported at the. The CCT was silted. Also, stray animals & Neel gai damaged the contour trenches. The effectiveness of contour trenches at the plantation site was reported low. The LSCD & talai was reported intact & its effectiveness was reported medium. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure. However, the CCT was measured 3956 RMT against 4840 RMT as per MB. The volume of LSCD was 135.8 cu.m against 400 cu.m as per MB. The remaining structure of LSCD has been stolen. FIR has been registered.



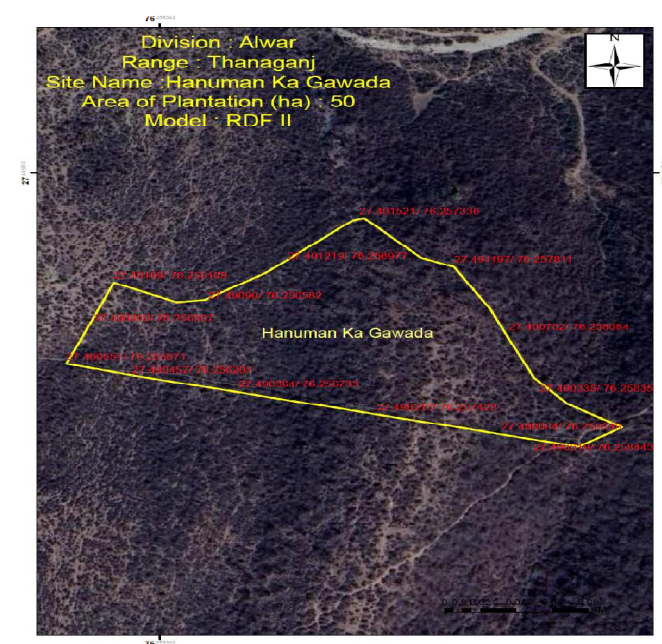
D. Enumeration of Planted Stocks

Table 3.22: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5865	149	3986	10000	58.65

The survival of planted seedling was reported average (58.65 percent). The reason for average survival was grazing by cattles & stray animals & human habitation close to the population. Also, guarding was reported poor at the site.

E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.5 Jogyon Ki Dhani site in Rajgarh range -N 27.184965 and E 76.490978

A. About Jogyo Ki Dhani Site

The selected plantation was carried out on 50 ha of land at Jogyo Ki Dhani site in Rajgarh range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

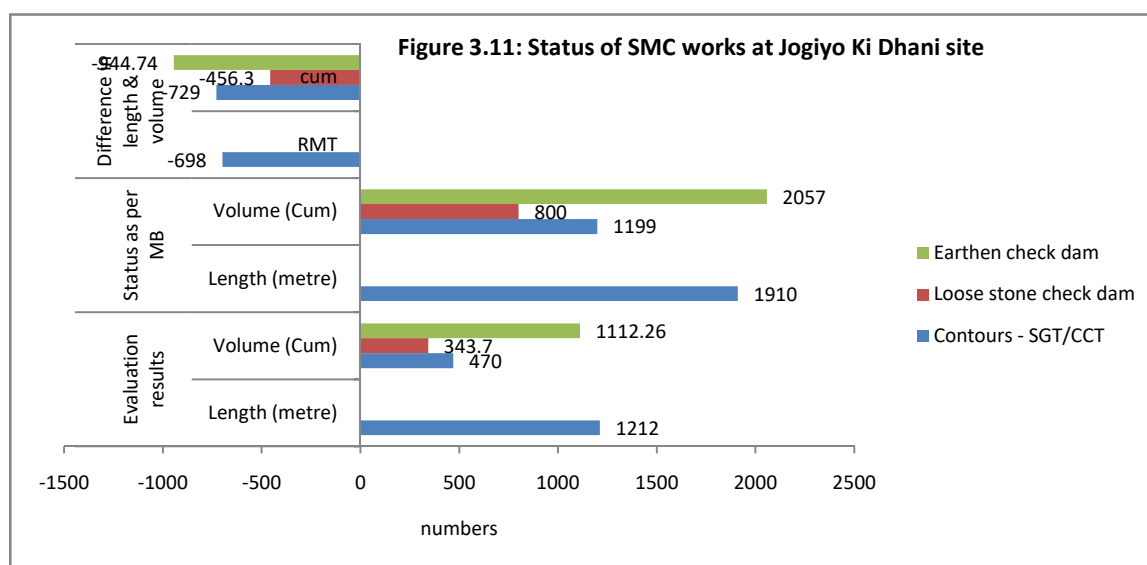
Table 3.23: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	295	401	279	401.76	16	-0.76	Not intact	low
2.	Loose stone wall fencing	2180	1465	2100	1764	80	-299	Intact	Medium



C. Soil Moisture Conservation Works Status

Contour trench, LSCD & talai (02 nos.) reported at the site. The CCT was silted. Also, stray animals & Neel gai damaged the contour trenches. The effectiveness of contour trenches at the



plantation site was reported low. The effectiveness of ECD was reported medium. Water was not available in the ECD. However, water mark was observed. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure. The LSCD was partly intact & effectiveness of LSCD was reported medium.



Measuring of LSCD in Plantation



Measuring of trench at Plantation

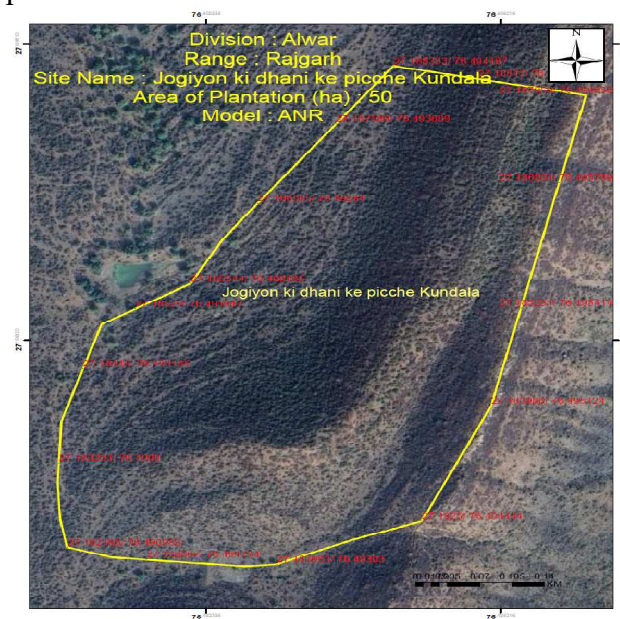
D. Enumeration of Planted Stocks

Table 3.25: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
1241	167	8592	10000	12.41

The survival of planted seedling was reported poor (12.4 percent). The reason for low survival was grazing by cattles & stray animals, destruction by termite at the site. Protection & guarding was reported poor. Also, advance work & plantation work was done simultaneously at the site.

E. GPS Location and KML file:The selected ANR model plantation site measured 50.0 hectare as per KML map.



3.6 Dera site in Rajgarh range - N 27°9'16" and E 76° 40'50"

A. About Dera Site

The selected plantation was carried out on 50 ha of land at Dera site in Rajgarh range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.

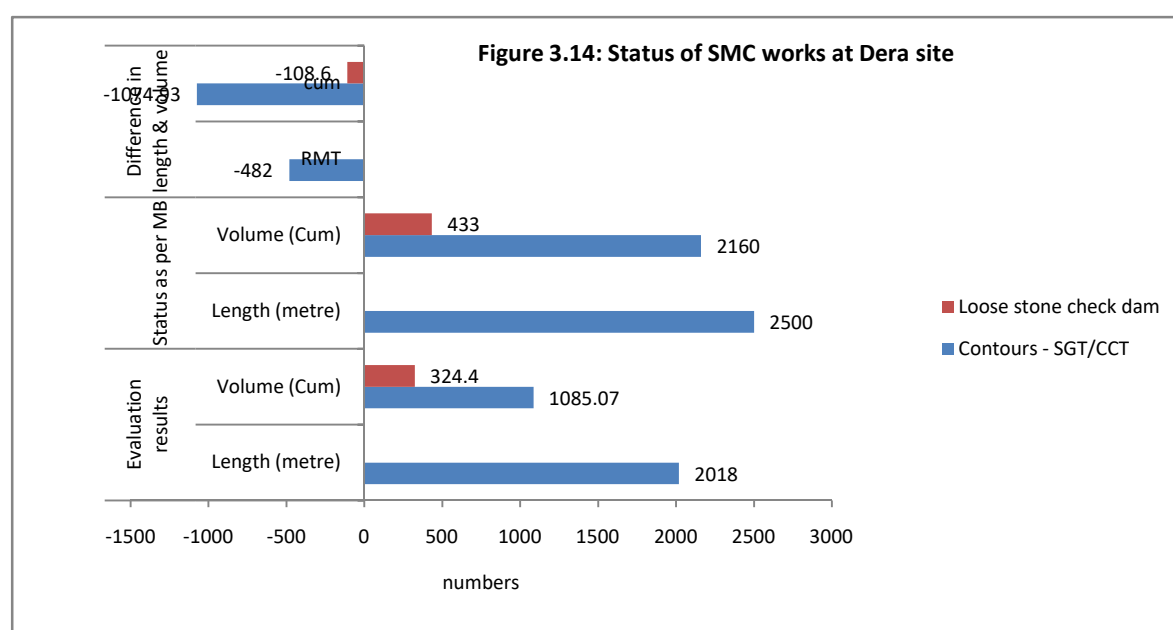


B. Fencing Status

Table 3.26: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2127	2420	2000	2880	127	-460	Not intact	low
2.	Loose stone wall fencing	2860	667	2500	2100	360	-1433	Not Intact	Low

C. Soil Moisture Conservation Works Status





Under SMC structure, Contour trench & LSCD was reported at the site. The CCT was silted. Also, stray animals & Neel gai damaged the contour trenches. The effectiveness of contour trenches at the plantation site was reported low. The CCT was measured 2018 RMT against 2500 RMT as per MB. Due to siltation & damage because of heavy rain caused low volume of CCT viz. 1085.07 cu.m against 2160 cu.m as per MB. The LSCD was partly intact & effectiveness of LSCD was reported medium.

D. Enumeration of Planted Stocks

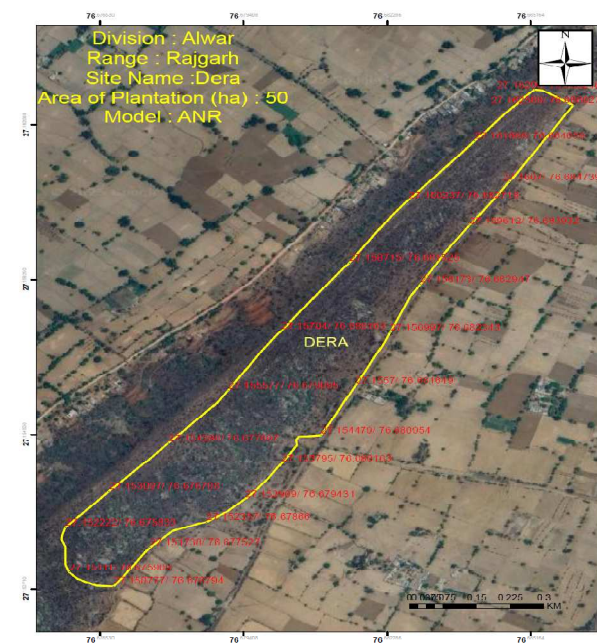
Table3.28: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
6027	213	3760	10000	60.3

The survival of planted seedling was reported good (60.3 percent). The reason for good survival of planted seedling was quality of soil i.e. domat soil in the area & good soil moisture retention due to hilly area.



E. GPS Location and KML file:The selected ANR model plantation site measured 50.0 hectare as per KML map.



3.7Baloj site in Tijara range - N 27°9'16" and E 76° 40'50"

A. About Baloj Site

The selected plantation was carried out on 100 ha of land at Baloj site in Tijara range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



B.Fencing Status

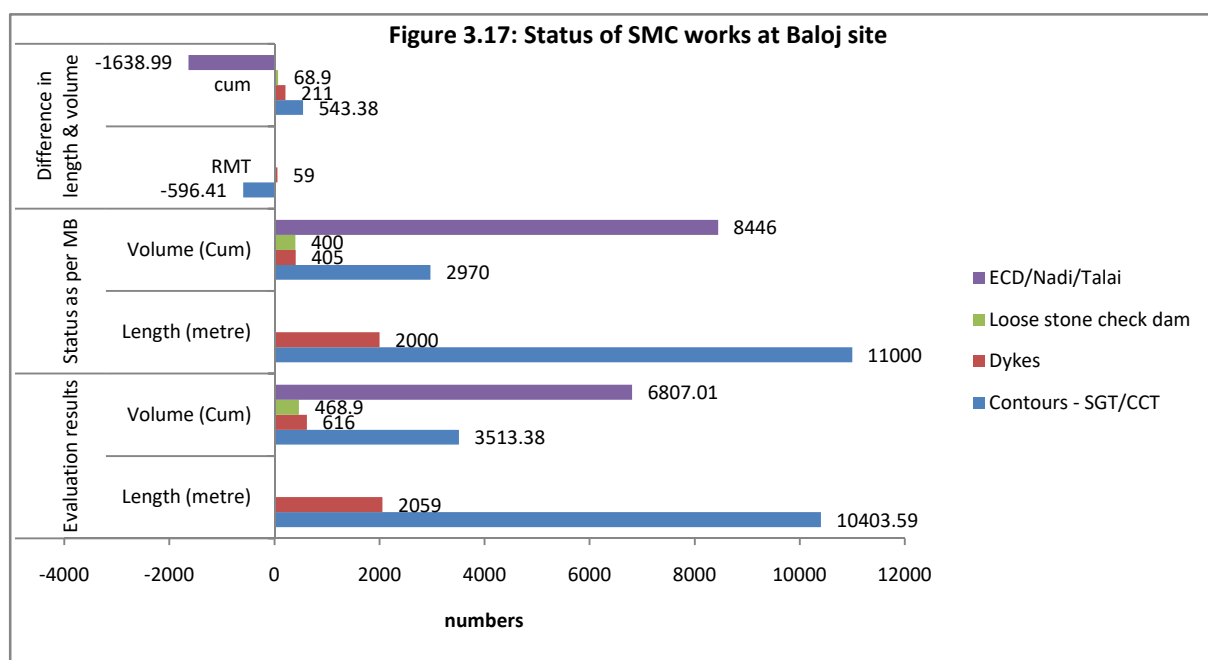
Table 3.29: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	3280	4672.45	3050	4392	230	280.45	Not intact	low
2.	Loose stone wall fencing	2135	962	1500	1260	635	-298	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, Contour trench, Dykes, LSCD& talai was reported at the site. The CCT was silted. Also, stray animals & Neel gai damaged the contour trenches. The effectiveness of contour trenches & Dykes at the plantation site was reported low. The CCT & Dykes was silted. The LSCD& talai was partly intact & effectiveness of LSCD was reported medium.



Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.

Enumeration of Planted Stocks

Table 3.31: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
8447	171	11382	20000	42.2

The survival of planted seedling was reported poor (42.2 percent). The reason for poor survival of planted seedling was poor protection & guarding, local pressure due to mining area in the past, grazing by cattles, stray animal & Neel gai. At present plantation was done at the site. Hence, people livelihood was affected due to prohibition of mining in the area. Also, destruction of planted seedling by rat/sehi was reported at the site.



E. GPS Location and KML file: The selected ANR model plantation site measured 100.0 hectare as per KML map.



3.8 Todiya site in Alwar range - N 27.619778 E 76.583008

A. About Todiya Site

The selected plantation was carried out on 50 ha of land at Todiya site in Alwar range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

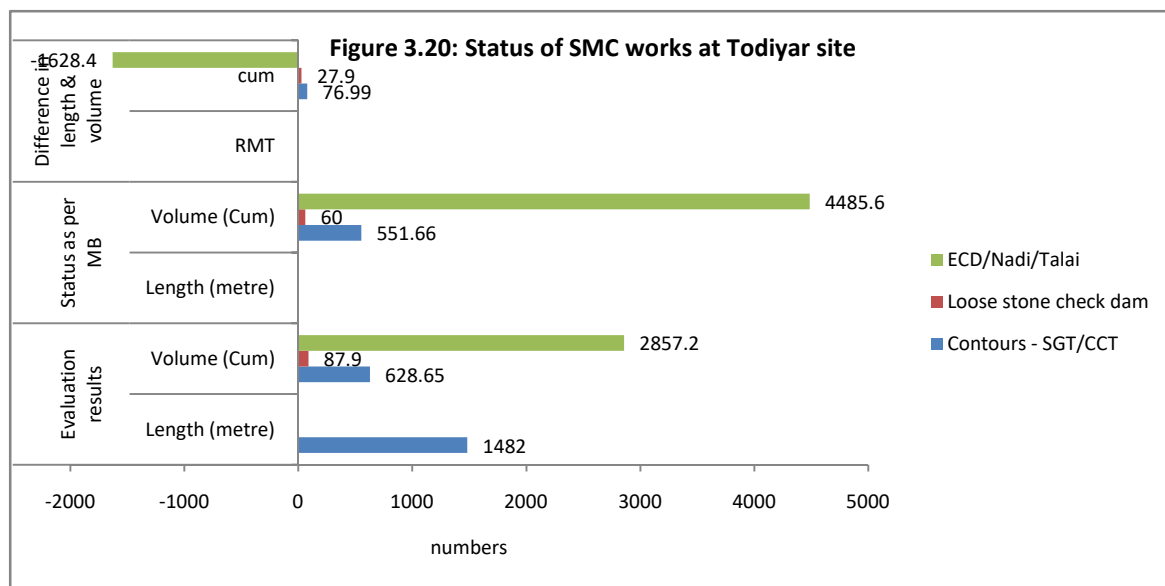
Table 3.32: Fencing Status

Sl.No	Name of Work/ Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)	Remarks
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)					
1.	Ditch Fencing	1940	2450	1895	2728	45	-278	Not Intact	Low	
2.	Loose stone wall fencing	2425	1544	2310	1940.4	115	-396.4	Not Intact	Low	
3.	Hedge	Not Found		600						As per MB 600 RMT is mentioned but at the time of evaluation the fencing was not found



C. Soil Moisture Conservation Works Status

Under SMC structure, Contour trench, LSCD & talai was reported at the site. The CCT was silted. The effectiveness of contour trenches at the plantation site was reported low. The LSCD & talai was partly intact & effectiveness of LSCD was reported medium. Water did not used to stay in the talai. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



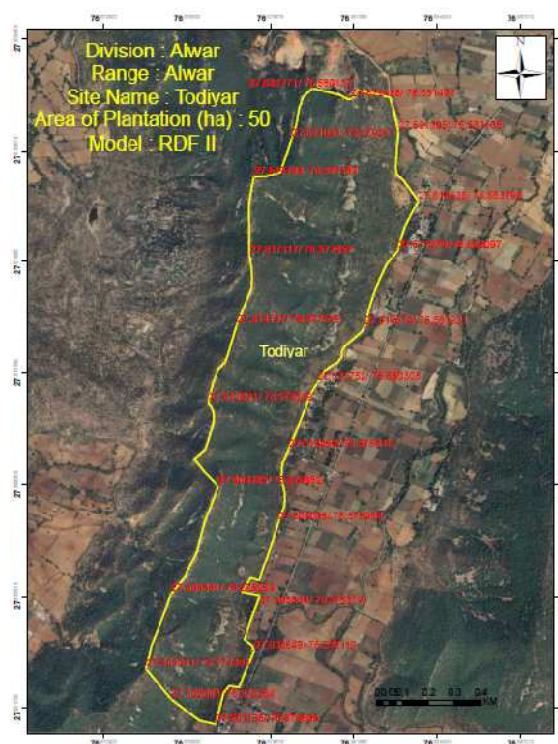
D. Enumeration of Planted Stocks

Table 3.34: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5467	246	4287	10000	54.7

The survival of planted seedling was reported average (54.7 percent). The reason for average survival of planted seedling was quality of soil i.e. domat soil in the area & good soil moisture retention due to hilly area.

E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.9 Lisadi site in Kishangarhbas range - N 27.738113 E 76.690633

A. About Lisadi Site

The selected plantation was carried out on 50 ha of land at Lisadi site in Kishangarhbas range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.

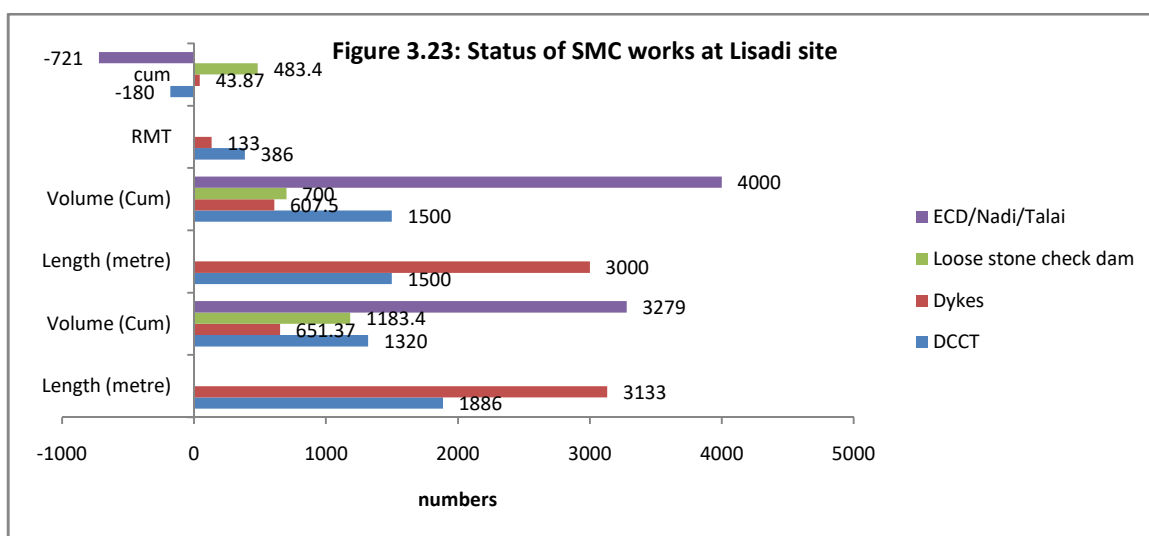


B.Fencing Status

Table 3.35: Fencing Status

Sl.No	Name of Work/Activity	Evaluation n results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2430	2643	2400	3456	30	-813	Not Intact	Low
2.	Loose stone wall fencing	1264	664	1150	966	114	-302	Not Intact	Low

C. Soil Moisture Conservation Works Status



Under SMC structure, DCCT, Dykes, LSCD & talai was reported at the site. The DCCT & Dykes was silted. The effectiveness of DCCT & Dykes at the plantation site was reported low. The LSCD & talai was partly intact & effectiveness of LSCD was reported medium. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.37: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4635	171	5194	10000	46.4

The survival of planted seedling was reported poor (46.4 percent). The reason for poor survival of planted seedling was rocky & sandy soil. The soil is not conducive for survival & growth of planted seedling. The protection & guarding at the site was reported poor.

E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.

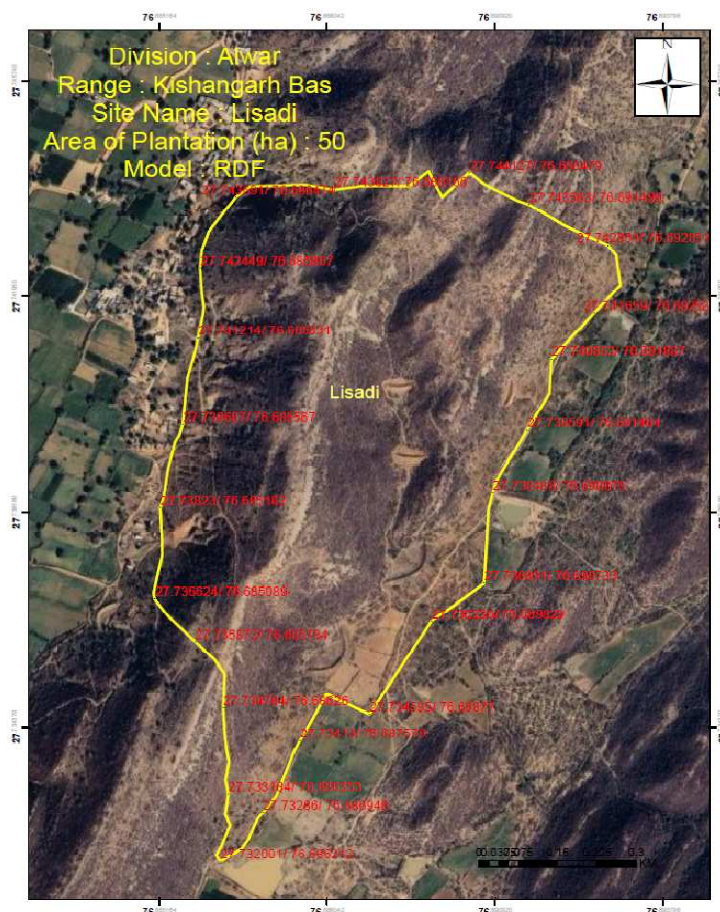


Table 3.38: Quantitative assessment of plantation work created under CAMPA in Alwar division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Jhiri-A	ANR	50	41.5	5
2.	Dudu Ki Dhani	ANR	50	42.2	5
3.	Lotawas-A	ANR	50	40.5	5
4.	Hanuman Ka Gwada	RDF-II	50	58.7	5
5.	Jogiyon ki Dhani	ANR	50	12.4	4
6.	Dera	ANR	50	60.3	6
7.	Balouj	ANR	100	42.2	5
8.	Todiyar	RDF-II	50	54.7	6
9.	Lisadi	RDF-II	50	46.4	5

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Dausa

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Jaipur Sambhag, in Dausa division 12 plantation sites were covered for second, third, fourth & fifth stage evaluation. This Forest Division with 5 Forest Ranges namely Bandikui, Dausa, Lalshot, Mahua & Sikrai has territorial jurisdiction over the entire Dausa District.



Figure: Location of Dausa district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Dausa Forest Division for evaluation are as given in table 1

Table 1: Plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Dausa	Ganeshpura	2023-24	50	EOP	RDF	II
2.	Dausa	Lahadiwala	2022-23	50	ANR	RDF	III
3.	Lalsoth	PLP Sanwasa	2021-22	25	Other	NABARD	IV
4.	Lalsoth	Dholi B	2021-22	50	ANR	CAMPA	IV
5.	Lalsoth	Padol A	2023-24	50	ANR	CAMPA	II
6.	Bandikui	Anantwara	2023-24	40	RDF-II	NABARD	II
7.	Bandikui	Dalalpura	2022-23	50	ANR	NABARD	III
8.	Sikrai	Moroli	2020-21	50	ANR	CAMPA	V
9.	Sikrai	Amol Moroli	2023-24	50	DFL	CAMPA	II
10.	Sikrai	Lanka B	2023-24	50	RDF-II	RDF	II
11.	Mahwa	Gagwana A	2023-24	50	RDF-II	RDF	II
12.	Mahwa	Padla A	2023-24	50	ANR	NABARD	II

3. Report of Evaluation of Plantation Site

3.1 Ganeshpura site in Dausa range -N 26.892766 and E 76.355084

A. About Ganeshpura Site

The selected plantation was carried out on 50 ha of land at Ganeshpura site in Dausa range during the year 2023-24. The activities were done under the EOP (Enrichment of old plantation) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

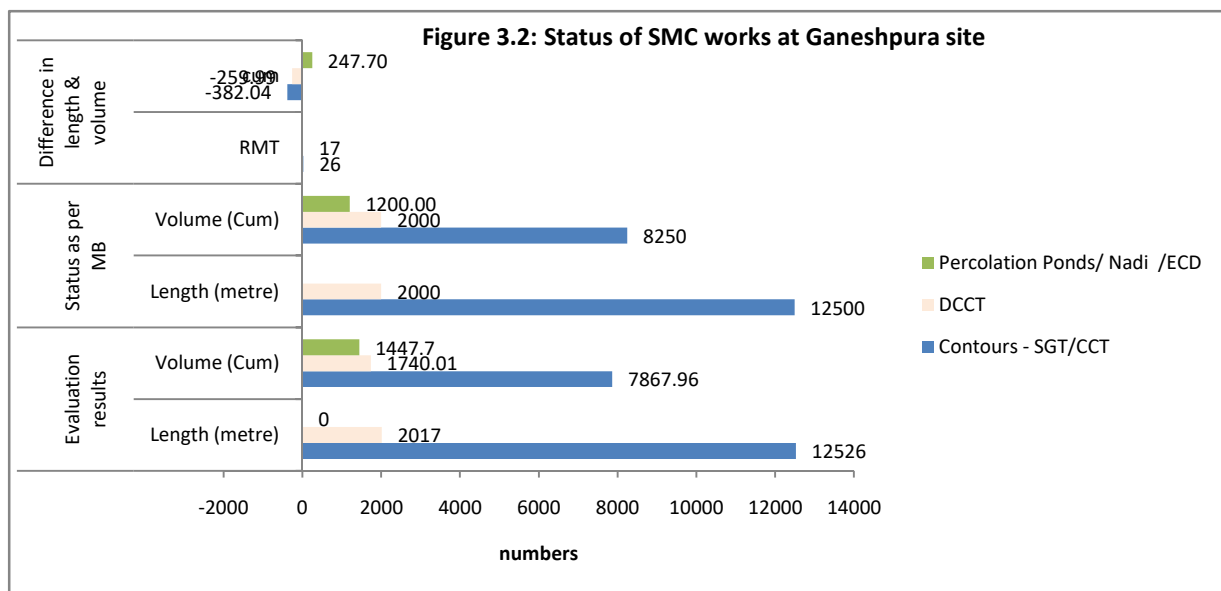
Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1080	1339.20	1000	1440	80	-100.8	Not Intact	Low



Soil Moisture Conservation Works Status

The CCT/ Deep CCT were oversize compared to the standard size. It was difficult to differentiate between DCCT & CCT. The catchment area of the earthen check dam dug for soil & moisture conservation has not been taken into consideration. Heavy siltation was reported in CCT & Deep CCT. The CCT & Deep CCT was not intact & its effectiveness was low. However, earthen check dam was reported intact & its effectiveness was reported medium.



C. Enumeration of Planted Stocks

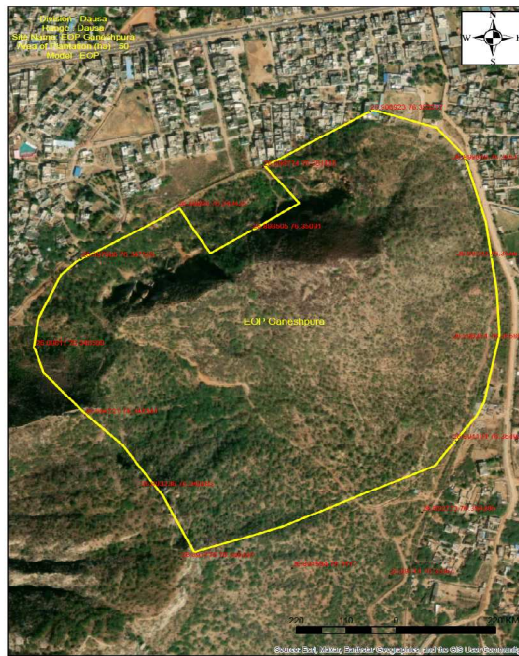
Table 3.4: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2290	28	3219	5537	41.36

The growth of planted seedling was visible only at the entrance area of the plantation site & in the remaining area growth of planted seedling was poor. Heavy growth of weed was reported at the site. The planted seedlings in the thawalas were fully covered with weeds. This obstructs the growth of planted seedling. Hoeing was not reported at the site. The survival of planted seedling was reported poor (41.4 percent).



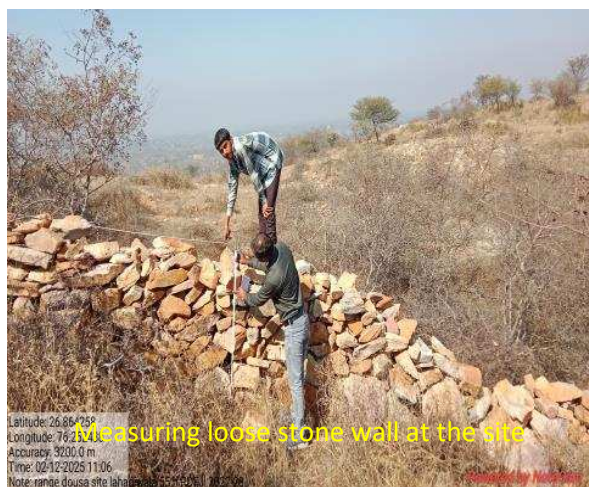
E. GPS Location and KML file:The selected EOP model plantation site measured 50 hectare as per KML map.



3.2 Lahadiwala site in Dausa range -N 26.691029 and E 76.296603

A. About Lahadiwala Site

The selected plantation was carried out on 55 ha of land at Lahadiwala site in Dausa range during the year 2022-23. The activities were done under the ANR (Assisted Natural regeneration) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.5: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch	204	1685.2	200	288	45	-	Not	Low

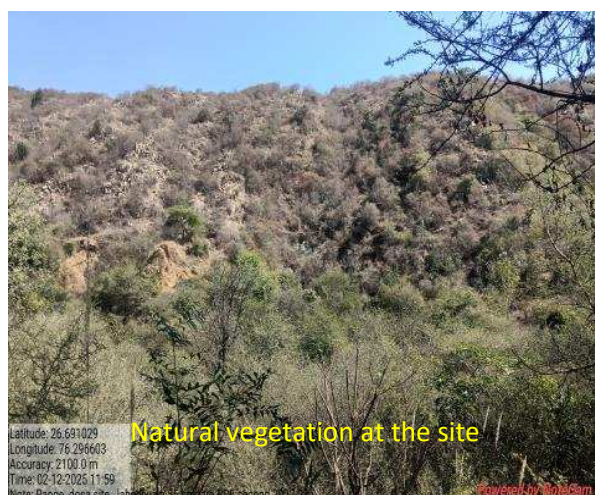
	Fencing	5	7	0	0		1194.73	Intact	
2.	Loose Stone wall	124 1	922.75	115 0	966	91	-43.25	Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.6: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
1938	13	9049	11000	17.62

Heavy growth of weeds was reported at the site & it was difficult to enter the site. The pits were totally covered by weeds & hence growth of planted seedling was affected. Hoeing was not reported at the site. The survival of planted seedling was reported very poor (17.6 percent). The height of planted seedling was low during the evaluation visit.



D. Enumeration of Sowing

Table 3.7: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a	Yes/No	No	Yes	Yes	No	Yes
b	No. of rows sown		3	2		3
c	Length (in Metres)		6000	22000		33000
d	Approximate No. of Plants as per enumeration		1000	250		Not seen
e	Species used		Desi Babool, Churail	Desi Babool, Churail		Desi Babool, Churail
f	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.8: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Kumtha	0.20	31.4	1. Grazing by Neel gai 2. Neel gai were seen during the evaluation. 3. Plants pit are not cleaned 4. Ho was not observed. 5. Weeds are seen large numbers
2.	Ber	0.30	31.4	
3.	Sheesham	0.50	125.6	
4.	Ronj	0.30	31.4	
5.	Totalis	0.25	31.4	
6.	Churail	0.60	125.6	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.9: Growth Assessment of Plant through Natural Regeneration

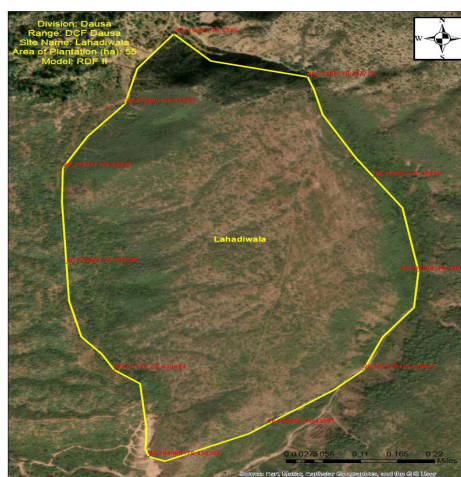
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Kumtha	0.60	62.8
2.	Desi Babool	0.80	62.8
3.	Totalis	1	62.8
4.	Churail	0.50	62.8
5.	Dhok	0.6	31.4

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.10: Assessment of SWC works & WHS

Sl.no	Particulars	Check Dams	Contour trenches
a	Present Status*	Partly damaged	Partly damaged
b	Intervention**	Need Repair	Need Repair
c	Effectiveness***	Low	Low
d	Remarks	LSCD & earthen check dam	Some trenches damaged & silted

E. GPS Location and KML file:The selected ANR model plantation site measured 55 hectare as per KML map.



3.3 Lanka B site in Sikrai range -N 26.786904 and E 76.565366

A. About Lanka B Site

The selected plantation was carried out on 50 ha of land at Lanka B site in Sikrai range during the year 2023-24. The activities were done under the RDF II (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.

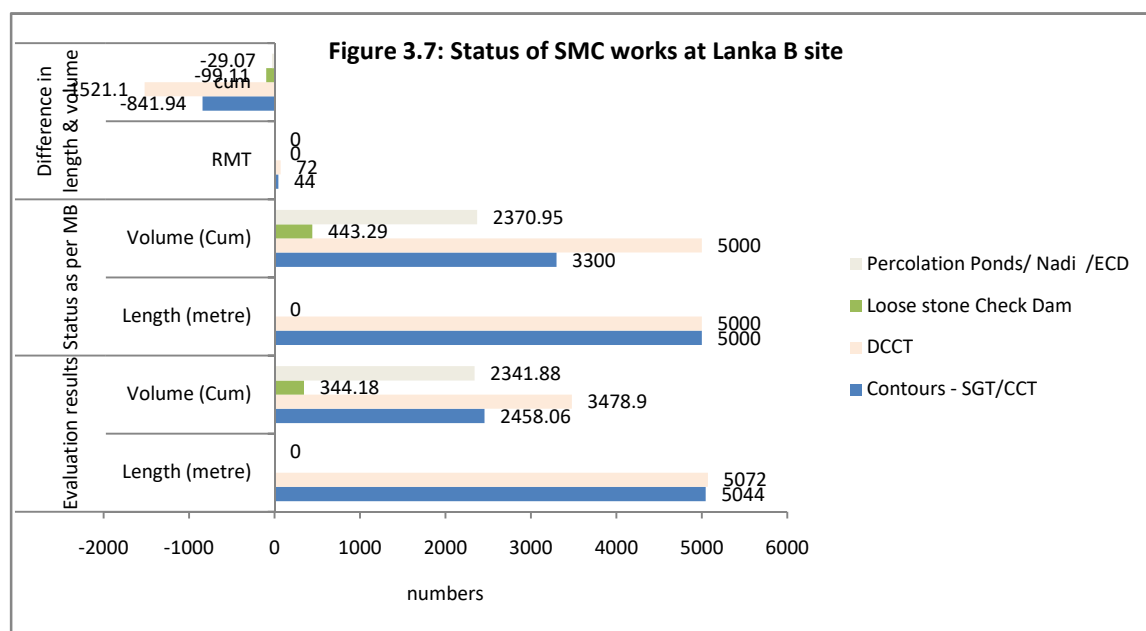


B. Fencing Status

Table 3.11: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2894	4914.58	2868	4129.9	26	784.66	Not Intact	Low
2.	Loose Stone wall	597	492.98	525	402.3	72	90.68	Not Intact	Low

C. Soil Moisture Conservation Works Status



The CCT & Deep CCT was silted & damaged. The catchment area of the earthen check dam dug & LSCD for soil & moisture conservation has not been taken into consideration. Heavy siltation was reported in CCT & Deep CCT. The CCT, Deep CCT & LSCD was not intact

& its effectiveness was low. However, earthen check dam was reported intact & its effectiveness was reported moderate.



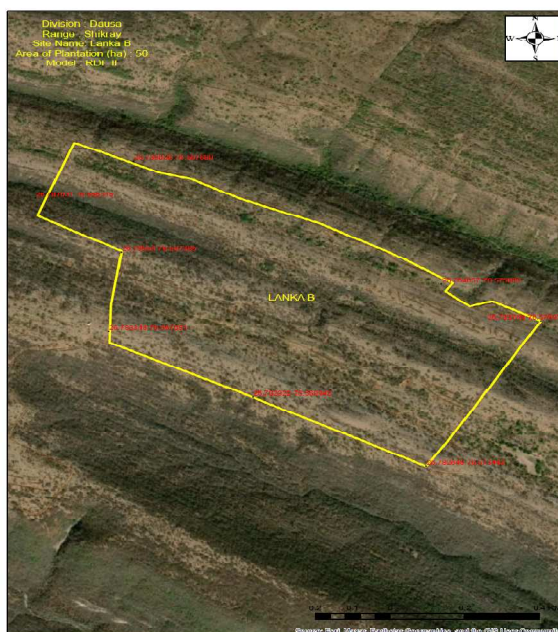
D. Enumeration of Planted Stocks

Table 3.13: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
1940	41	8019	10000	19.40

The survival & growth of planted seedling (viz. Desi Babool, Bair, Ronj & Churail) was severely affected due to grazing by Neel gai, Cattles & stray animals. The Nee gai foot marks were seen during the third party evaluation. The survival of planted seedling was reported very poor (19.4 percent). Also, destruction to planted seedling by termite was observed during third party evaluation.

E. GPS Location and KML file: The selected RDF model plantation site measured 50 hectare as per KML map.



3.4 Amol Moroli site in Sikrai range -N 26.77195 and E 76.519968

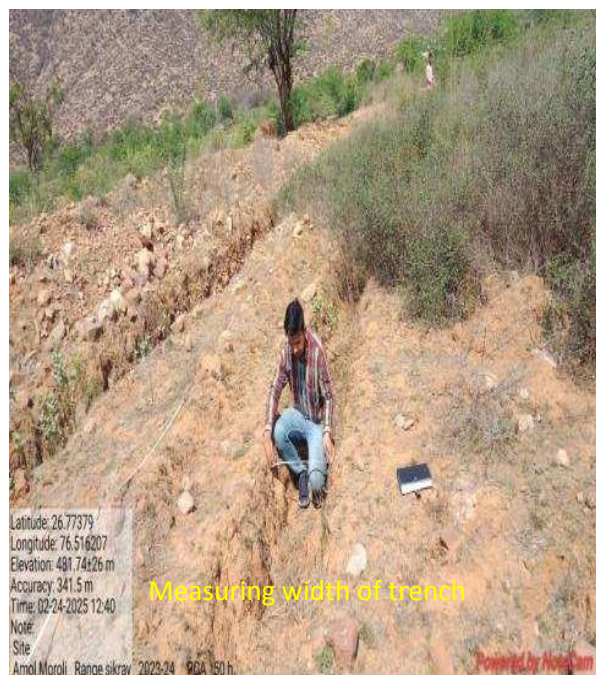
A. About Amol Moroli Site

The selected plantation was carried out on 50 ha of land at Amol Moroli site in Sikrai range during the year 2023-24. The activities were done under the DFL (Degraded Forest Land) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

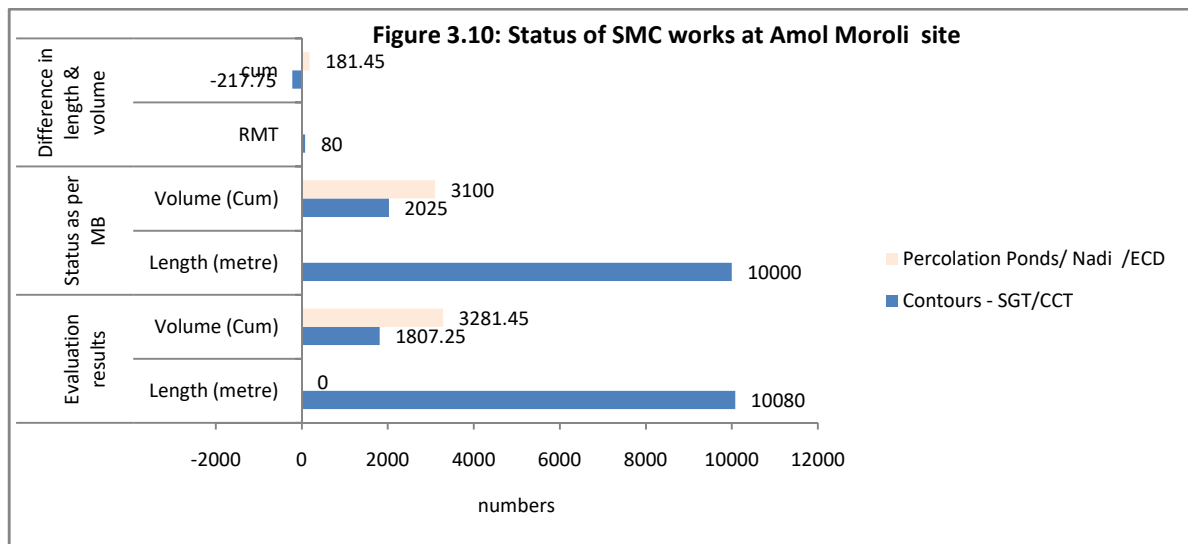
Table 3.14: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
1.	Ditch Fencing	3803	5501.86	3740	5385.6	63	116.26	Not Intact	Low
2.	Loose Stone wall	958	568.29	890	677.85	68	-109.56	Not Intact	Low
3.	Hedge	425		420		5		Not Intact	Low



C. Soil Moisture Conservation Works Status

The CCT was silted in many places. Siltation was reported in CCT. The CCT was not intact & its effectiveness was reported low. The catchment area of the earthen check dam dug for soil & moisture conservation has not been taken into consideration. However, earthen check dam was reported intact & its effectiveness was reported medium.



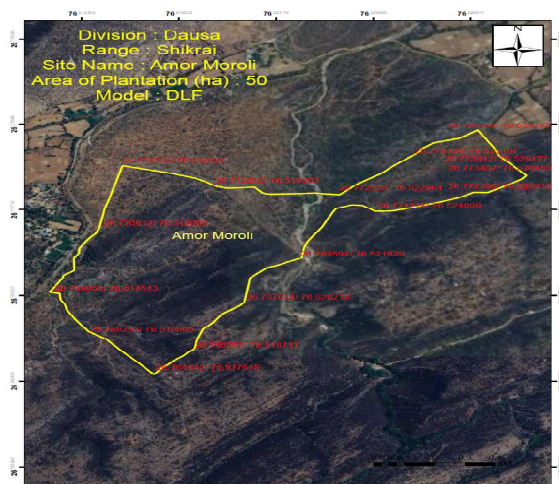
D. Enumeration of Planted Stocks

Table 3.16: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
6900	53	28047	35000	19.7

The survival & growth of planted seedling was reported very poor (19.7 percent). The survival & growth of planted seedling was severely affected due to grazing by Neel gai, Cattles & stray animals. Grazing by cattles & stray animals were seen at the site during the Third Party visit.

E. GPS Location and KML file:The selected DFL model plantation site measured 50 hectare as per KML map.



3.5 Moroli site in Sikrai range -N 26.777285 and E 76.52938

A. About Moroli Site

The selected plantation was carried out on 50 ha of land at Moroli site in Sikrai range during the year 2020-21. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was fifth.

B. Fencing Status

Table 3.17: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1235	1545.70	1220	1756.8	15	-211.1	Not Intact	Low
2.	Loose Stoe wall	2355	1522.5	2350	1974	5	-451.5	Not Intact	Low

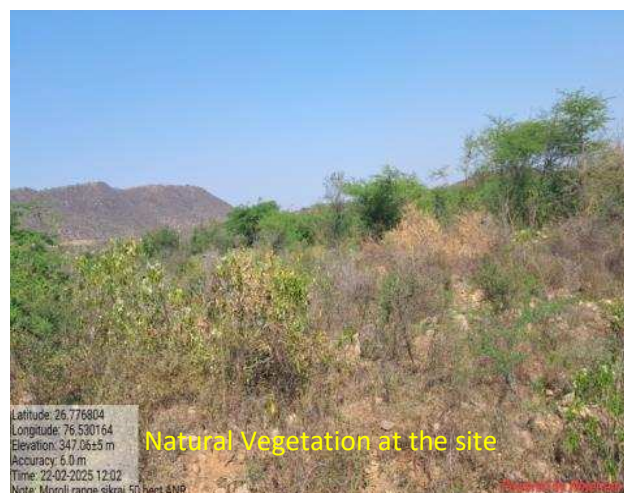


C. Enumeration of Planted Stocks

Table 3.18: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2641	13	7346	10000	26.4

Heavy growth of weeds was reported at the site. The pits were totally covered by weeds & hence growth of planted seedling was affected. Heavy growth of Juliflora was reported at the site. The plantation site was very close to human habitation. Hence, destruction of planted seedling was also reported by humans during the Third Party Evaluation. The survival of planted seedling was reported very poor (26.4 percent). Hoeing & pruning is required for proper growth of planted seedling. The height of planted seedling was low during the evaluation visit.



D. Enumeration of Sowing

Table 3.19: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
1.	Yes/No	No	Yes	Yes	No	Yes
2.	No. of rows sown		3	2		3
3.	Length (in Metres)		3660	15800		30000
4.	Approximate No. of Plants as per enumeration		4220	11540		not seen
5.	Species used		Kumtha, Desi Babool	Kumtha, Desi Babool		Kumtha, Desi Babool
6.	Result*		Very good	Very good		Poor

E. Growth Assessment of Planted Stock

Table 3.20: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Churail	0.80	219.8
2.	Ronj	0.70	188.4
3.	Desi Babool	0.90	226.08

4.	Khair	0.85	188.4
5.	Bair	0.60	204.1

F. Growth Assessment of Plant through Natural Regeneration

Table 3.21: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Desi Babool	0.90	157
2.	Churail	0.80	188.4
3.	Ronj	0.50	94.2
4.	Ber	0.50	78.5

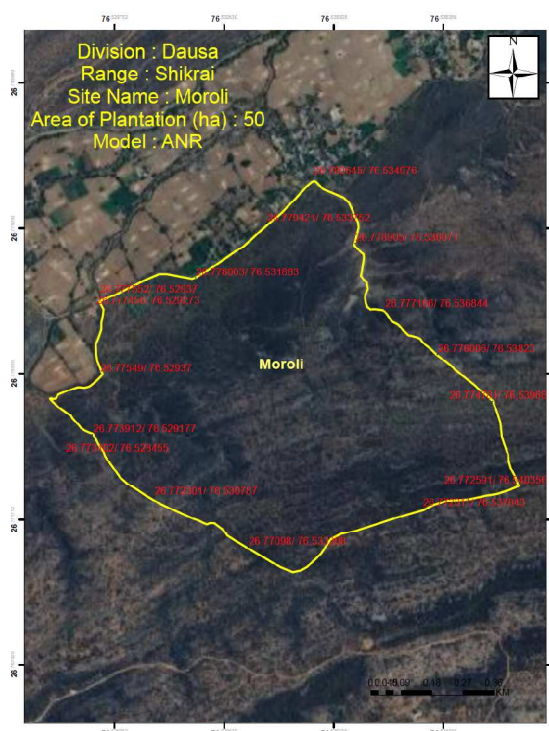
G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.22: Assessment of SWC works & WHS

Sl.no	Particulars	Loose stone Check Dams	Contour trenches
a	Present Status*	Silted & damaged	Intact
b	Intervention**	Need Repair	No action required
c	Effectiveness***	Low	Moderate
d	Remarks		

Loose stone Check dams & contour trenches were reported at the plantation site. LSCD was silted & damaged. The effectiveness of LSCD was reported low. However, contour trenches were reported intact & effectiveness was reported moderate.

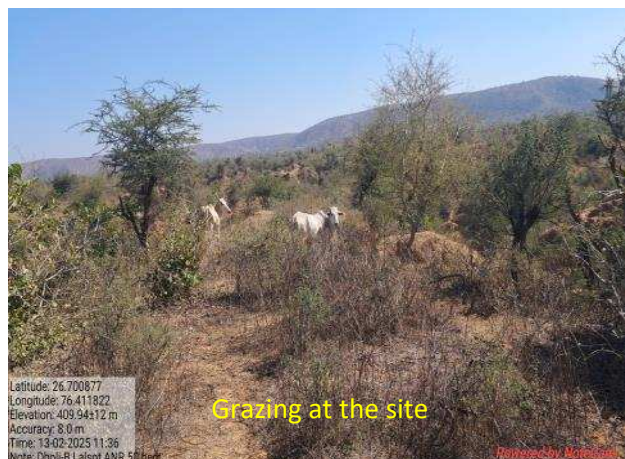
H. GPS Location and KML file: The selected ANR model plantation site measured 50 hectare as per KML map.



3.6 Dholi B site in Lalsot range -N 26.687018 and E 76.333155

A. About Dholi B Site

The selected plantation was carried out on 50 ha of land at Dholi B site in Lalsot range during the year 2021-22. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was fourth.



B. Fencing Status

Table 3.23: Fencing Status

SL.N o	Name of Work/Acti vity	Evaluation results		Status as per MB		Differe nce (RMT) (in +/-)	Differe nce (Volum e) (in +/- CUM)	Condi tion of the fence Intact/ Not	Effectiven ess of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	350 3	3701. 05	342 9	4937. 76	74	- 1236.71	Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.24: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
1920	13	8067	10000	19.2

The survival of planted seedling was reported very poor (19.2 percent). Cattles & stray animals were seen at the site. Heavy grazing was reported at the site during the evaluation visit which restricts growth of planted seedling. Plantation site is situated close to human habitation where gujar community used to reside. They used to graze their cattles at the plantation site. Plantation gate was not reported at the site. A temple was situated close in the plantation site. People use to visit the temple & thus planted seedling was affected at the site. Destruction of plants by human was seen during the Third Party visit.



Natural Vegetation at the site



Measuring depth of ditch fencing at the site

D. Enumeration of Sowing

Table 3.25: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
1.	Yes/No	No	Yes	Yes	No	Yes
2.	No. of rows sown		3	2		3
3.	Length (in Metres)		10287	30000		30000
4.	Approximate No. of Plants as per enumeration		333	495		not seen
5.	Species used		Khair, Totalis	Katkaranj, Kumtha		Katkaranj, Kumtha
6.	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.26: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Totalis	0.40	62.8	Grazing is being done by goats, stray animal and village animals and damage is also being done by humans.
2.	Kumtha	0.30	31.4	
3.	Bair	0.30	31.4	
4.	Ronj	0.32	31.4	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.27: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Totalis	0.50	31.4	Grazing is being done by goats, stray animal and village animals and
2.	Ronj	0.30	31.4	

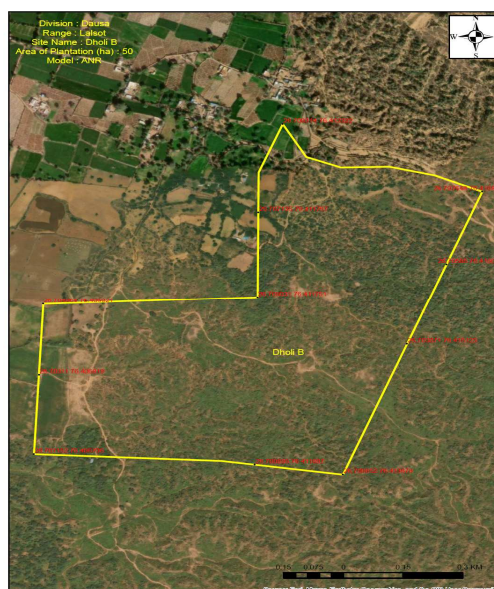
3.	Desi Babool	0.30	31.4	damage is also being done by humans.
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G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.28: Assessment of SWC works & WHS

Sl.no	Particulars	Earthen Check Dams	Contour trenches
a	Present Status*	Silted	Partly damaged
b	Intervention**	Need Repair	Need Repair
c	Effectiveness***	Moderate	Low
d	Remarks	Silting	Some trenches damaged & silting

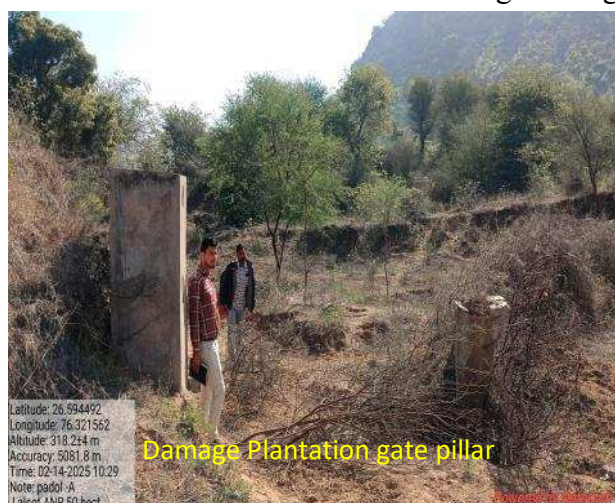
H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectare as per KML map.



3.7 Padol A site in Lalsot range -N 26.587389 and E 76.306592

A. About Padol A Site

The selected plantation was carried out on 50 ha of land at Padol A site in Lalsot range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.

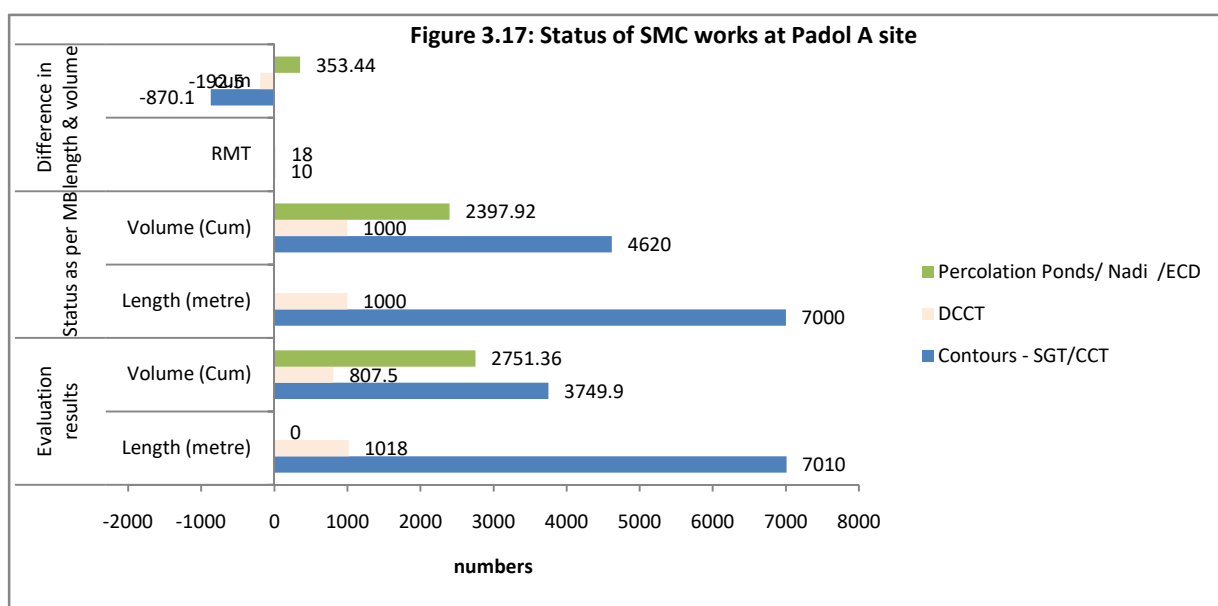


B. Fencing Status

Table 3.29: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1080	1433.10	960	1382.4	120	50.7	Not Intact	Low
2.	Loose Stone wall	2340	1839.60	2280	1915.20	60	-75.6	Not Intact	Low
3.	Hedge	540	0	520	0	20		Not Intact	Low

C. Soil Moisture Conservation Works Status



The CCT & Deep CCT was damaged & silted in many places. The CCT & Deep CCT was not intact & its effectiveness was reported low. However, earthen check dam was reported intact & its effectiveness was reported moderate. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.

D. Enumeration of Planted Stocks

Table 3.31: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4126	27	5847	10000	41.26

The survival & growth of planted seedling was affected due to grazing by Neel gai, Cattles & stray animals. The Nee gai foot marks were seen during the third party evaluation. The survival of planted seedling was reported poor (41.3 percent).Also, destruction to planted seedling by termite was observed during third party evaluation.



E. GPS Location and KML file:The selected ANR model plantation site measured 50 hectare as per KML map.



3.8 PLP Sanwasa site in Lalsot range -N 26.563168 and E 76.23827

A. About PLP Sanwasa Site

The selected plantation was carried out on 25 ha of land at PLP Sanwasa site in Lalsot range during the year 2021-22. The activities were done under the other model. The site was a panchayat land and stage of evaluation was fourth.

B. Fencing Status

Table 3.32: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	3930	3440.85	3900	5616	30	-2175.15	Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.33: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5448	42	14510	20000	27.2



The survival of planted seedling was reported very poor (27.2 percent). Cattles & stray animals were seen at the site. Heavy grazing was reported at the site during the evaluation visit which restricts growth of planted seedling. Path was made to reach dhani & agriculture field in the middle of the plantation site. Thus, locals movement was also reported at the site. Destruction of plants by locals was also reported at the site. Stray animals were seen at the site during the third party visit. Stone mining was situated close to the site. Vehicle for mining used to enter at the site. Pipeline was also laid at the site. Hence, heavy destruction of planted seedling by local was also reported at the site.

D. Enumeration of Sowing

Table 3.34: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a	Yes/No	No	Yes	Yes	No	No
b	No. of rows sown		3	2		3
c	Length (in Metres)		11700	15000		60000
d	Approximate No. of Plants as per enumeration		1296	756		not seen
e	Species used		Kumtha, Desi Babool	Kumtha, Desi Babool		Kumtha, Desi Babool
f	Result*		Poor	Poor		Poor



E. Growth Assessment of Planted Stock

Table 3.35: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Totalis	0.60	62.8
2.	Churail	0.70	62.8
3.	Ber	0.50	94.2
4.	Sheesham	0.10	94.2
5.	Desi Babool	0.60	78.5
6.	Rohida	0.10	31.4

F. Growth Assessment of Plant through Natural Regeneration

Table 3.36: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
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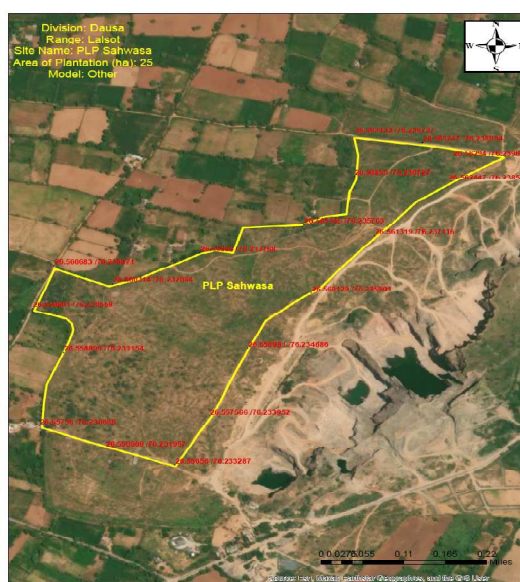
1.	Totalis	0.60	62.8
2.	Desi Babool	0.50	47.1

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.37: Assessment of SWC works & WHS

Sl.no.	Particulars	Earthen Check Dams	Contour trenches
a	Present Status*	Silted	Partly Damaged
b	Intervention**	Need Repair	Need Repair
d	Effectiveness***	Moderate	Low

H. GPS Location and KML file:The selected other model plantation site measured 25 hectare as per KML map.



3.9 Gagwana A site in Mahuwa range -N 27.018418 and E 76.816495

A. About Gagwana A Site

The selected plantation was carried out on 50 ha of land at Gagwana A site in Mahuwa range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

Table 3.38: Fencing Status

Sl. No	Name of Work/ Activity	Evaluation results	Status as per MB	Differ ence (RMT) (in +/-)	Differ ence (Volum e) (in +/- CUM)	Condi tion of the fence Intact / Not	Effectiv eness of the fence (High/ Medium
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									/ Low)
1.	Ditch Fencing	2060	2031.08	2050	3170.3	10	1139.17	Not Intact	Low
2.	Loose Stone wall	1325	808.60	1300	1045.5	25	236.90	Not Intact	Low
3.	Hedge	700	-	700	-	0		Not Intact	Low



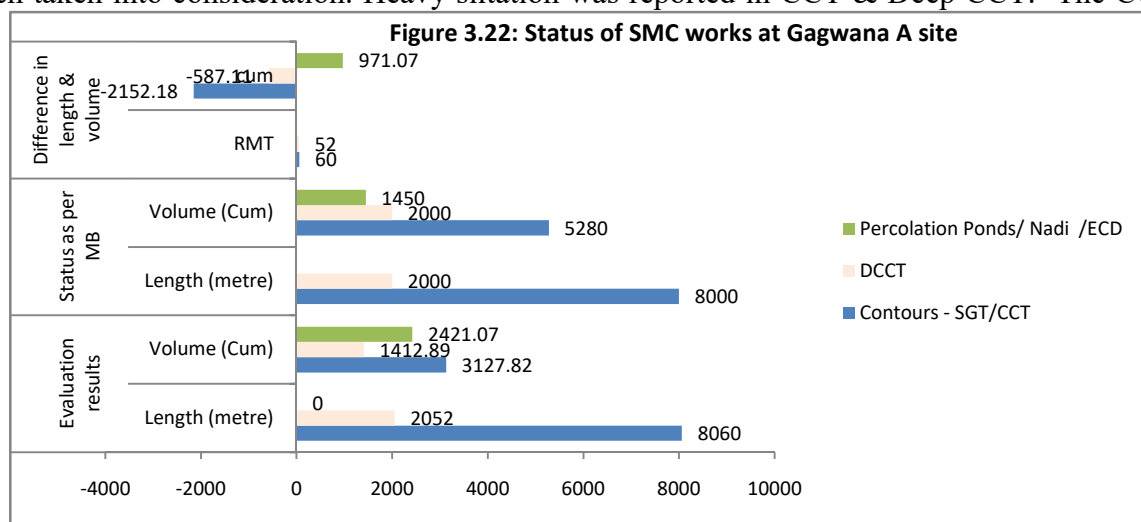
Measuring ECD at the site



Measuring depth of trench at the site

C. Soil Moisture Conservation Works Status

The catchment area of the earthen check dam dug for soil & moisture conservation has not been taken into consideration. Heavy siltation was reported in CCT & Deep CCT. The CCT/



Deep CCT were silted. The CCT & Deep CCT was not intact & its effectiveness was low. However, earthen check dam was reported intact & its effectiveness was reported medium.

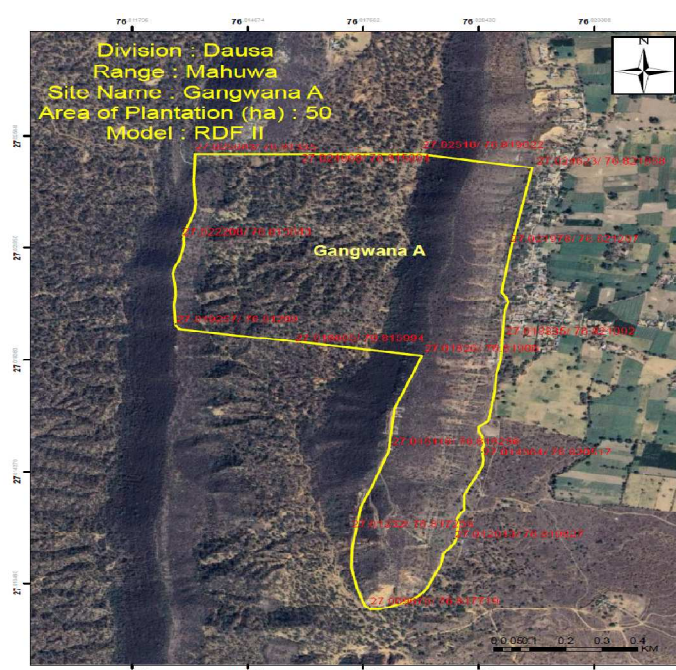
D. Enumeration of Planted Stocks

Table 3.40: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2237	181	7582	10000	22.4

The survival & growth of planted seedling (viz. Desi Babool, Bair, Ronj & Churail) was severely affected due to grazing by Neel gai, Cattles & stray animals. The Nee gai foot marks were seen during the third party evaluation. The survival of planted seedling was reported very poor (22.4 percent).Also, human habitation was reported close to the plantation site. Hence, destruction of planted seedling by human was also reported at the site.

E. GPS Location and KML file:The selected RDF model plantation site measured 50 hectare as per KML map.



3.3.10 Padla A site in Mahuwa range -N 27.098443 and E 76.839203

A. About Padla A Site

The selected plantation was carried out on 50 ha of land at Padla A site in Mahuwa range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



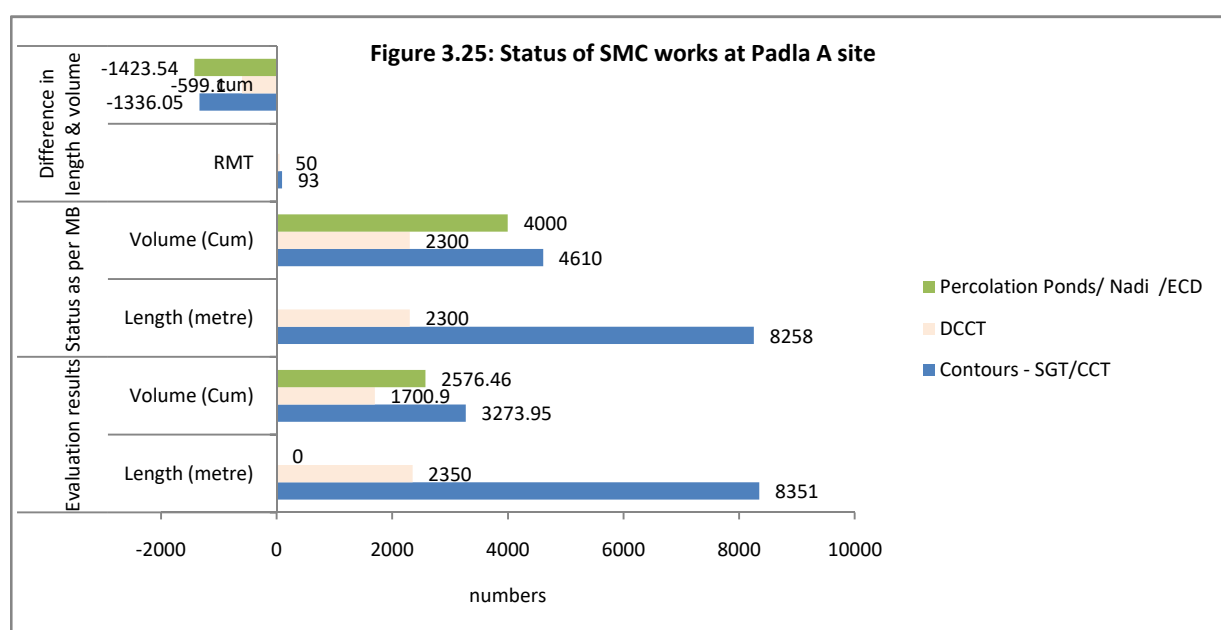
Latitude: 27.098443
Longitude: 76.839203
Elevation: 246.37±28 m
Accuracy: 1.5 m
Time: 02-19-2025 09:40
Note: Division Dausa, Range Mahuwa
Padla A

B. Fencing Status

Table 3.41: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2040	2063.25	2008	2900.0	32	-836.75	Non Intact	Low
2.	Loose Stone wall	1468	1033.78	1125	1127.25	343	-93.47	Non Intact	Low
3.	Hedge	50	-	50	-	0		Non Intact	Low

C. Soil Moisture Conservation Works Status



Siltation was reported in CCT & Deep CCT. The CCT/ Deep CCT were silted. The CCT &



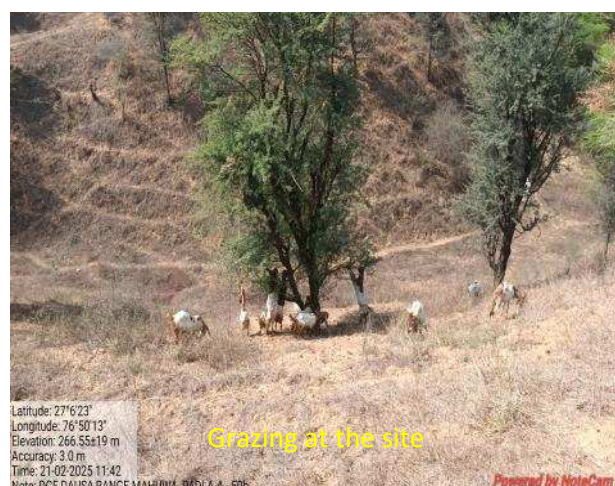
Deep CCT was not intact & its effectiveness was low. However, earthen check dam was reported partly intact & its effectiveness was reported medium. Some earthen check dams were damaged by cattles & stray animal. Catchment area for constructing the earthen check dam should be taken into consideration during the site selection. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.

D. Enumeration of Planted Stocks

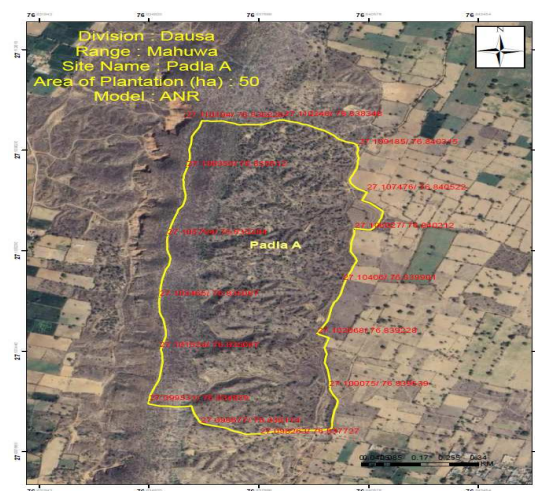
Table 3.43: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4223	141	5636	10000	42.2

The survival & growth of planted seedling was severely affected due to grazing by Neel gai, Cattles & stray animals. The Nee gai foot marks were seen during the third party evaluation. Also, cattles & stray animals were seen at the site during the third party evaluation. The survival of planted seedling was reported poor (42.2 percent).



E. GPS Location and KML file:The selected ANR model plantation site measured 50 hectare as per KML map.



3.11 Dalalpura site in Bandikui range -N 27.099597 and E 76.483325

A. About Dalalpura Site

The selected plantation was carried out on 50 ha of land at Dalalpura site in Bandikui range during the year 2022-23. The activities were done under the ANR (Assisted Natural Plantation) model. The site was a forest land and stage of evaluation was third.

B. Fencing Status

Table 3.44: Fencing Status



S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1475	2083	1430	2059.2	45	23.8	Not Intact	Low
2.	Loose Stone wall	550	395.5	500	420	50	-24.5	Not Intact	Low
3.	Hedge	700	-	660	-	40		Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.45: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
3252	27	6721	10000	32.52

The survival of planted seedling was reported very poor (32.5 percent). Plantation site is



situated close to human habitation. Grazing by cattles, stray animals & Neel gai was reported at the plantation site. Balaji temple was situated at the site. Also, water tank was installed near temple where locals used to take bath & wash their clothes. Path was made to reach dhani & agriculture field in the middle of the plantation site. Thus, locals movement was also reported at the site. Destruction of plants by locals was also reported at the site. Destruction of planted seedling by termite was also reported at the site. Also, the soil of the area was rocky with boulders which obstruct the growth of planted seedling.

D. Enumeration of Sowing

Table 3.46: Enumeration of Sowing

Sl.no .	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
A	Yes/No	No	Yes	Yes	No	Yes
B	No. of rows sown		3	2		3
C	Length (in Metres)		4290	21000		30000
D	Approximate No. of Plants as per enumeration		380	779		not seen
E	Species used		Desi Babool, Kumtha, Ronj, Churail	Desi Babool, Kumtha, Ronj, Churail		Desi Babool, Kumtha, Ronj, Churail
F	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.47: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Desi Babool	0.55	100.48
2.	Ronj	0.30	78.5
3.	Kumtha	0.30	87.92
4.	Churail	0.30	125.6
5.	Bair	0.25	56.52

F. Growth Assessment of Plant through Natural Regeneration

Table 3.48: Growth Assessment of Plant through Natural Regeneration

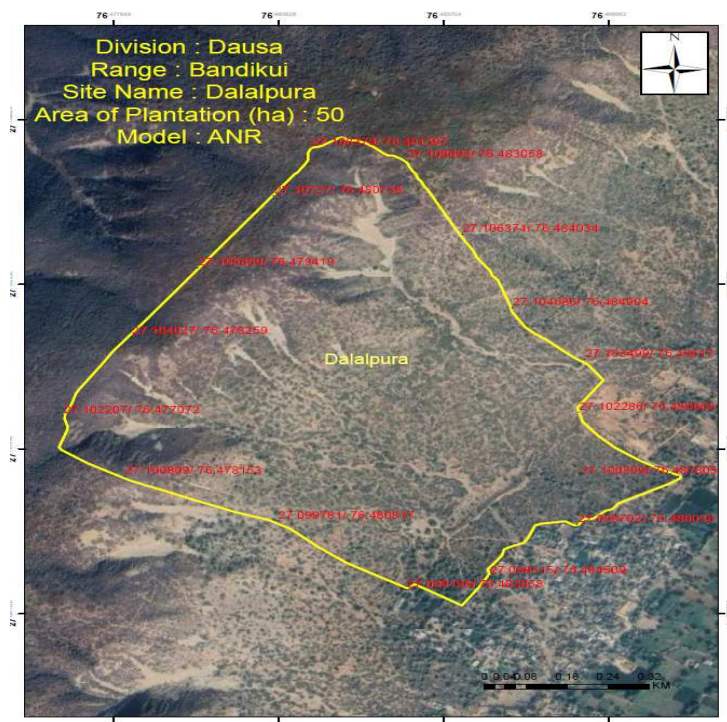
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Desi Babool	0.70	188.4
2.	Churail	0.50	172.7
3.	Dhok	0.70	94.2

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.49: Assessment of SWC works & WHS

Sl.no	Particulars	Loose Stone Check Dams	Contour trenches
a	Present Status*	Silted & damage	Intact
b	Intervention**	Need Repair	No action required
c	Effectiveness***	Moderate	Moderate
d	Remarks	Silting	

H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectare as per KML map.



3.12 Anantwara site in Bandikui range -N 27.042253 and E 76.61592

A. About Anantwara Site

The selected plantation was carried out on 40 ha of land at Anantwara site in Bandikui range during the year 2023-24. The activities were done under the RDF II (Rehabilitation of degraded Forest) model. The site was a forest land and stage of evaluation was second.



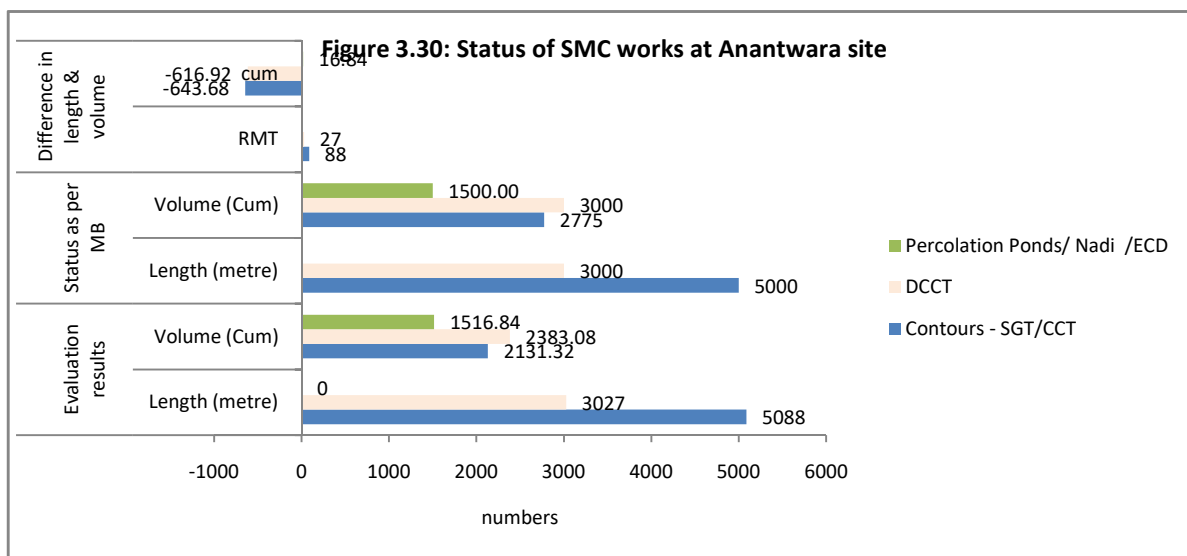
B. Fencing Status

Table 3.50: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	3565	4977.93	3400	4896	165	81.93	Not Intact	Low

C. Soil Moisture Conservation Works Status

The entire area is ravines & sand dunes. Most of the trenches have been silted by soil erosion due to heavy rains & winds. CCT/DCCT was dug on both sides of the main road. There was no difference seen between trenches or ditch fencing. Plantation will not get moisture from road side trenches. The SMC structures were not dug as per requirement of plantation. The CCT & Deep CCT was not intact & its effectiveness was low. However, earthen check dam was reported intact & its effectiveness was reported medium. The catchment area of the earthen check dam dug for soil & moisture conservation has not been taken into consideration. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.52: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
3310	13	4677	8000	41.3

The survival & growth of planted seedling was severely affected due to grazing by Neel gai, Cattles & stray animals. The survival of planted seedling was reported poor (41.3 percent). Also, human habitation was reported close to the plantation site. Hence, destruction of planted seedling by human was also reported at the site.



E. GPS Location and KML file: The selected RDF model plantation site measured 40 hectare as per KML map.

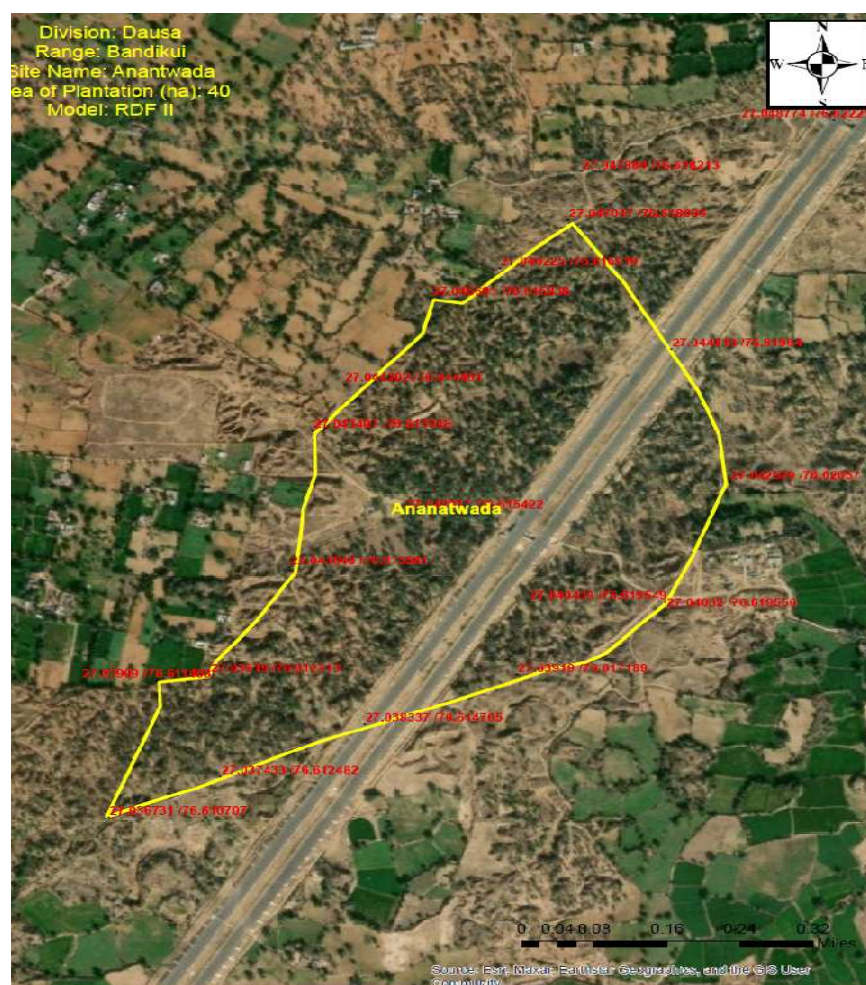


Table 3.53: Quantitative assessment of plantation works created under CAMPA in Dausa division

Sl. No.	Site	Model	Area in Ha	Stage of Evaluation	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Ganeshpura	EOP	50	II	41.4	5
2.	Lahadiwala	ANR	50	III	17.6	4
3.	PLP Sanwasa	Other	25	IV	27.2	4
4.	Dholi B	ANR	50	IV	19.2	4
5.	Padol A	ANR	50	II	41.3	5
6.	Anantwara	RDF-II	40	II	41.4	5
7.	Dalalpura	ANR	50	III	32.5	4
8.	Moroli	ANR	50	V	26.4	4
9.	Amol Moroli	DFL	50	II	19.7	4
10.	Lanka B	RDF-II	50	II	19.4	4
11.	Gagwana A	RDF-II	50	II	22.4	4
12.	Padla A	ANR	50	II	42.2	4

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Jaipur Sambhag, in Jaipur division 04 plantation sites were covered for second, third & fourth stage evaluation. This Forest Division with 5 Forest Ranges namely Amer, Phagi, Jaipur Pradeshik, Dudu & Bassi has territorial jurisdiction over the entire Jaipur District.



Figure: Location of Jaipur district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Jaipur Forest Division for evaluation are as given in table 1

Table 1: Plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha)	Model	Plan	Stage of Evaluation
1.	Amber	Jain Mandir Kukas	2021-22	50.0	ANR	CAMPA	IV
2.	Phagi	Pahadiya main	2022-23	50.0	RDF II	RDF	III
3.	Amber	Mundota	2023-24	10.99	ACA	CAMPA	II
4.	Amber	Kukas Park ke peeche	2023-24	50.0	RDF II	RDF	II

3. Report of Evaluation of Plantation Site

3.1 Jain Mandir Kukas site in Amer range -N 27.048785 and E 75.88785

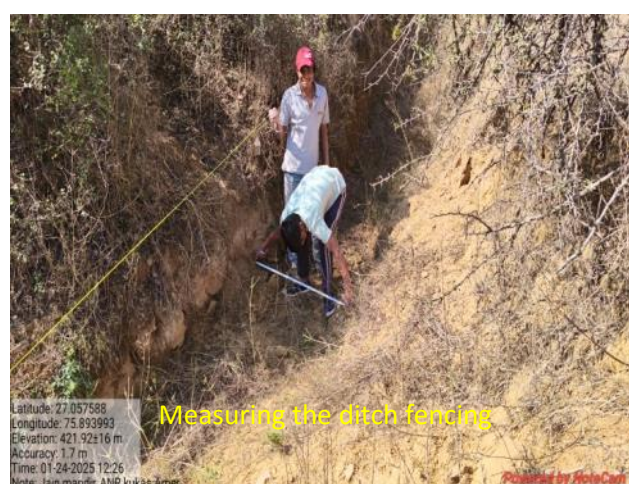
A. About Jain Mandir Kukas Site

The selected plantation was carried out on 50 ha of land Jain Mandir Kukas site in Amer range during the year 2021-22. The activities were done under the ANR (Assisted Natural Regeneration) model. The site is a forest land and stage of evaluation was fourth.

B. Fencing Status

Table 3.1: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RM T) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)	Remarks
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)					
1.	Ditch Fencing	2245	3089.36	2240	3225.6	5	- 136.24	Not Intact	Low	
2.	Loose stone wall fencing	1215	875.93	1210	1742.4	5	- 866.47	Not Intact	Low	



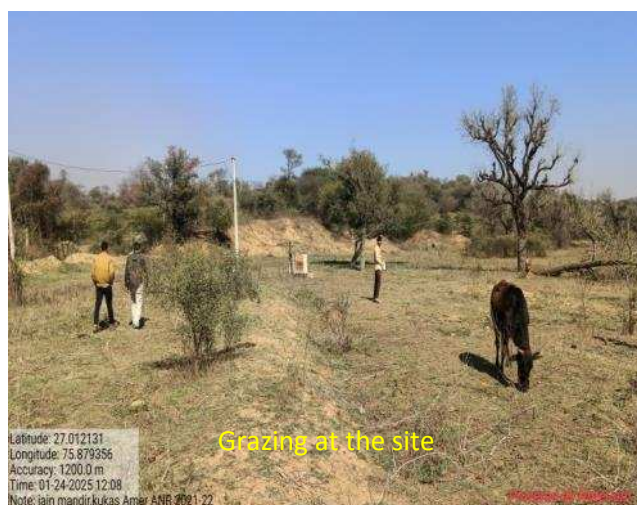
C. Enumeration of Planted Stocks

Table 3.2: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
572	150	9278	10000	5.7

The survival of planted seedling was reported very poor (5.7 percent). Grazing by stray animals & cattle and destruction by Neelgai, sehi and rat was reported at the site. Human destruction to planted sapling was also reported at the site. Cutting of natural plants by cutting machine was reported during third party evaluation. Survival was reported poor. Plants were not reported (seen) at majority of the area of the plantation site. The planted seedlings were seen only around the plantation gate. There were hardly any plants in the rest of plantation

area. The protection & guarding of plantation site was reported poor. Blocks were also not marked at the site.



D. Enumeration of Sowing

Table 3.3: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
1.	Yes/No	No	Yes	Yes	No	Yes
2.	No. of rows sown		3	2		3
3.	Length (in Metres)		6735	26000		30000
4.	Approximate No. of Plants as per enumeration		1121	3100		Not seen
5.	Species used		Kumtha, Desi babool	Kumtha, Desi babool		Kumtha, Desi babool
6.	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.4: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Shisham	0.3	63	Grazing was reported by goats, stray animal and village cattle's and damage in the plantation was also reported by the humans.
2.	Bair	0.25	63	
3.	Desi Babool	0.3	63	
4.	Churail	0.3	63	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.5: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Khejari	3	251	Grazing was reported by goats, stray animal and village cattle's and damage in the plantation was also reported by the humans.
2.	Kakeda	4	314	
3.	Dhok	4	188	
4.	Ronj	2.5	219	
5.	Kumtha	4	251	
6.	Churail	3.5	471	
7.	Totalis	3	314	
8.	Ber	1.5	157	
9.	Arusta	1	31	
10.	Desi Babool	5	502	
11.	Neem	4	502	

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.6: Assessment of SWC works & WHS

S.no.	Particulars	Earthen check Dams	Contour trenches
a	Present Status*	Intact	Filled
b	Intervention**	No action required	Need Repair
c	Effectiveness***	High	Low

H. GPS Location and KML file:The selected ANR model at plantation site measured 50 hectare as per KML map.



3.2 Pahadiya Main site in Phagi range -N 26.676466 and E 75.75332

A. About Pahadiya Main Site

The selected plantation was carried out on 50 ha of land at Pahadiya Main site in Phagi Range during the year 2022-23. The activities were done under the RDF II (Rehabilitation of degraded Forest) model. The site is a forest land and stage of evaluation was third.

B. Fencing Status

Table 3.7: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)	Remarks
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)					
1.	Ditch Fencing	3640	5010	3400	4896	240	114	Intact	Medium	
2.	Loose Stone wall	480	403.2	410	344.4	70	58.8	Not Intact	Low	
3.	Barbed wire	140		360		-160		Not Intact	Low	



C. Enumeration of Planted Stocks

Table 3.8: Enumeration of Planted Stocks

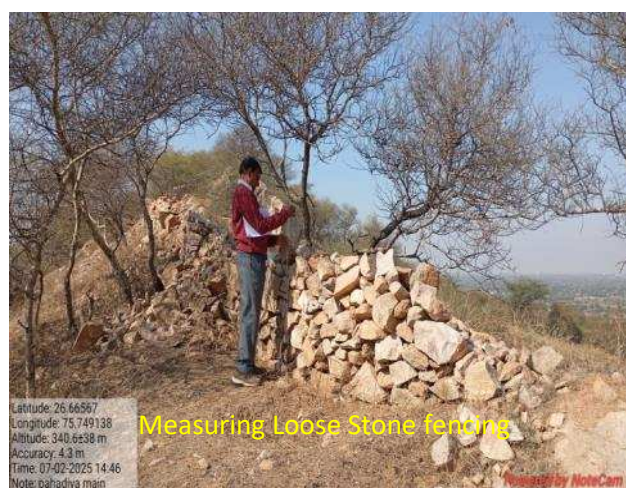
Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4189	16	5795	10000	41.9

The survival of planted seedling was reported satisfactory (41.9 percent). The height of planted seedling was low during the evaluation visit. The reason poor survival of planted seedling was grazing by cattle's, stray animals & Neelgai. Also, destruction by rat/sehi (Porcupine) & termite was also reported at the site.

D. Enumeration of Sowing

Table 3.9: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a	Yes/No	No	Yes	Yes	No	Yes
b	No. of rows sown		3	2		3
c	Length (in Metres)		10920	13908		30000
d	Approximate No. of Plants as per enumeration		1191	2318		Not seen
e	Species used		Kumtha, Totalis, Ronj, Cheela & Desi babool	Kumtha, Totalis, Ronj, Cheela & Desi babool		Kumtha, Totalis, Ronj, Cheela & Desi babool
f	Result*		Average	Average		Poor



Growth Assessment of Planted Stock

Table3.10: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Bair	0.3	110	1. Grazing by cattle's, stray animals Neelgai 2. Plants pit are not cleaned 3. Hoeing weeding was not observed.
2.	Deshi Babool	0.45	204	
3.	Kumtha	0.3	63	

E. Growth Assessment of Plant through Natural Regeneration

Table 3.11: Growth Assessment of Plant through Natural Regeneration

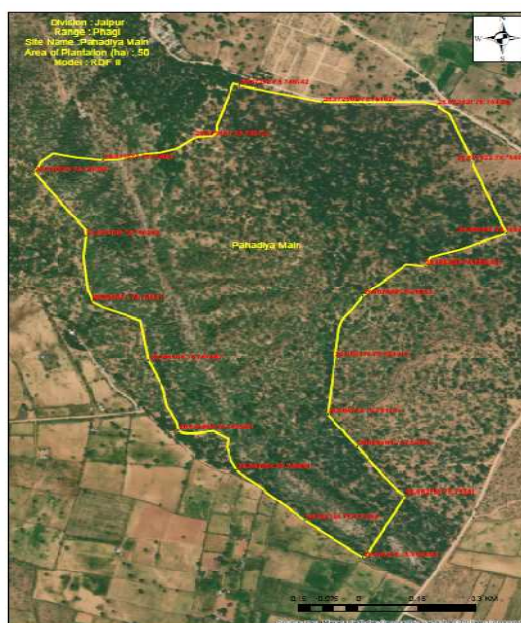
Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)
1.	Totalis	2	126
2.	Kumtha	1	63
3.	Deshi Babool	1.5	63
4.	Kair	1	31

F. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.12: Assessment of SWC works & WHS

Sl.no	Particulars	Loose stone Check Dams	Contour trenches	Talai/Nadi
a	Present Status*	Intact	Filled	Intact
b	Intervention**	No action required	Need Repair	No action required
c	Fund Requirement (in Rs.)	-	-	-
d	Effectiveness***	High	Low	High
e	Remarks	-	-	-

H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectares as per KML map.



3.3 Mundota site in Amber range -N 27.017091 and E 75.584091

A. About Mundota Site

The selected plantation was carried out on 10.99 ha. of land at Mundota site in Amber range during the year 2023-24. The plantation activities were done under the CA-DFL (Compensatory Afforestation on Degraded Forest Land) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

Table 3.13: Fencing Status

S.No	Name of Work/ Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)	Remarks
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)					
1.	Ditch Fencing	1586	1870.51	1600	2304	-14	-433.49	Not intact	Low	

C. Soil Moisture Conservation Works Status

At few places, the status of CCT was good. However, due to sandy soil the CCT was filled back with soil. Also, stray animals & Neelgai damaged the contour trenches. The effectiveness of contour trenches at the plantation site was reported average. 2000 RMT contour trenches were recorded in MB but while measuring contour trenches on the site it was found to be 1947 RMT. In this regard the site in-charge said that 53 RMT trench near the gate was washed away during rainy season due to heavy rainfall.



Table 3.14: SMC Works Status

S. No.	Name of Work/ Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- cum)	Condition of the SMC works (Intact / Not)	Effectiveness of the SMC works (High/ Medium/ Low)	Remarks
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)					
1.	Contours - SGT/CCT	1947	428.22	2000	405	-53	23.22	Average	Moderate to low	silted & some damaged

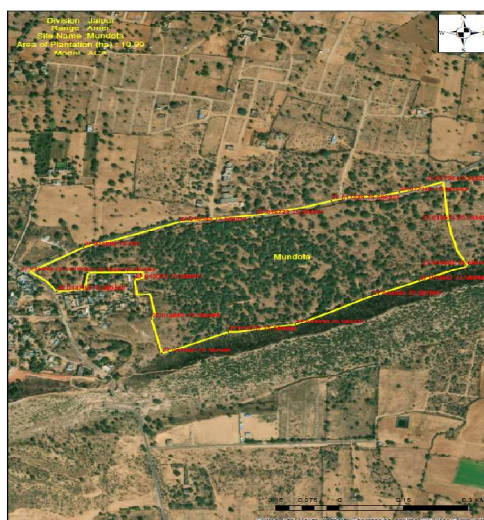
D. Enumeration of Planted Stocks

Table 3.15: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2630	26	5037	7693	34.2

The survival of planted seedling was reported very poor (34.2 percent). The reason for low survival was grazing by cattle's & stray animals & human habitation close to the population.

E. GPS Location and KML file: The selected ACA DFL model plantation site measured 10.99 hectare as per KML map.



3.4 Kukas Park ke peeche site in Amber range -N 27.04852 and E 75.887339

A. About Kukas Park ke peeche Site

The selected plantation was carried out on 50 ha of land at Kukas park ke peeche site in Amber range during the year 2023-24. The activities were done under the RDF II (Rehabilitation of degraded forest) model. The site is a forest land and stage of evaluation was second.

B. Fencing Status

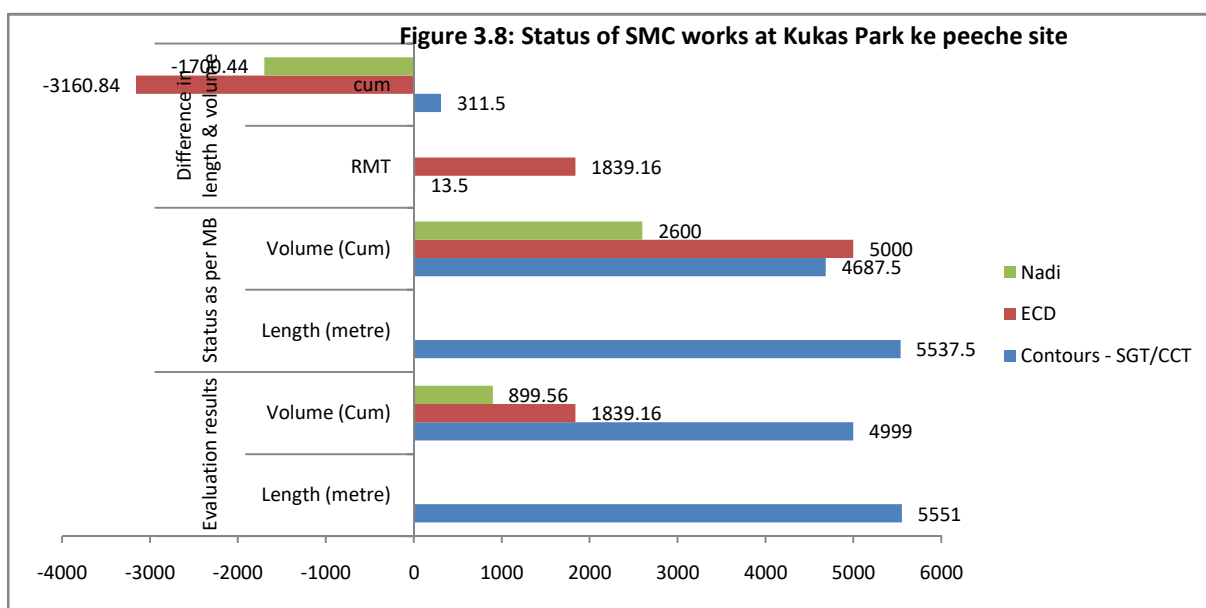
Table 3.16: Fencing Status

S.No .	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium / Low)	Remarks
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)					
1.	Ditch Fencing	4357	5723.18	4100	5904	257	-180.82	Not intact	Low	



C. Soil Moisture Conservation Works Status

The CCT was filled partially with soil. Also, stray animals & Neelgai damaged the contour trenches. The effectiveness of contour trenches at the plantation site was reported low. The effectiveness of ECD was reported high. Water was not available in the ECD. However, water mark was observed. Dense vegetation has grown in the catchment area.



D. Enumeration of Planted Stocks

Table 3.18: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2575	763	6662	10000	25.8

The survival of planted seedling was reported very poor (25.8 percent). The reason for low survival was grazing by cattle's & stray animals, frost, destruction by rats &sehi & heavy growth of weed at the site.

E. GPS Location and KML file:The selected RDF model plantation site measured 50.0 hectare as per KML map.

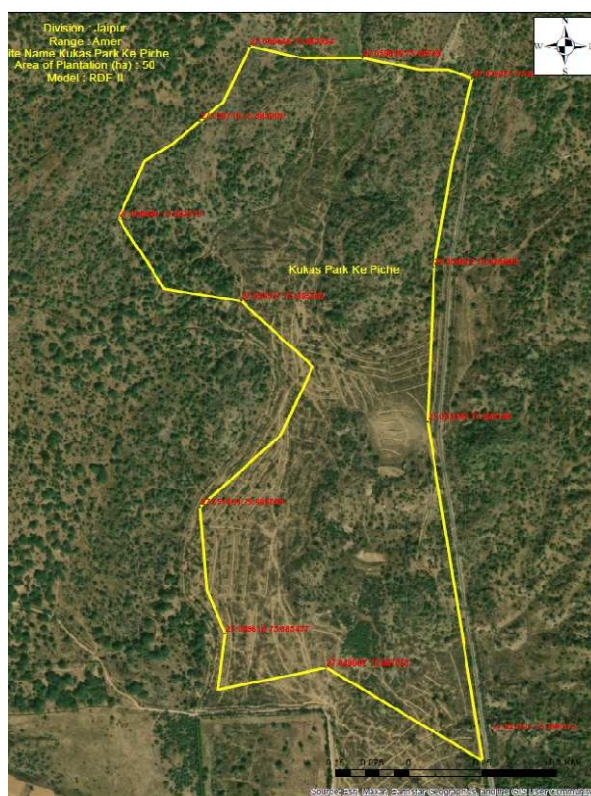


Table 3.19: Quantitative assessment of plantation work created under CAMPA in Jaipur division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1	Jain Mandir Kukas	ANR	50	5.7	4
2	Mundota	ACA	11	34.2	4
3	Kukas park ke Piche	RDF-II	50	25.7	4
4	Pahadiya Main	RDF-II	50	41.9	5

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Jaipur North

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Jaipur Sambhag, in Jaipur North division 04 plantation sites were covered for second, third & fourth stage evaluation. This Forest Division with 6 Forest Ranges namely Achrol, Kotputli, Shahpura, Veeratnagar, Paota & Chomu has territorial jurisdiction over the entire Jaipur District.



Figure: Location of Jaipur district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Jaipur North Forest Division for evaluation are as given in table 1

Table 1: Plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Achrol	Bilochi-A	2021-22	50	ANR	CAMPA	IV
2.	Achrol	Foot ka Baas	2023-24	50	RDF-II	RDF	II
3.	Shahpura	Malera Kumbhawas-III	2022-23	50	ANR	CAMPA	III
4.	Shahpura	Lobadawas	2023-24	4	NFL	CAMPA	II

3. Report of Evaluation of Plantation Site

3.1 Bilochi A site in Achrol range -N 27.156501 and E 75.861929

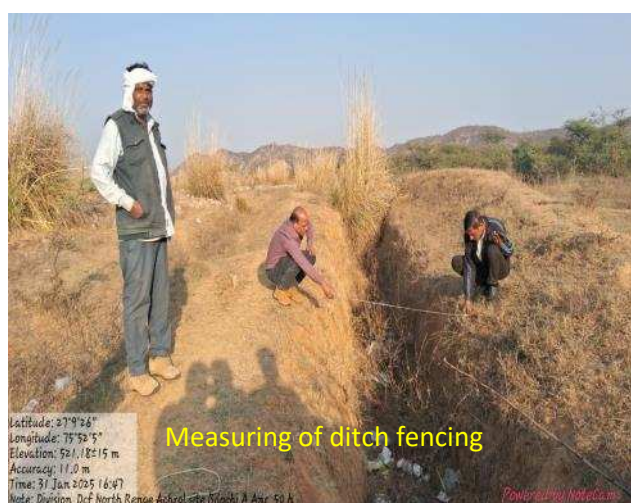
A. About Site

The selected plantation was carried out on 50 ha of land Bilochi A site in Achrol range during the year 2021-22. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was fourth.

B. Fencing Status

Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	3603	4993.47	2700	3888	903	1105.47	Not intact	Low
2.	Loose stone wall fencing	755	361	500	420	255	-59	Intact	Medium
3.	Hedge fencing	360		360		0		Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

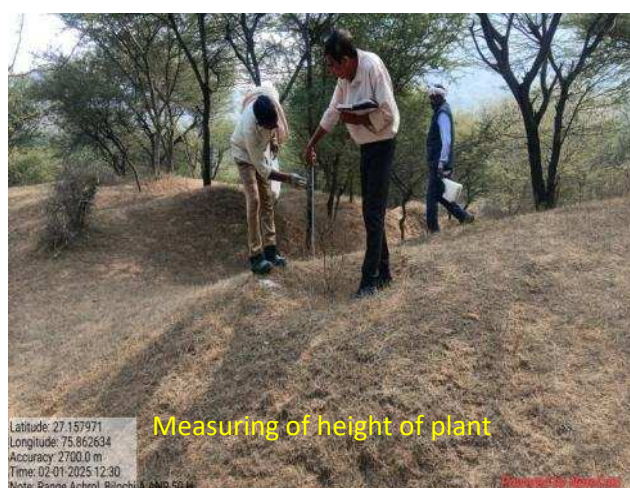
Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4235	112	5653	10000	42.4

The survival of planted seedling was reported poor (42.4 percent). Heavy grazing by cattles & stray animals was reported at the site due to damaged ditch fencing at the site. The growth of planted seedling was reported low. Destruction of planted seedling by rat & sehi was also reported at the site. The protection & guarding of plantation site was reported poor.

D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
1.	Yes/No	No	Yes	Yes	No	Yes
2.	No. of rows sown		3	2		3
3.	Length (in Metres)		6330	31900		30000
4.	Approximate No. of Plants as per enumeration		1200	6380		Not seen
5.	Species used		Kumtha, Totalis	Kumtha, Totalis		Kumtha, Totalis
6.	Result*		Poor	Poor		Poor



E. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Totalis	0.9	16	Grazing is being done by goats, stray animal and village animals
2.	Bair	0.3	6	
3.	Churail	1	19	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Totalis	6.8	628	Grazing is being done by goats, stray animal and village animals and damage is also being done by humans.
2.	Kumtha	3.4	377	
3.	Churail	3.05	188	

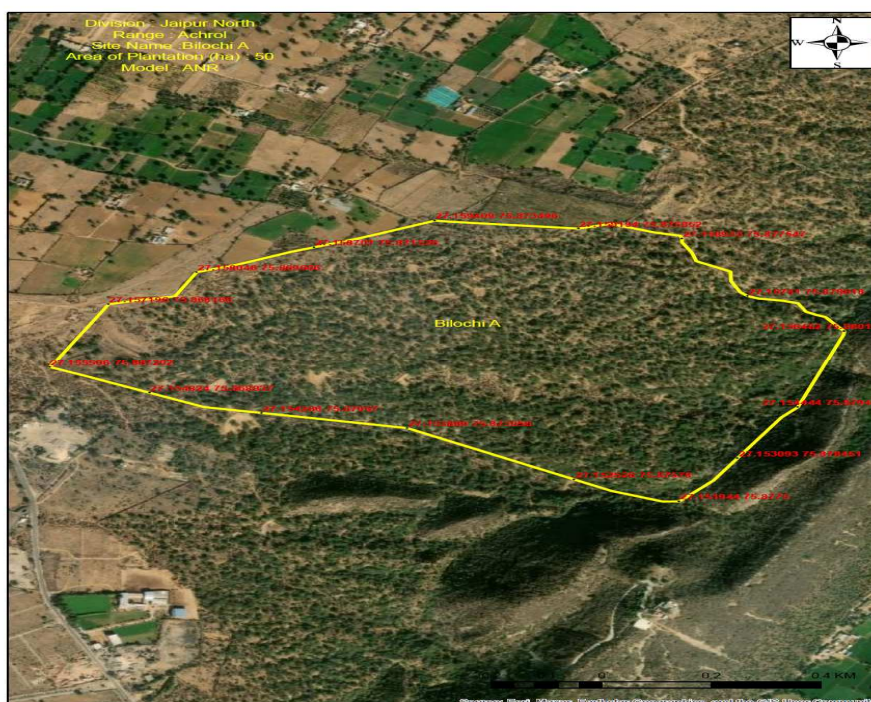
G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

	Particulars	Earthen check Dams & LSCD	Contour trenches	Talai/Nadi
a	Present Status*	Intact	Partly silted	Intact
b	Intervention**	No action required	Need Repair	No action required
c	Effectiveness***	Moderate	Low	Moderate

Earthen check dams, loose stone check dam, contour trenches & Talai/Nadi(02 nos.) were reported at the plantation site. Earthen check Dams, LSCD & talai/nadi was intact. The effectiveness of earthen check dams, LSCD & talai/nadi was reported moderate. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure. Natural vegetation is in good condition in down streams of check dam. However, contour trenches were reported partly damaged & silted. Its effectiveness was reported low.

H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectare as per KML map.



3.2 Foot Ka Bas site in Achrol range -N 27.189108 and E 75.935065

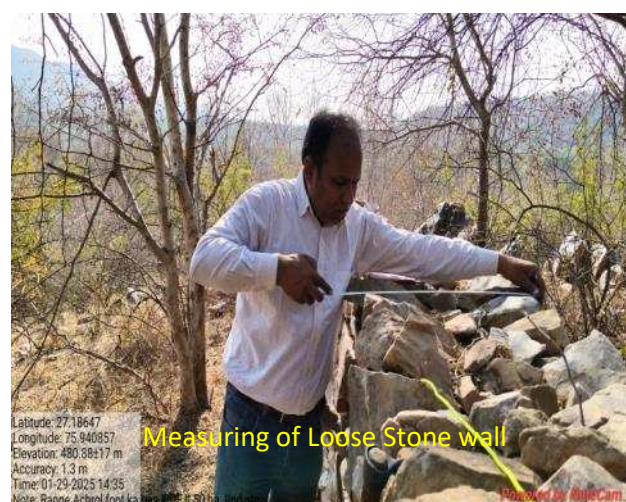
A. About Foot Ka Bas Site

The selected plantation was carried out on 50 ha of land at Foot Ka Bas site in Achrol range during the year 2023-24. The activities were done under the RDF (Rehabilitation of degraded forest Land) model. The site was a forest land and stage of evaluation was second.

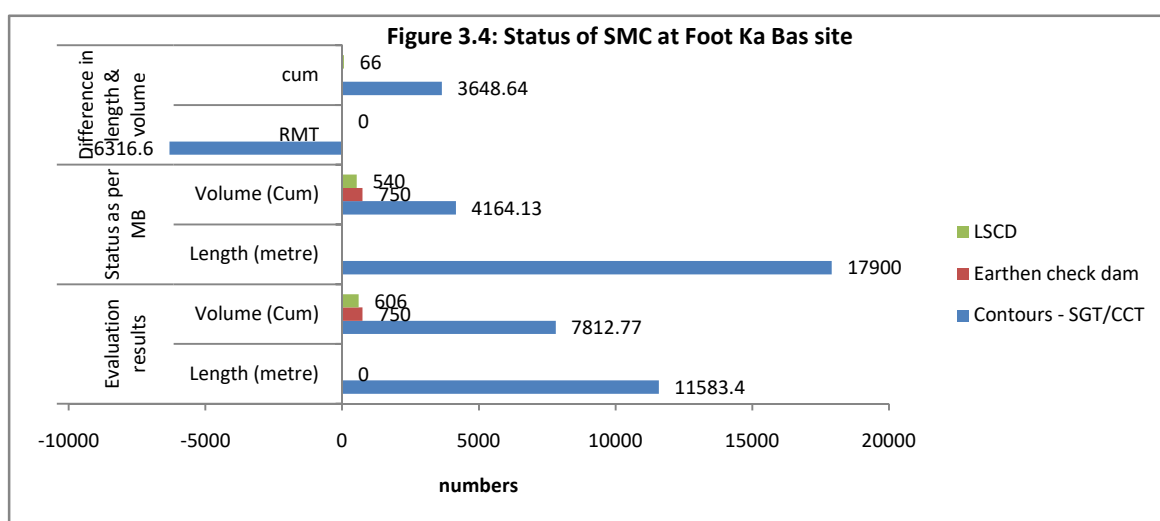
B. Fencing Status

Table 3.8: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1445	2080.8	1052.5	1515.6	392.5	565.2	Not intact	Low
2.	Loose stone wall fencing	2700	1573.13	2260	1898.4	440	-325.27	Not intact	Low

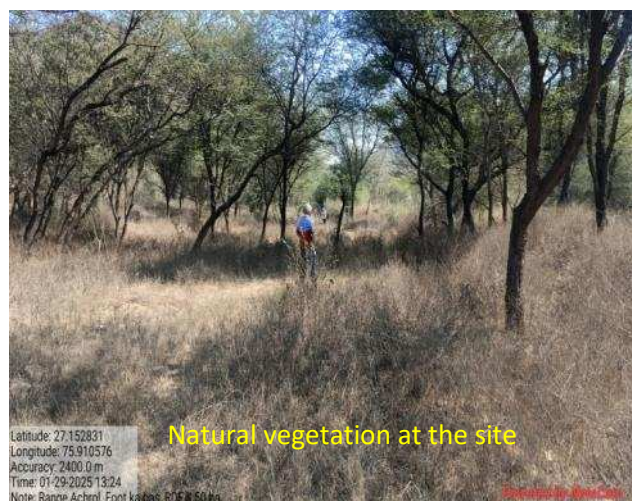


C. Soil Moisture Conservation Works Status



In few places the status of CCT was good. However, due to sandy soil the CCT was silted. Also, stray animals & Neel gai damaged the contour trenches. The condition of contour trenches was not intact & its effectiveness at the plantation site was reported low. The loose

stone check dam was intact & effectiveness was reported moderate. Earthen check dam was partly damaged & effectiveness was reported moderate. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



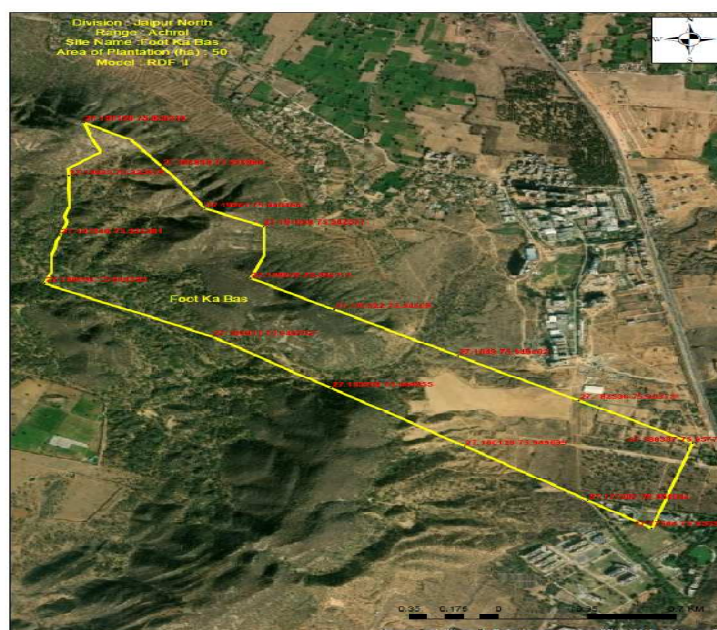
D. Enumeration of Planted Stocks

Table 3.10: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2780	255	6965	10000	27.8

The survival of planted seedling was reported very poor (27.8 percent). The reason for low survival was grazing by cattles & stray animals & human habitation situated close to the population. Also, quality of soil is not conducive for survival & growth of planted seedling.

E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.3 Malera Kumbhawas III site in Shahpura range -N 27.30849 and E 76.057866

A. About Malera Kumbhawas III Site

The selected plantation was carried out on 50 ha of land at Malera Kumbhawas II site in Shahpura range during the year 2022-23. The activities were done under the Assisted Natural Regeneration (ANR) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.11: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2774	3329.65	2536	3651.84	238	-322.19	Not intact	Low
2.	Loose Stone wall	970	744.8	600	504	370	240.8	Intact	Medium

C. Enumeration of Planted Stocks

Table 3.12: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
3236	38	6726	10000	32.36

The survival of planted seedling was reported very poor (32.4 percent). The height of planted seedling was low during the evaluation visit. Heavy grazing was reported at the site which

restricts growth of planted seedling. Cattles, stray animals were seen at the site during third party evaluation.

D. Enumeration of Sowing

Table 3.13: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a	Yes/No	No	Yes	Yes	No	Yes
b	No. of rows sown		3	2		3
c	Length (in Metres)		7608	38192		30000
d	Approximate No. of Plants as per enumeration		1267	6365		Not seen
e	Species used		Kumtha, Desi Babool, Ronj, Neem, Ardu, Churail, Cheela	Kumtha, Desi Babool, Ronj, Neem, Ardu, Churail, Cheela		Kumtha, Desi Babool, Ronj, Neem, Ardu, Churail, Cheela
f	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.14: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Churail	0.4	94	Grazing by cattles, stray animals & Neel gai
2.	Totalis	0.3	69.0	
3.	Bair	0.15	50.0	
4.	Ronz	0.15	47	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.15: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Ardu	1.5	94
2.	Churail	1	63
3.	Desi Babool	2	126
4.	Shisham	2	126



G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.16: Assessment of SWC works & WHS

Sl.no	Particulars	Loose stone Check Dams & earthen	Contour trenches
a	Present Status*	Intact	Silted
b	Intervention**	No action required	Need Repair
c	Effectiveness***	Moderate	Low
d	Remarks		Partly Silted & section damaged at many places

H. GPS Location and KML file: The selected ANR model plantation site measured 50 hectare as per KML map.



3.4 Lobadawas site in Shahpura range -N 27.435865 and E 76.079619

A. About Lobadawas Site

The selected plantation was carried out on 4.0 ha of land at Lobadawas site in Shahpura range during the year 2023-24. The activities were done under the Non-Forest Land (NFL) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

Table 3.17: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium / Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1180	1542.7	1050	1512	130	30.7	Not intact	Low

C. Soil Moisture Conservation Works Status

Contour trenches were found more than 1590 RMT against 1598 RMT as per MB. Trenches were dug properly. Since it is sand dunes area & also due to soil erosion during rainy season the same was silted.

Table 3.18: SMC Works Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/-)	Condition of the SMC works (Intact/ Not	Effectiveness of the SMC works (High/Medium/ Low)	Remarks
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)					
1	Contours - SGT/CT	1590	321.97	1598	324.04	-8	-2.07	Not intact	Moderate to low	Some silted & some damaged

D. Enumeration of Planted Stocks

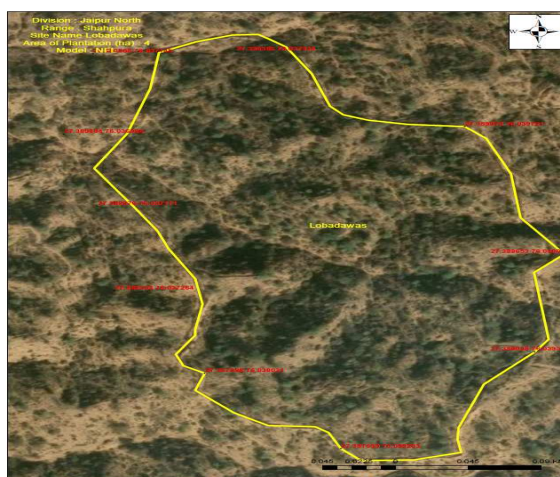
Table 3.19: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
1048	43	3309	4400	23.8

The survival of planted seedling was reported very poor (23.8 percent). The reason for poor survival was low soil moisture retention due to sand dunes & ravines area, no provision of watering, poor protection & guarding & filled & damaged ditch fencing.



E. GPS Location and KML file:The selected NFL model plantation site measured 4.0 hectare as per KML map.



3.20: Quantitative assessment of plantation work created under CAMPA in Jaipur North division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1	Bilochi-A	ANR	50	42.4	5
2	Foot ka Baas	RDF-II	50	27.8	4
3	Malera Kumbhawas-III	ANR	50	32.4	4
4	Lobdawas	NFL	4	23.8	4

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80%-90%)

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Jaipur Sambhag, in Jaipur(WL) division 01 plantation site was covered for second stage evaluation. . This Forest Division with 5 Forest ranges namely Nahargarh, Jamwaramgarh, Raisar, Wild life Jaipur & Ajabgarh has territorial jurisdiction over the entire Jaipur District.



Figure: Location of Jaipur district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation site of Jaipur WL Forest Division for evaluation is as given in table 1.

Table 1: Plantation site for evaluation

Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
Ajabgarh	Billu Ki Khan	2023-24	40	ANR	CAMPA	II

3. Report of Evaluation of Plantation Site

3.1 Billu Ki Khan site in Ajabgarh range -N 27.081395 and E 76.017425

A. About Billu Ki Khan Site

The selected plantation was carried out on 40 ha of land at Billu Ki Khan site in Ajabgarh range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



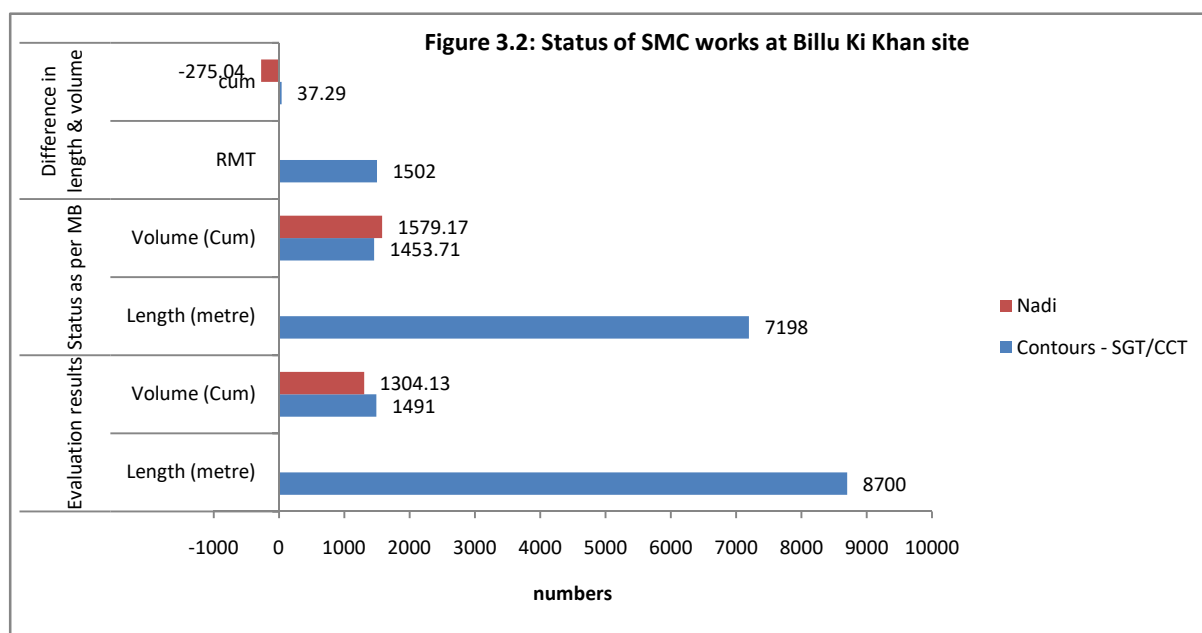
B. Fencing Status

Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/-)	Condition of the fence Intact / Not	Effectiveness of the fence (High/ Medium / Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2582	3718.08	2503	3604.32	79	113.76	Intact	High

C. Soil Moisture Conservation Works Status

The CCT was silted. The effectiveness of contour trenches at the plantation site was reported low. Two talai/Nadi viz. one at block 7 & second at block 8 was reported at the site. The effectiveness of talai/Nadi was reported high. Water was not available in the Nadi. However, water mark was observed. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.4: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4117	533	3350	8000	51.5

The survival of planted seedling was reported average (51.5 percent). The reason for average survival was intact fencing at the site. The quality of soil is conducive for survival & growth of planted seedling. Local pressure was also comparatively less in the site.



E. GPS Location and KML file: The selected ANR model plantation site measured 40.0 hectare as per KML map

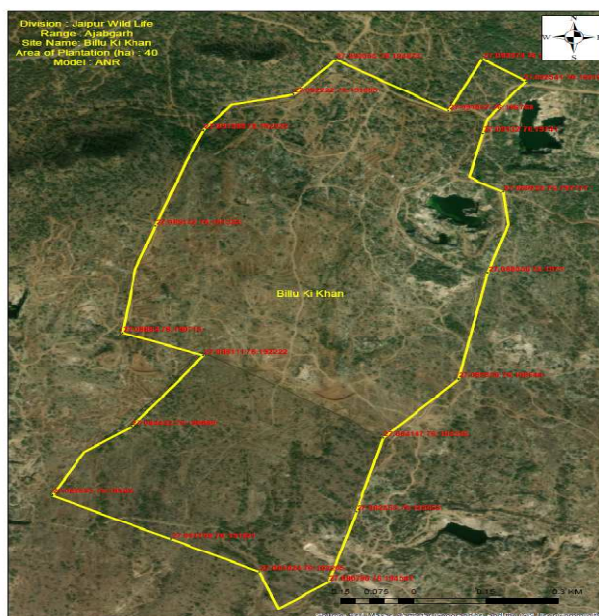


Table 3.5: Quantitative assessment of plantation work created under CAMPA in Jaipur WL division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1	Billu Ki Khan	ANR	40	51.5	5

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Jhunjhunu

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Jaipur Sambhag, in Jhunjhunu division 07 plantation sites were covered for second & third stage evaluation. This Forest Division with 5 Forest Ranges namely Khetri, Udaipurwati, Chirani, Jhunjhunu & Navalgarh has territorial jurisdiction over the entire Jhunjhunu District.



Fig: Location of Jhunjhunu district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Jhunjhunu Forest Division are as given in table-1.

Table-1: Selected plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Khetri	Chirani I	2022-23	50	RDF I	RDF	III
2.	Khetri	Mehar Ki Dhani	2022-23	50	ANR	CAMPA	III
3.	Khetri	Bansiyal	2023-24	50	RDF II	RDF	II
4.	Khetri	SDS Burak	2023-24	25	SDS	RDF	II
5.	Khetri	Nalpur III	2023-24	50	ANR	CAMPA	II
6.	Chirawa	SDS Urika	2023-24	20	SDS	RDF	II
7.	Jhunjhunu	SDS Ladsar	2021-22	14	SDS	RDF	III

3. Report of Evaluation of Plantation Site

3.1 Chirani I site in Khetri range -N 28.010657 and E 75.847404

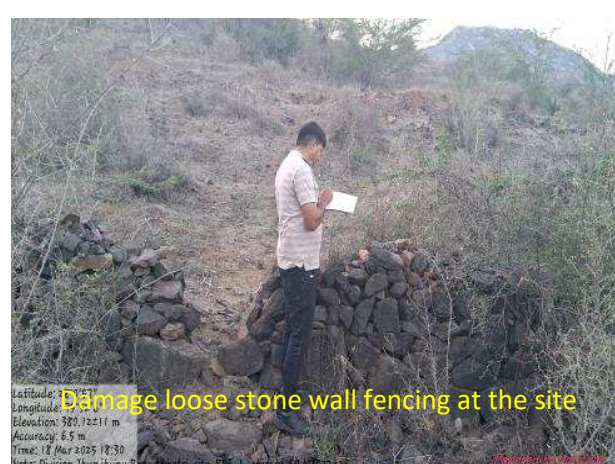
A. About Chirani I Site

The selected plantation was carried out on 50 ha of land at Chirani I site in Khetri range during the year 2022-23. The activities were done under the RDF I (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was third.

B. Fencing Status

Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2764	4140	2050	2952	714	1188	Intact	Medium
2.	Loose Stone wall	300	231	300	252	0	-21	Not Intact	Low



C. Enumeration of Planted Stocks

The survival of planted seedling was reported average (58.3 percent). The height of planted seedling was satisfactory during the evaluation visit. The protection measure of the plantation site was satisfactory due to intact ditch fencing. Also, quality of soil is conducive for survival & growth of planted seedling.

Table 3.3: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
14580	120	10300	25000	58.3

D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas / Saucer mounds
a	Yes/No	No	Yes	Yes		Yes
c	No. of rows sown		3	2		3
d	Length (in Metres)		6150	10500		75000
e	Approximate No. of Plants as per enumeration		7350	1070		37100
f	Species used		Ronj	Ronj		Ronj
g	Result*		Very Good	Very Good		Good

E. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Bair	0.6	66
2.	Ronj	1.2	94
3.	Churail	0.5	79
4.	Desi Babool	0.9	88



F. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

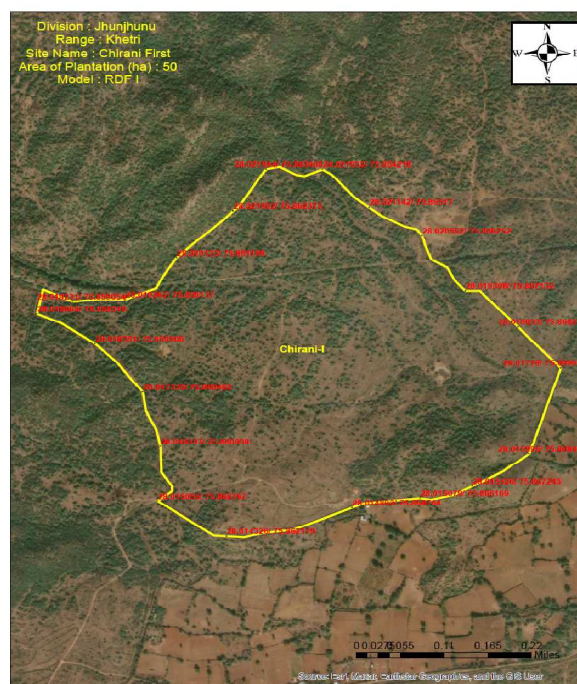
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Kumtha	0.5	47
2.	Ronj	0.6	53
3.	Bair	0.35	47

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

Sl. no	Particulars	Loose stone Check Dams	Contour trenches	Nadi
a	Present Status*	Silted & damaged	Partly Intact	Intact
b	Intervention**	Need repair	No action	No action
c	Effectiveness***	Moderate	Moderate	Moderate
d	Remarks		Some trenches damaged & silting	Vegetation improved around Nadi/upstream& downstream

H. GPS Location and KML file:The selected RDF model plantation site measured 50 hectare as per KML map.



3.2 Mehar Ki Dhani site in Khetri range -N 27.960546 and E 75.867409

A. About Mehar ki Dhani Site

The selected plantation was carried out on 50 ha of land at Mehar Ki Dhani site in Khetri range during the year 2022-23. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was third.

B. Fencing Status



Table 3.8: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1785	2571.6	1750	2520	35	51.6	Partly intact	Medium
2.	Loose Stone wall	820	625.43	800	672	20	-46.57	Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.9: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5130	20	4850	10000	51.3

The survival of planted seedling was reported average (51.3 percent). The plantation was done as per quality of soil. Patches of Desi babool & Ronj was seen as per soil condition at the site. Also, monitoring by site in charge & guarding was good at the site. The height of Desi babool was good during the evaluation visit.



D. Enumeration of Sowing

Table 3.10: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a	Yes/No	No	Yes	Yes	No	Yes
b	No. of rows sown		3	2		3
c	Length (in Metres)		1750	10500		30000
d	Approximate No. of Plants as per enumeration		475	5255		620

e	Species used		Kumtha, Deshi Babool	Kumtha, Deshi Babool		Kumtha, Deshi Babool
f	Result*		Good	Good		Poor

E. Growth Assessment of Planted Stock

Table 3.11: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Deshi Babool	1.3	94
2.	Ronj	0.6	63



F. Growth Assessment of Plant through Natural Regeneration

Table 3.12: Growth Assessment of Plant through Natural Regeneration

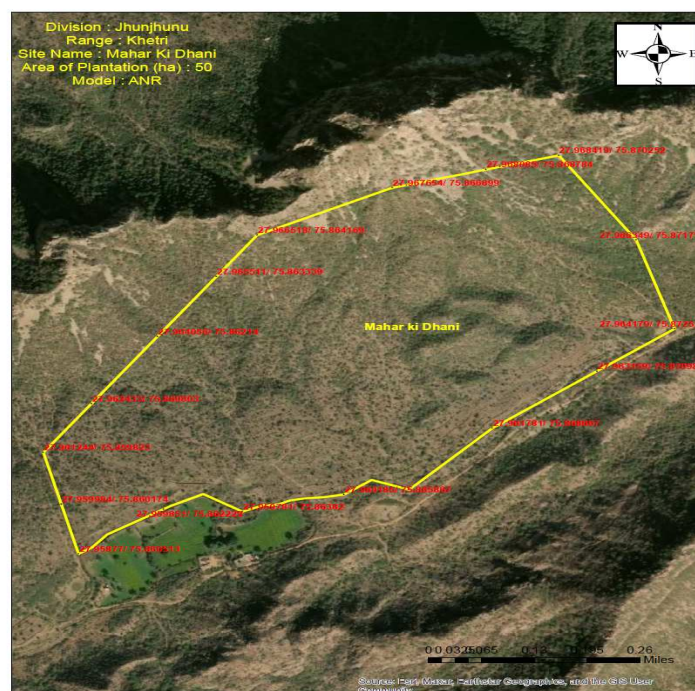
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Desi Babool	1.3	94
2.	Ronj	0.5	63
3.	Kumtha	0.6	63
4.	Dhok	0.8	63

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.13: Assessment of SWC works & WHS

Sl.no	Particulars	Loose stone Check Dams	Contour trenches
a	Present Status*	Intact	Partly Intact
b	Intervention**	No Action Required	Need repair
c	Effectiveness***	Moderate	Moderate

H. GPS Location and KML file: The selected ANR model plantation site measured 50 hectare as per KML map.



3.3 Bansiyal site in Khetri range -N 27.996317 and E 75.86447

A. About Bansiyal site

The selected plantation was carried out on 50 ha of land at Bansiyal site in Khetri range during the year 2023-24. The activities were done under the RDF II (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

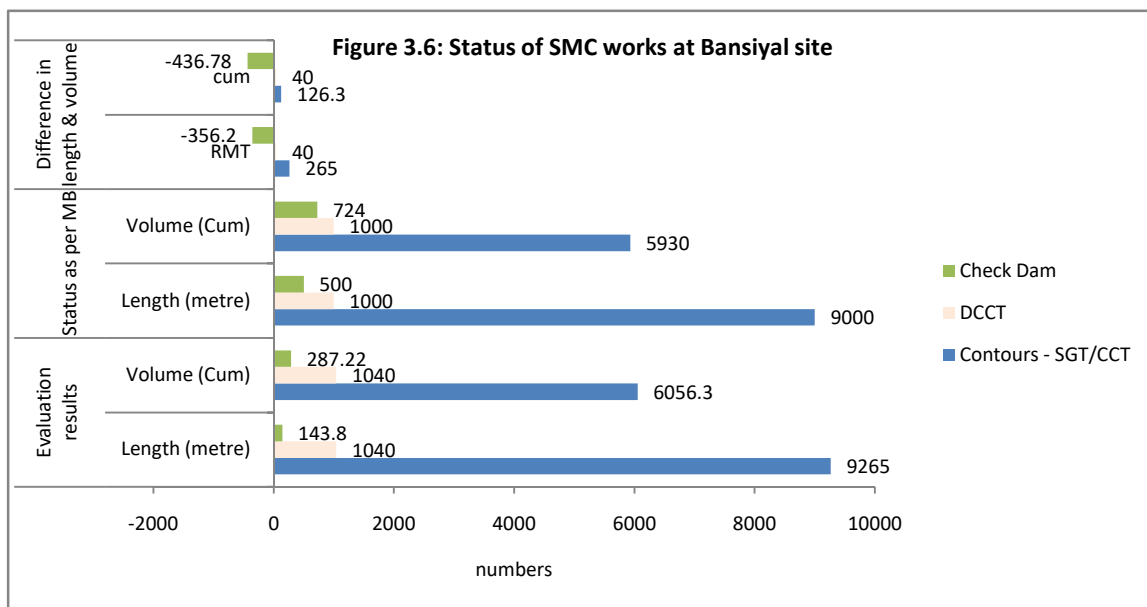


Table 3.14: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1117	1608	1100	1584	17	24	Not Intact	Low
2.	Loose Stone wall	233	179	400	336	-167	-157	Not Intact	Low
3.	Barbed wire	93		150		-57	0	Not Intact	Low

C. Soil Moisture Conservation Works Status

Under SMC, SGT/CCT, DCCT & loose stone check dam was reported at the site. The SGT/CCT& DCCT was partly intact & its effectiveness was reported moderate. The SGT/CCT& DCCT was silted in some places. However, loose stone check dam was intact & its effectiveness was reported moderate.



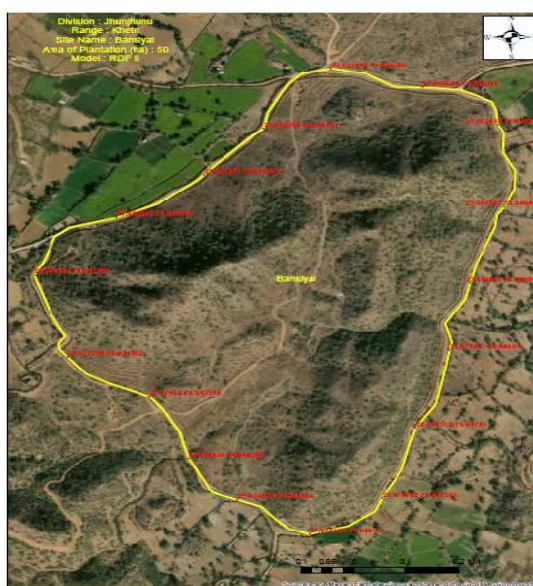
D. Enumeration of Planted Stocks

Table 3.16: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4920	11	5069	10000	49.2

The survival & growth of planted seedling was affected due to grazing by Neel gai, Cattles & stray animals. The survival of planted seedling was reported poor (49.2 percent). Also, due to rocky area the growth of planted seedling was affected. Grazing by cattles & stray animals was seen during the third Party evaluation. Also, guarding& protection was poor at the site

E. GPS Location and KML file:The selected RDF model plantation site measured 50 hectare as per KML map.



3.4 Burak site in Khetri range -N 27. 937395 and E 75.722813

A. About Burak site

The selected plantation was carried out on 25 ha of land at Burak site in Khetri range during the year 2023-24. The activities were done under the SDS (Sand Dunes Stabilization) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

Table 3.17: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Barbed wire	13500		13200		300		Partly Intact	Medium

C. Soil Moisture Conservation Works Status

Only earthen check dam (ECD) was reported at the site. However, earthen check dam was reported intact & its effectiveness was reported moderate. The plantation site is situated in ravine area. Hence, some ECD was silted. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.

Table 3.18: SMC Works Status

S.No	Name of Work/Activity	Evaluation results	Status as per MB	Difference (Volume) (in +/-)	Condition of the SMC works (Intact/ Not)	Effectiveness of the SMC works (High/ Medium/ Low)
		Volume (Cum)	Volume (Cum)			
1.	Percolation Ponds/ Nadi /ECD	2322	2200	122	Intact	Medium



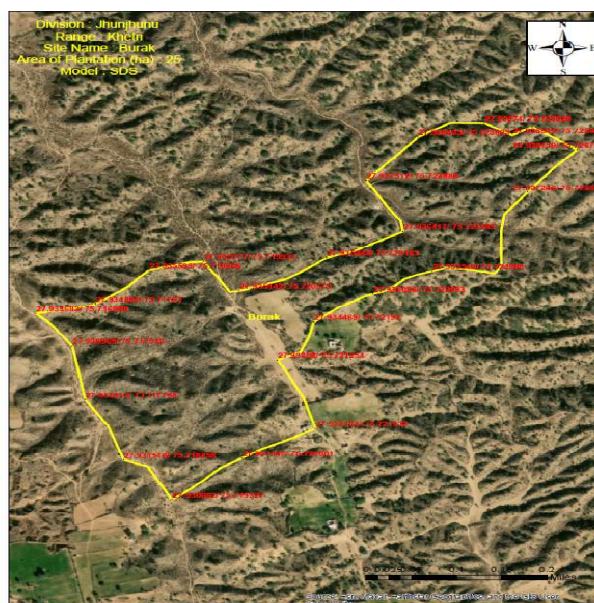
D. Enumeration of Planted Stocks

Table 3.19: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
3482	57	11461	15000	23.2

The survival of planted seedling was reported very poor (23.2 percent). The quality of soil is not conducive for survival & growth of planted seedling. Heavy growth of weed was reported at the site. The survival & growth of planted seedling was affected due to grazing by Neel gai, cattles & stray animals. Hoeing & weeding around thawalas was not reported at the site.

E. GPS Location and KML file: The selected SDS model plantation site measured 25 hectare as per KML map.



3.5 Nalpur III site in Khetri range -N 28. 037684 and E 75.896071

A. About Nalpur III site

The selected plantation was carried out on 50 ha of land at Nalpur III site in Khetri range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

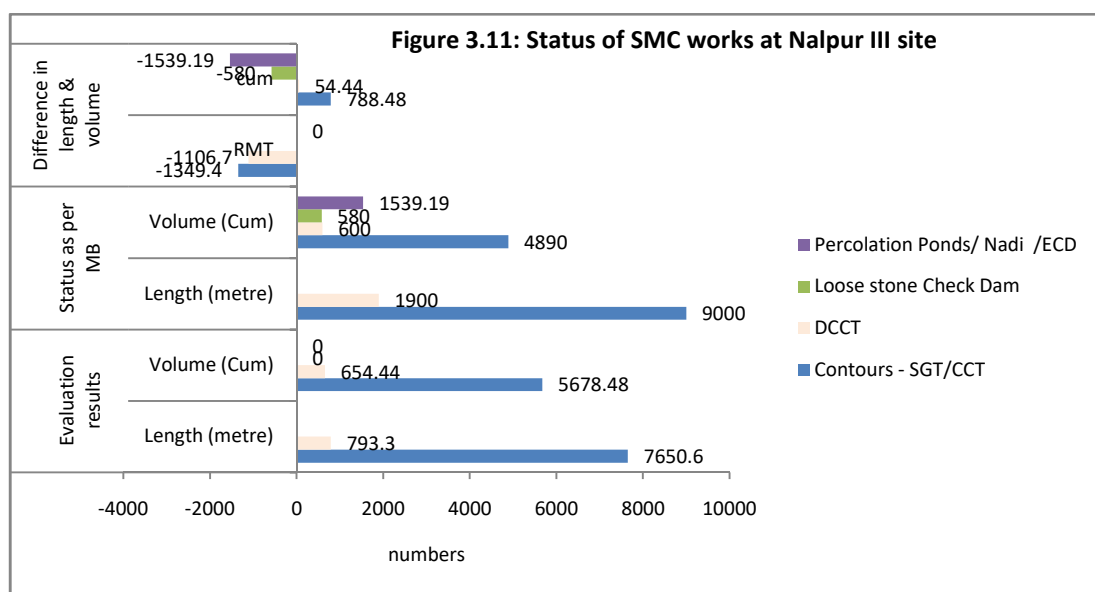
Table 3.20: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1542	2711.89	1500	2160	42	551.89	Not Intact	low
2.	Loose Stone wall	708	351	250	210	458	141	Not Intact	low
3.	Barbed wire	150						Not Intact	Low

C. Soil Moisture Conservation Works Status

The CCT & Deep CCT was silted & damaged. Heavy siltation was reported in CCT & Deep CCT. The CCT, Deep CCT & LSCD was not intact & its effectiveness was low. As per MB 1

MPT & LSCD was constructed but at the time of evaluation not found as per MB 1539.19 Cum MPT & 580 Cum LSCD.



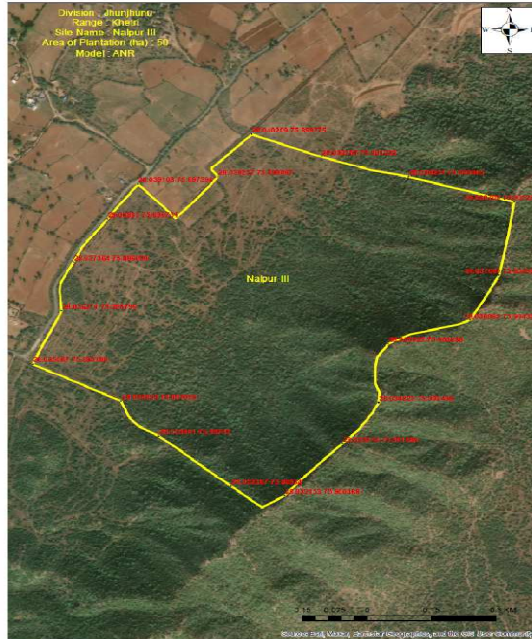
D. Enumeration of Planted Stocks

Table 3.22: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4110	21	5869	10000	41.1

The survival & growth of planted seedling was affected due to grazing by Neel gai, Cattles & stray animals. The survival of planted seedling was reported poor (41.1 percent). Also, heavy growth of weeds around thawalas was reported at the site. Ditch fencing was damaged in several places. Cattles, stray animals, Neel gai & humans used to enter the plantation site through damaged ditch fencing route.

E. GPS Location and KML file: The selected ANR model plantation site measured 50 hectare as per KML map.



3.6 Urika site in Chirawa range -N 28. 348069 and E 75.900775

A. About Urika site

The selected plantation was carried out on 20 ha of land at Urika site in Chirawa range during the year 2023-24. The activities were done under the SDS (Sand Dunes Stabilization) model. The site was a revenue land and stage of evaluation was second.



B. Fencing Status

Table 3.23: Fencing Status

S.No	Name of Work/ Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1912	2302.57	1900	2736	12	-433.43	Partly Intact	Medium
2.	Barbed wire	908		900		8		Partly Intact	Medium



C. Soil Moisture Conservation Works Status

Table 3.24: SMC Works Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RM T) (in +/-)	Difference (Volume) (in +/-)	Condition of the SMC works (Intact/ Not)	Effectiveness of the SMC works (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	V Ditch	4014		4000		14		Partly Intact	Medium



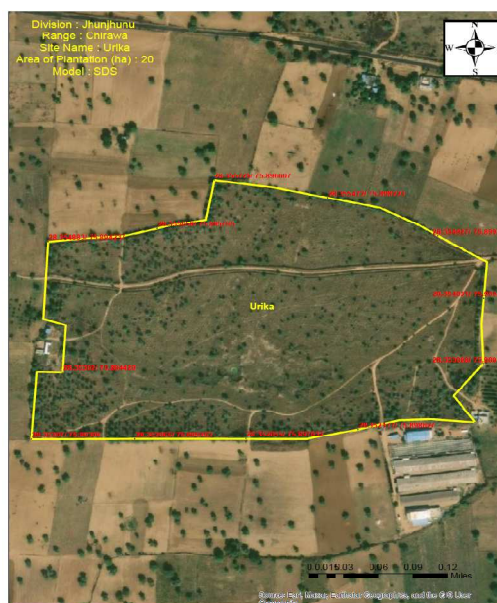
D. Enumeration of Planted Stocks

Table 3.25: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
6409	57	5534	12000	53.4

The survival of planted seedling was reported average (53.4 percent). Path was made through plantation site to reach nearby agriculture field & village. The survival & growth of planted was affected due to grazing by Neel gai, Cattles & stray animals & human interferences. Ditch & Barbed wire fencing was also damaged in some places. Also, destruction to planted seedling by termite & rats was observed during third party evaluation. The growth of planted seedling was low due to heavy growth of weeds around thawalas in some area of plantation site.

E. GPS Location and KML file:The selected SDS model plantation site measured 20 hectare as per KML map.



3.7 SDS Ladsar site in Jhunjhunu range -N 28.042545 and E 75.233454

A. About SDS Ladsar Site

The selected plantation was carried out on 14 ha of land at Jhunjhunu I site in Khetri range during the year 2021-22. The activities were done under the SDS (Sand Dunes Stabilization) model. The site was a forest land and stage of evaluation was third.

B. Fencing Status

Table 3.26: Fencing Status

S.No	Name of Work/ Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1065	1558.6	1062	1529	3	29.6	Intact	Medium
2.	Barbed wire	650		650		0		Partly Intact	Medium



Measuring ditch fencing at the site



Plants growth is very good

C. Enumeration of Planted Stocks

Table 3.27: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5548	39	2813	8400	66.0

The survival of planted seedling was reported good (66.0 percent). The quality of soil is conducive for proper growth of planted seedling. Also protection measures in the site was good. Ditch fencing was intact & barbed wire fencing was partly intact.

D. Enumeration of Sowing

Table 3.28: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds	
a.	Yes/No	No	Yes	NA	No	Yes	Mulching
b.	No. of rows sown		3	2		3	1*2400
c.	Length (in Metres)		3186			25200	2400
d.	Approximate No. of Plants as per enumeration		3086			100	0
e.	Species used		Kumtha			Kumtha	Kheep
f.	Result*		Good			Poor	Poor

E. Growth Assessment of Planted Stock

Table 3.29: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Bair	1.1	60
2.	Shisham	2.7	163
3.	Totalis	1.7	94
4.	Khejri	0.5	31

F. Growth Assessment of Plant through Natural Regeneration

Table 3.30: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Khejri	0.7	126
2.	Kumtha	0.4	63

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.31: Assessment of SWC works & WHS

Sl.no	Particulars	V Ditch	Mulching
a	Present Status*	Silted	Damaged
b	Intervention**	Need repair	Need repair
c	Effectiveness***	Moderate	Moderate

H. GPS Location and KML file:The selected SDS model plantation site measured 14 hectare as per KML map.



Table 3.32: Quantitative assessment of plantation work created under CAMPA in Jhunjhunu division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Chirani I	RDF I	50	58.3	6
2.	Mehar Ki Dhani	ANR	50	51.3	6
3.	Bansiyal	RDF II	50	49.2	5
4.	SDS Burak	SDS	25	23.2	4
5.	Nalpur III	ANR	50	41.1	5
6.	SDS Urika	SDS	20	53.4	6
7.	SDS Ladsar	SDS	14	66.0	7

* 4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Jaipur Sambhag, in Sikar division 08 plantation sites were covered for second, third & fourth stage evaluation. This Forest Division with 6 Forest Ranges namely Srimadhapur, Danta, Sikar, Neem Ka Thana, Patan & Fatehpur has territorial jurisdiction over the entire Sikar District.

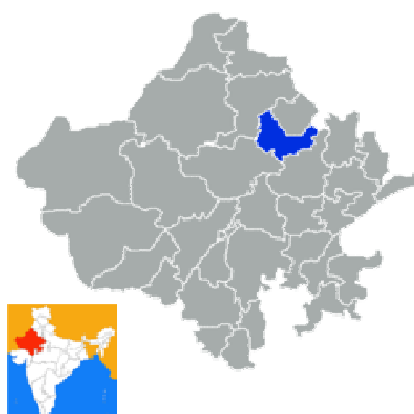


Figure: Location of Sikar district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Sikar Forest Division for evaluation are as given in table 1

Table 1: Plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Srimadhapur	Jhadali-III	2019-20	50	SDS	RDF	Fourth
2.	Srimadhapur	Nare-IV	2023-24	25	SDS	RDF	Second
3.	Srimadhapur	Mangarh	2023-24	25	SDS	RDF	Second
4.	Neem Ka Thana	Palasala-I	2023-24	50	RDF-II	RDF	Second
5.	Neem Ka Thana	Deepawas-II	2023-24	50	RDF-II	RDF	Second
6.	Patan	Baorikala Kota-I	2023-24	50	RDF-I	RDF	Second
7.	Sikar	Pandora-I	2022-23	50	RDF-II	RDF	Third
8.	Danta	Manda Surera	2023-24	50	ANR	CAMPA	Second

3. Report of Evaluation of Plantation Site

3.1 Jhadali III site in Shrimadhapur range -N 27.3120 and E 75.4846

A. About Jhadali III Site

The selected plantation was carried out on 50 ha of land at Jhadali III site in Shrimadhapur range during the year 2019-20. The activities were done under the Sand Dunes Stabilization (SDS) model. The site was a forest land and stage of evaluation was fourth.

B. Fencing Status

Table 3.2: Fencing Status

SL.N o	Name of Work/Activity	Evaluati on results		Status as per MB		Differ ence (RMT) (in +/-)	Differen ce (Volume) (in +/- -CUM)	Condi tion of the fence Intact/ Not	Effectiven ess of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Barbed wire fencing	275 0		275 0		0		Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
9240	37	20723	30000	30.8

The survival of planted seedling was reported very poor (30.8 percent). Grazing by cattles & stray animals was reported at the site. Also, protection (damaged barbed wire fencing) & guarding was reported poor at the site. Destruction of planted seedling by rat/sehi & termite was also reported at the site. The area is sand dunes & ravines. Hence, the thawalas of planted seedlings were not easily identified. Also, destruction of planted seedling & plant grown out of natural regeneration by locals was reported at the site.

D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a.	Yes/No	NA	NA	NA		Yes
b.	No. of rows sown					3
c.	Length (in Metres)					90000
d.	Approximate No. of Plants as per enumeration					Not seen
e.	Species used					Ronj, Kumtha
f.	Result*					Poor

E. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Totalis	1.60	534	1. Grazing by cattles, stray animals & Neel gai 2. Hoeing was not observed.
2.	Sheesham	0.70	251	
3.	Neem	0.60	126	
4.	Ber	0.30	63	
5.	Churail	0.90	314	
6.	Ronj	0.30	94	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

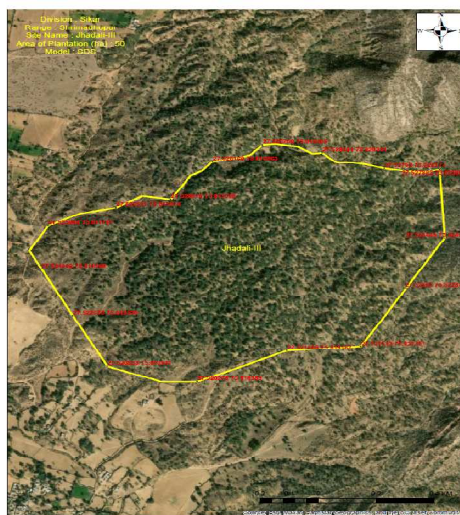
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Totalis	1.40	408
2.	Kumtha	0.90	283

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

Sl.no	Particulars	Earthen check Dams	Mulching	Tanka
a	Present Status*	Intact	Not intact	Intact
b	Intervention**	No action required		
c	Effectiveness***	Moderate	Low	High

H. GPS Location and KML file: The selected SDS model at plantation site measured 50 hectares as per KML map.



3.2 Nare IV site in Shrimadhopur range -N 27.2848 and E 75.5225

A. About Nare IV Site

The selected plantation was carried out on 25 ha. of land at Nare IV site in Shrimadhopur range during the year 2023-24. The activities were done under the SDS (Sand Dunes Stabilization) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

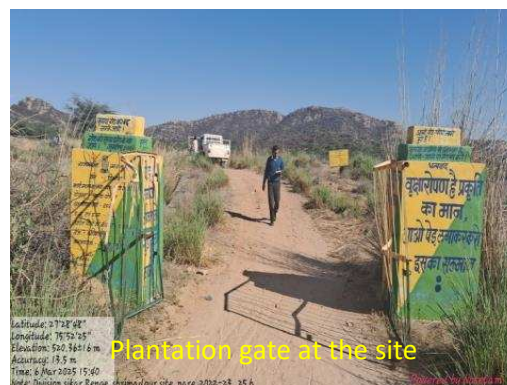


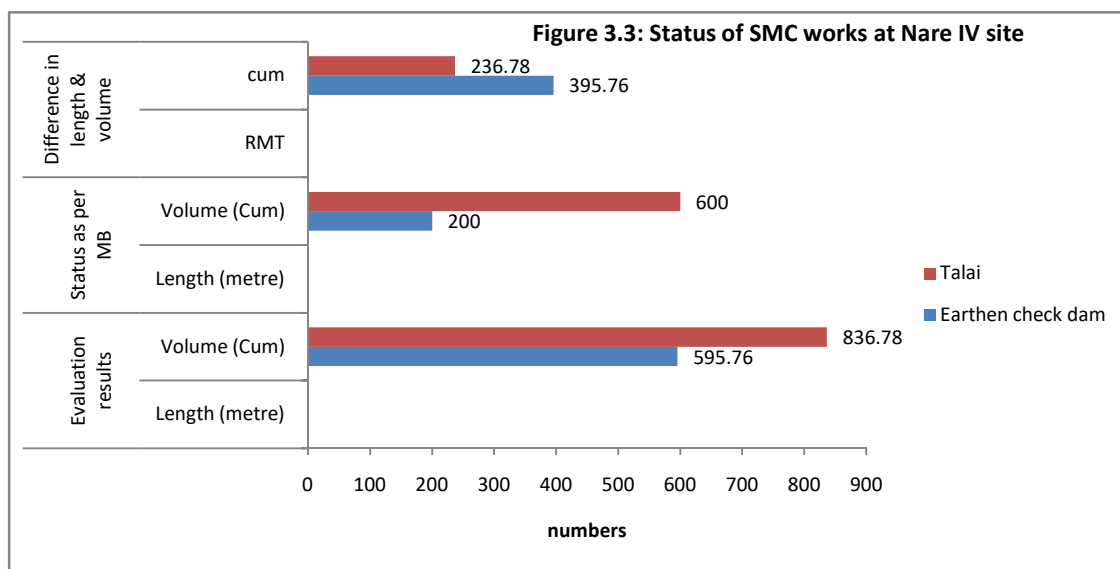
Table 3.8: Fencing Status

Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	3227	3687.33	3225	4644.0	2	-956.67	Not Intact	Low
2.	Barbed wire fencing	250		250		0		Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure & WHS, earthen check dam, talai & tanka (01 no.) was reported at the. The earthen check dam & talai was reported intact & its effectiveness was reported medium. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



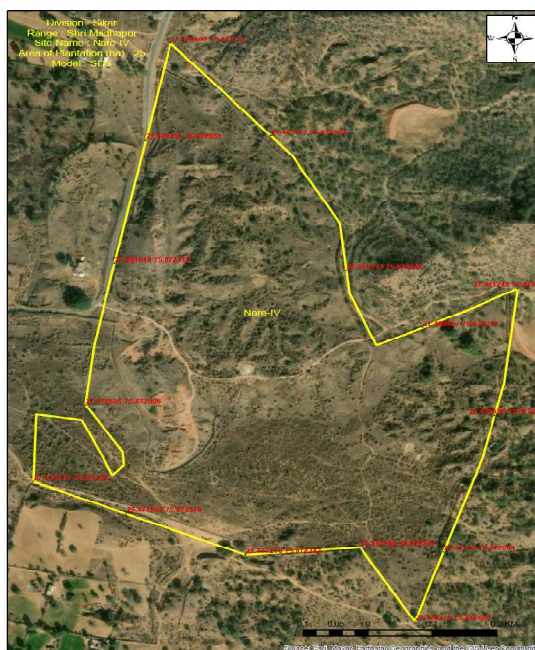
D. Enumeration of Planted Stocks

Table 3.10: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
8670	17	6313	15000	57.8

The survival of planted seedling was reported average (57.8 percent). The area is taken from gram Panchayat as lease for five years & plantation has been done for sand dunes stabilization. Vegetation had been improved at the plantation site. The original species of Desi babool has been coming up in the area. The survival of planted seedling was affected due to frost & grazing by cattles, stray animals & Neel gai.

E. GPS Location and KML file:The selected SDS model at plantation site measured 25 hectares as per KML map.



3.3 Mangarh site in Shrimadhapur range -N 27.2348 and E 75.5112

A. About Mangarh Site

The selected plantation was carried out on 25 ha of land at Mangarh site in Shrimadhapur range during the year 2023-24. The activities were done under the SDS (Sand Dunes Stabilization) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

Table 3.11: Fencing Status



Sl.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1400	1928.65	1400	2016.00	0	-87.35	Not Intact	Low
2.	Barbed wire fencing	808		802		6		Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure & earthen check dam & tanka (01 no.) was reported at the. The earthen check dam was reported not-intact & its effectiveness was reported low. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.

Table 3.12: SMC Works Status

Sl.No	Name of Work/Activity	Evaluation results	Status as per MB	Difference (Volume) (in +/- M3)	Condition of the SMC works (Intact/ Not)	Effectiveness of the SMC works (High/ Medium/ Low)
		Volume (Cum)	Volume (Cum)			
1.	Earthen check dam	734.3	2699	-1964.7	Not intact	Low

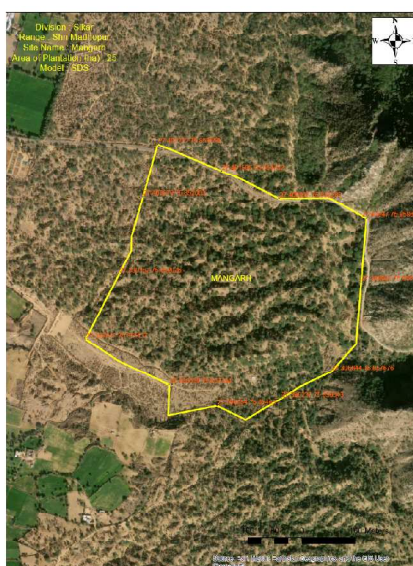
D. Enumeration of Planted Stocks

Table 3.13: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4542	42	10416	15000	30.3

The survival of planted seedling was reported very poor (30.3 percent). Grazing by cattles & stray animals was reported at the site. Also, protection (damaged barbed wire fencing) & guarding was reported poor at the site. Destruction of planted seedling by rat/sehi & termite was also reported at the site. The area is sand dunes & ravines.

E. GPS Location and KML file:The selected SDS model at plantation site measured 25 hectares as per KML map.



3.4 Palasala I site in Neem Ka Thana range -N 27.663087 and E 75.916795

A. Palasala Site

The selected plantation was carried out on 50 ha of land at Palasala I site in Neem Ka Thana range during the year 2023-24. The activities were done under the RDF (Rehabilitation of degraded forest) model. The site was a forest land and stage of evaluation was second.

B.Fencing Status

Table 3.14: Fencing Status

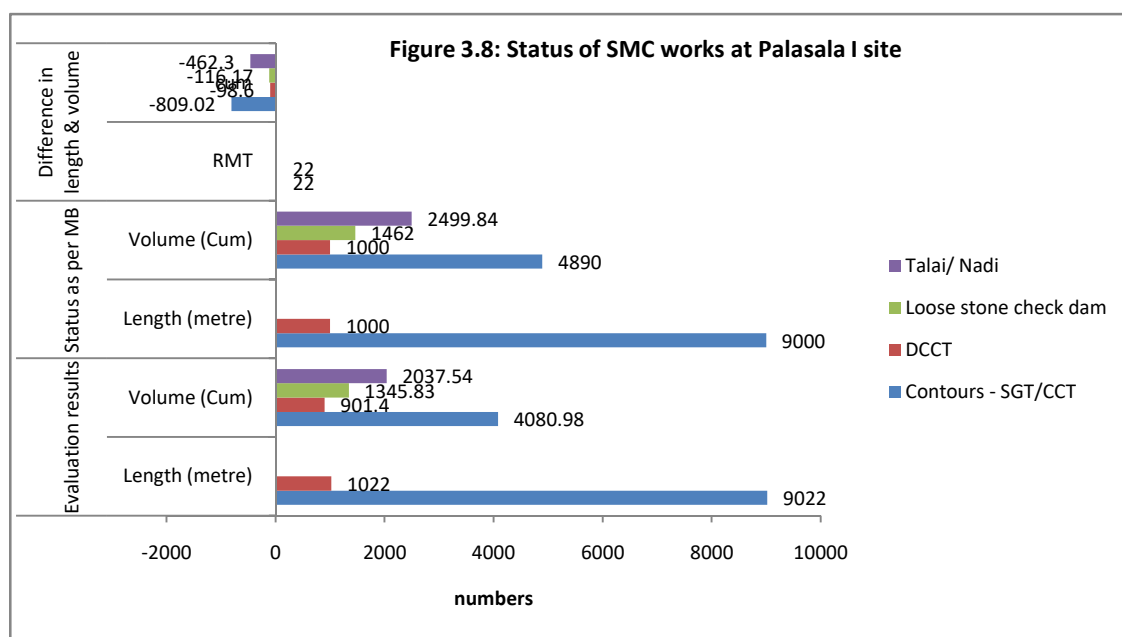


S.No .	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	445	655.50	435	626.4	10	29.10	Not Intact	Low
2.	Loose stone wall fencing	1115	893.55	1100	924	15	-30.45	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT, earthen check dam & talai/nadi was reported at the site. The CCT was silted. Also, stray animals & Neel gai damaged the contour trenches. The effectiveness of contour trenches & DCCT at the plantation site was reported low. The LSCD was partially damaged & effectiveness was reported low. However, talai at the site was reported intact & its effectiveness was reported moderate.



D. Enumeration of Planted Stocks

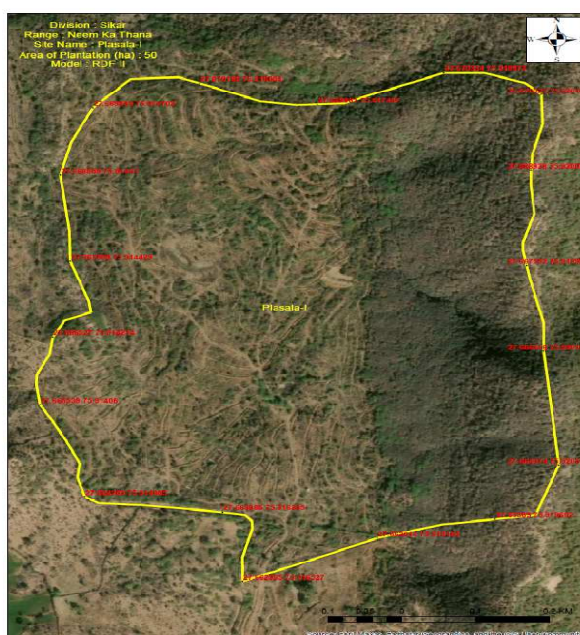
Table 3.16: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5230	25	4745	10000	52.3

The survival of planted seedling was reported average (52.3 percent). The site was situated at a distance (almost 1-2km) from human habitation. Grazing by cattles & stray animals was not reported at the site. The growth of planted seedling was poor due to heavy growth of weed at the site especially around thawalas.



E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.5 Deepawas II site in Neem Ka Thana range -N 27.60095 and E 75.867012

A. Deepawas II Site

The selected plantation was carried out on 50 ha of land at Palasala I site in Neem Ka Thana range during the year 2023-24. The activities were done under the RDF (Rehabilitation of degraded forest) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

Table 3.17: Fencing Status

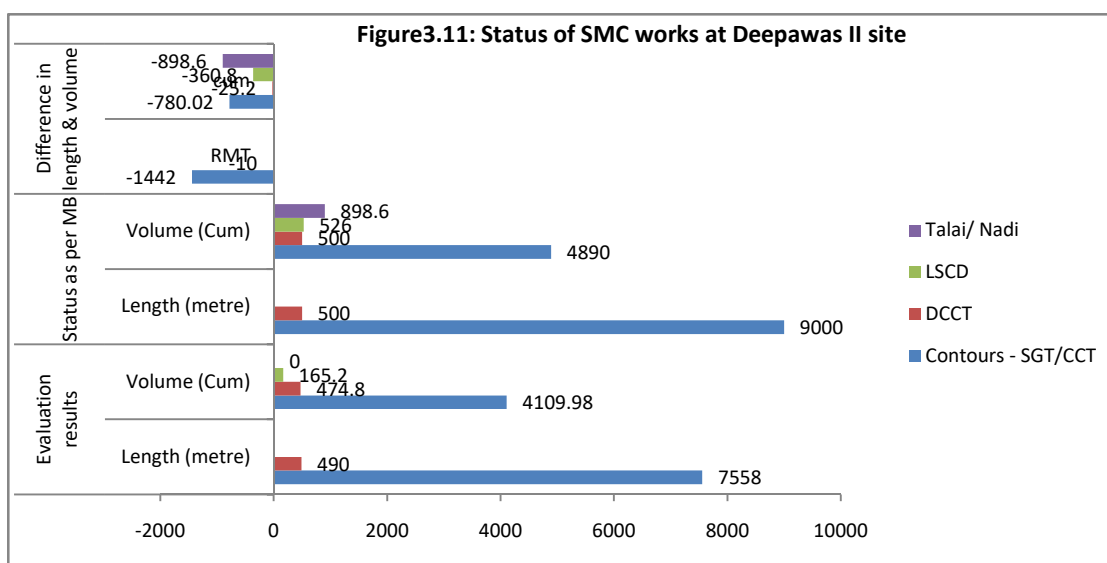
S.No .	Name of Work/ Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- M)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium / Low)	Remarks
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)					

1.	Ditch Fencing	100.1	81.08	100	144	0.1	-62.92	Not Intact	Low	Out of 50 hec. area, 24 hect area allotted to Ms. Ojaswi Marble and Granite limited
2.	Loose stone wall fencing	1980.1	1383.26	3200	2688	-1219.9	-1304.74	Not Intact	Low	



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT, loose stone check dam was reported at the site. The CCT, DCCT & loose stone check dam was intact & its effectiveness was reported moderate. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

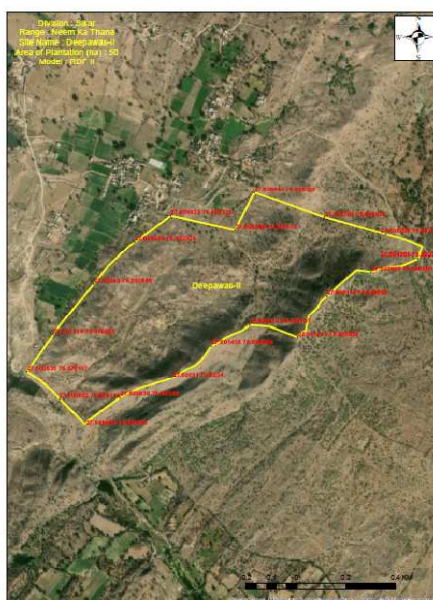
Table: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2510	10	3300	5820	43.1

The survival of planted seedling was reported poor (43.1 percent). The type of soil at the site is hard clayey soil with boulders. The soil was not supportive for survival & growth of planted seedling. Hence, survival of planted seedling was reported poor. Grazing by cattles, stray animals & Neelgai was reported at the site.



E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.6 Baori Kala Kota site in Patan range -N 27.628623 and E 75.937667

A. Baori Kala Kota Site

The selected plantation was carried out on 50 ha of land at Baori Kala Kota site in Patan range during the year 2023-24. The activities were done under the RDF (Rehabilitation of degraded forest) model. The site was a forest land and stage of evaluation was second.

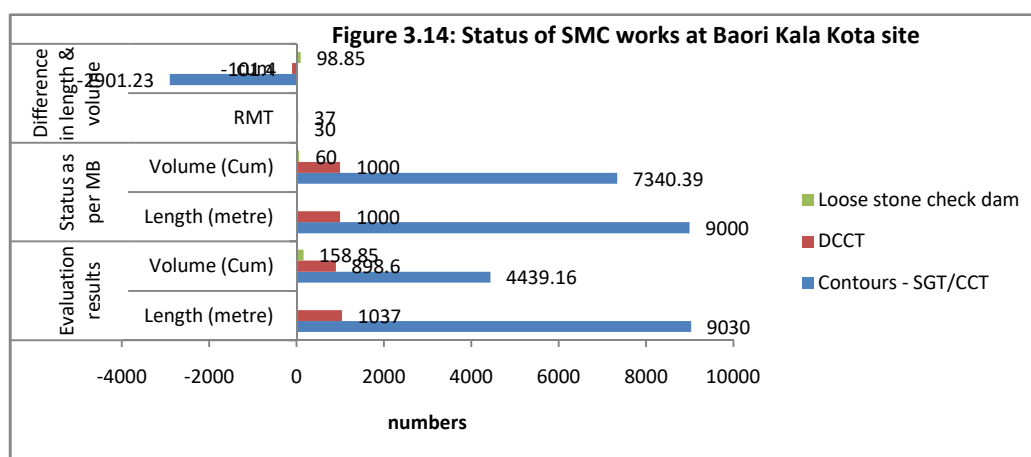
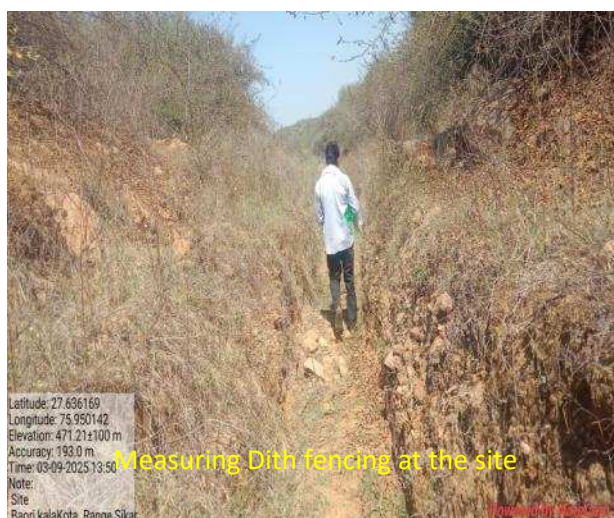
B.Fencing Status

Table 3.20: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2775	3856.63	1539.45	2217	1235.55	1639.83	Not Intact	Low
2.	Loose stone wall fencing	1045	860.65	1000	840	45	20.65	Not Intact	Low

C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT & loose stone check dam was reported at the site. The CCT was silted. Also, stray animals & Neel gai damaged the contour trenches. The effectiveness of contour trenches & DCCT at the plantation site was reported low. However, LSCD at the site was reported intact & its effectiveness was reported moderate.



D. Enumeration of Planted Stocks

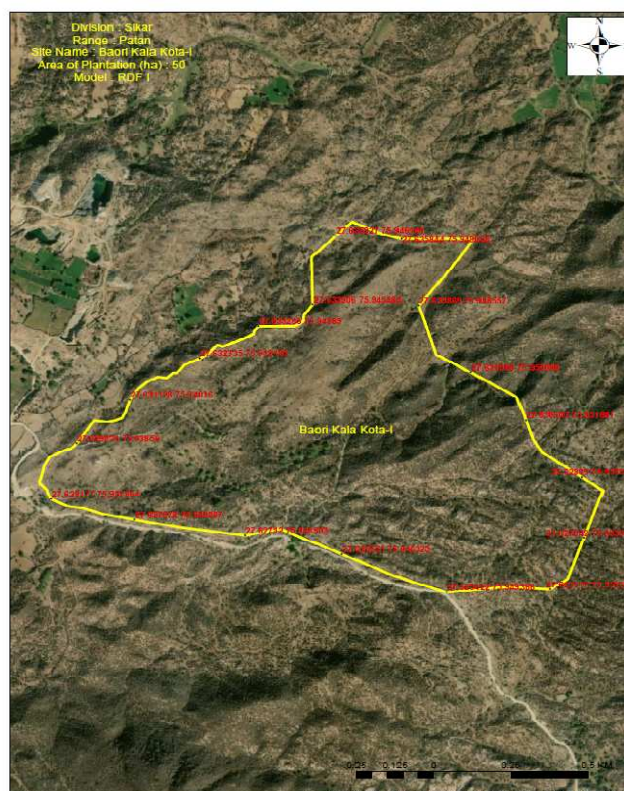
Table 3.22: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
7767	30	17203	25000	31.1

The survival of planted seedling was reported very poor (31.1 percent).The protection & guarding at the site was reported poor. Grazing by cattles & stray animals was reported at the site during Third Party Evaluation.



E. GPS Location and KML file:The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.7 Pandora I site in Sikar range -N 27.641504 and E 75.336262

A. About Pandora I Site

The selected plantation was carried out on 50 ha of land at Pandora I site in Sikar range during the year 2022-23. The activities were done under the RDF (Rehabilitation of degraded Forest) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.23: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Loose Stone wall	1860	1530.9	1830	1537.2	30	-6.3	Not Intact	Low
2.	Barbed wire fencing	1940		1905		35		Not Intact	Low

C.Enumeration of Planted Stocks

Table 3.24: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4130	25	5845	10000	41.3

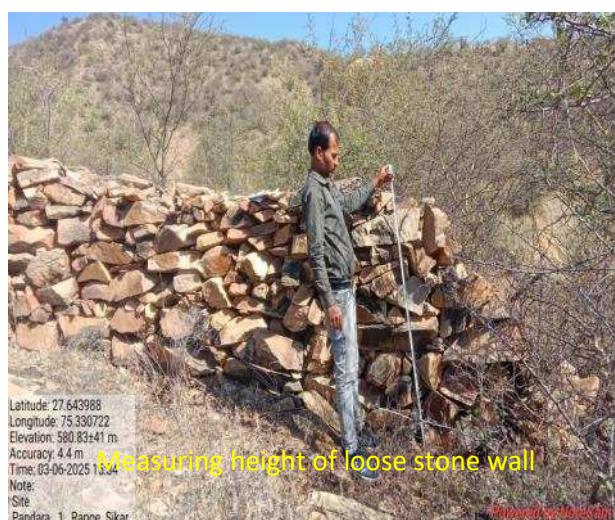
The survival of planted seedling was reported poor (41.3 percent). Grazing by cattles & stray animals due to damaged loose stone wall & barbed wire fencing was reported at the site. Protection & guarding was reported poor at the site. Heavy growth of weed was reported at the site.



D. Enumeration of Sowing

Table 3.25: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a.	Yes/No	No	NA	Yes	No	Yes
b.	No. of rows sown			2		3
c.	Length (in Metres)			6552		30000
d.	Approximate No. of Plants as per enumeration			620		Not seen
e.	Species used			Kumtha		Kumtha
f.	Result*			Poor		Poor



E. Growth Assessment of Planted Stock

Table 3.26: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Sheesham	1.00	47	1. Grazing by cattles, stray animals & Neel gai 3. Plants pit are not cleaned 4. Hoeing was not observed. 5. Weeds are seen large numbers
2.	Totalis	2.00	157	
3.	Ber	0.80	31	
4.	Neem	0.30	13	
5.	Churail	0.80	31	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.27: Growth Assessment of Plant through Natural Regeneration

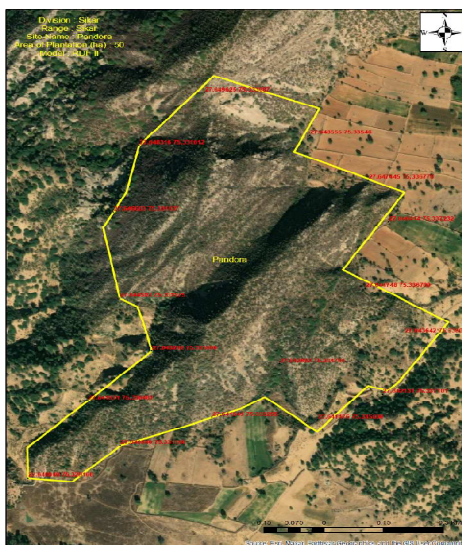
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Kumtha	3.00	314
2.	Kakeda	3.00	440
3.	Dhok	2.00	314
4.	Ronj	1.00	63
5.	Totalis	1.50	126

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.28: Assessment of SWC works & WHS

Sl.no	Particulars	Check Dams	Contour trenches	Contour dykes
a.	Present Status*	Rain water filled	Partly damages & filled	Partly damages & filled
b.	Intervention**	No action required	Need Repair	Need Repair
c.	Effectiveness***	Moderate	Low	Low

H. GPS Location and KML file:The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.8 Manda Surera site in Danta range -N 27.199614 and E 75.131652

A. Manda Surera Site

The selected plantation was carried out on 50 ha of land at Manda Surera site in Danta range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



B.Fencing Status

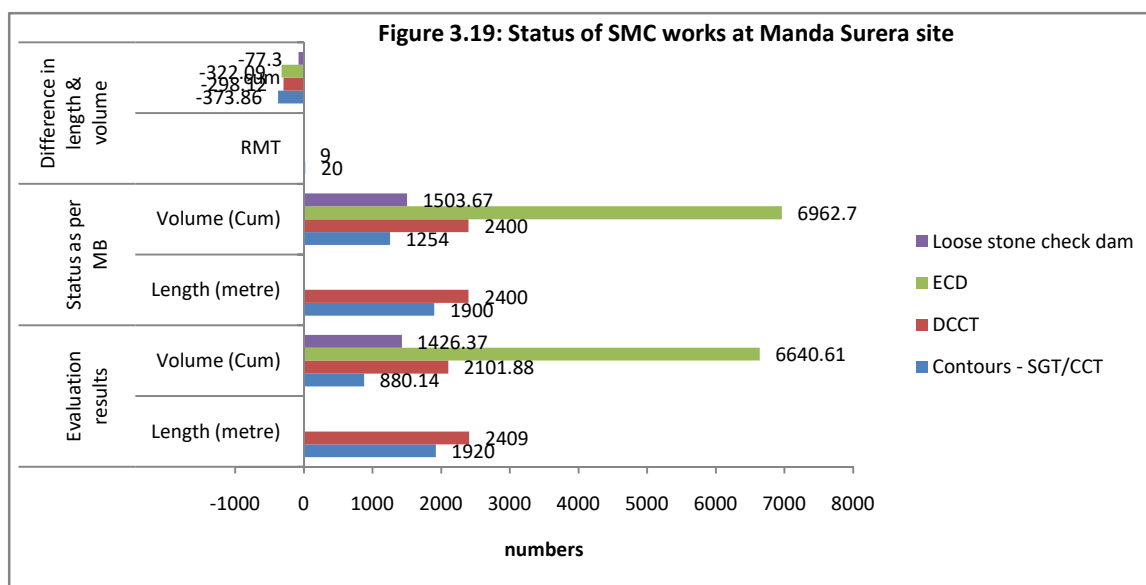
Table 3.29: Fencing Status

S.No .	Name of Work/Activity	Evaluation results		Status as per MB		Difference (R MT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1975	3249.80	1937.5	2790	37.5	459.8	Not Intact	Low
2.	Loose stone wall fencing	925	770.00	900	756	25	14.00	Not Intact	Low
3.	Barbed wire	780		780		0		Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT, LSCD & earthen check dam was reported at the site. The CCT & DCCT was silted. Also, the same was reported broken in many places. The effectiveness of contour trenches & DCCT at the plantation site was reported low. However, LSCD & earthen check dam at the site was reported intact & its effectiveness was reported moderate. Provision of waste weir for safe disposal of excess runoff water was not given in the earthen check dam & talai. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.31: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2621	18	7361	10000	26.2

The survival of planted seedling was reported very poor (26.2 percent). The protection & guarding at the site was reported poor. Grazing by cattles & stray animals was reported at the site during Third Party Evaluation.



E. GPS Location and KML file: The selected ANR model plantation site measured 50.0 hectare as per KML map.

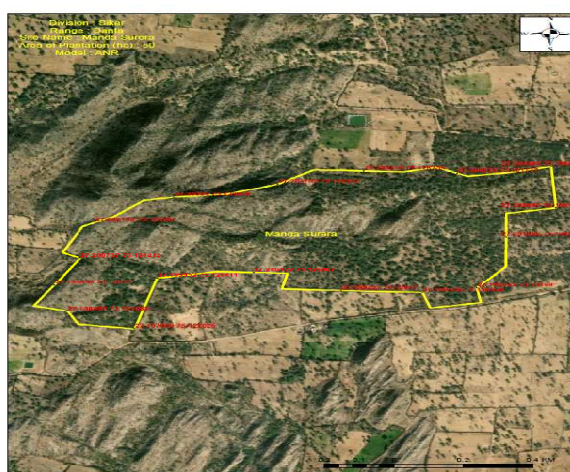


Table 3.32: Quantitative assessment of plantation work created under CAMPA in Sikar division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Jhadali-III	SDS	50	30.8	4
2.	Nare-IV	SDS	25	57.8	6
3.	Mangarh	SDS	25	30.3	4
4.	Palasala-I	RDF-II	50	52.3	6
5.	Deepawas-II	RDF-II	50	43.1	5
6.	Baorikala Kota-I	RDF-I	50	31.1	4
7.	Pandora-I	RDF-II	50	41.3	4
8.	Manda Surera	ANR	50	26.2	4

* 4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Alwar STR

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Jaipur Sambhag, in Alwar STR division 02 plantation sites were covered for second, third & fourth stage evaluation. This Forest Division with 6 Forest Ranges namely Akbarpur, Alwar Buffer, Talvriksh, Tehla, Ajabgarh and Sariska has territorial jurisdiction over the entire Alwar District.



Figure : Location of Alwar district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Sariska Tiger Project Forest Division are as given in table 1

Table 1: Plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Tehla	Nadoli	2017-18	85.44	NFL	CAMPA	IV
2.	Sariska	Kharrika	2022-23	50	RDF II	NABARD	III

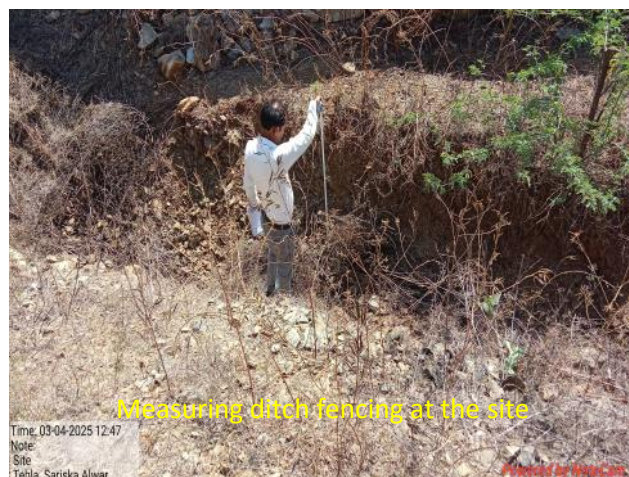
3. Selected Plantation Sites for Evaluation

3.3.1 Nadoli site in Tehla range -N 27.262719 and E 76.408267

A. About Nadoli Site

The selected plantation was carried out on 85.44 ha of land at Nadoli site in Tehla range during the year 2017-18. The activities were done under the NFL (Non-Forest Land) model. The site was a forest land and stage of evaluation was fourth.





B. Fencing Status

Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	7032	9882.11	6979	10049.76	53	-167.65	Not Intact	Low
2.	Loose Stone wall	1363	947.32	1350	1134	13	-186.68	Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

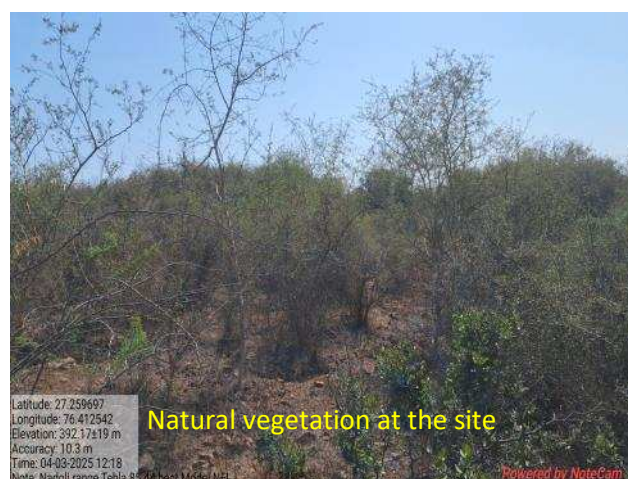
Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
15565	51	39384	55000	28.3

The survival of planted seedling was reported very poor (28.3 percent). Grazing by cattles & stray animals were seen at the site during the Third Party visit. Destruction of planted seedling by termite was also seen at the site. The ditch fencing was almost damaged at the site which directly affects the survival of planted seedling. Some encroachers were residing at the plantation site. They used to practice agriculture & rear cattle's at the site. This had a negative impact on survival & growth of planted seedling.

D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a.	Yes/No	No	Yes	Yes	No	Yes
b.	No. of rows sown		3	2		3
c.	Length (in Metres)		20937	94000		
d.	Approximate No. of Plants as per enumeration		10880	47205		not seen
e.	Species used		Kumtha , Desi Babool	Desi, Babool, Kumtha , Ronj		Desi, Babool, Kumtha, Ronj
f.	Result*		Good	Good		Poor



E. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Kumtha	2.00	251
2.	Desi Babool	3.00	251
3.	Ber	1.50	126
4.	Ronj	2.00	126

F. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Hingot	1.50	94

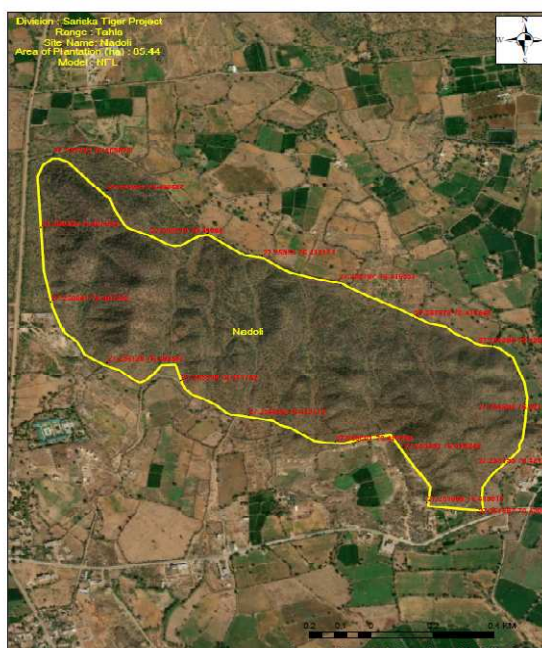
2.	Kumtha	1.20	94
3.	Kair	1.50	63
4.	Jal	1.30	94

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

Sl.no	Particulars	Contour trenches	Percolation of tanks
a	Present Status*	Partly silted	Partly damaged
b	Intervention**	Need Repair	Need Repair
c	Effectiveness***	Low	Low
d	Remarks		I st - damaged due to overflow during rainy season. II nd - siltation

H. GPS Location and KML file: The selected NFL model plantation site measured 85.44 hectare as per KML map.



3.2 Kharriika site in Sariska range -N 27.330704 and E 76.319493

A. About Kharriika Site

The selected plantation was carried out on 50 ha of land at Kharriika site in Sariska range during the year 2022-23. The activities were done under the RDF II (Rehabilitation of degraded Forest) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.8: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2700	3683.45	2650	3816	50	-132.55	Not Intact	Low
2.	Loose Stone wall	285	234.15	250	181.87	35	52.28	Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.9: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5850	20	4130	10000	58.5

The survival of planted seedling was reported average (58.5 percent). The reason behind satisfactory survival & growth of planted seedling was proper upkeep & maintenance of planted seedling. The size of thawalas was more than the average size. Proper bund was constructed around thawalas. Also, termite treatment & manure was also given to the planted seedlings.



Also, 2-3 feet height of plants were planted at the site. In addition the monitoring by site incharge & guarding was also good.

D. Enumeration of Sowing

Table 3.10: Enumeration of Sowing

Sl.no	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a.	Yes/No	No	Yes	Yes	No	Yes
b.	No. of rows sown		3	2		3
c.	Length (in Metres)		7950	20000		30000
d.	Approximate No. of Plants as per enumeration		4162	10380		14089
e.	Species used		Desi, Babool, Kumtha, Ronj	Desi, Babool, Kumtha, Ronj		Desi, Babool, Kumtha, Ronj
	Result*		Good	Good		Good

E. Growth Assessment of Planted Stock

Table 3.11: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Desi Babool	2.50	126	Growth of Desi Babool, Kumtha, Churail looking good.
2.	Ber	1.80	94	
3.	Churel	0.70	31	
4.	Totalis	2.80	157	
5.	Ronj	0.70	31	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.12: Growth Assessment of Plant through Natural Regeneration

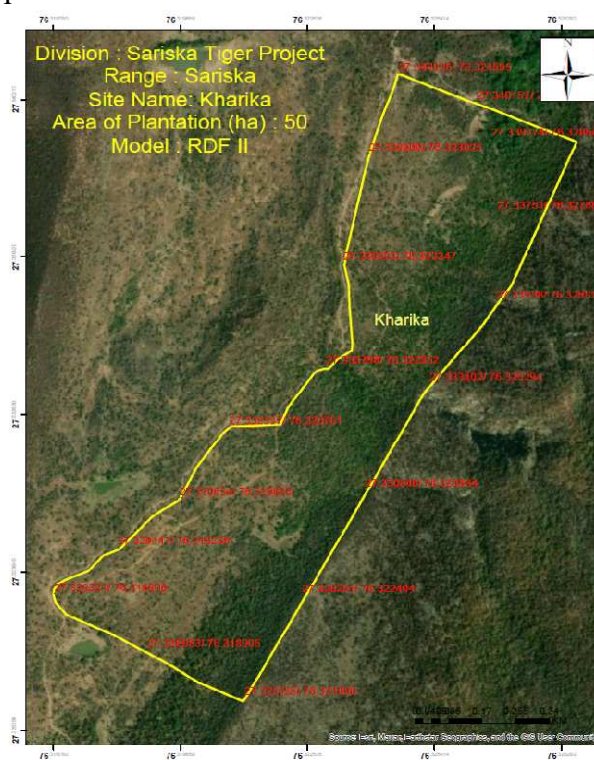
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Totalis	1.50	63
2.	Jal	0.70	15
3.	Kumtha	1.80	188
4.	Hingot	1.50	251

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.13: Assessment of SWC works & WHS

Sl.no	Particulars	Loose Stone Check Dams	Contour trenches	Percolation of tanks
a.	Present Status*	Partly silted & damaged	Partly silted	Intact
b.	Intervention**	Need Repair	Need Repair	No action required
c.	Effectiveness***	Low	Low	Moderate
d.	Remarks			Built in downstream area. Dense vegetation found in downstream area

F. GPS Location and KML file:The selected RDF model plantation site measured 50 hectare as per KML map.

**Table 3.14: Quantitative assessment of plantation works created under CAMPA in Sariska Tiger Project division**

Sl. No.	Site	Model	Area in Ha	Stage of Evaluation	Survival percentage	Rank of Site (Between 0 to 10)*
1	Nadoli	NFL	85.44	Fourth	28.3	4
2	Kharriika	RDF II	50	Third	58.5	6

* 4- very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Bharatpur Sambhag

Bharatpur

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Bharatpur Sambhag, in Bharatpur division 05 plantation sites were covered for second, third & fifth stage evaluation. This Forest Division with 5 Forest Ranges namely Bayana, Kaman, Deeg, Bharatpur & Nadbai has territorial jurisdiction over the entire Bharatpur District.



Figure: Location of Bharatpur district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Bharatpur Forest Division for evaluation are as given in table 1

Table 1: Plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Bayana	Jarkhor	2020-21	50	ANR	CAMPA	Fifth
2.	Bayana	Jarkhor-2	2023-24	50	RDF-II	CAMPA	Second
3.	Deeg	Madhera-4	2022-23	50	ANR	NABARD	Third
4.	Deeg	Pahadtal-3	2023-24	50	ANR	NABARD	Second
5.	Nadbai	Kamalpura	2022-23	25	Other	NABARD	Third

3. Report of Evaluation of Plantation Site

3.1 Jarkhor site in Bayana range -N 26°57'54" and E 77°14'8"

A. Jarkhor Site

The selected plantation was carried out on 50 ha of land Jarkhor site in Bayana range during the year 2020-21. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was fifth.



B. Fencing Status

Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RM T) (in +/-)	Difference (Volume) (in +/- cum)	Condition of the fence Intact / Not	Effectiveness of the fence (High/Medium / Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Loose stone wall fencing	3701	3085	3696	3104	5	-19	Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2983	119	6898	10000	29.8

The survival of planted seedling was reported very poor (29.8 percent). Grazing by stray animals & cattle and destruction by Neel gai, and termite was reported at the site. Human destruction to planted sapling was reported at the site. The protection & guarding of plantation site was reported poor. The area is hilly & soil is rocky.

D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of the Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
1.	Yes/No	No	NA	Yes	NA	Yes
2.	No. of rows sown			2		3
3.	Length (in Metres)			20000		30000
4.	Approximate No. of Plants as per enumeration			2913		Not seen
5.	Species used			Kumtha, Desi babool		Kumtha, Desi babool
6.	Result*			Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Desi Babool	0.55	38	Grazing was reported by goats, stray animal and village. Destruction by termite. rocky soil
2.	Churail	0.45	69	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

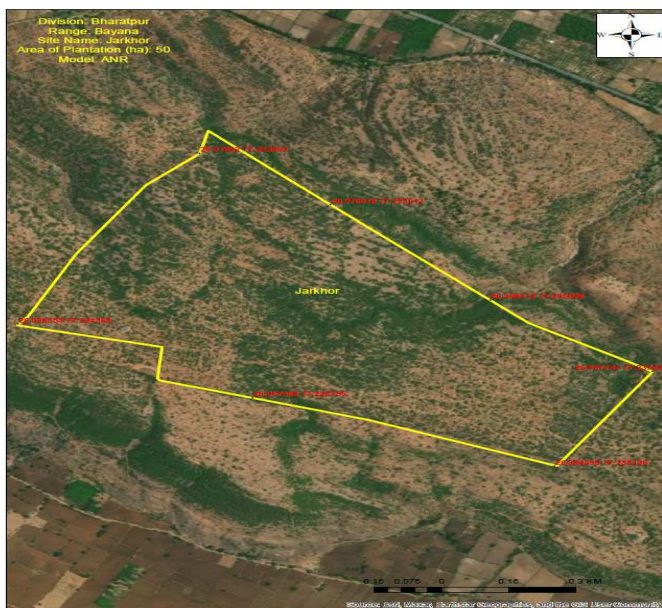
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Ronz	2.3	119	Grazing was reported by goats, stray animal and village animals and damage in the plantation was also reported by the humans.
2.	Desi Babool	2.8	113	
3.	Totalis	2.1	100	
4.	Dhok	2.1	126	

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

Sl.no.	Particulars	Check Dams	Contour trenches
a	Present Status*	Intact	Partly Siltation & damage
b	Intervention**	No	need repair
c	Effectiveness***	Medium	Low

H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectares as per KML map.



3.3.2 Jarkhor 2 site in Bayana range -N 26. 967855 and E 77.221185

A. About Jarkhor 2 Site

The selected plantation was carried out on 50.0 ha. of land at Jarkhor 2 site in Bayana range during the year 2023-24. The activities were done under the RDF II (Rehabilitation Degraded Forest) model. The site was a forest land and stage of evaluation was second.



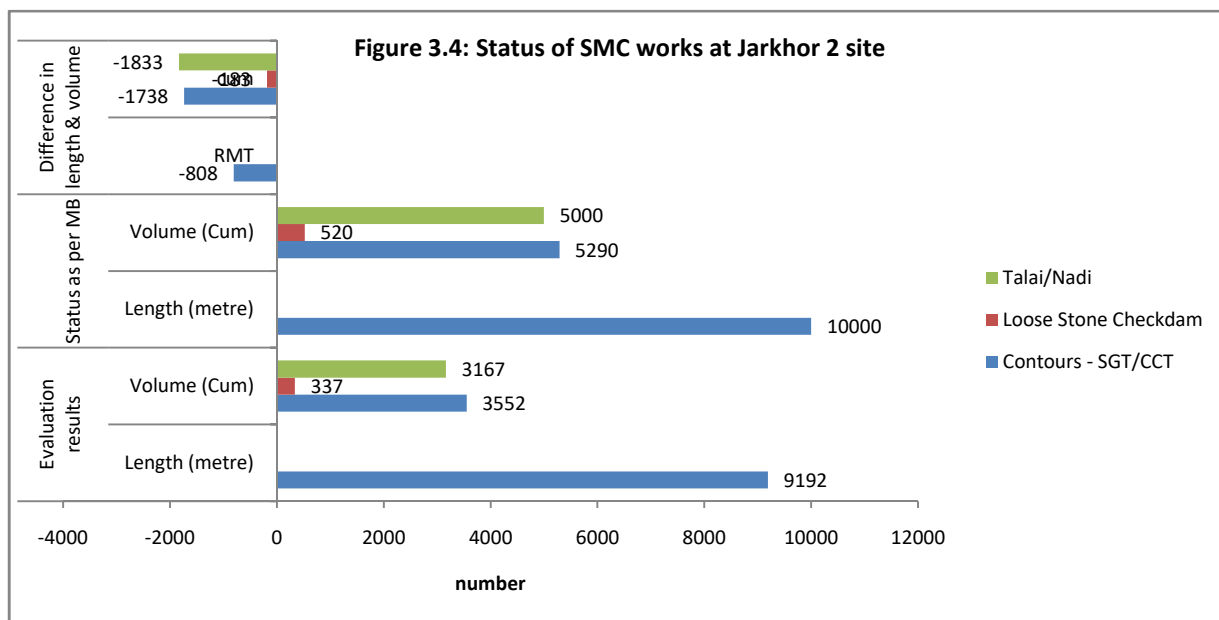
B. Fencing Status

Table 3.8: Fencing Status

S.No	Name of Work/Activity	Evaluation n results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	55	45	50	72	5	-27	Not Intact	Low
2.	Loose stone wall	256 5	203 4	250 0	210 0	65	-66	Not Intact	Low

C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, LSCD & talai/nadi was reported at the site. The area is rocky. The depth of contour trenches was not as per norms. The condition of contour trenches was intact & its effectiveness was reported medium. Loose stone check dam was partly damaged & effectiveness was reported moderate. Talai/Nadi was intact & effectiveness was reported moderate. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



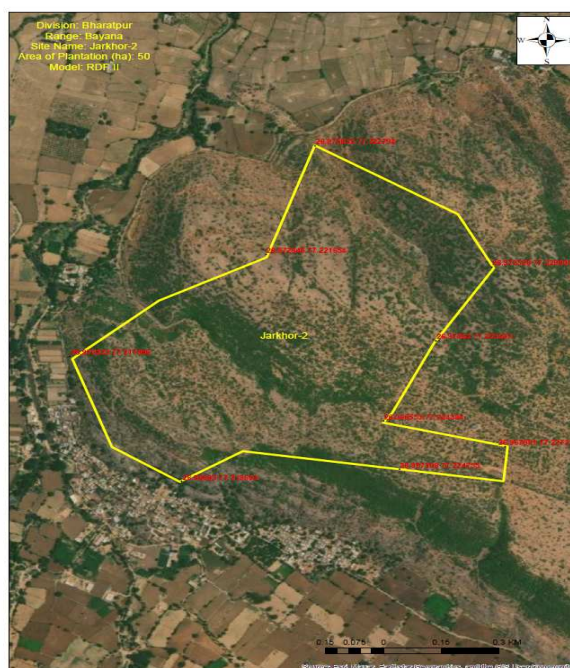
D. Enumeration of Planted Stocks

Table 3.10: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4687	297	5016	10000	46.9

The survival of planted seedling was reported poor (46.9 percent). The reason for low survival was grazing by cattle's & stray animals & human habitation situated close to the site.

E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.3 Mandra 4 site in Deeg range -N 27°24'4" and E 77°21'11"

A. About Mandra 4 Site

The selected plantation was carried out on 50 ha of land at Mandra 4 site in Deeg range during the year 2022-23. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.11: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Barbed wire	2480		2474		6		Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.12: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2243	236	7521	10000	22.43

The survival of planted seedling was reported very poor (22.4 percent). The protection & guarding was reported low at the site. Heavy growth of bushes (Hees) was reported at the site. It obstructs growth of planted seedling. Moreover, widespread fire was reported at the site. Hence, less number of planted seedlings was seen during Third Party Evaluation.



D. Enumeration of Sowing

Table 3.13: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of the Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a.	Yes/No	NA	NA	Yes	No	Yes
b.	No. of rows sown			2		3
c.	Length (in Metres)			20000		30000
d.	Approximate No. of Plants as per enumeration			3125		not seen
e.	Species used			Desi Babool, Kumtha		Desi Babool, Kumtha & Ardu
f.	Result*			Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.14: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Desi Babool	0.6	41	Grazing by cattle's, stray animals. Heavy growth of bushes. Spread of fire. Destruction by monkey
2.	Bair	0.3	25	
3.	Ardoo	1.2	57	
4.	Churail	0.6	38	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.15: Growth Assessment of Plant through Natural Regeneration

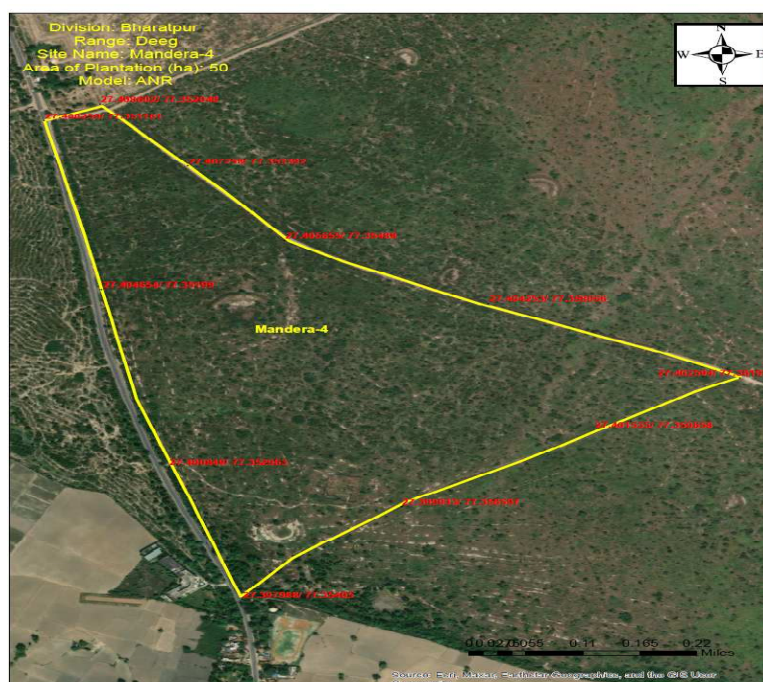
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Peelu	3.21	205
2.	Kair	2.1	195
3.	Kaith	5.8	240
4.	Hingot	1.9	180

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.16: Assessment of SWC works & WHS

Sl.no	Particulars	Contour trenches	Talai/Nadi
a	Present Status*	Intact	Talai-Intact
b	Intervention**	No Action Required	No Action Required
c	Effectiveness***	Medium	Medium

H. GPS Location and KML file: The selected ANR model plantation site measured 50.0 hectare as per KML map.



3.4 Pahadtal 3 site in Deeg range -N 27°27'1" and E 77°17'29"

A. About Pahadtal 3 Site

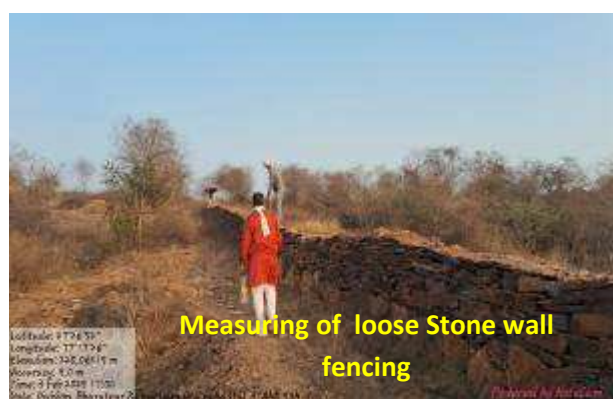
The selected plantation was carried out on 50.0 ha. of land at Pahadtal site in Deeg range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

Table 3.17: Fencing Status

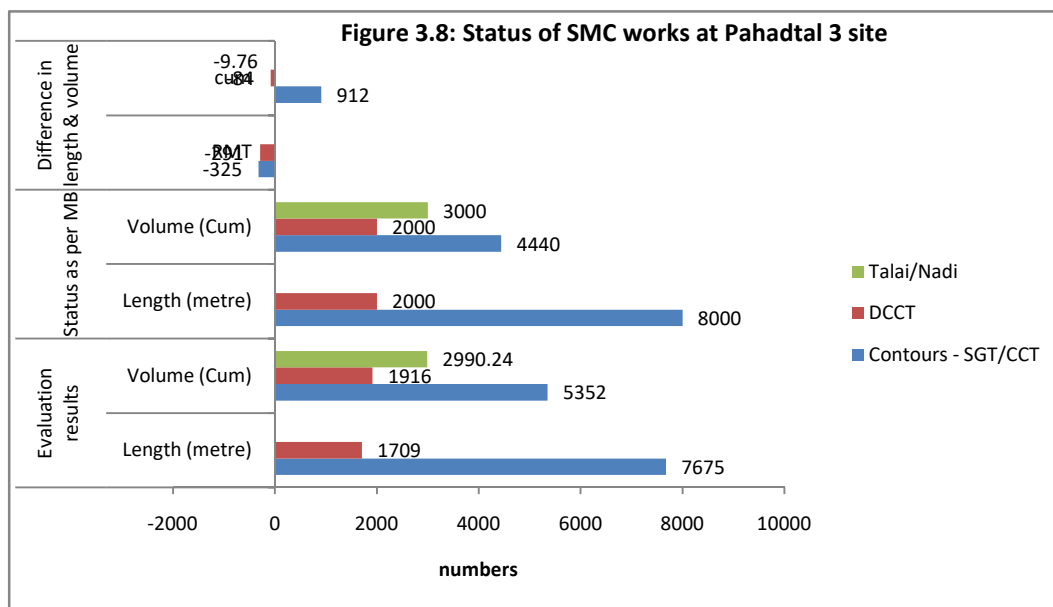
S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1780	2146	1775	2556	5	-410	Not Intact	Low
2.	Loose stone wall	1065	860	1035	869.4	30	-9.4	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT & talai/nadi was reported at the site. The CCT & DCCT was silted or damaged by stray animals & cattles where soil is sandy. In the remaining area CCT & DCCT was intact & effectiveness was reported medium. Also, Talai/Nadi was intact & effectiveness was reported medium. However, catchment area was not taken into

consideration while constructing talai/nadi. Water did not stay for long period in the talai/nadi. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



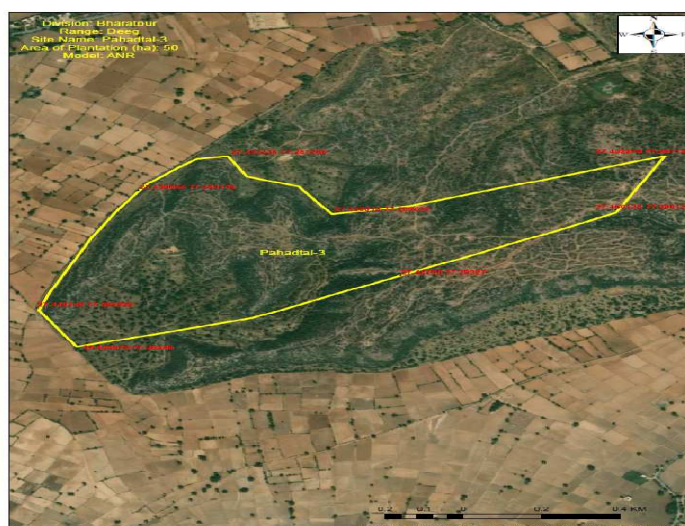
D. Enumeration of Planted Stocks

Table 3.19: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4863	148	4989	10000	48.63

The survival of planted seedling was reported poor (48.6 percent). Protection & guarding was reported poor at the site. Grazing by cattle's, stray animals & Neel gai was reported at the site. The type of soil in the area is moram & sandy. Soil did not retain moisture & survival of planted seedling was poor.

E. GPS Location and KML file: The selected ANR model plantation site measured 50.0 hectare as per KML map.



3.5 Kamalpura site in Nadbai range -N 27°5'5" and E 76°59'37"

A. About Kamalpura Site

The selected plantation was carried out on 25 ha of land at Kamalpura site in Nadbai range during the year 2022-23. The activities were done under the other model. The site was a panchayat land and stage of evaluation was third.

B. Fencing Status

Table 3.20: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch fencing	1890	2414	1800	2592	90	-178	Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.21: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
6093	52	13855	20000	30.5

The survival of planted seedling was reported very poor (30.5 percent). The Panchayat has allotted land to the forest department. Human habitation is situated close to the plantation site. Grazing by cattles, stray animals & Neel gai was reported at the site. Heavy growth of grass viz. moonja was reported at the site. It obstructs growth of planted seedling. Also, protection & guarding was reported poor.



D. Enumeration of Sowing

Table 3.22: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of the Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
a.	Yes/No	No	Yes	Yes	No	Yes
b.	No. of rows sown		3	2		3
c.	Length (in Metres)		5400	15000		60000
d.	Approximate No. of Plants as per enumeration		879	2000		not seen
e.	Species used		Kumtha Totalis	Kumtha Totalis		Kumtha Totalis
f.	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.23: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Totalis	1.82	63	Grazing by cattle's, stray animals. Heavy growth of moonja grass. Poor guarding & protection
2.	Desi Babool	1.53	50	
3.	Bair	1.27	44	
4.	Shisham	0.79	28	
5.	Jungle Jalebi	1.24	41	
6.	Churail	0.64	31	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.24: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)
1.	Totalis	1.92	69
2.	Churail	1.78	63
3.	Neem	1.73	53
4.	Desi Babool	1.68	57

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.25: Assessment of SWC works & WHS

Sl.no	Particulars	Contour trenches	Talai/Nadi
a	Present Status*	Silted& damaged	Intact

b	Intervention**	Need of Repairing	No action
c	Effectiveness***	Low	Medium



H. GPS Location and KML file: The selected other model plantation site measured 25.0 hectare as per KML map.

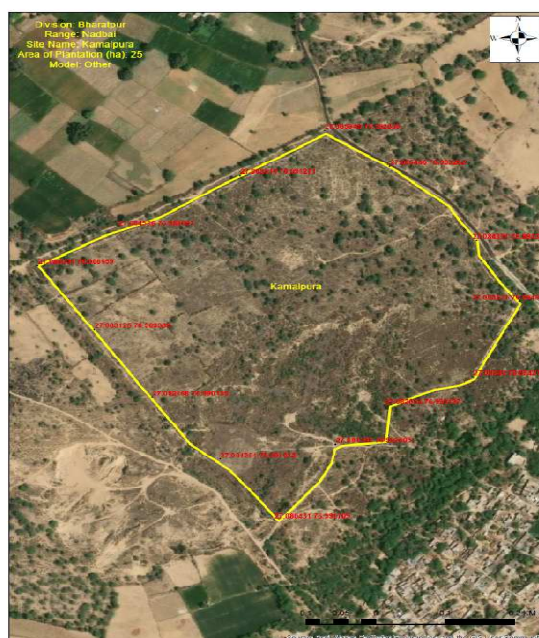


Table 3.26: Quantitative assessment of plantation work created under CAMPA in Bharatpur division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Jarkhor	ANR	50	29.8	4
2.	Jarkhor-2	RDF-II	50	46.9	5
3.	Madhera-4	ANR	50	22.4	4
4.	Pahadtal-3	ANR	50	48.6	5
5.	Kamalpura	Other	25	30.5	4

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Dholpur

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Bharatpur Sambhag, in Dholpur division 06 plantation sites were covered for second, third & fourth stage evaluation. This Forest Division with 4 Forest Ranges namely Sarmathura, Baadi, Van Vihar & Dholpur has territorial jurisdiction over the entire Dholpur District.



Figure: Location of Dholapur district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Dholpur Forest Division are as given in table-3.1.

Table-3.1: Selected plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Sarmathra	Hariyawali	2021-22	50.0	ANR	CAMPA	IV
2.	Badi	Sagar	2023-24	50.0	RDF-II	RDF	II
3.	Badi	Kans Ki Nari-A	2022-23	50.0	RDF-II	RDF	III
4.	Dholpur	Hatiyakhar-A	2023-24	50.0	ANR	CAMPA	II
5.	Van Vihar	Karas Ka Dada	2023-24	50.0	ANR	NABARD	II
6.	Van Vihar	Layakpura-II	2023-24	50.0	RDF-I	RDF	II

3. Report of Evaluation of Plantation Site

3.1 Hariyawali site in Sarmathra range -N 26.481607 and E 77.254689

A. About Hariyawali Site

The selected plantation was carried out on 50 ha of land at Hariyawali site in Sarmathra range during the year 2021-22. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was fourth.

B. Fencing Status

Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RM T) (in +/- RM T)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Loose stone wall Fencing	810	695.00	800	672	10	23.00	Not Intact	Low
2.	Dola fencing	2500	5101	2400	3984	100	1117	Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4291	321	5388	10000	42.9

The survival of planted seedling was reported poor (42.9 percent). Grazing by stray animals & cattle and destruction by Neel gai & termite was reported at the site. Protection & guarding was reported poor. The dola fencing was damaged in many places.

D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of a Dola fence	On mound of a Contour	In the ditch of Contour trench	On Thawalas/ Saucer mounds

				trench		
a.	Yes/No	No	Yes	Yes	No	Yes
b.	No. of rows sown		3	2		3
c.	Length (in Metres)		7200	11000		30000
d.	Approximate No. of Plants as per enumeration		7950	24080		325
e.	Species used		Desi Babool, Kumtha	Desi Babool, Kumtha		Kumtha
f.	Result*		Good	Good		Poor

E. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Desi Babool	0.95	79	Grazing was reported by goats, stray animal and village animals. Poor protection
2.	Ronz	0.35	21	



F. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Goya Khair	0.60	31	Grazing was reported by goats, stray animal and village animals.

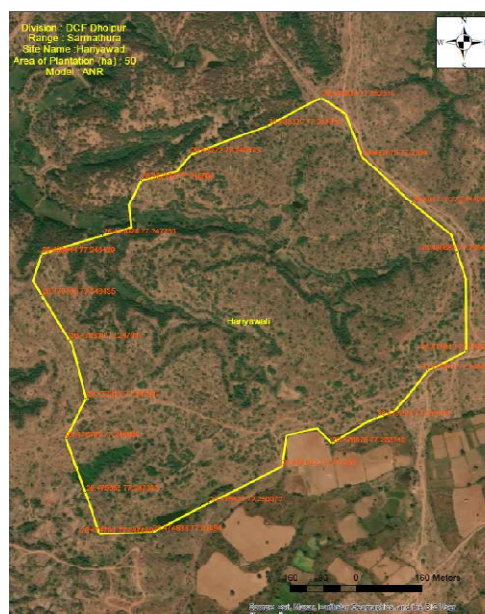
G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

S.no.	Particulars	Earthen check dam	Contour trenches
a	Present Status*	Silted	Silted

b	Intervention**	Need Repair	Need Repair
c	Effectiveness***	Low	Low

H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectares as per KML map.



3.2 Sagar site in Badi range -N 26.701558and E 77.400598

A. About Sagar Site

The selected plantation was carried out on 50.0 ha. of land at Sagar site in Badi range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

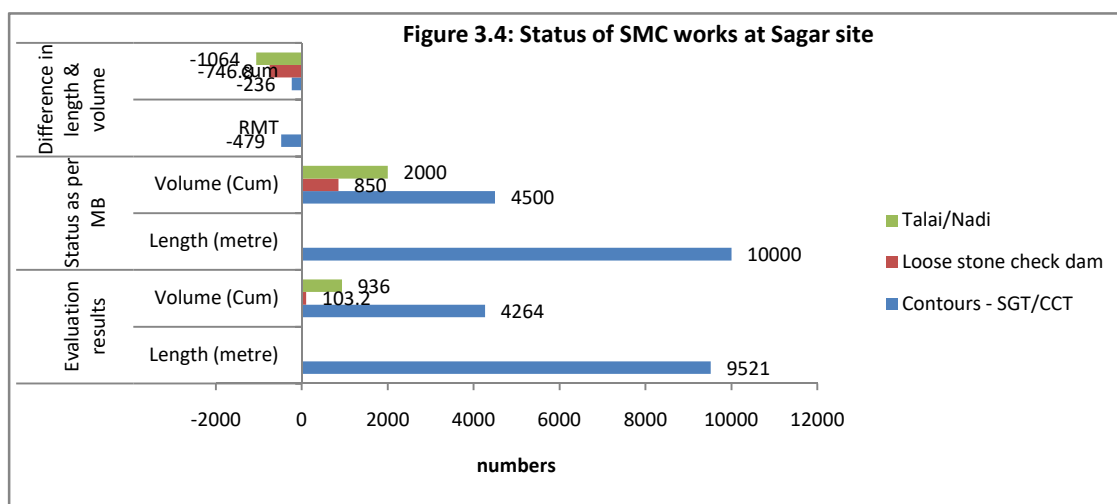
Table 3.8: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Dola Fencing	3200	6532	3185	5287.1	15	1244.90	Not Intact	Low

C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, loose stone check dam & talai was reported at the site. The CCT was almost silted. The CCT was not intact & effectiveness was reported low. The stones of LSCD were stolen by local people. The loose stone check dam & earthen check dam was not intact & effectiveness was reported low. The talai was silted and damaged with excessive rain

water. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.10: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
3340	7	6653	10000	33.4

The survival of planted seedling was reported very poor (33.4 percent). Cattles, stray animals & Neel gai used to enter through damaged dola fencing route. The soil was not conducive for



survival of planted seedling. The pillar was damaged & main gate was not reported at the site. Destruction by termite was also seen during the Third Party Evaluation. Majority of thawalas were seen empty without any live plants.

E. GPS Location and KML file:The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.3 Kans Ki Nari A site in Badi range -N 26.694013and E 77.38763

A. About Kans Ki Nari A Site

The selected plantation was carried out on 50 ha of land at Kans Ki Nari A site in Badi range during the year 2022-23. The activities were done under the RDF (Regeneration of degraded forest) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.11: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1	Dola fencing	3733	7327.00	3700	6142.0	33	1185.00	Intact	Medium

C. Enumeration of Planted Stocks

Table 3.12: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2584	21	7395	10000	25.8

The survival of planted seedling was reported very poor (25.8 percent). Cattles, stray animals & Neel gai used to enter through damaged dola fencing route. The soil was not supportive for survival of planted seedling. Main gate was not reported at the site, only pillar was reported at the site. Destruction by termite was also seen during the Third Party Evaluation. Hoeing was not reported at the site. Protection & guarding was reported.



Enumeration of Sowing

Table 3.13: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On mound of a Dola fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
	Yes/No	No	Yes	Yes	NA	Yes
a.	No. of rows sown		3	2		3
b.	Length (in Metres)		11100	20000		30000
c.	Approximate No. of Plants as per enumeration		2135	1420		325
d.	Species used		Desi Babool, Kumtha	Desi Babool, Kumtha		Desi Babool, Kumtha
e.	Result*		Poor	Poor		Poor

D. Growth Assessment of Planted Stock

Table 3.14: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
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1.	Desi Babool	0.35	63	Grazing was reported by goats, stray animal and village animals. Poor protection
2.	Bair	0.15	46	
3.	Churail	0.13	67	

E. Growth Assessment of Plant through Natural Regeneration

Table 3.15: Growth Assessment of Plant through Natural Regeneration

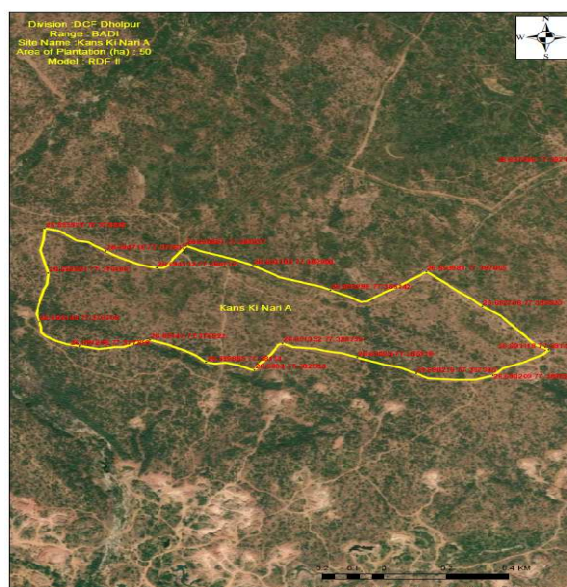
Sl.no	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Goya Khair	0.35	67	Grazing was reported by goats, stray animal and village animals.

F. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.16: Assessment of SWC works & WHS

S.no.	Particulars	Loose stone check dam	Contour trenches
a	Present Status*	Partly damaged	Damaged
b	Intervention**	Need Repair	Need Repair
c	Effectiveness***	Medium	Low

H. GPS Location and KML file: The selected RDF model plantation site measured 50 hectares as per KML map.



3.4 Hatiyakhar A site in Dholpur range -N 26.679318 and E 77.94235

A. About Hatiyakhar A Site

The selected plantation was carried out on 50.0 ha. of land at Hathyakhar A site in Dhlopur range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

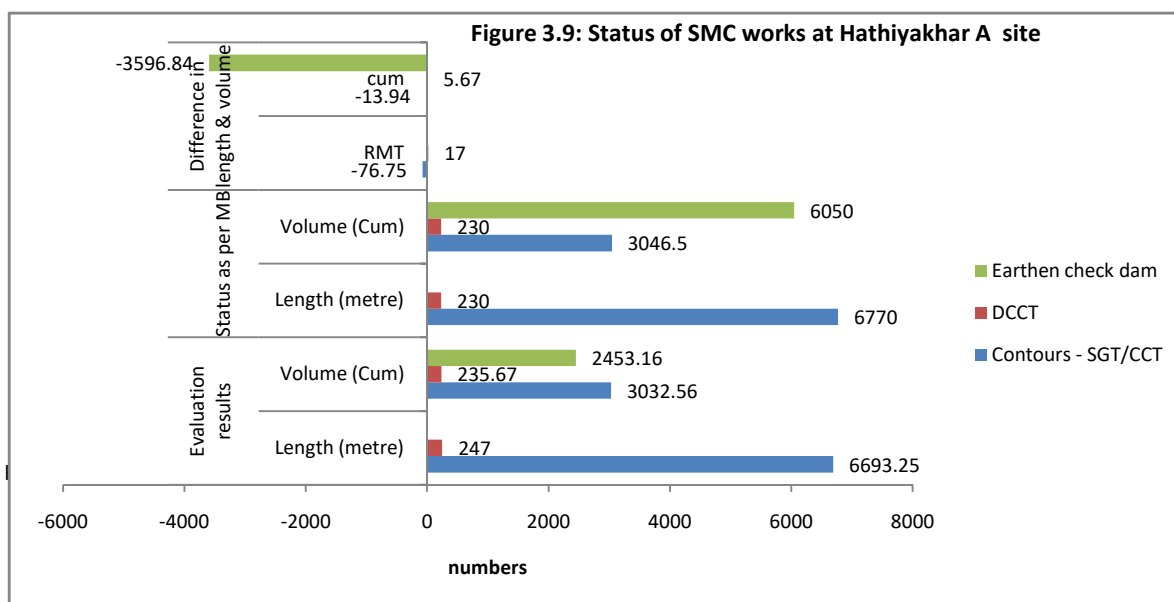
Table 3.17: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	3050	4392	2970	4276.8	80	115.2	Intact	Medium



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT & earthen check dam was reported at the site. ECDs were constructed without arrangement of waste weir for safe disposal of excess water & lack of compaction was seen during the Third Party Evaluation. The ECD was damaged & silted. Quantity (cum) of DCCT & SGT is satisfactory as compared with quantity monitored in MB.



At some places contours are not followed while digging SGT/DCCT. DCCT at some places executed in the valley portion which may cause formation of nallah.

D. Enumeration of Planted Stocks

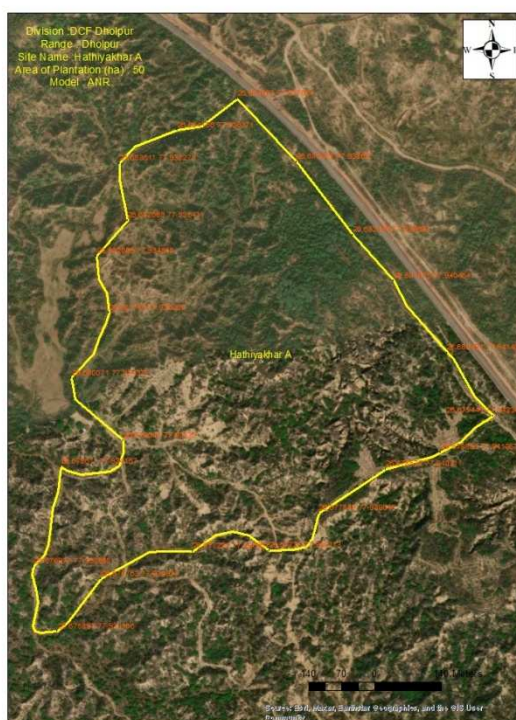
Table 3.19: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5862	243	3895	10000	58.6

The survival of planted seedling was reported average (58.6 percent). Apart from ravines & undulating land, in the remaining area of plantation site the soil is conducive for survival of planted seedling. Also, protection of site through ditch fencing was satisfactory.



E. GPS Location and KML file:The selected ANR model plantation site measured 50.0 hectare as per KML map.



3.5 Karas Ka Dada site in Van Vihar range -N 26.589093andE 77.669908

A. About Karas Ka Dada Site

The selected plantation was carried out on 50.0 ha. of land at Karas Ka Dada site in Van Vihar range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.

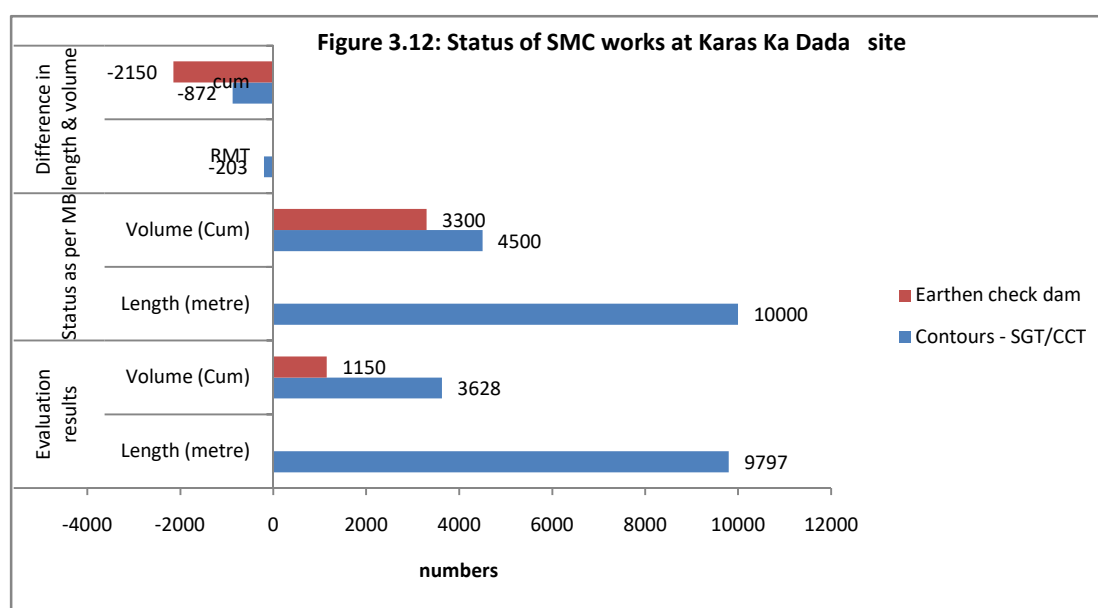
B.Fencing Status

Table 3.20: Fencing Status

S.N o	Name of Work/Activi ty	Evaluation results		Status as per MB		Differ ence (RMT) (in +/- RMT)	Differ ence (Volum e) (in +/- Cum)	Condi on of the fence Intact/ Not	Effectiven ess of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1	Dola Fencing	2270	4601.00	1450	2871.0	820	1730.00	Not Intact	Low
2	Loose Stone wall	1855	1043.00	1800	1512	55	-469.00	Not Intact	Low

The dola & loose stone wall fencing which was measured 2270 RMT & 1855 RMT respectively against 1450 RMT & 1800 RMT as per MB. The condition of both the fencing was not intact & effectiveness of fencing was reported low. The dola & loose stone wall fencing was damaged in many places.

C. Soil Moisture Conservation Works Status



Under SMC structure, CCT/SGT & earthen check dam was reported at the site. The type of soil in the area is rocky. Due to which the contour trenches & SGT were not dug as per standard size. The earthen check dam was intact & effectiveness was reported medium.

Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.

D. Enumeration of Planted Stocks

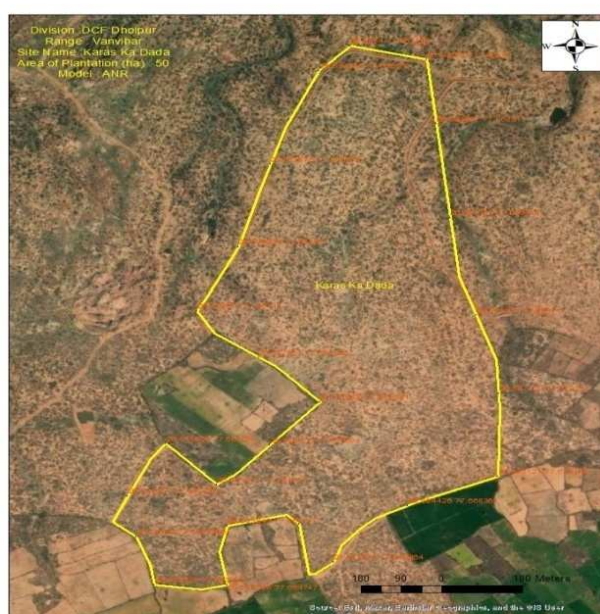
Table 3.22: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
3230	29	6741	10000	32.3



The survival of planted seedling was reported very poor (32.3 percent). Cattles, stray animals & Neel gai used to enter through damaged dola & loose stone wall fencing route. The soil was not conducive for survival of planted seedling. The pillar was damaged & main gate was not reported at the site. Destruction by termite was also seen during the Third Party Evaluation. Majority of thawalas were seen empty without any live plants.

E. GPS Location and KML file: The selected ANR model plantation site measured 50.0 hectare as per KML map.



3.6 Layakpura II site in Van Vihar range -N 26.595828 and E 77.693183

A. About Layakpura II Site

The selected plantation was carried out on 50.0 ha. of land at Layakpura II site in Van Vihar range during the year 2023-24. The activities were done under the RDF (Rehabilitation of degraded Forest) model. The site was a forest land and stage of evaluation was second.



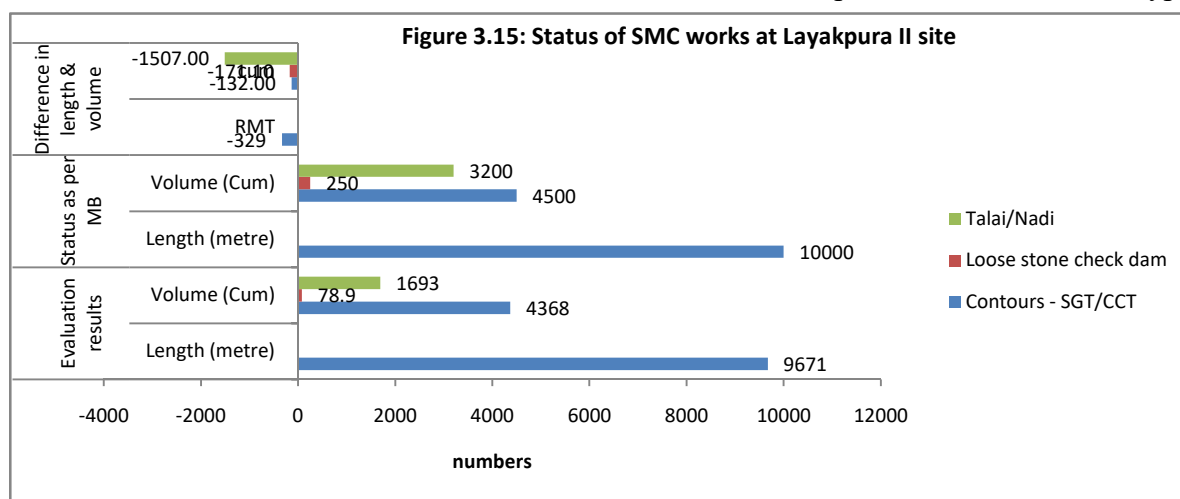
B. Fencing Status

Table 3.23: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1	Dola Fencing	3650	7179.00	3450	6831.0	200	348.00	Not Intact	Low

C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, loose stone check dam & talai was reported at the site. The type



of soil in the area is rocky. Due to which the contour trenches & SGT were not dug as per standard size. The talai & loose stone check dam was intact & effectiveness was reported medium. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.25: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
10485	7	14508	25000	41.9

The survival of planted seedling was reported poor (41.9 percent). Cattles, stray animals & Neel gai used to enter through damaged dola fencing route. The soil was not conducive for survival of planted seedling. The pillar was installed but main gate was not reported at the site. Destruction by termite was also seen during the Third Party Evaluation.

E. GPS Location and KML file:The selected ANR model plantation site measured 50.0 hectare as per KML map.

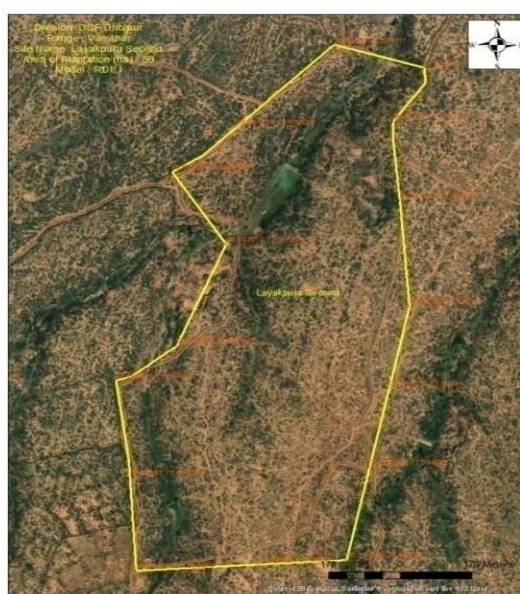


Table 3.26: Quantitative assessment of plantation work created under CAMPA in Dholpur division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Hariyawali	ANR	50	42.9	5
2.	Sagar	RDF-II	50	33.4	4
3.	Kans Ki Nari-A	RDF-II	50	25.8	4
4.	Hatiyakhar-A	ANR	50	58.6	6
5.	Karas Ka Dada	ANR	50	32.3	4
6.	Layakpura-II	RDF-I	50	41.9	5

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Karauli

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Bharatpur Sambhag, in Karauli division 07 plantation sites were covered for second & fifth stage evaluation. This Forest Division with 6 Forest Ranges namely Hindaun, Mandrayal, Masalpur, Karauli, Sapotra & Gudachannandraji has territorial jurisdiction over the entire Karauli District.



Figure : Location of Karauli district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Karauli Forest Division for evaluation are as given in table 1

Table 1: Plantation sites for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Mode I	Plan	Stage of Evaluation
1.	Karauli	Gandhiji Ateva	2020-21	50	RDF-I	RDF	V
2.	Karauli	Tal Ke Upar Soraya Kosra	2023-24	5	PCA	CAMPA	II
3.	Sapotra	Masavta	2023-24	50	ANR	NABARD	II
4.	Sapotra	Lediya	2023-24	50	RDF-I	RDF	II
5.	Sapotra	Adadugar	2023-24	50	RDF-II	RDF	II
6.	Hindon	Medkapura	2023-24	50	RDF-II	NABARD	II
7.	Masalpur	Jhamri Mata	2023-24	50	ANR	CAMPA	II

3. Report of Evaluation of Plantation Site

3.1 Gandhiji Atewa site in Karauli range -N 26°22'26"and E 76°55'54"

1. About Gandhiji Atewa Site

The selected plantation was carried out on 50 ha of land at Gandhiji Atewa site in Karauli range during the year 2020-21. The activities were done under the RDF II (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was fifth.

2. Fencing Status

Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Loose stone wall Fencing	4295	3441.00	4280	3595	15	-154.00	Not Intact	Low



3. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
10773	472	13755	25000	43.1

The survival of planted seedling was reported poor (43.1 percent). The plantation site has completed five year of maintenance. Watcher/ Cattle guard was not reported at the site. Grazing by stray animals & cattle and destruction by Neel gai & termite was reported at the site. Protection



& guarding was reported poor. Also, main gate was not reported at the plantation site.

4. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
	Yes/No	No	NA	Yes	NA	Yes
a.	No. of rows sown			2		3
b.	Length (in Metres)			18836		75000
c.	Approximate No. of Plants as per enumeration			9418		Not seen
d.	Species used			Khair, Kumtha, Desi Babool, Ronz		Khair, Kumtha, Desi Babool, Ronz
e.	Result*			Good		Poor

5. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Churail	0.84	79	Grazing was reported by goats, stray animal and village animals. Poor protection & guarding
2.	Desi Babool	1.20	63	
3.	Neem	1.10	79	
4.	Bair	1.60	63	

6. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

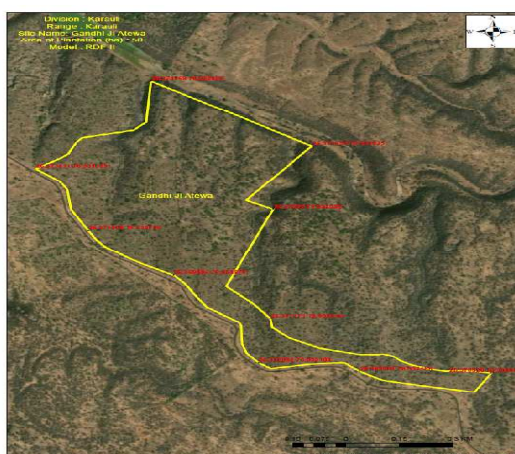
Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
	Dhok	2.90	226	Grazing was reported by goats, stray animal and village animals.

8. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

S.no.	Particulars	Loose Stone Check Dams	CCT/SGT	DCCT
a	Present Status*	Damaged	Silted 20-30%	Silted 25-35%
b	Intervention**	Needs Repair	No Action Required	No Action Required
c	Effectiveness***	Moderate	High	High
d	Remarks	Could be made Gabion with wire mesh work	Largely followed the slopes and effective	

H. GPS Location and KML file:The selected RDF model plantation site measured 50 hectares as per KML map.



3.2 Tal Ke Upar Sorya Kosra site in Karauli range -N 26°27'23" and E 77°5'23"

A. About Tal Ke Upar Sorya Kosra Site

The selected plantation was carried out on 5.03 ha. of land at Tal Ke Upar Sorya Kosra site in Karauli range during the year 2023-24. The activities were done under the PCA (Penal Compensatory Afforestation) model. The site was a forest land and stage of evaluation was second.

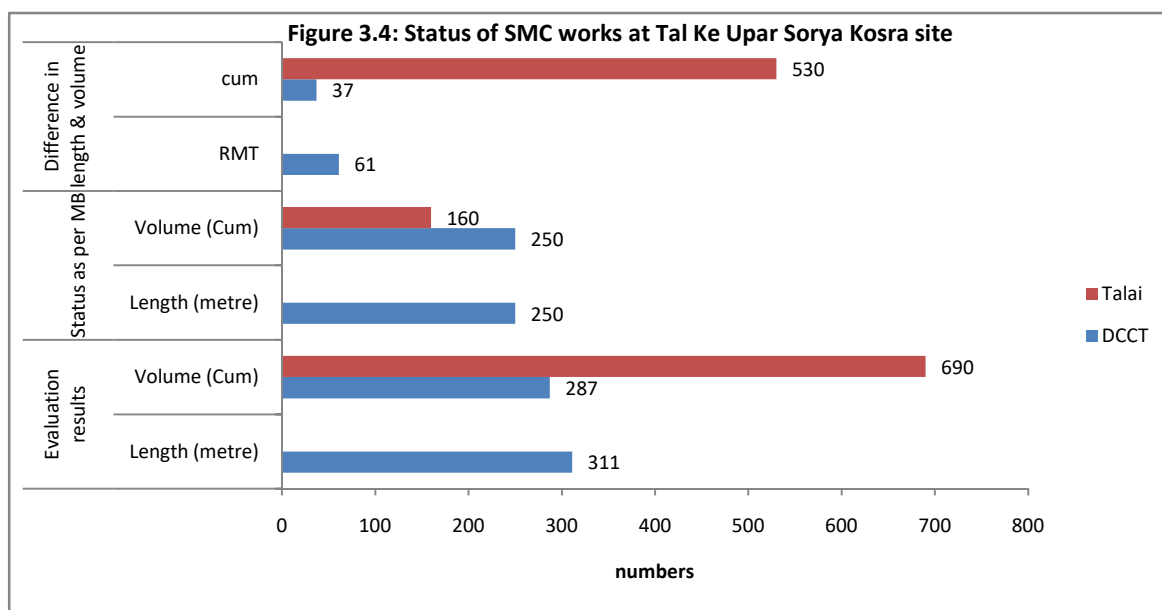
B. Fencing Status

Table 3.8: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/-)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1300	1577.00	1000	1444.0	300	133.00	Not Intact	Low

C. Soil Moisture Conservation Works Status

Under SMC structure, DCCT & talai (02 nos.) was reported at the site. The DCCT & talai was intact & effectiveness was reported medium. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

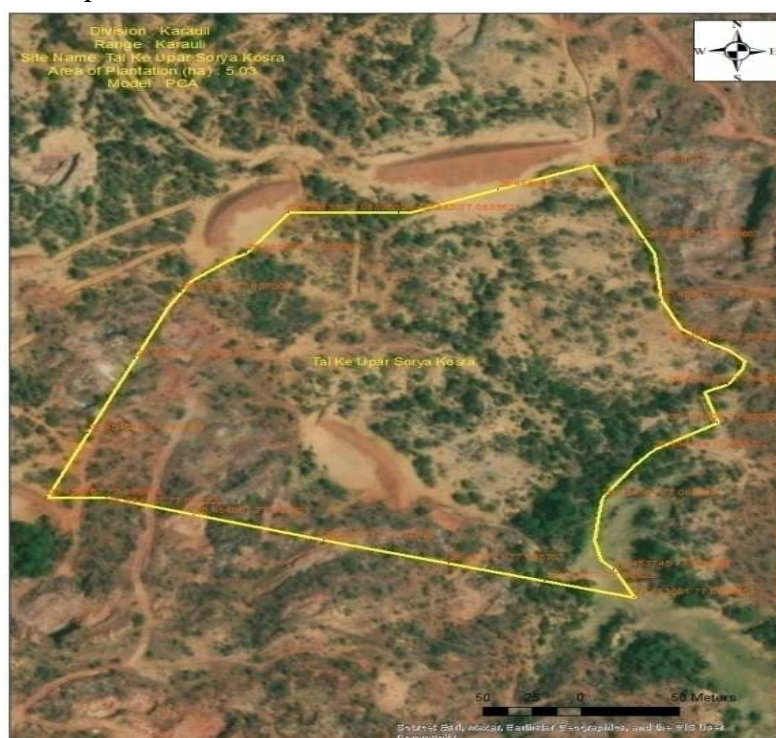
Table 3.10: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
1789	37	1674	3500	51.1

The survival of planted seedling was reported average (51.1 percent). The soil is conducive for survival of planted seedling due to soil moisture retention. However, cattles, stray animals & Neel gai used to enter through damaged ditch fencing route. Hence, growth of planted seedling was reported poor.



E. GPS Location and KML file: The selected PCA model plantation site measured 5.03 hectare as per KML map.



3.3.3 Masawta site in Sapotra range -N 26°20'39"and E 76°40'56"

A. About Masawta Site

The selected plantation was carried out on 50.0 ha. of land at Masawta site in Sapotra range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

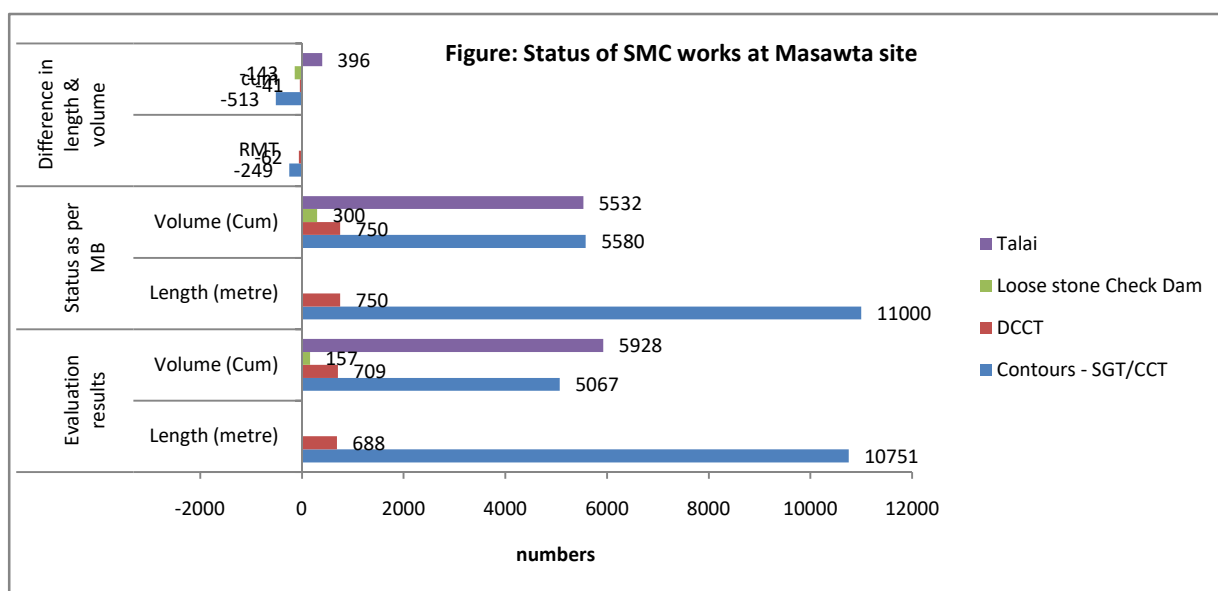
Table 3.11: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	3200	3100.00	3040	4377.6	160	-1277.60	Not Intact	Low
2.	Loose stone wall fencing	140	74.00	200	168	-60	-94.00	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT, loose stone check dam & talai was reported at the site. All the SMC structures were intact & effectiveness was reported moderate. The CCT & DCCT was silted (20-30 percent). The talai was silted and damaged with excessive rain water. The talai was constructed without arrangement of waste weir for safe disposal of excess water.



D. Enumeration of Planted Stocks

Table 3.13: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4676	131	5193	10000	46.8

The survival of planted seedling was reported poor (46.8 percent). Cattles, stray animals & Neel gai used to enter through damaged ditch & loose stone wall fencing route. Also, human habitation was situated close to the site. Thus, local pressure was also reported at site. The main gate was not reported at the site.



E. GPS Location and KML file: The selected ANR model plantation site measured 50.0 hectare as per KML map.



3.4 Lediya site in Sapotra range -N 26°24'45" and E 76°50'12"

A. About Lediya Site

The selected plantation was carried out on 50.0 ha. of land at Lediya site in Sapotra range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.



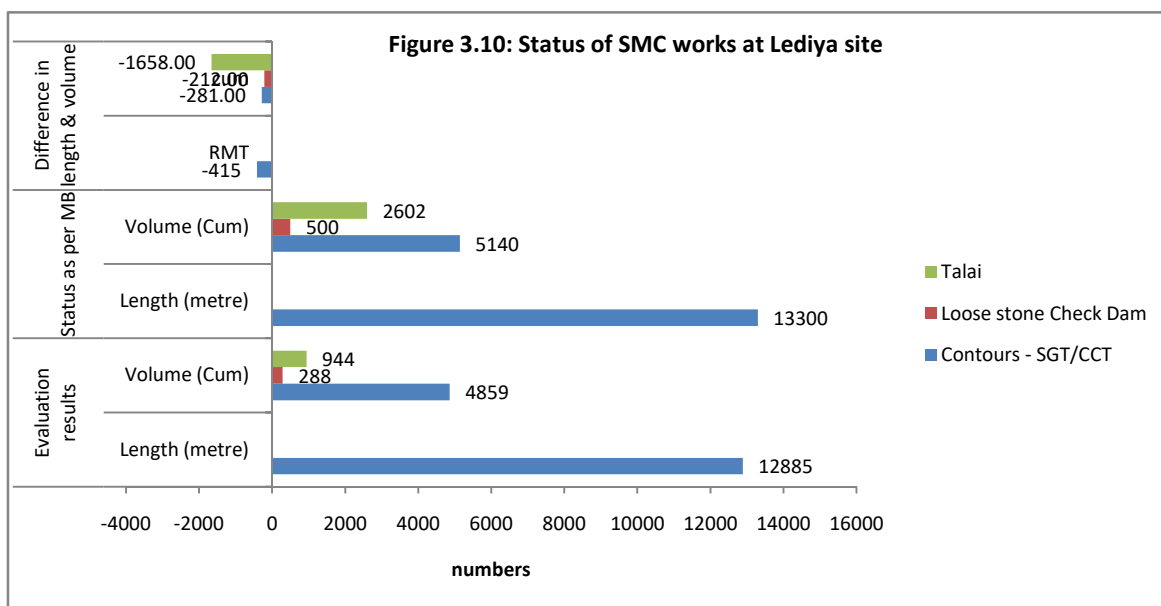
B. Fencing Status

Table 3.14: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1655	2147.00	1650	2376.0	5	-229.00	Not Intact	Low
2.	Loose Stone wall	1510	1056.00	1500	1260	10	-204.00	Not Intact	Low

C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, loose stone check dam & talai was reported at the site. All the SMC structures were intact & effectiveness was reported moderate. All the three SMC structures were made less in quantity (cum) as compared with quantity monitored in MB. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.16: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5721	111	4168	25000	22.9

The survival of planted seedling was reported very poor (22.9 percent). Cattles, stray animals & Neel gai used to enter through damaged ditch & loose stone wall fencing route. The main

gate was not reported at the site. The soil in some part of site is not conducive for survival & growth of planted seedling. Protection & guarding was poor at the site.

E. GPS Location and KML file:The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.5 Adadungar site in Sapotra range -N 26.310142 and E 76.810022

A. About Adadungar Site

The selected plantation was carried out on 50.0 ha. of land at Adadungar site in Sapotra range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

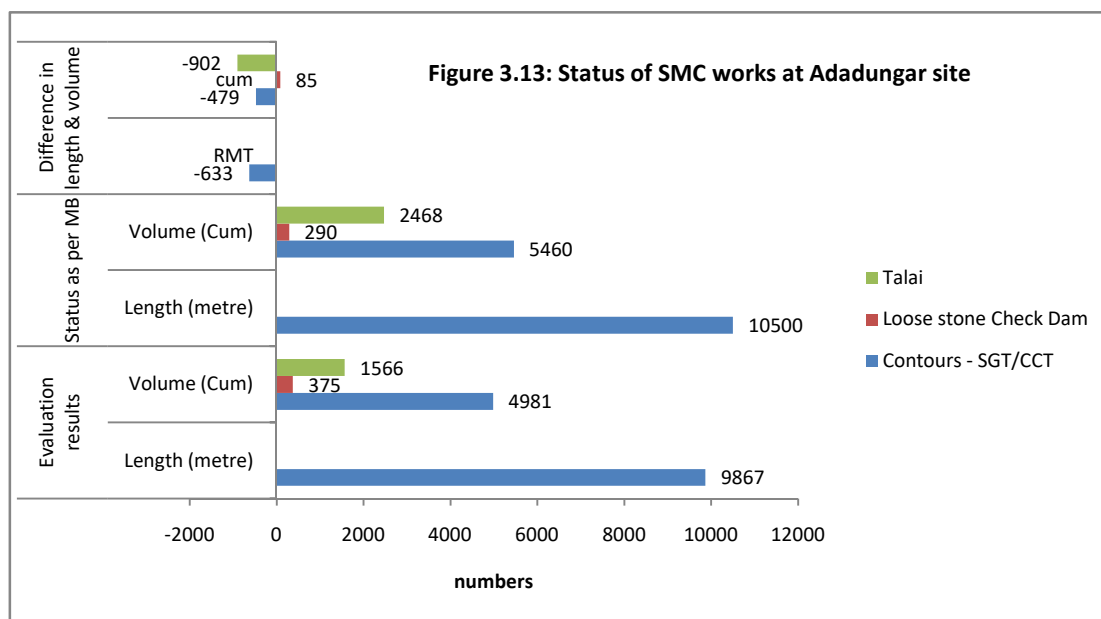
Table 3.17: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2610	4020.00	2443	3517.9	167	502.08	Not Intact	Low
2.	Loose Stone wall	860	1369.00	838	703.92	22	665.08	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, loose stone check dam & talai was reported at the site. All the SMC structures were intact & effectiveness was reported moderate. The contour trenches were not dug as per standard due to rocky soil in some part of the plantation site. The talai was silted and damaged with excessive rain water. The talai was constructed without arrangement of waste weir for safe disposal of excess water.



D. Enumeration of Planted Stocks

Table 3.19: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4982	137	4881	10000	49.8

The survival of planted seedling was reported poor (49.8 percent). Cattles, stray animals & Neel gai used to enter through damaged ditch & loose stone wall fencing route. Human habitation is situated at a distance of 200 metre from the site. The main gate was not reported at the site. The soil in some part of site is not conducive for survival & growth of planted seedling. Protection & guarding was poor at the site.



E. GPS Location and KML file:The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.6 Medkapura site in Hindaun range -N 26.659998 and E 77.017735

A. About Medkapura Site

The selected plantation was carried out on 50.0 ha. of land at Medkapura site in Hindaun range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

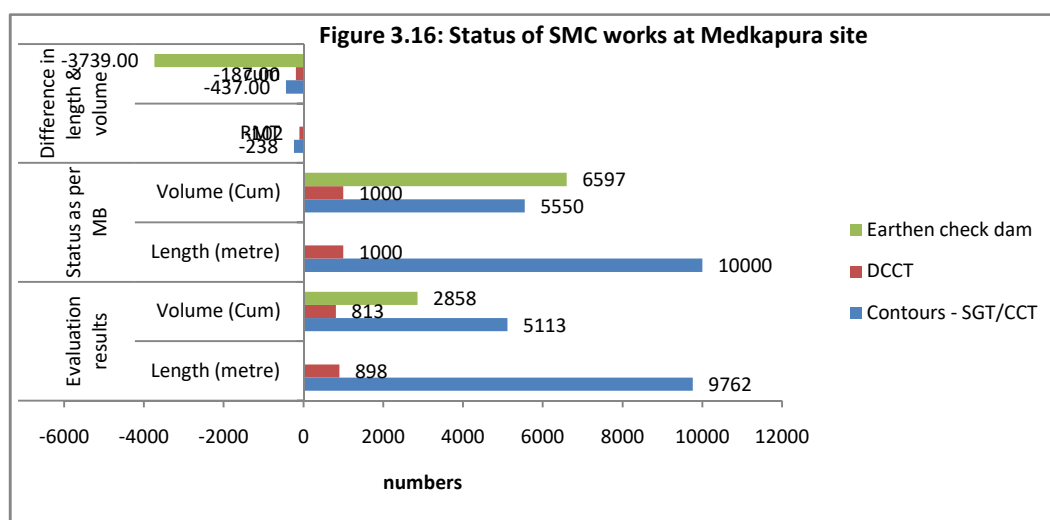
Table3.20: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1	Ditch Fencing	4080	5741.00	4050	5832.0	30	-91.00	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT & earthen check dam was reported at the site. The contour trenches & DCCT was silted in many places. The contour trenches & DCCT was not intact & its effectiveness was reported low. There are 12-15 earthen check dam/talai in the site constructed under various scheme viz. MJSA & others. These earthen check dam/talai did not fulfill the purpose of soil & moisture conservation as some were constructed without taking consideration of catchment area & other aspects. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



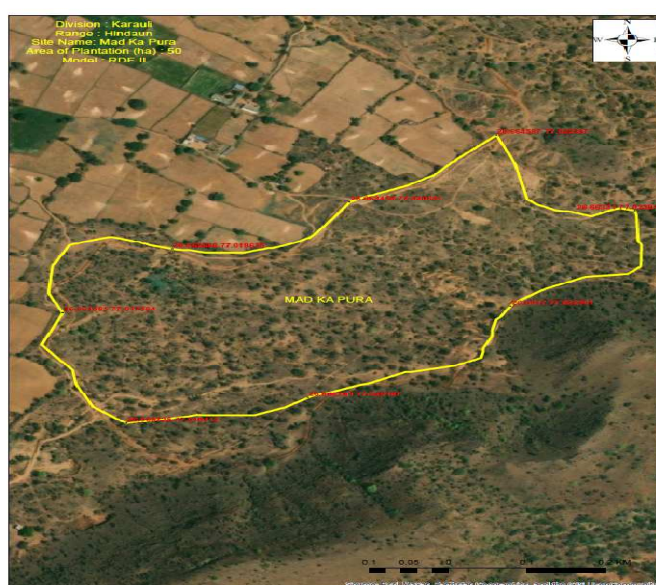
D. Enumeration of Planted Stocks

Table 3.22: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
1603	6	8391	10000	16.03

The survival of planted seedling was reported very poor (16.03 percent). Cattles, stray animals & Neel gai used to enter through damaged ditch fencing route. Protection & guarding was poor at the site.

E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.7 Jhamri Mata site in Masalpur range -N 26.6454 and E 77.266197

A. About Jhamri Mata Site

The selected plantation was carried out on 50.0 ha. of land at Jhamri Mata site in Masalpur range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.



B. Fencing Status

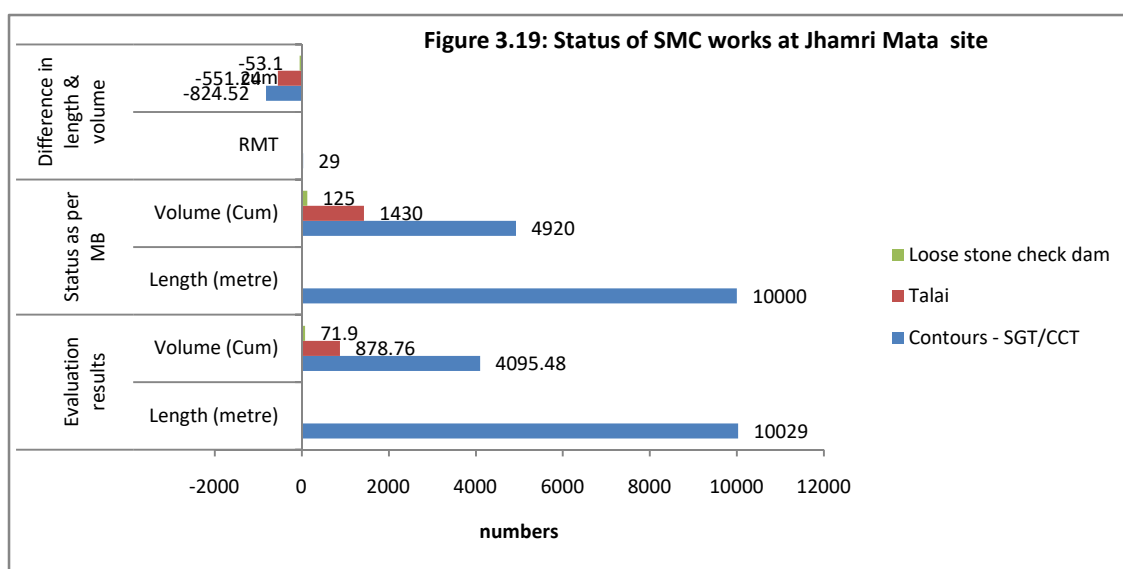
Table 3.23: Fencing Status

S.N o	Name of Work/Activi ty	Evaluation results		Status as per MB		Differen ce (RMT) (in +/- RMT)	Differen ce (Volum e) (in +/- Cum)	Condi on of the fence Intact/ Not	Effectiven ess of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1	Loose Stone wall	350 5	2810. 85	350 0	294 0	5	-129.15	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, loose stone check dam & talai was reported at the site. The contour trenches were not dug as per standard due to rocky soil in major part of the plantation site. The depth of contour trenches was not more than 1 feet. Hence, contour trenched did not fulfill the purpose of soil & moisture conservation. The talai was damaged with excessive rain water. The talai was constructed without arrangement of waste weir for safe disposal of excess water. The location of loose stone check dam was not proper & its use was low.



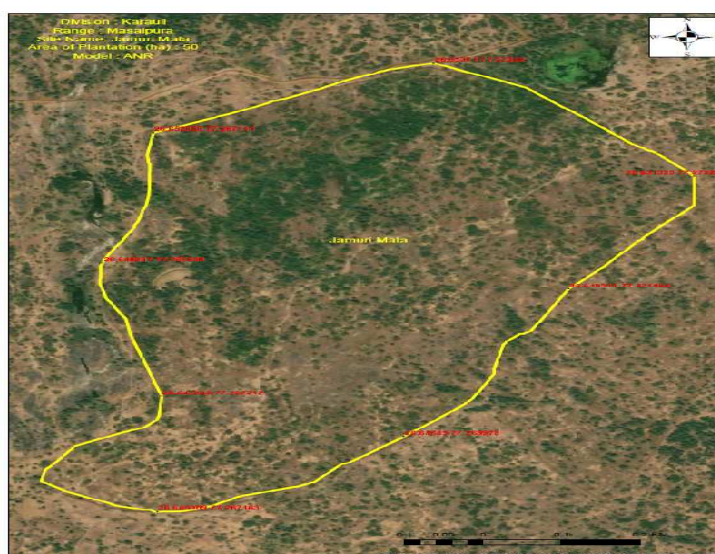
D. Enumeration of Planted Stocks

Table 3.25: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4187	122	5691	10000	41.9

The survival of planted seedling was reported poor (41.9 percent). Cattles, stray animals & Neel gai used to enter through damaged loose stone wall fencing route. Destruction of planted seedling was also done by wild boar & termite. Empty thawalas were seen in the site due to destruction of planted seedling by wild boar. Also, soil in the site is rocky which is not conducive for survival & growth of planted seedling. Protection & guarding was poor at the site.

E. GPS Location and KML file: The selected ANR model plantation site measured 50.0 hectare as per KML map.

**Table 3.26: Quantitative assessment of plantation work created under CAMPA in Karauli division**

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Gandhiji Ateva	RDF-I	50	43.1	5
2.	Tal Ke Upar Soraya Kosra	PCA	5.03	51.1	6
3.	Masavta	ANR	50	46.8	5
4.	Lediya	RDF-I	50	22.9	4
5.	Adadugar	RDF-II	50	49.8	5
6.	Medkapura	RDF-II	50	16.0	4
7.	Jhamri Mata	ANR	50	41.9	5

* 4: very poor (below 40%), 5: poor (40- 50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Sawai Madhopur

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Bharatpur Sambhag, in Sawai Madhopur division 07 plantation sites were covered for second, third & fourth stage evaluation. This Forest Division with 3 Forest Ranges namely Sawai Madhopur, Bonli & Gangapur City has territorial jurisdiction over the entire Sawai Madhopur District.

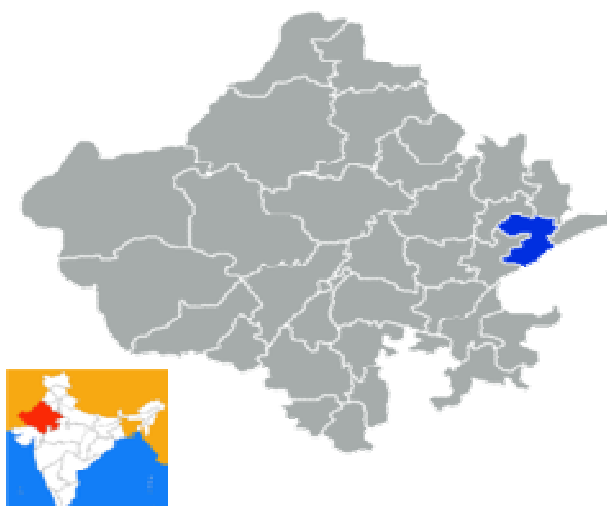


Figure 1 Location of Sawaimadhopedistrict, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Sawai Madhopur Forest Division for evaluation are as given in table 1

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Gangapur City	Bucholai 2nd	2021-22	50	RDF-II	NABARD	Fourth
2.	Gangapur City	Safeda Ki Khan	2023-23	50	RDF-II	NABARD	Third
3.	Gangapur City	Kuagaon Bichpuri	2023-23	50	RDF-II	RDF	Third
4.	Sawai Madhopur	Khedli-I	2023-23	50	ANR	CAMPA	Third
5.	Sawai Madhopur	Todolai- 2nd	2023-24	50	RDF-II	NABARD	Second
6.	Sawai Madhopur	Isarda Balaji Ist	2023-24	50	RDF-II	RDF	Second
7.	Bonli	Jailalpura	2023-24	50	ANR	CAMPA	Second

3. Report of Evaluation of Plantation Site

3.1 Bucholai II in Gangapur City range -N 26.441039 and E 76.697033

A. About Bucholai II Site

The selected plantation was carried out on 50 ha of land Bucholai II site in Gangapur City range during the year 2021-22. The activities were done under the RDF (Rehabilitation of degraded Forest) model. The site was a forest land and stage of evaluation was fourth.



B. Fencing Status

Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	430	577	400	576	30	1	Not Intact	Low
2.	Loose stone wall fencing	1730	1228.6	1560	1310.4	170	-81.8	Not Intact	Low
3.	Barbed wire fencing	195		180		15		Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4468	21	5511	10000	44.7

The survival of planted seedling was reported poor (44.7 percent). Guarding & Protection was reported poor at the site. Grazing by stray animals & cattle and destruction by Neel gai, was reported at the site. Human destruction to planted sapling was reported at the site. The type of soil in the area is sandy & rocky. Soil & moisture retention is low & survival of planted seedling was reported poor.



D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
	Yes/No	No	Yes	Yes	No	Yes
a.	No. of rows sown		3	2		3
b.	Length (in Metres)		4680	14000		30000
c.	Approximate No. of Plants as per enumeration		936	1750		not seen
d.	Species used		Desi Babool, Kumtha	Desi Babool, Kumtha		Desi Babool, Kumtha
e.	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock

Table 3.5: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Desi Babool	1.10	79	Grazing was reported by goats, stray animal and village animals and damage in the plantation was also reported by the humans. Sandy & rocky soil
2.	Ber	0.30	22	
3.	Ronj	0.40	47	
4.	Churail	0.45	47	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.6: Growth Assessment of Plant through Natural Regeneration

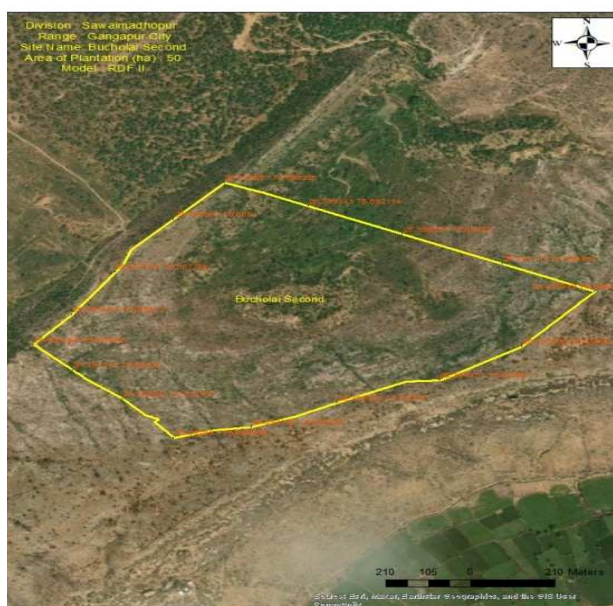
Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Jal	0.80	94	Grazing was reported by goats, stray animal and village animals and damage in the plantation was also reported by the humans.
2.	Kakhod	0.55	63	
3.	Desi Babool	0.95	69	
4.	Totalis	0.90	75	

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.7: Assessment of SWC works & WHS

S.no.	Particulars	Contour trenches	Contour dykes	Talai
a	Present Status*	Partly Damage & silted	Intact	Intact
b	Intervention**	Need repair	No action required	No action required
c	Effectiveness***	Low	Moderate	Moderate

H. GPS Location and KML file:The selected RDF model at plantation site measured 50 hectare as per KML map.



3.2 Safeda Ki Khan in Gangapur City range -N 26.338627 and E 76.60089

A. About Safeda Ki Khan Site

The selected plantation was carried out on 50 ha of land Safeda Ki Khan site in Gangapur City range during the year 2022-23. The activities were done under the RDF (Rehabilitation of degraded Forest) model. The site was a forest land and stage of evaluation was third.

B. Fencing Status

Table 3.8: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2460	3677.32	2370	3412.8	90	264.52	Not Intact	Low
2.	Loose stone wall fencing	150	119.5	150	126	0	-6.5	Not Intact	Low
3.	Barbed wire fencing	55		18		37		Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.9: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4510	86	5404	10000	45.1

The survival of planted seedling was reported poor (45.1 percent). Guarding & Protection was reported poor at the site. Grazing by stray animals & cattle and destruction by Neel gai, was reported at the site.

D. Enumeration of Sowing

Table 3.10: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
	Yes/No	No	Yes	Yes	No	Yes
a.	No. of rows sown		3	2		3
b.	Length (in Metres)		7110	30000		30000

c.	Approximate No. of Plants as per enumeration		2488	10507		not seen
d.	Species used		Desi Babool, Kumtha	Desi Babool, Kumtha		Desi Babool, Kumtha
e.	Result*		Average	Average		Poor

E. Growth Assessment of Planted Stock



Table 3.11: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Desi Babool	0.40	31	Grazing was reported by goats, stray animal and village animals.
2.	Ber	0.30	18	
3.	Ronj	0.25	13	
4.	Totalis	0.35	22	

F. Growth Assessment of Plant through Natural Regeneration

Table 3.12: Growth Assessment of Plant through Natural Regeneration

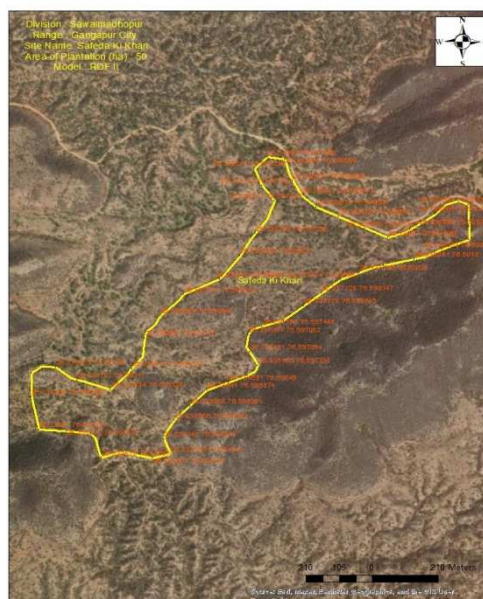
Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Barbara	0.20	31	Grazing was reported by goats, stray animal and village animals and damage in the plantation was also reported by the humans.
2.	Chepni	0.25	19	
3.	Dhok	0.30	16	
4.	Ber	0.35	19	
5.	Khejdi	0.40	19	

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.13: Assessment of SWC works & WHS

S.no.	Particulars	Earthen Check Dams	Contour trenches
a	Present Status*	Partly Damage	Partly silted & damaged
b	Intervention**	Need repair	No action required
c	Effectiveness***	Low	Moderate to low

H. GPS Location and KML file:The selected RDF model at plantation site measured 50 hectare as per KML map.



3.3 Kuagaon Bichpuri in Gangapur City range -N 26°34'43" and E 76°24'57"

A. About Kuagaon Bichpuri Site

The selected plantation was carried out on 50 ha of land Kuagaon Bichpuri site in Gangapur City range during the year 2022-23. The activities were done under the RDF (Rehabilitation of degraded Forest) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.14: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1630	1772.2	1350	1944	280	-171.8	Not Intact	Low
2.	Loose stone wall fencing	1485	907.2	1405.76	1124.6	79.24	-217.4	Not Intact	Low
3.	Barbed wire fencing	60		60				Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.15: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4582	109	5309	10000	45.8

The survival of planted seedling was reported poor (45.8 percent). Guarding & Protection was reported poor at the site. Grazing by stray animals & cattle and destruction by Neel gai, was reported at the site. Heavy growth of bush viz. Arusta, Thor & Jal was reported at the site. It obstructs the growth of planted seedling at the site. The type of soil in the area is bolder & moranda.



D. Enumeration of Sowing

Table 3.16: Enumeration of Sowing

Sl.no	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
	Yes/No	No	Yes	Yes	No	Yes
a.	No. of rows sown		3	2		3
b.	Length (in Metres)		4050	10606		30000
c.	Approximate No. of Plants as per enumeration		2320	5304		not seen
d.	Species used		Desi Babool, Kumtha, Ardoo	Desi Babool, Kumtha, Ardoo		Desi Babool, Kumtha, Ardoo
e.	Result*		Good	Good		Poor

E. Growth Assessment of Planted Stock

Table 3.17: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Desi Babool	1.90	88	Grazing was reported by goats, stray animal and village animals. Heavy growth of bush.
2.	Churail	1.70	88	
3.	Gular	2.25	100	

4.	Siras	2.50	69	
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F. Growth Assessment of Plant through Natural Regeneration

Table 3.18: Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)
1.	Palas	1.45	100
2.	Churail	0.95	88
3.	Dhok	1.00	113
4.	Amaltas	1.15	88
5.	Ronj	0.80	50
6.	Khirni	0.75	44

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)

Table 3.19: Assessment of SWC works & WHS

S.no.	Particulars	Contour trenches	Talai
a	Present Status*	Intact	Partly Damaged
b	Intervention**	No action required	Need repair
c	Effectiveness***	Moderate	Low

H. GPS Location and KML file: The selected RDF model at plantation site measured 50 hectare as per KML map.



3.4 Khedli I in Sawai Madhopur range -N 26.182515 and E 76.284781

A. About Khedli Site

The selected plantation was carried out on 50 ha of land Khedli I site in Sawai Madhopur range during the year 2022-23. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was third.



B. Fencing Status

Table 3.20: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1	Ditch Fencing	3535	4762.53	3530	5083.2	5	-320.67	Not Intact	Low

C. Enumeration of Planted Stocks

Table 3.21: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
3208	117	6675	10000	32.1

The survival of planted seedling was reported very poor (32.1 percent). In the front side of the plantation site due to plain area the survival of planted seedling was reported satisfactory, whereas heavy growth of Juliflora was reported in the ravine area which obstruct the growth of planted seedling. Guarding & Protection was reported poor at the site. Grazing by stray animals & cattle and destruction by Neel gai, was reported at the site.



D. Enumeration of Sowing

Table 3.22: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
	Yes/No	No	Yes	Yes	No	Yes
a.	No. of rows sown		3	2		3
b.	Length (in Metres)		10590	20000		30000
c.	Approximate No. of Plants as per enumeration		2350	8642		Not seen
d.	Species used		Desi Babool, Kumtha	Desi Babool, Kumtha		Desi Babool, Kumtha
e.	Result*		Poor	Average		Poor

E. Growth Assessment of Planted Stock

Table 3.23: Growth Assessment of Planted Stock

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Desi Babool	1.75	88	Heavy growth of Juliflora.
2.	Churail	0.60	94	
3.	Ber	0.50	31	
4.	Sheesham	1.20	50	
5.	Ronj	0.55	50	

F. Growth Assessment of Plant through Natural Regeneration

Sl.no.	Species	Average Height (in Metre)	Average Girth (in mm)	Remarks
1.	Desi Babool	1.15	88	Heavy growth of Juliflora
2.	Peelu	0.90	82	
3.	Hingot	1.10	57	
4.	Ardoo	0.80	69	

Table 3.25: Assessment of SWC works & WHS

S.no.	Particulars	Contour trenches	Talai	Gabion
a	Present Status*	Intact	Intact	Intact
b	Intervention**	No action required	No action required	No action required
c	Effectiveness***	Moderate	Moderate	High

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B. Fencing Status

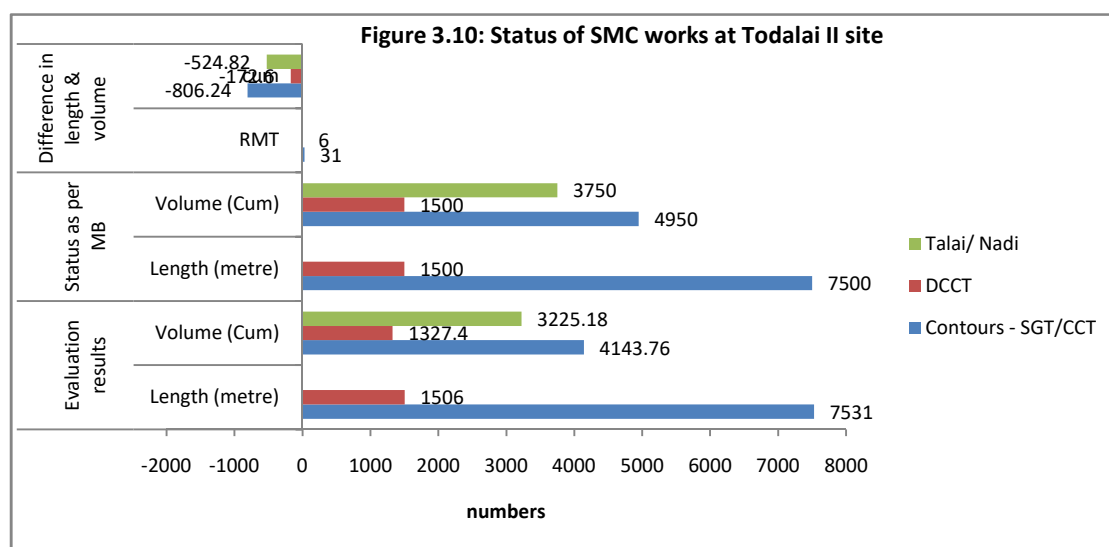
Table 3.26: Fencing Status

S.No.	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	586	742.13	570	820.8	16	-78.67	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT & talai was reported at the site. CCT & DCCT was partly silted. The condition of CCT & DCCT was not intact & effectiveness of contour trenches & CCT at the plantation site was reported low. The talai was partly damaged & effectiveness of talai was reported medium. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



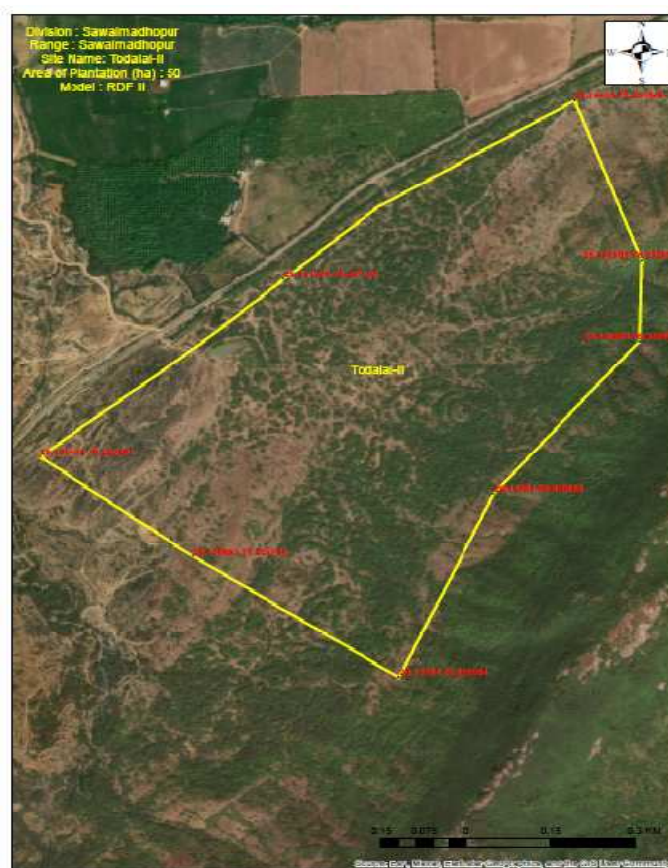
D. Enumeration of Planted Stocks

Table 3.28: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
5113	173	4714	10000	51.1

The survival of planted seedling was reported average (51.1 percent). Due to soil moisture retention capacity of clayey domat soil the survival of planted seedling was reported average.

E. GPS Location and KML file:The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.6 Isarda Balaji Ist site in Sawai Madhopur range -N 26.147202 and E 76.045755

A. About Isarda Balaji Ist Site

The selected plantation was carried out on 50 ha of land at Isarda Balaji Ist site in Sawai Madhopur range during the year 2023-24. The activities were done under the RDF (Rehabilitation of degraded forest) model. The site was a forest land and stage of evaluation was second.

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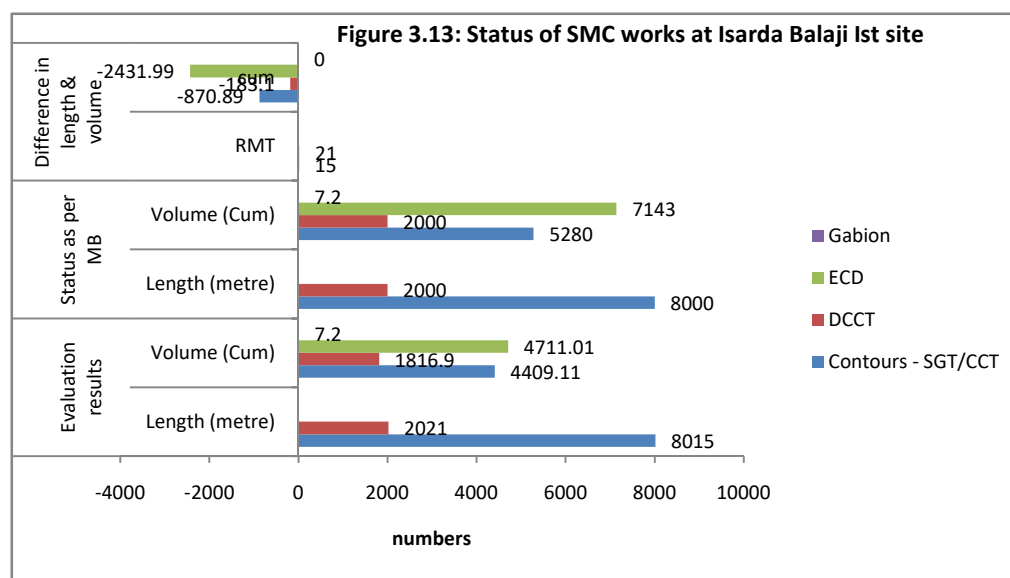
B. Fencing Status

Table 3.29: Fencing Status

S.No.	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	1635	2730.48	1550	2232.0	85	498.48	Not Intact	Low
2.	Barbed wire	280		250		30		Not Intact	Low

C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT, talai/nadi & gabion was reported at the site. The CCT & DCCT was partly silted. The effectiveness of contour trenches & DCCT at the plantation site was reported medium. The gabion was intact & effectiveness was reported medium. The earthen check dam was not intact & effectiveness of ECD was reported low. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

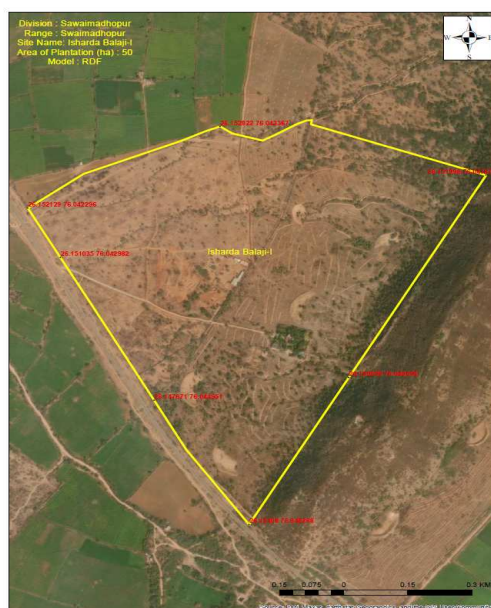
Table 3.31: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4691	13	5296	10000	46.9

The survival of planted seedling was reported poor (46.9 percent). The soil is not supportive for survival & growth of planted seedling. Good growth of planted seedling was reported in some part of the site, whereas it has not shown in the other part of the site. Semi crescent thawalas has been made under shed of trees restricted growth of planted seedling. Also, grazing by cattle's & stray animals was reported at the site.



E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



3.7 Jailalpura site in Bonli range – N 26.296418 and E 76.181255

A. About Jailalpura Site

The selected plantation was carried out on 50 ha of land at Jailalpura site in Bonli range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status



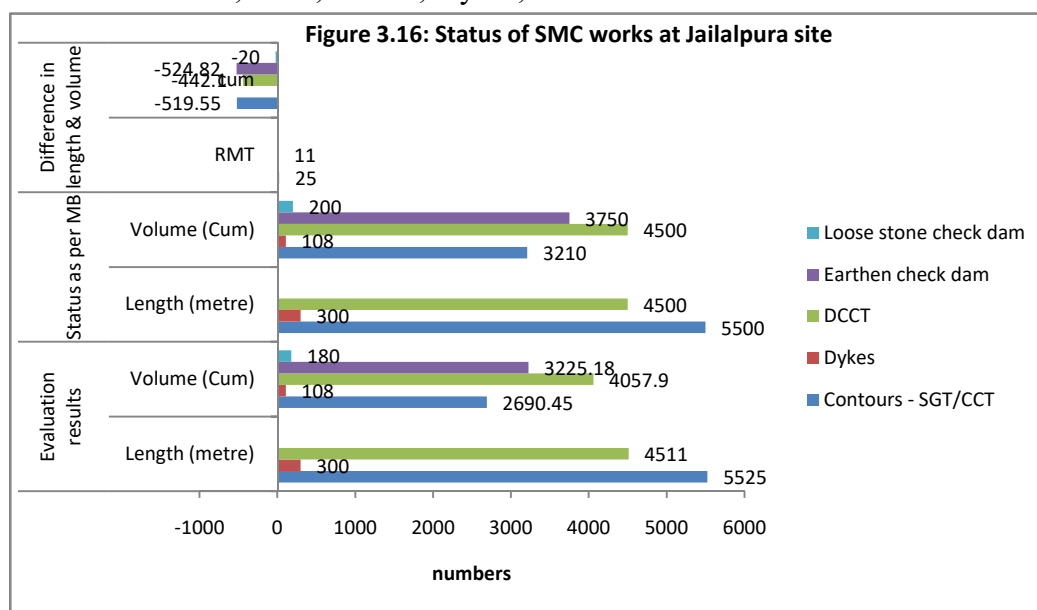
Table 3.32: Fencing Status

S.N o.	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	2442	5095.32	2270	3268.8	172	1826.52	Not Intact	Low
2.	Loose stone wall	510	436.10	470	394.8	40	41.30	Not Intact	Low
3.	Barbed wire	135		125		10		Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT, Dykes, earthen check dam & loose stone check dam was



reported at the site. The CCT & DCCT was partly silted. The effectiveness of contour trenches & DCCT at the plantation site was reported medium. The Dykes, earthen check dam & loose stone check dam was intact & its effectiveness was reported medium. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.

D. Enumeration of Planted Stocks

Table 3.34: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
2321	17	7662	10000	23.2

The survival of planted seedling was reported very poor (23.2 percent). Protection & guarding was poor at the site. Grazing by cattle's & stray animals, destruction by rats & sehi was reported at the site.

E. GPS Location and KML file: The selected RDF model plantation site measured 50.0 hectare as per KML map.



Table 3.35: Quantitative assessment of plantation work created under CAMPA in Sawai Madhopur division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Bucholai 2nd	RDF-II	50	44.7	5
2.	Safeda Ki Khan	RDF-II	50	45.1	5
3.	Kuagaw Bichpuri	RDF-II	50	45.8	5
4.	Khedli-1	ANR	50	32.1	4
5.	Todolai- 2nd	RDF-II	50	51.1	6
6.	Isarda Balaji Ist	RDF-II	50	46.9	5
7.	Jailalpura	ANR	50	23.2	4

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

NCS Dholpur

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Bharatpur Sambhag, in NCS Dholpur division 04 plantation sites were covered for second & fourth stage evaluation.

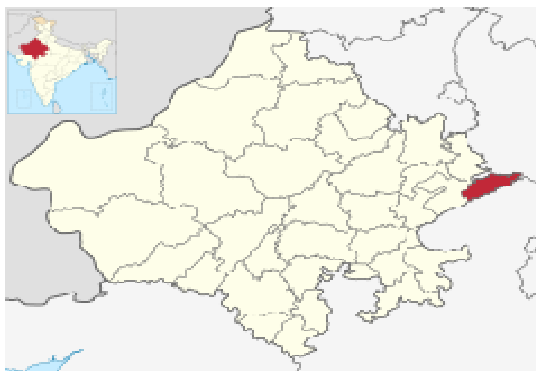


Figure: Location of Dholpur district, Rajasthan

2. Selected Plantation Sites for Evaluation

The selected plantation sites of Dholpur Forest Division are as given in table-3.1.

Table-3.1: Selected plantation site for evaluation

Sl.no	Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
1.	Itawa	Amalda	2021-22	50.0	ANR	CAMPA	IV
2.	WL Chambal, Dholpur	Datilo	2023-24	50.0	RDF-II	RDF	II
3.	WL Chambal, Dholpur	Acheleshwar Mahavev	2023-24	50.0	RDF-II	NABARD	II
4.	WL Chambal, Dholpur	Bharka Baba-2	2023-24	50.0	RDF-II	RDF	II

3. Report of Evaluation of Plantation Site

3.3.1 Amalda site in Itawa range -N 25°33'51"and E 76°18'2"

A. About Amadla Site

The selected plantation was carried out on 50 ha of land at Amalda site in Itawa range during the year 2021-22. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was fourth.

B. Fencing Status



Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1	Ditch Fencing	3303	3336.27	3121	4494.2	182	-1157.93	Not Intact	Low



C. Enumeration of Planted Stocks

Table 3.3: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
406	940	8654	10000	4.1

The survival of planted seedling was reported very poor (4.1 percent). Heavy growth of Juliflora was reported at the site which obstructs the growth of planted seedling. Grazing by stray animals & cattle and destruction by Neel gai, sehi and rat was reported at the site. The thawalas were not identified due to ravines & flood in 2022-23. Protection was reported poor as ditch fencing was up to 60 percent filled with soil. The quality of soil was not conducive for survival of planted seedling.

D. Enumeration of Sowing

Table 3.4: Enumeration of Sowing

Sl.no.	Particulars	Along Stone wall fence	On trench of a Ditch fence	On mound of a Contour trench	In the ditch of Contour trench	On Thawalas/ Saucer mounds
	Yes/No	No	Yes	Yes	No	Yes
a.	No. of rows sown		3	2		3
b.	Length (in Metres)		9363	20000		30000
c.	Approximate No. of Plants as per enumeration		1518	3100		not seen
d.	Species used		Kumtha, Desi Babool	Kumtha, Desi Babool		Kumtha, Desi Babool
e.	Result*		Poor	Poor		Poor

E. Growth Assessment of Planted Stock**Table 3.5: Growth Assessment of Planted Stock**

Sl.no.	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Desi Babool	0.55	41	Grazing was reported by goats, stray animal and village animals. Flood& heavy rain & poor protection

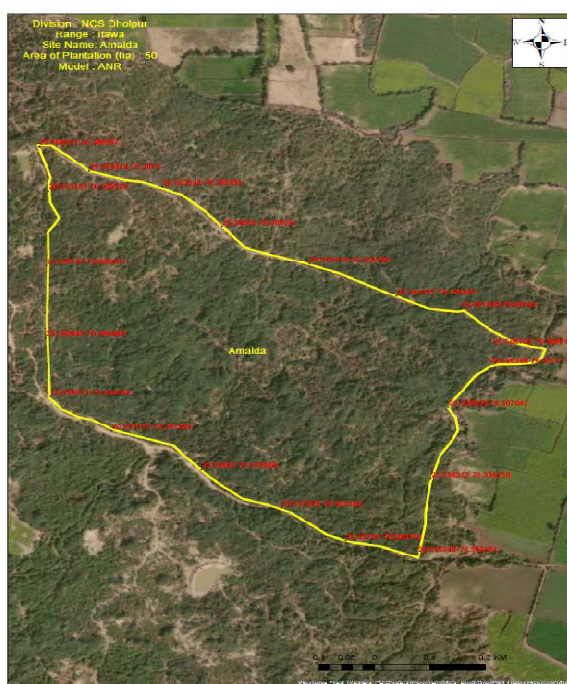
F. Growth Assessment of Plant through Natural Regeneration**Table 3.6: Growth Assessment of Plant through Natural Regeneration**

Sl.no .	Species	Average Height (in Meter)	Average Girth (in mm)	Remarks
1.	Desi Babool	0.60	51	Grazing was reported by goats, stray animal and village animals.
2.	Hingot	0.85	60	

G. Assessment of Soil Water Conservation (SWC) works/ Water Harvesting Structures (WHS)**Table 3.7: Assessment of SWC works & WHS**

S.no.	Particulars	Contour trenches	Talai/ Nadi
a	Present Status*	Filled	Intact
b	Intervention**	Need Repair	No Action required
c	Effectiveness***	Low	Medium

H. GPS Location and KML file:The selected ANR model plantation site measured 50 hectares as per KML map.



3.3.2 Datilo site in W L Chambal Dholpur range -N 26.560078 and E 77.430215

A. About Datilo Site

The selected plantation was carried out on 50.0 ha. of land at Datilo site in WL Chambal Dholpur range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

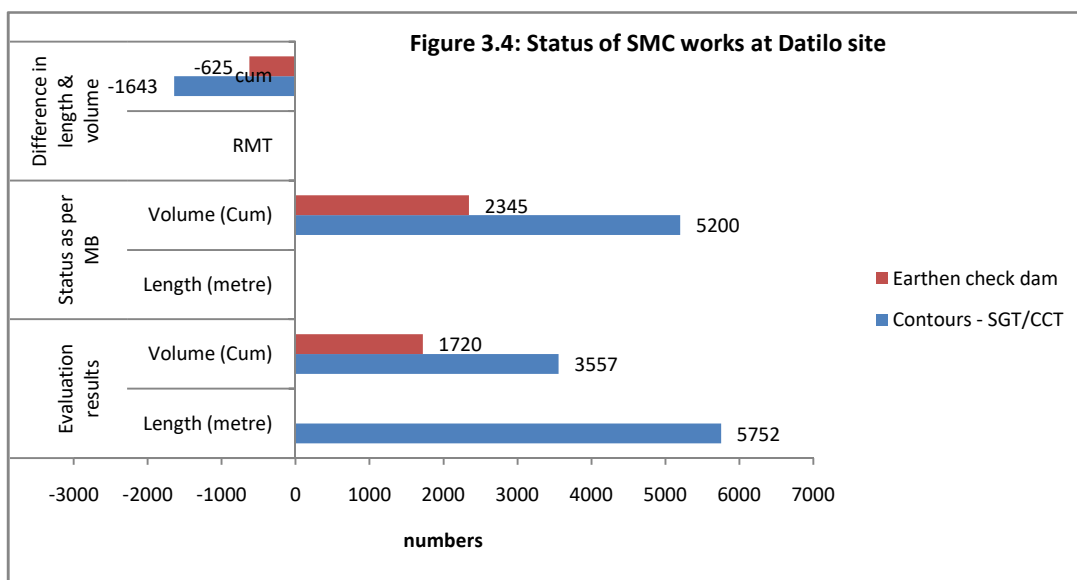
Table 3.8: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/Medium/Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1	Ditch Fencing	3467	3869.00	3395	4896.0	72	-1027.00	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT & earthen check dam was reported at the site. The CCT was silted in many places. The CCT was not intact & effectiveness was reported low. The earthen check dam was partly intact & effectiveness was reported low. The area is ravine. Due to rain the soil loses its grip. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.10: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4362	132	5506	10000	43.6

The survival of planted seedling was reported poor (43.6 percent). The reason for low survival was grazing by cattle's & stray animals. The area is ravine. Due to rain the soil loses its grip. The thawalas was almost filled with soil.

E. GPS Location and KML file: The selected RDFL model plantation site measured 50.0 hectare as per KML map.



3.3.3 Achleshwar Mahadev site in WL Chambal Dholpur range -N 26°39'56" and E 77°53'44"

A. About Achleshwar Mahadev Site

The selected plantation was carried out on 50.0 ha. of land at Achleshwar Mahadev site in WL Chambal Dholpur range during the year 2023-24. The activities were done under the RDF (Rehabilitation of Degraded Forest) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status

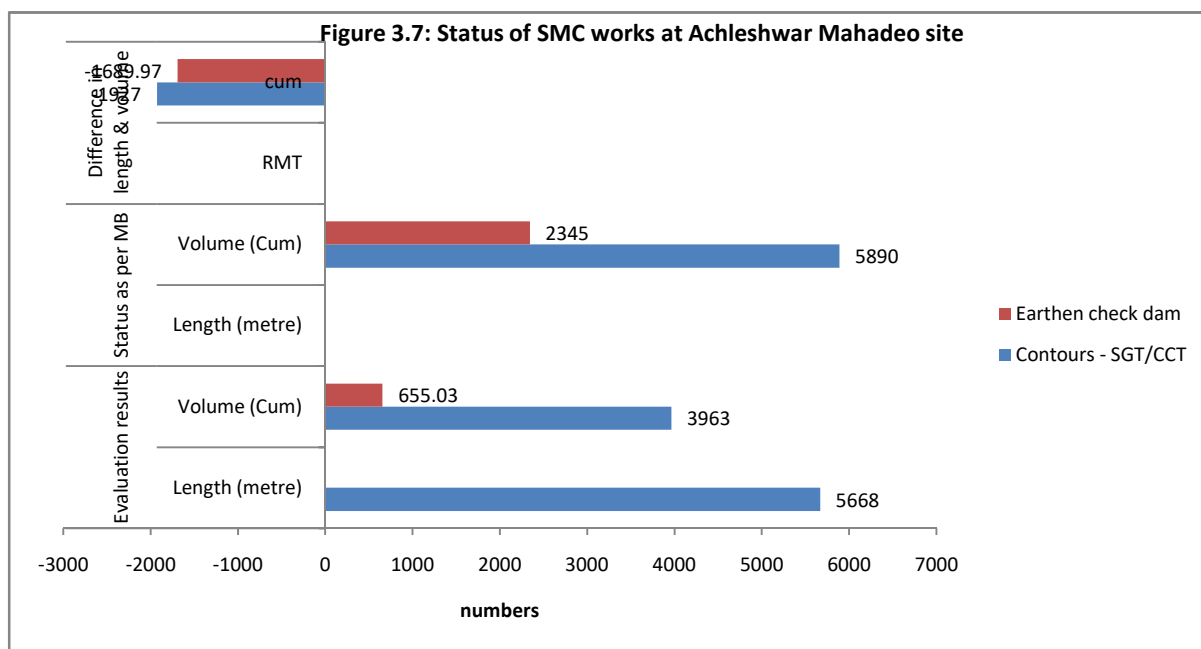
Table 3.11: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Ditch Fencing	3400	3892.00	3400	4896.0	0	-1004.00	Not Intact	Low
2.	Dola	40	98.00	40	66.4	0	31.60	Intact	Medium



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT & earthen check dam was reported at the site. The CCT was almost silted in many places. The CCT was not intact & effectiveness was reported low. The area is ravine. Due to rain the soil loses its grip & fall on the ground. The trenches were widely damaged due to ravines. During third Party evaluation 08 check dam was reported at the site. Only one damage earthen check dam was evaluated. The remaining check dam was damaged due to heavy rain & ravine area as reported by the staff. The earthen check dam was not intact & effectiveness was reported low. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.13: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4338	282	5380	10000	43.4



Juliflora plant in plantation site

Latitude: 26.594632
 Longitude: 117.893467
 Elevation: 147.29458 m
 Azimuth: 1.5 m
 Time: 04-06-2025 16:44
 Note: Shown NGS-DH-UP-02, Image: Photo of the plantation site, Location: Malindi, 20250602

[illegible]

3.3.4 Bharka Baba II site in W L Chambal Dholpur range -N 26.517732 and E 77.514982

A. About Bharka Baba II Site

Rajasthan Forest TPE Evaluation - Report-CDECS



B. Fencing Status

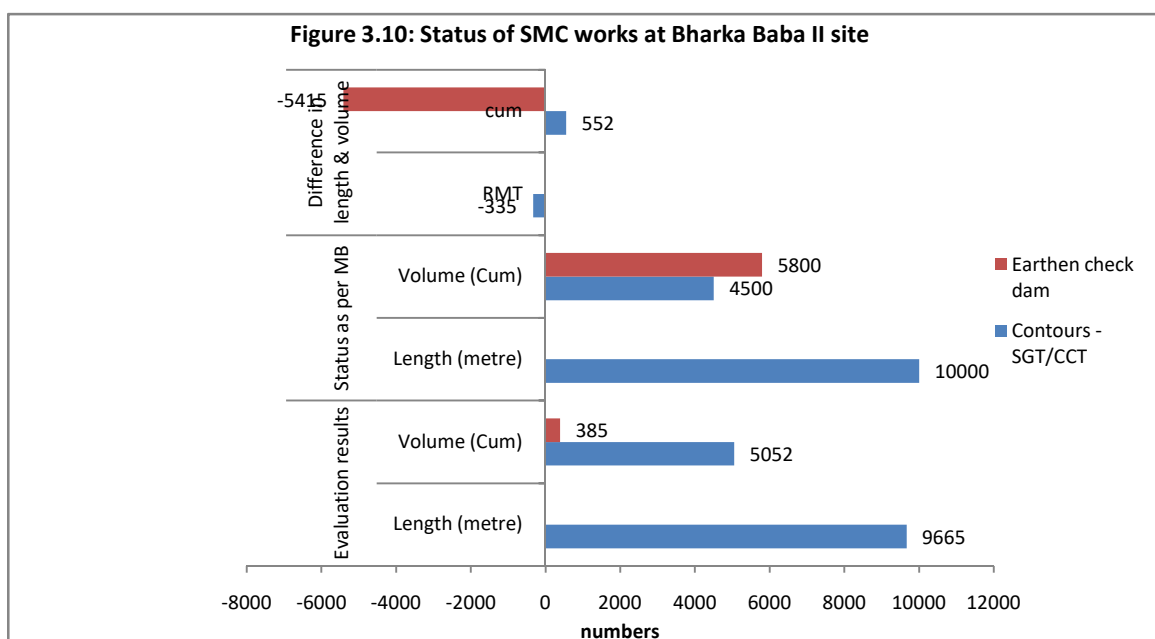
Table 3.14: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/- RMT)	Difference (Volume) (in +/- Cum)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length (metre)	Volume (Cum)	Length (metre)	Volume (Cum)				
1.	Loose stone wall	500	384.00	500	420	0.00	-36.00	Not Intact	Low
2.	Dola	2610	5552.00	2636	4376.0	-26.00	1176.00	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT & earthen check dam was reported at the site. The area is rocky. Due to which contour trenches were dug (width & depth) not as per standard norms. In the remaining area CCT was silted. The CCT was not intact & effectiveness was reported low. The area is ravine. Due to pressure of water & non-provision of outlet of water 04 earthen check dam was damaged. The earthen check dam was not intact & effectiveness was reported low. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.16: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
4369	365	5266	10000	43.7

The survival of planted seedling was reported poor (43.7 percent). The reason for low survival was grazing by cattle's & stray animals. The soil (rocky, moram & sandy) is not conducive for survival & growth of planted seedling. Protection & guarding was also poor.

E. GPS Location and KML file: The selected RDFL model plantation site measured 50.0 hectare as per KML map.

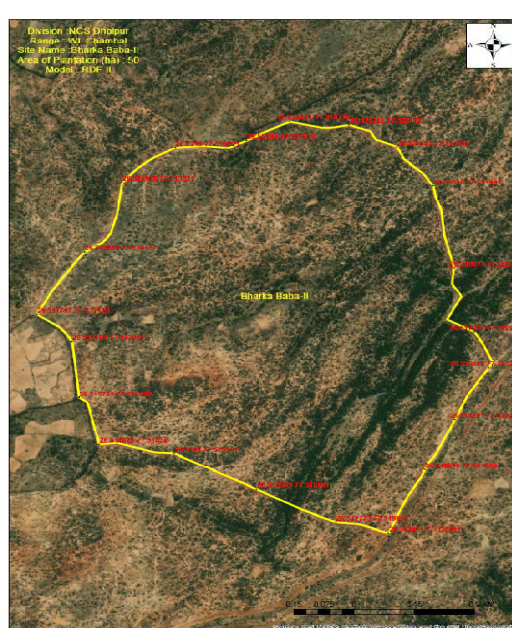


Table 3.17: Quantitative assessment of plantation work created under CAMPA in NCS Dholpur division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1	Amalda	ANR	50	4.06	4
2	Datilo	RDF-II	50	43.6	5
3	Acheleshwar Mahavev	RDF-II	50	43.4	5
4	Bharka baba-2	RDF-II	50	43.7	5

* <4: very poor (below 40%), 5: poor (40-50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

Karauli RTR

1. Present Third Party Evaluation/ Study

The Third Party Evaluation / Study of Plantations created under various schemes between 2013-14 to 2023-24 were carried out in the 14 Forest Divisions of Bharatpur and Jaipur Sambhag. Under Bharatpur Sambhag, in Karauli RTR division 01 plantation site was covered for second stage evaluation. This Forest Division with 4 Forest Ranges namely Mandrayal, Kaila Devi, Nainiyaki & Karanpur has territorial jurisdiction over the entire Karauli District.



Figure: Location of Karauli district, Rajasthan

2.1 Selected Plantation Sites for Evaluation

The selected plantation site of Karauli RTR Forest Division is given in table-1.

Table-1: Plantation sites for evaluation

Forest Range	Name of Site	Year of Plantation	Area (Ha.)	Model	Plan	Stage of Evaluation
Mandrayal	Toda Ki Pulia	2023-24	50	ANR	CAMPA	II

3.3 Report of Evaluation of Plantation Site

3.3.1 Toda Ka Pulia site in Mandrayal -N 26.189865 and E 77.052573

A. About Toda Ka Pulia Site

The selected plantation was carried out on 50 ha of land at Toda Ka Pulia site in Mandrayal range during the year 2023-24. The activities were done under the ANR (Assisted Natural Regeneration) model. The site was a forest land and stage of evaluation was second.

B. Fencing Status



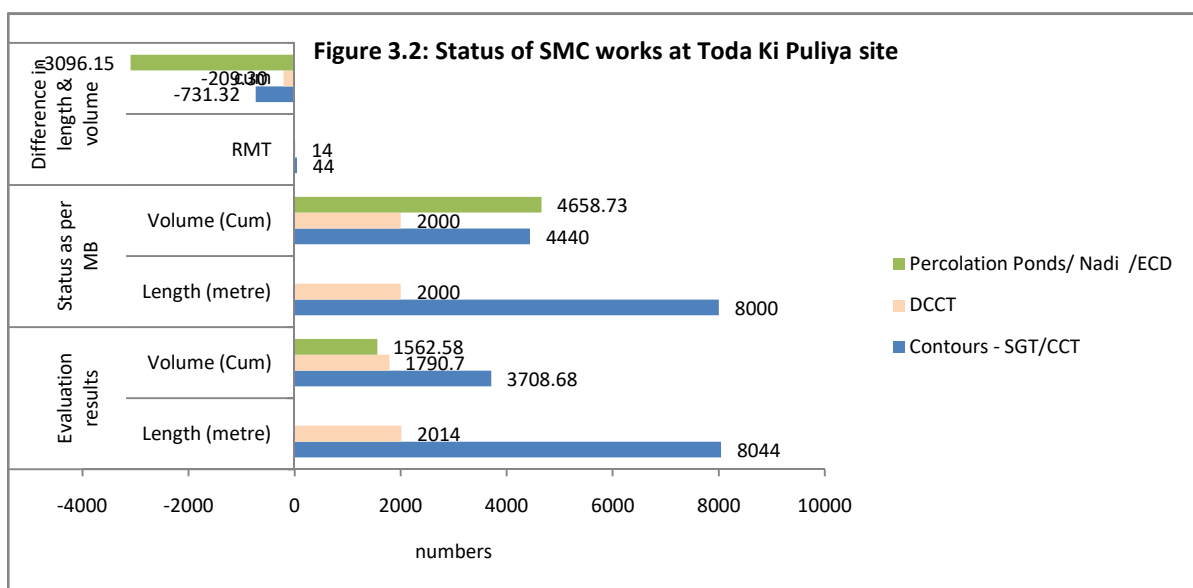
Table 3.2: Fencing Status

S.No	Name of Work/Activity	Evaluation results		Status as per MB		Difference (RMT) (in +/-)	Difference (Volume) (in +/- CUM)	Condition of the fence Intact/ Not	Effectiveness of the fence (High/ Medium/ Low)
		Length	Volume (Cum)	Length	Volume (Cum)				
1	Ditch Fencing	3100	3861.25	2910	4190.4	190	-329.15	Not Intact	Low
2	Loose stone wall	300	246.75	440	369.6	-140	-122.85	Not Intact	Low



C. Soil Moisture Conservation Works Status

Under SMC structure, CCT, DCCT & earthen check was reported in the site. The CCT& DCCT was silted & damage. The CCT & Deep CCT was not intact & its effectiveness was low. The earthen check dam was partly intact & its effectiveness was reported moderate. Provision of waste weir for safe disposal of excess runoff water was not given. This may cause damage to structure in case of overflow over earthen structure.



D. Enumeration of Planted Stocks

Table 3.4: Enumeration of Planted Stocks

Number of plants /pits (Enumerated) (in Nos.)			Total Number of Plants	Survival Percentage
Pits with live plants	Pits with dead plants	Empty Pits		
1634	167	8199	10000	16.3

The survival of planted seedling was very poor (16.3 percent). The soil quality was not conducive for growth & survival of planted seedling. Protection & guarding was poor. Grazing by cattles, stray animals, neelgai & destruction by rat/sehi & termite was also observed during Third Party Evaluation.

E. GPS Location and KML file:The selected ANR model plantation site measured 50 hectare as per KML map.



Table 3.5: Quantitative assessment of plantation work created under CAMPA in RTR II Karauli division

Sl. No.	Site	Model	Area in Ha	Survival percentage	Rank of Site (Between 0 to 10)*
1.	Toda Ki Pudia	ANR	50	16.3	4

* 4: very poor (below 40%), 5: poor (40- 50%), 6: average (50-60%), 7-good (60-70%), 8: very good (70-80%), 9: excellent (80-90%),

GLIMPSES

JaipurSambhag

Baloj, Range-Tijara



Dera, Range-Rajgarh



Lisadi, Range-Kishangarh Bas



Measuring of Loose Stone wall fencing at Lisadi Plantation



Measuring of Talai Depth at Plantation



Contour dykes in Plantation



Measuring Ditch fencing at Lisadi Plantation



Plants counting in Plantation

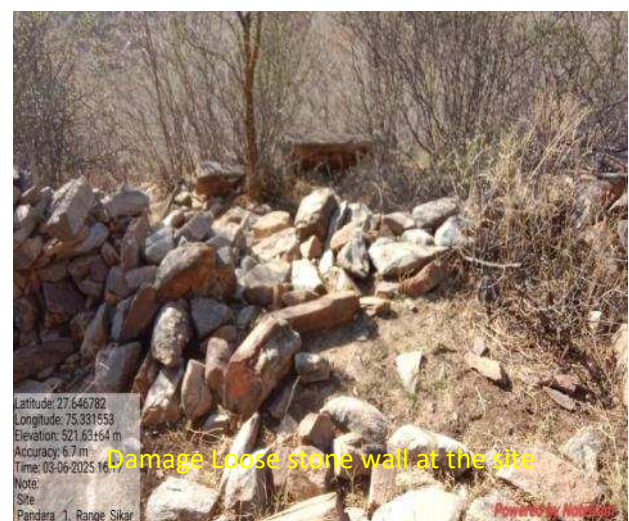
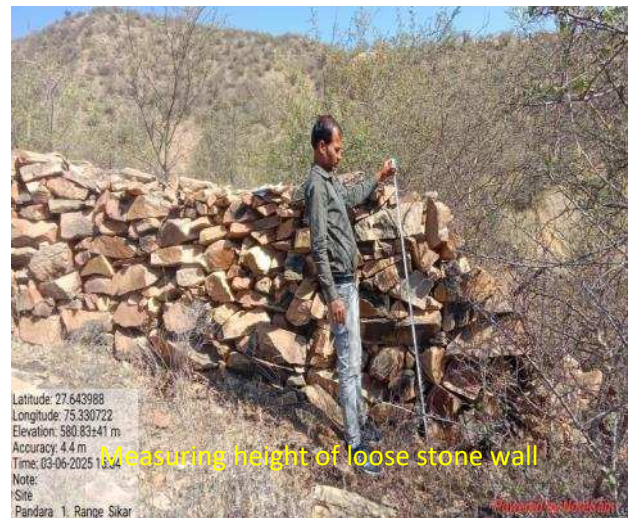
Hanuman Ka Gwada, Range-Thanagaji



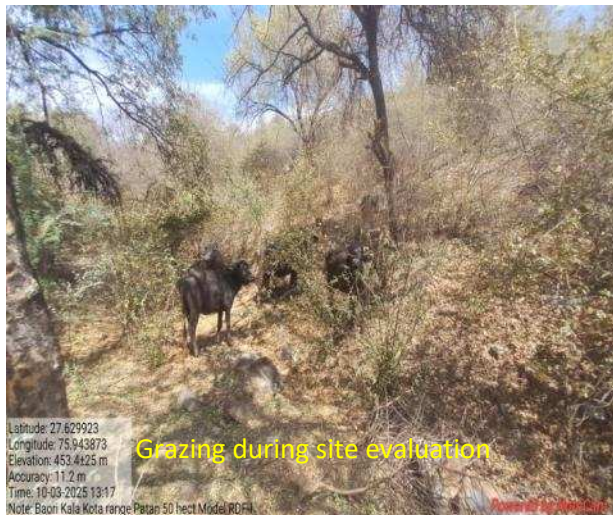
Range-Danta, MandaSurera



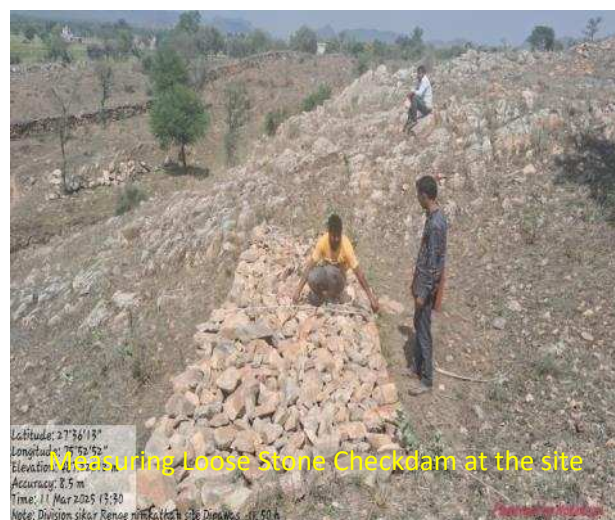
Range-Sikar, Pandora-I



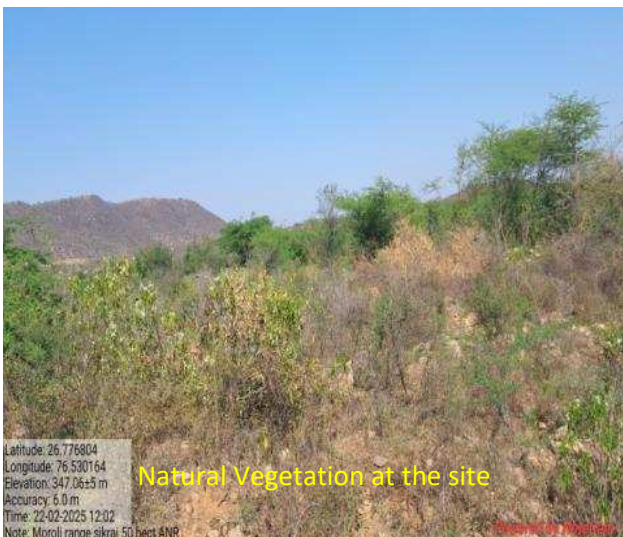
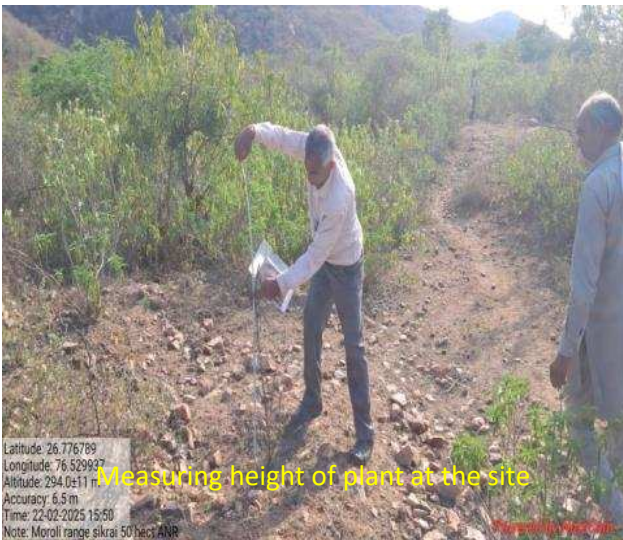
Range-Patan, Baorikala Kota-I



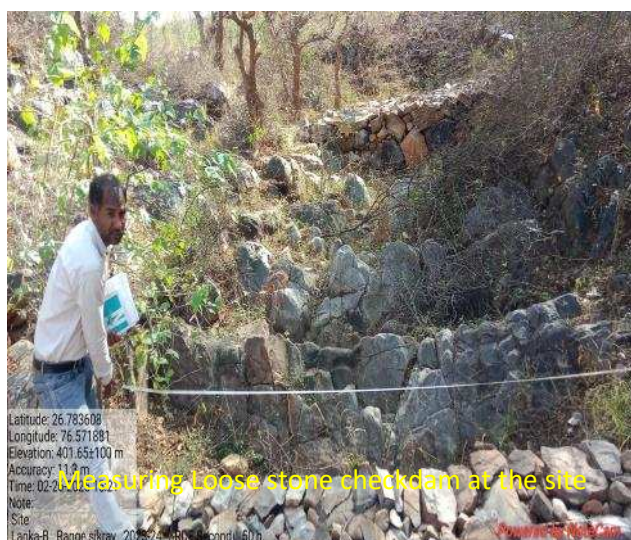
Range-Neemkathana, Deepawas-II



Range-Sikrai, Moroli



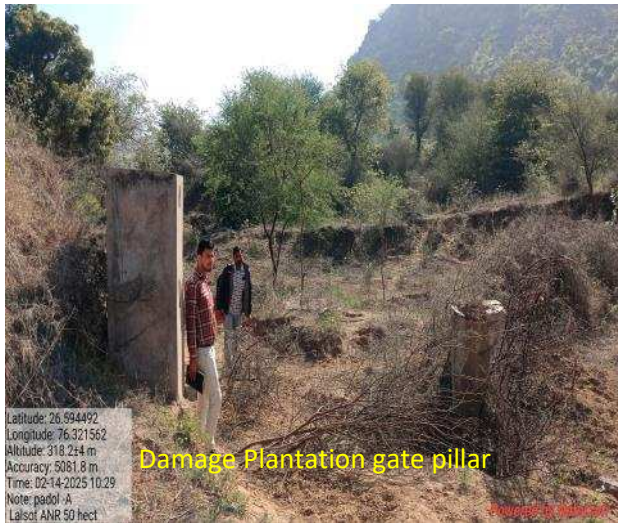
Range-Sikrai, Lanka-B



Range-Mahuwa, Padla-A



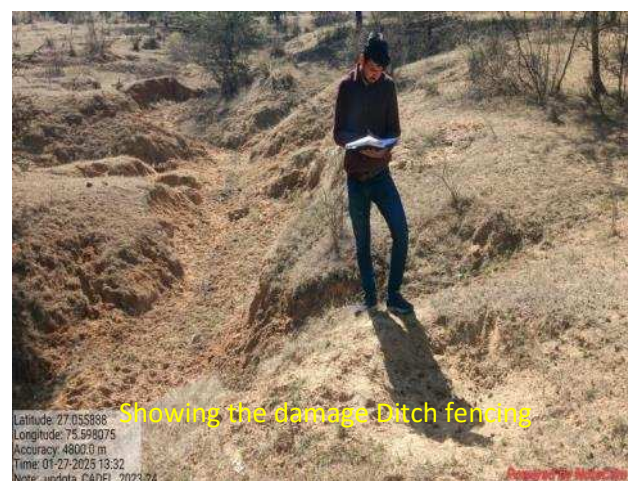
Range-Lalsot, Padol-A



Range-Amer, Jain MandirKukas



Range-Amer, Mundota



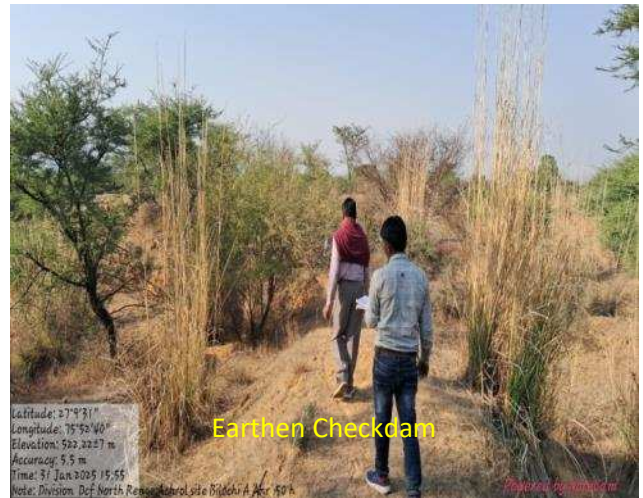
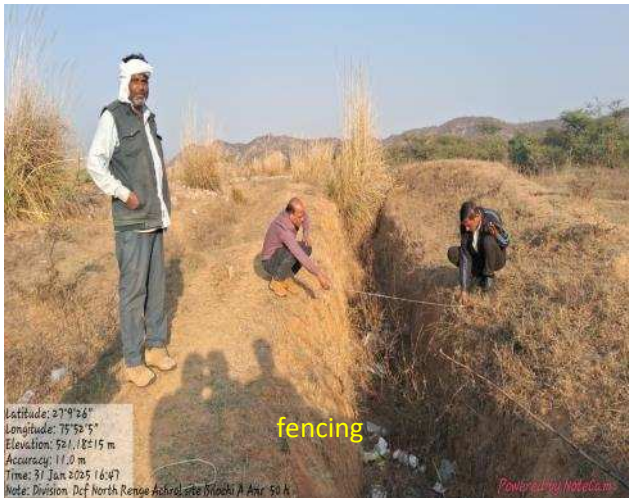
Range-Amer, Kukas park kepiche



Range-Phagi, Pahadiya Main



Range-Achrol, Bilochi-A



Range-Achrol, Foot Ka Baas



Range-Shahpura, MaleraKumbhawas-III



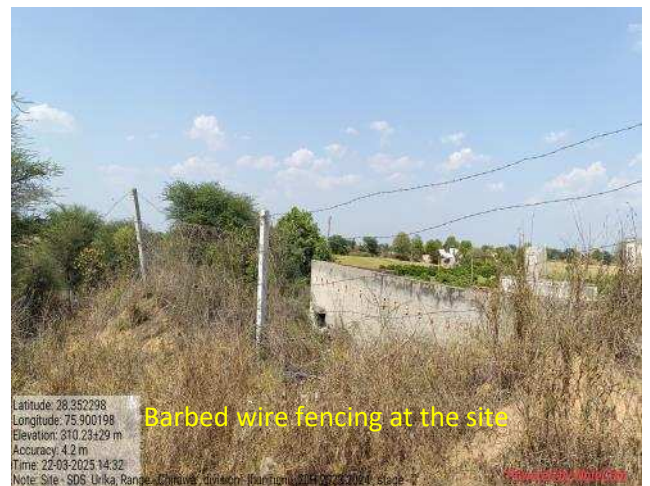
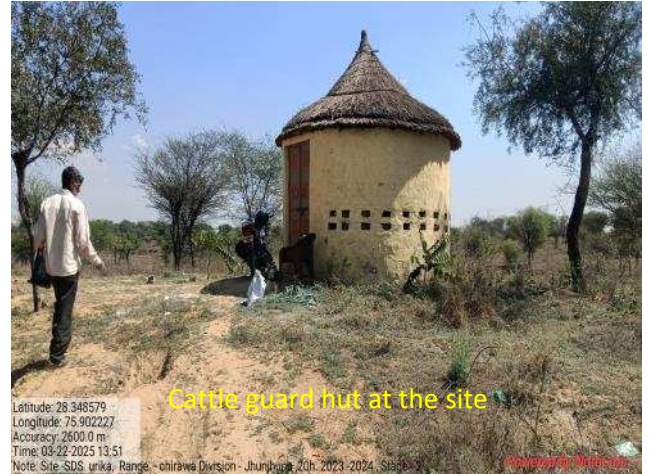
Range-Shahpura, Lobadawas



Range-Ajabgarh, Billu Ki Khan



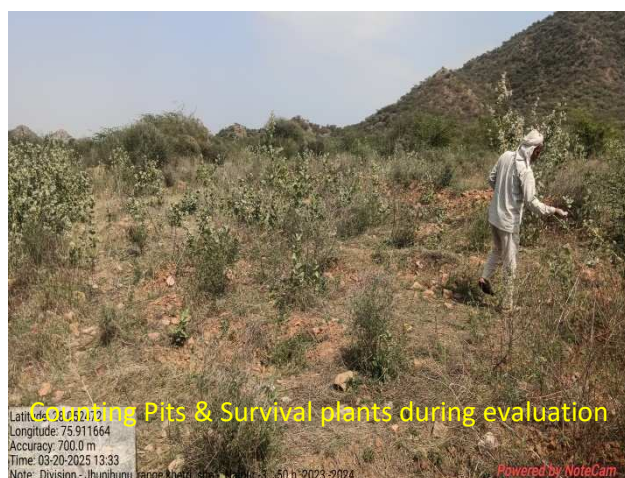
Range-Chirawa, Urika



Range-Jhunjhunu, Ladsar



Range-Khetri, Nalpur-III



Range-Khetri, Bansiyal



Range-Sariska, Kharrika

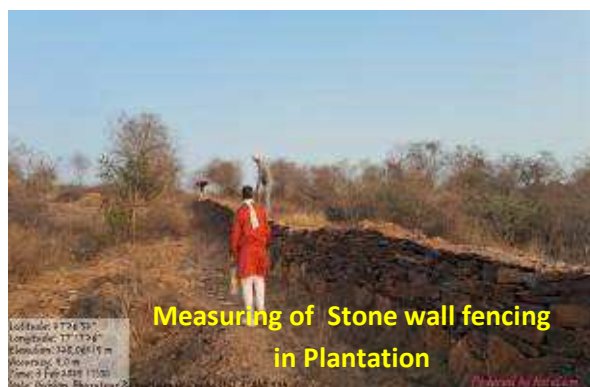


Range-Tehla, Nadoli



Bharatpur Sambhag

Pahartal-03, Range-Deeg



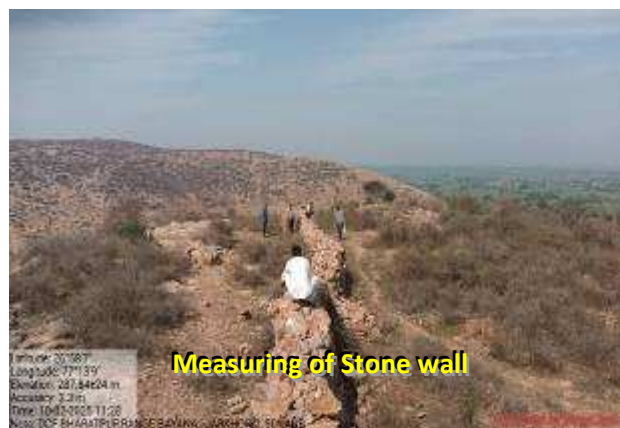
Mandera-4, Range-Deeg



Jharkhor, Bayana



Jharkhor-2, Bayana



Kans Ki Nari-A, Bari



Sagar, Bari, Dholpur



Layakpur-II, Van Vihar



Karas ka Dada, Vanvihar



Lediya, Sapotra



Jhamri Mata, Masalpur



Evaluation team and forest staff in plantation site



Stone wall fencing in plantation site



Wild boar attack in plantation site



Measuring top width of trench



Grazing in plantation site



Measuring Talai in plantation site



Constructed Loose Stone Check Dam in plantation site

Medkapura, Hindaun



Masawata, Sapotra



Amalda



Achleshwar Mahadev



Toda ki puliya, Mandrayal



Kua Gaon Bichpuri, Gangapurcity



Todolai-II, Sawai Madhopur



Kherli-I, Sawai Madhopur



Bucholai-II, Gangapurcity



Plantation gate



Damage trench in plantation



Measuring of stone wall fencing in plantation



Contour dykes in plantation site



Damage Barbed wire fencing in plantation



Damage Stone wall fencing in plantation



Damage ditch fencing in plantation



Measuring of ditch fencing in plantation

