



Reinvigorating the ‘*insignia of life*’ in the forest: A Case Study of Harda District, Madhya Pradesh.

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Abstract: *Plantation is crucial in determining the best method for dealing with unstatic climate change—trees can absorb carbon dioxide and other energetic carbon components, making them a viable option for combating global warming. Today, even at present times, it is widely noted that it is cultivated by millions of smallholders in the world, who grow the trees on their privately-owned lands. For example, in India, hundreds of people indulge in tree plantation, specifically experimented with Teak (Sangwan) forests, and earning in millions, which acts as their other source of income beyond agriculture. Subsequently, the plantation has become a significant household asset and gradually serves as the household saving account.*

Keywords: *planation, stakeholders, climate change, household assets, entrepreneurship.*

Introduction

Forest Landscape Restoration (FLR) is a method to generate synergistic amalgamation amongst significant players, particularly those involved in plantations. With the green revolution, enormous output has resulted in deforestation difficulties in the forest landscape. Because of unchecked deforestation, waste materials were dumped into rivers, causing major floods and decreasing ground-water levels. Thus, FLR is a long-term process of rejuvenating ecological functionality and restoring balance to improve human well-being in diverse deforested forests. FLR has restored an entire landscape to satisfy current and future demands and provide many advantages throughout time.

Furthermore, the issue of forest restoration stems from the Green Revolution's tremendous production, which further deforests the forest landscape.² It is important to establish a good

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²Endnotes & References:

‘Forest Landscape Restoration’. Accessed on 26th March 2019.

<https://www.iucn.org/theme/forests/our-work/forest-landscape-restoration>



and dynamic FLR strategy to strengthen the landscape and create feasible alternatives to balance the ecological disturbances. For example, it focused on the landscape, restored functioning, allowed for various benefits, leveraged tactics, reduced the forest cover, and involved other stakeholders³. Subsequently, the anthropogenic pressure on natural landscapes is not restrained to India alone; rather, it covers the global concerns of World's natural habitats covering around 16.1. hectares of natural forests were lost annually during the 1990s.

Meanwhile, the primary focus of this research is to draw attention to the significant outline of FLR in the state of Madhya Pradesh, specifically in the Harda District, where the plantation mechanism with the greatest usefulness and productivity is growing at a faster rate than in other Indian states. For example, the finest possible solution is a river that is almost 7 kilometres long and covered by more than 400 acres of land planted with millions of trees and plants, which is the best answer. The farmers received gross benefits in the millions of rupees, and they used the leftover money to plant more trees in other parts of the districts. It also conducts empirical research in the region to determine the root cause of the widespread destruction of the forest landscape and devise the most effective solutions to the problem. Lastly, this paper is merely a theoretical endeavour to enhance the significance of tree plantation beyond the environmental aspects; rather it also includes the scenarios of creating more self-employment, i.e. an '*era of entrepreneurship*'.

Harda- District with multiple prospects.

It was suggested through an empirical study conducted in the 1990s in Harda, a district in the state of Madhya Pradesh, that participatory forest experience, also known as Joint forest management (hereafter JFM), has been neither an absolute success nor a complete failure, but rather has fallen somewhere in the middle of the two extremes of the spectrum. It has been observed that among the participatory forests in various firms such as social forestry, community forestry, and farm-agro forestry, JFM is actively working in the field and has evolved over the years due to involving farmers and other stakeholders in the process of tree planting and establishment.⁴ The forest division in Harda is primarily composed of southern

³ *ibid.*

⁴ Madhya Pradesh, Series 24, Part XII-B, District Census Handbook, HARDA, Village and Town wise, Primary Census Abstract, Directorate of Census Operation, Madhya Pradesh. Accessed on 26th March 2019. http://censusindia.gov.in/2011census/dchb/2331_PART_B_DCHB_HARDADA.pdf



tropical and dry deciduous forests, and it has a total forest area of approximately 1,42,536 hectares (which is 38.5 percent of the total geographical area), of which approximately 98,318 hectares are possibly legally classified as reserved forests, and approximately 44,300 hectares are protected forests⁵. The forest is covered with a dense population of teak trees in the entire district. Specifically, for administrative reasons, the forest division is classified into six inter-related ranges- Temagaon, Borpani, Rahatgaon, Handia, Magardha, and Makrai.⁶

It is important to understand the history of Harda, which is a part of the Narmadapuram division and used to be part of the erstwhile Hoshangabad district of Madhya Pradesh. Further, “it was declared a district vide MP Gazette notification no. 1210/F/20 dated 2/7/1998”.⁷ Gradually, it was assumed that the name ‘harda’ comes from ‘haldi’ or ‘hardulju’. Reportedly, the area of Harda territorial division lies “between 21 54’ 18” and 22 38’ 50” north latitudes, 77 46’ 7” and 77 43’ 44” longitudes”⁸. Further, the hill slopes possess a well-drained, lumpy brown soil and carry moisture for a longer spell. In the district, the teak and the, bamboo and other rare species could be easily traced in many Harda district areas.⁹ The significance of Harda dates to the era of confrontation between the Mughal and Maratha empires. It had some other significant historiography associated with the Maratha conquest, when it succeeded in superseding “Handia's old Mughal city that was Harda's capital and later the Maratha clan residence.”¹⁰ However, later, in 1844, the tract, as mentioned earlier, was given to the British as the part of the territory further associated with the assistance of the Gwalior regiment and attached to the Hoshangabad district, which was finally ceded in 1860¹¹.

The question that may come as a result of the goal of choosing the title is how to find life in the woods at a time when the entire world is moving towards a metropolitan concept in the era of globalization, and then what is left among the woods is an interesting one. How might it be able to trace the abundant evidence of 'life' among the flora- fauna, i.e. the density of the

⁵ *ibid.*

⁶ Madhya Pradesh Gazette, Notification no. F. 30-40-95-X. 3, dated 13/12/2000.

⁷ Madhya Pradesh Gazette, Notification no. 1201/F/20, dated 02/07/1998.

⁸ Madhya Pradesh, Series 24, Part XII-B, Op. cit.

http://censusindia.gov.in/2011census/dchb/2331_PART_B_DCHB_HARD_A.pdf

⁹ D. Debanth and S. Dasgupta, Livelihood Generation and poverty reduction attempts in Joint Forest Management activities in Madhya Pradesh, The International Forestry review, Vol. 8, no. 2, pp. 241-43.

¹⁰ History of Madhya Pradesh, Archaeological Survey of India (Handbook).

¹¹ Madhya Pradesh, Op. Cit.

http://censusindia.gov.in/2011census/dchb/2331_PART_B_DCHB_HARD_A.pdf



woods, except for the wild habitat, if there is no wild habitat? Instead of addressing the sceptics' concerns, this study has already accomplished its primary goal, which is to better understand the significance of primitive technologies in an age of globalized machines, particularly in preserving natural resources and ecological equilibrium. These were some of the objectives of this research, which included identifying forest protection initiatives that are visible on the ground in the absence of regrowth of growing stock and improved natural regeneration that resulted in reduced biotic pressures and improved water regime, and investigating the impact of Joint Forest Management on soil and water conservation, seed adoption, sowing, and how planting mechanisms were primarily being established, among other things.

Living with nature: an initiative for ‘natural’ prosperity.

One of the most fundamental issues is preserving the forest landscape through the formation of a synergistic partnership among the various different parties involved in it. Local farmers enthusiastically participated in the tree plantation along the banks of the Narmada river, which flows through the Harda district, during the decade of the early 1990s. Currently, in the modern period, this plantation program was offered as part of a much broader initiative known as 'Nadi Bachao, Smriddhi Lao,' which stands for 'Nadi Bachao, Smriddhi Lao,' which means "Nadi Bachao, Smriddhi Lao" (Save Rivers and Bring Prosperity). The ground-breaking rural governance project resulted in the development of all farmers, the administration, government agencies, and several non-governmental organizations (NGOs), all of whom agreed to plant more than 2,4 million riverbank trees in the Madhya Pradesh district of Harda as a result of the project. Aside from that, FLR benefited from this innovative management because it permitted the alignment of multiple stakeholders' interests and the accumulation of sufficient physical, financial, and human capital.

Since the majority of the land had been adversely affected by soil erosion, their rivers and streams had breached their banks, and many people had lost land as a result of sudden changes in the course of these rivers and streams, particularly during the rainy season, as a result of the soil erosion. Additionally, even though a specific distance on either side of rivers and streams is designated as public land, the farmers understood the benefits of stabilizing riverbanks through tree and bamboo plantations. One might easily categorize the forest within the division into two types: teak forest and mixed forest. As a result, Teak forests



account for 85 per cent of the region's total area. In the entire division, on average, 70 per cent of crops are middle-aged, 10 percent are young, and 20 percent are mature. Bamboo can be found in the forest's understory covering 35% of the total forest area.¹² The first Indian National Forest Policy 1952 states that the national forest cover target is 1/3rd of its land area: - "India should strive to hold 1/3 of its total forest area. As a denudation coverage, a much greater proportion of the earth, roughly 60 per cent, must be held in the Himalayas, Deccan and other erosion-prone mountainous areas under forests. The proportion to be reached in the plains, where the soil is flat, and erosion is not usually a serious factor"¹³. Further, the 6th five-year plan (1980-85) states: "It would be appropriate to subdue intense management of the forest production of 5.5 meters of hectares, that is the clearing and planting of the woods 25 cm. In addition, the massive planting program is being introduced in the state, the forests will have extensive mono-crops of teak"¹⁴.

Similarly, according to the Forest Survey of India (hereafter FSI) report (2005), forest cover has increased by 2800 km. Still, this increase of 0.041 percent of the forest area has been followed by a gross decrease in the density of dense forest cover by 26.245 km, which indicates that a significant portion of the dense forest area has been degraded and is now classified as 'open forest'. On the other hand, there has also been an increase in forest cover, according to the Forest Survey of India report (hence referred to as FSI, 2005). As a result of these conversions, it is projected that around 630 km of productive forest areas have been turned into degraded regions of low ecological significance¹⁵. However, FSI assessment in the year 2001-2 has reported the effectiveness of protection measures due to the large-scale involvement of communities through JFM. The Govt. of India, Ministry of Environment and Forests (Vide letter no. 6.21/89/-PP, dates June 1990) further outlined and conveyed to "State Governments establish the masses of people through the participation of village communities to preserve, restore and improve degraded forestry"¹⁶.

¹² P. K. Bhattacharya, Historical Geography of Madhya Pradesh, 1998, Yoga Publication Trust, pp. 23-40.

¹³ 'National Forest Policy'. Accessed on 29th March 2019.

www.moef.nic.in/sites/default/files/jfm/jfm/html/national.htm

¹⁴ '6th Five Year Plan'. Accessed on 29th March 2019

<http://planningcommission.nic.in/plans/planrel/fiveyr/6th/welcome.html>

¹⁵ Census of India 2011, Madhya Pradesh, Series 24, Part XII-B, District Census Handbook, HARDA, Village and Town wise, Primary Census Abstract (PCA), Directorate of Census Operation, Madhya Pradesh. Accessed on 29th March 2019.

http://censusindia.gov.in/2011census/dchb/2331_PART_B_DCHB_HARDA.pdf

¹⁶ Ministry of Environment and Forests, Government of India, vide letter no. 6.21/89/- PP, dated 01/06/1990.



According to the National Forest Policy, 1988 (NFP), The aim is to provide the forest or tree cover for at least 1/3 of the country's total land area. In particular, it focuses on developing tree crops and fodder resources on village and community lands that are not required for other productive uses. The government provides technical assistance and other inputs necessary for initiating such a program and "the sharing of revenues generated through such a program with the panchayats. Local communities are urged to engage in the program to give them an incentive and benefit from the initiative"¹⁷. Several types of research have shown a dynamic change in the cropping pattern in most nearby villages subsequently, which also changed considerably in the past 10-15 years¹⁸.

The significant role of trees in the Agro-Farm industry

Following an increase in tree planting, India's forest programs aim to alleviate the demand for forest resources to re-establish the supply of fuelwood, fodder, and small timber now available to rural populations. Encouragement of farmers to engage in forestry on their properties has several potential benefits, at least in theory. It protects marginal land from degradation by recycling nutrients and protecting soils as an added benefit. Additionally, it maintains or increases soil productivity and increases the value-added per unit of land by planting trees and other species in different locations or at different times. An increase in fuelwood and fodder output by planting several nature trees on their own farm and rented lands will undoubtedly lessen drudgery and free up their labour for other productive vocations¹⁹.

The accomplishment of the Agro-Farm industry.

Farmland tree planting can be considered a long-term capital investment with recurring costs but no recurring output. In contrast to seasonal crops, a long gestation period for trees causes advantages to be delayed, and a family's land revenue is reduced during the interim period. In addition, trees cultivated for cash must be sold. The farmer must find a market for his trees, gain access to it, and obtain authorization from the appropriate government agencies to transport and sell his harvest.

¹⁷ National Forest Policy 1988, Ministry of Environment and Forests, Govt. of India.

<http://envfor.nic.in/legis/forest/forest1.html>

¹⁸ P. K. Bhattacharya, Historical Geography of Madhya Pradesh, 1998, Yoga Publication Trust, pp. 45-50.

¹⁹ Ibid.



To maximize returns, such investments are most likely to be made by farmers and in regions where there is a long tradition of growing crops for market, where other forms of land investment are common, such as the installation of tube wells or the purchase of farm machinery, and where the profits from land investments are re-invested back into agriculture. The rising pay in the country's surplus agricultural regions also contributed to a labour shortage, which may have aided the success of vast labour-intensive tree farming, which required less strict supervision and was thus ideal for landowners who were absent from the farm. Farm forestry gained an advantage over other cash crops because of the belief that wood prices were more consistent than the volatile pricing of other cash crops. Larger holdings, secure irrigation, owner cultivation, higher surplus and re-investment in agricultural production, stronger risk-bearing ability, and well-known enterprises were the factors that enabled farm forestry to prosper.

Key Findings

Apart from the analysis mentioned above over the Harda model under 'Nadi Bachao, Samriddhi Lao', it is clear that it helps identify distinct understandings held by many stakeholders. Based on the field study, we reached empirical findings on forest landscape restoration.

- **Limits of Bureaucratic Participation:** It has been observed that bureaucratic participation describes a process of implementation that establishes standardised, administrative formats for collaboration between the state and local people, but does not consider the specific characteristics of the local people participating in this process. In Harda, the connection between the people and the forest department is synergistic but unequal in terms of power. A major point of contention among the mass tribal organizations is this inequality. When it comes to everyday challenges related to the implementation of participatory forest management in a hierarchical social structure and a development model dominated by an unaccountable and paternalistic state, this is a fight worth watching.²⁰
- **Issues of 'Encroachment'**²¹: - In the context of forestry and livelihoods, the right to land, particularly for cultivation, is a critical and difficult subject to be addressed. Many people are

²⁰ Bhaskar Vira, Deconstructing the Harda Experience: Limits of Bureaucratic Participation, EPW, Vol. 40, No. 48, (Nov. 26- Dec 2 2005), pp. 5068- 5075.

²¹ Cambridge-Harda Project Paper, 1990, pp. 34-40. See also, Prakash Kashwan, 'Why Harda Failed: A Response', EPW, Vol. 41, No. 24, pp. 2497-99.



employing the term 'encroachment' to refer to the use and cultivation of forest areas by local populations who do not have legal entitlement (i.e., *pattas*) over the lands in question. A study found that locals believed strong communities, who had the cooperation of the Forest Department, were responsible for the majority of the encroachment. Therefore, it will be difficult to achieve institutionalizing participation of marginalized communities in sustainable forest management as long as indigenous peoples live under the uncertainty and contention over their tenurial rights to the lands on which their survival is dependent.

- **Quality of Forests:** - The purpose of this research is not to determine the influence of movement on forest quality but rather to engage in a discussion on the state of forests and forest protection with a diverse group of respondents to understand their perspectives on the subject. Following this innovative administration by the local farmers, the density of forests had increased, resulting in an increase in the number of animals. On the other hand, respondents at the village level said that the amount of destruction caused by forest fires had increased over time. And the obvious cause for this is the collection of *mahua* (*Madhuca Indica*), forest fire to boost fodder production or eradicate weeds, and destruction of forest lands for farming or for clandestine passage through the forest. According to the findings of our investigation, the overall quality of the participatory forest program had deteriorated over time. Moreover, village women indicated that their participation in fire protection has decreased because they do not receive any compensation from the government for fire protection and related activities.
- **Nistar:** - In Madhya Pradesh, the right to bona fide use of forest products (nistar) was recognized as a legal right in the state's income records. In recent years, these have been gradually diminished, first as concessions and subsequently as privileges, depending on the availability of raw materials. Even though legislation such as the Madhya Pradesh Protected Forest Rules, 1960, and the Madhya Pradesh Disposal of Timber and Forest Produce Rules, 1974, recognized nistar's legal basis, they restricted its practice as a privilege. According to this research on Harda, local residents found it extremely difficult to achieve their nistar requirements. It was more difficult for them to visit nistar depots because of the long distances involved and the low quality of forest produce that was made available to them. Obtaining material for nistar from the depots resulted in significant transaction costs, which were passed on to the customer.²²

²² Cambridge-Harda project policy, 1990, pp. 12-18



- **Forest Villages become ‘Revenue’ Villages:** - In Madhya Pradesh, several 'Forest villages' are located within the state's Protected and Reserve Forests. However, the Revenue Department does not have control over administrative categories such as these. As a result, they are deprived of numerous developmental inputs that would otherwise be made available. Therefore, most villagers favoured the conversion of forest villages into revenue villages, believing that doing so would provide them with greater benefits.

The yearly average price of Teak (*Sagwan*) logs for girth class of 120 to 150 cm in India

Year	Price per m ³ (₹)
1970	646
1971	810
1972	963
1973	850
1974	1390
1975	1256
1976	1511
1977	1583
1978	2809
1979	2965
1980	2965
1981	3919
1982	4603
1983	4840
1984	6862
1985	7801
1986	8359
1987	6075
1988	8078
1989	9964
1990	13449

(Source: State Statistical Dept. of Madhya Pradesh Government)



According to numerous locals, those living in forest villages did not have solid land rights, and the Forest Department did not provide enough care for them. The outcome was that they believed that all forest settlements should be converted into revenue-generating communities (they cited an outbreak of malaria in a forest village which had killed many children, evidently). On the other hand, some villagers were opposed to the conversion because they were concerned about increasing harassment by government authorities and the loss of economic prospects (in forest work). The legal study also reveals that the conversion process is lengthy and time-consuming for completeness and objectivity. There is no guarantee that it would inevitably result in more secure land claims. However, to turn forest area into more productive agricultural land, the farmers would require greater cooperation from the government and bureaucracy than described in the papers and reports. The Sagwan tree, according to the local villagers' team, takes approximately 10-12 years to mature before it can be sold in the market or donated to government depots for use. During this roughly ten-year period, they require some form of subsidized revenue/income from the government to exist and not rely just on the method of planting trees to survive.

Planting trees on private wastelands and marginal areas is a socially acceptable and commercially viable activity that can be carried out on a small scale. It is possible to dramatically enhance farmers' revenues by planting trees in degraded areas. This is in addition to supplying much-needed biomass and providing cover for barren plains, among other benefits.

Sum Up

Planting trees is one of the potential solutions for lowering carbon emissions, soil erosion near river banks, and other environmental problems. Tree planting is a critical component of the answer to combat climate change since trees can readily absorb carbon dioxide and serve as essential carbon sinks. Unfortunately, the process of participatory forests has proven to be ineffective over a long period, spanning several decades. The researchers have made a few observations based on their research in this area. The answer to what makes the Harda model so authoritative for the study is twofold: (i) establishing a common village fund; (ii) the simultaneous promotion of dual forest protection and village resource development²³. Sagwan Plantation produces a higher yield in locations with significant rainfall while also

²³ Ibid.



reducing soil erosion and eroding. Its timber can be used to make high-quality furniture, increasing the profit margins for the farmers that harvest it. Gradually, the costs rise, but after the seventh year, the investment begins to yield some returns. It also has the additional benefit of preserving soil fertility and reducing nutrient losses from the field. In this way, growing Teak (*Sagwan*) is a legitimate and good source of income/revenue in conjunction with agricultural production.

At the same time, developing innovative governance to save forests and safeguard the environment is not possible without the engagement of bureaucrats and other concerned officials. Therefore, it is essential that the discourse on sustainable participatory forest management and any research conducted on the subject are guided by agendas for democratisation and empowerment of marginalized people if the effort is to be really "joint." In Harda, the connection between the people and the forest department is synergistic but unequal in terms of power. This inequity has been criticized by the villagers, who have proposed an alternative paradigm that recognizes the rights of villagers to govern their own resources while also reducing the exploitation of these resources by the forest department. In particular, it is important to emphasize that engagement between the state and local people in the forest sector is only one of several sectors in which they engage with one another²⁴. Accordingly, a much-needed effective and transparent monitoring and control system is required for such a massive pioneering governance innovation in which the roles and responsibilities amongst the forest departments and the villagers are complementary to ensure the welfare of all, as well as an efficient system to conserve the forest and prevent ecological imbalances.²⁵

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²⁴ P. K. Bhattacharya, Op. Cit.

²⁵ Ibid.