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Empowering Rural Women Through Self-Help Groups: A Multidimensional Analysis of Financial Inclusion, Livelihood Enhancement, Entrepreneurship Development, and Sustainable Rural Development in Kandhamal District, Odisha

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***Abstract* – The Self-Help Groups (SHGs) are the largest community-based institutional framework for economic and social empowerment of women in rural India. This paper takes a multi-dimensional approach and compiles the evidence from Mission Shakti (official statistics of the SHG movement in the district), the Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM) (evaluation studies undertaken by the Indian Institute of Public Administration [IIPA] on tribal districts of Odisha), the National Bank for Agriculture and Rural Development (NABARD) reports on the SHG–Bank Linkage Programme in the district, Census of India (2011) data on district level, and peer-reviewed literature on the SHG movement. Four interwoven set of dimensions are examined: financial inclusion, livelihood improvement, entrepreneurship development and sustainable rural development. It reveals that the architecture of SHGs in the state increased by approximately fourteen times from 2001-02 to 2020-21, the overwhelming majority of tribal-belt SHG members have regular savings behaviour, and they experience perceptible improvements in income and living standards, and that the Geographical Indication (GI) tagged Kandhamal Haldi (turmeric) value chain is a unique pathway for livelihoods in the tribal-belt, which is overwhelmingly managed by the women's SHG. Meanwhile, the movement's transformative power is limited by chronic inequalities in credit absorption, infrastructural isolation, thin market linkages and low female literacy. Finally, the paper offers policy recommendations to strengthen federation-based enterprise development in tribal areas.**

***Keywords* - Self-Help Groups; Mission Shakti; financial inclusion; women entrepreneurship; tribal livelihoods; Kandhamal; sustainable rural development**

I. INTRODUCTION

Poor rural women's mobilisation in the form of Self-Help Groups (SHGs) has been a development of three decades that has become the main tool of financial inclusion and grassroots empowerment in India. The movement is rooted in two pillars institutionally: The SHG–Bank Linkage Programme (SHG-BLP) was introduced by the NABARD in 1992 to link informal savings groups with the formal banking system to ensure collateral-free credit for households that were traditionally highly exposed to high-cost informal moneylenders (NABARD, 2024). The second is the implementation of a mission mode approach by state governments and, since 2013, by DAY-NRLM to promote women's SHGs, which was replaced by a mission mode approach to livelihoods by Ministry of Rural Development (2013).

Odisha is a unique state in this national architecture. Mission Shakti was launched by the State Government on 8th March 2001 with a clear mandate of organizing rural women in SHGs and improving the existing groups through technical assistance, credit facilitation and market linkage (Government of Odisha, 2021). In June 2021, Odisha established a Mission Shakti Department to focus on women's SHGs and their federations exclusively, which was an institutional innovation highlighting the pivotal role of the SHG platform in the state's development agenda. Today, the programme covers over six lakh women's SHGs with around seventy lakh members, who receive interest subvention which makes credit up to ₹5 lakh interest-free for SHGs that perform well.

Kandhamal district is an extreme case for testing SHG model in Odisha. The district is extremely rural, forest-centric, and has a high tribal population, is one of the least developed districts in the State as per Human Development Index and has low market and road connectivity. It is precisely because of this deprivation and geographic isolation that the district exaggerates the promise of the SHG platform as it is the only organised institutional platform that links the poor tribal women with the formal economy and its limitations. Kandhamal is also unique in the country because it is known for its indigenous turmeric variety, ‘Kandhamal Haldi', which is registered as a Geographical Indication tag in 2019, and the value chain of which is managed to a significant extent

by the women's SHGs of the district (Intellectual Property India, 2019; The Raisina Hills, 2023).

In this backdrop, the present paper aims to: (i) profile the socio-economic context of the district of Kandhamal which shapes the performance of SHG; (ii) analyse the institutional architecture and growth of SHG movement in Odisha with particular focus on the tribal districts; (iii) assess the multidimensional outcomes of the SHG participation from official evaluation of SHG of tribal-belt—financial inclusion, improvement in livelihoods, and development of entrepreneurship; and (iv) infer policy conclusions for promoting SHG-led sustainable rural development in tribal India. The research is conducted exclusively with secondary data extracted from official and scholarly sources that are triangulated into an analysis of the story in the district.

II. REVIEW OF LITERATURE

The literature review reveals that the research on SHGs in India focused on three major findings, and is split between four. Firstly, on financial inclusion, the SHG-BLP has been much hailed for mainstreaming savings culture among the poor women and replacing institutional loan with informal loan. In their review of the programme's trajectory from 2002–03 to 2024–25, Kumar and co-authors report on its significant growth in terms of number of groups, bank linkages, and credit flow, as well as its enhanced recovery performance, yet also highlight disparities across regions, loan defaults, low levels of entrepreneurial usage of the credit, and financial illiteracy (Kronika Journal, 2025). Studies, like Aruna and Jyothirmayi that fall under the remit of the Community Development Journal tradition, also show that the membership of SHG has a positive influence on self-employed women's employment stability compared to wage earners and it adds to the inclusive long-term rural growth (2023).

Second, in the field of livelihood, NABARD's programme change is in itself a reflection of its appreciation of the inadequacy of credit. The Micro-Enterprise Development Programmes (MEDPs, 2006) and the Livelihood and Enterprise Development Programmes (LEDPs, Dec. 2015) focused on upgrading skills into sustainable livelihoods based on clusters of 15-30 SHGs in contiguous villages with backward and forward linkages (NABARD, 2024). This programmatic transition is based on the analytical basis that livelihoods outcomes in districts like Kandhamal are driven by, not merely credit disbursement, but by integration into the value chain.

Third, the Odisha experience in the tribal belt of the Koraput-Balangir-Kalahandi (KBK) region to which Kandhamal is socio-economically close, provides the most systematic evidence of recent times in that regard, in the form of an IIPA evaluation of Mission Shakti. The study indicates that four-fifths of the SHG members are from below-poverty-line and Antyodaya families, and around seventy per cent of all members are literate and aware about the government schemes, and also participation in SHG resulted in high reported changes in regular saving (97.96 per cent), income (87.24 per cent), living standard (85.71 per cent) and participation in group meetings (81.63 per cent) (IIPA, 2023). Complementary district studies, such as socio-economic profile of Mission Shakti members in Ganjam district, reveal that far more skills and confidence is acquired by the trained members of SHG groups than the non-members with 86.75 per cent of them trained as compared to 35 per cent of non-members.

The un-resolved fourth strand relates to transformation versus instrumentalization. The two decades of Mission Shakti have failed to bring any long-term vision to fruition for industrialisation, training of entrepreneurs, and financial autonomy, which can change the existing structural role of women in the patriarchal economy, according to critical assessment (Sahu, 2023). This critique is especially relevant for remote districts in culturally diverse areas, where market accessibility is an additional burden on women. In the context of the above debate, the present paper places Kandhamal in the context of the shift of SHGs from thrift and credit to governance of a premium value chain in agriculture, which is very rarely empirically observed.

Identifiable research gap is the lack of a single consolidated district perspective on the four dimensions of financial inclusion, livelihoods, entrepreneurship, and sustainability, among which is a single analytical framework. This paper aims to fill this gap by applying triangulated secondary evidence.

III. STUDY AREA, DATA, AND METHODOLOGY

1. Study Area

Kandhamal district was formed from Phulbani district on 1 January 1994, and is named after the Kandha tribe that is predominant in the district. The district spans 8,021 square kilometres between 83.30°E–84.48°E and 19.34°N–20.54°N, at altitudes ranging from roughly 300 to 1,100 metres. About seventy-one per cent of the land area of district is forest and less than twelve per cent is cultivable and the road connectivity with the neighbouring districts is poor. Kandhamal is 29th among 30 districts of the state in terms of HDI, and is one of the poorest districts in Odisha (Kandhamal District Administration, n.d.). Table 1 summarises the district's demographic profile.

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Table 1. Demographic and socio-economic profile of Kandhamal district

Indicator	Value
Total population (Census 2011)	7,33,110 (Males: 3,59,945; Females: 3,73,165)
Decadal growth rate (2001–2011)	12.92%
Population density	≈ 91 persons per sq. km
Rural population share	90.14%
Sex ratio	1,037 females per 1,000 males
Child sex ratio (0–6 years)	≈ 962–963 girls per 1,000 boys
Overall literacy rate	64.13% (Male: 76.93%; Female: 51.94%)
Scheduled Tribe population share	≈ 54%
ST literacy rate	≈ 49%
Geographical area	8,021 sq. km (≈ 71% forest; ≈ 12% cultivable)
HDI rank within Odisha	29th of 30 districts

Source: Census of India (2011); NHSRC compilation of Census ST data; Kandhamal District Administration.

The SHG analysis is closely related to three features of Table 1. Second, a comfortable sex ratio together with a 25 per cent difference in literacy rate between males and females (76.93 per cent male and 51.94 per cent female) indicates a large population of female members with limited human capital, which are the most sought-after clientele for group-based financial intermediation. Second, its tribal-majority population (around 54 per cent of the population is SC) puts the district in the priority geography of Mission Shakti and NABARD's scheme for promotion of women's SHGs in backward and LWE districts. Thirdly, the highly forested nature of the land makes it difficult to use settled agriculture, which makes it more suitable to engage in non-timber forest produce, spice farming, and off-farm micro enterprise, which are areas where SHGs are the natural organisation form.

2. Data Sources and Analytical Approach

The study is descriptive-analytical design with secondary data approach. Five types of sources are triangulated: (i) programme statistics of Mission Shakti, Government of Odisha; (ii) IIPA evaluation of Mission Shakti SHGs in KBK tribal region of Odisha, whose socio-economic conditions are similar to Kandhamal; (iii) documentation from NABARD on SHG-BLP and LEDP; (iv) Census of India (2011) district tables and derived compilations; and (v) peer-reviewed and institutional literature related to SHGs in Odisha including the Kandhamal turmeric value chain. Comparative and trend analysis are used to draw inferences; quantitative indicators are presented in tables and graphs. No primary field data was collected, however, findings on member level outcomes are reported as documented in the cited evaluations and the KBK evidence is considered a proxy for the Kandhamal district and not as an estimate of the district level.

3. Conceptual Framework

The conceptual framework which underlies the analysis is shown in Figure 1. SHG participation is proposed to act through four complementary modes – Financial Inclusion, Livelihood Enhancement, Entrepreneurship Development and Social Empowerment – all of which put together creates a sustainable development in the district.

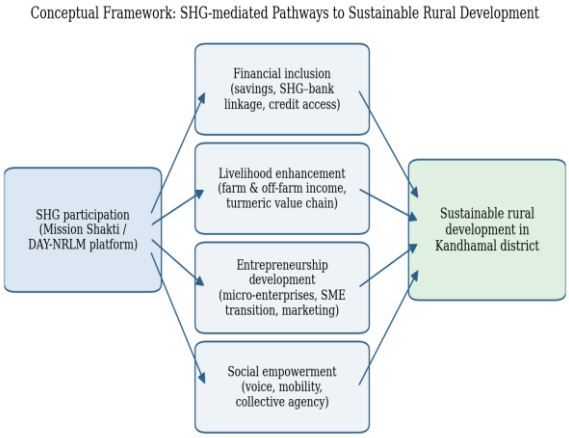


Figure 1. Conceptual framework of SHG-mediated pathways to sustainable rural development

IV. RESULTS AND DISCUSSION

1. Growth and Institutional Architecture of the SHG Movement

The left-hand side of the scale trajectory represents the supply side of the analysis in the context of Mission Shakti. In 2001-02, there were 41,475 women's SHGs, which grew to around seventy lakh women members in 2020-21, or around a fourteenfold increase (IIPA, 2023). This expansion is shown in figure 2. Institutionally, groups are federated in a three-tier structure: Gram Panchayat Level Federations (GPLFs) at the panchayat level, Block Level Federations (BLFs) at the ICDS project level and District Level Federations (DLFs) at the district level (IIPA, n.d.). The analytical significance of this federated architecture is that federations (not individual groups) can aggregate produce, bargain with buyers and operate district-level value chains, like turmeric, which are beyond the capacity of individual groups.

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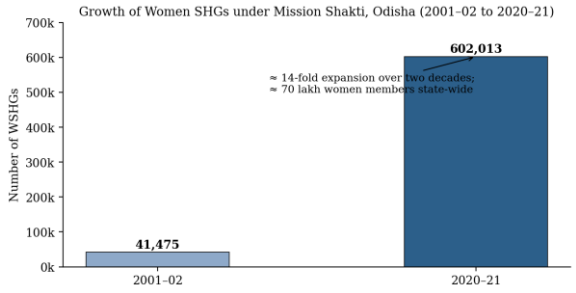


Figure 2. Growth of women's SHGs under Mission Shakti, Odisha

Table 2. Institutional architecture and support instruments of the SHG ecosystem in Odisha

Component	Description
Mission Shakti (2001)	State flagship launched 8 March 2001 to organise women into SHGs, build capacity, and provide credit and market linkage
Department of Mission Shakti (2021)	First dedicated state department for SHGs and federations in India, created June 2021
Federation structure	GPLF (Gram Panchayat level) → BLF (Block/ICDS project level) → DLF (District level)
Interest subvention	Loans up to ₹5 lakh at 0% effective interest for well-performing WSHGs
SHG–Bank Linkage Programme (NABARD, 1992)	Savings-linked, collateral-free credit after six months of regular savings; cash-credit and overdraft products
MEDP (2006) / LEDP (2015)	NABARD skill-to-enterprise programmes; LEDP covers full value chains for clusters of 15–30 SHGs in contiguous villages
DAY-NRLM (2013)	National livelihoods mission (restructured SGSY) providing universal social mobilisation and community institutions
Shakti Sahayika cadre	1,200+ young women trained as business development service providers for SHGs and federations

Source: Government of Odisha; NABARD (2024); Ministry of Rural Development; The Raisina Hills (2023).

2. Financial Inclusion Outcomes

The SHG platform is the first order outcome of financial inclusion and the pre-condition for other 3 dimensions. The SHG-BLP mechanism is directly tackling the issue of the exclusion of tribal women from formal finance, and their reliance on moneylenders, the key factor being six months of savings discipline before the introduction of collateral-free bank credit at reasonable interest rates (NABARD, 2024; Drishti IAS, 2025). Near-universal adoption of the savings habit is reflected in the evaluation evidence for the tribal belt of Odisha, with 97.96 per cent of the tribal members in the Mission Shakti evaluation saying they saved regularly, the strongest indicator in the study. The SHG acts as the de-facto doorstep financial institution in a district like Kandhamal where terrain and the fact that 90 per cent of the population is rural limits the density of bank branches, thereby providing an intermediary for deposits and credit for the unbanked population. The state interest-subvention policy, which now makes the cost of credit for performing groups up to ₹5 lakh negligible, further tips the balance between the incentive of credit for consumption smoothing and the incentive for productive investment. However, there are warnings from the literature that credit can be a source of credit absorption. According to the reviews of the SHG-BLP, the loan disbursement is not well used by the entrepreneurs, and financial-literacy is a weakness that has not been addressed (Kronika Journal, 2025). Financial-literacy intermediation by federation-level cadres like the Shakti Sahayikas is not an ancillary service, but a binding constraint on the level of inclusion for Kandhamal, where female literacy is only 52 per cent.

3. Livelihood Enhancement

It is in the livelihood aspect that Kandhamal is most distinct. Tribal households grow turmeric on their land on the fringes of the forest, an organic crop in the district. Kandham Haldi has been given the Geographical Indication tag under the Geographical Indications of Goods (Registration and Protection) Act, 1999, for its unique quality and healing abilities, allowing the farmers to sell it at premium market rates and hence increase the farm-gate income (Intellectual Property India, 2019; Organic India, 2024). As is relevant for this analysis, the women's SHGs of the district play a significant role in the management of the turmeric economy of Kandhamal, being involved in the collection, processing and marketing of turmeric (The Raisina Hills, 2023). This is a textbook example of the logic of LEDP (value chain approach to livelihood promotion) that has grown out of a tribal district. There is confirmation from earlier interventions of the viability of this pathway. Four tribal villages of Kandhamal (Raipali, Kundanaju, Brahmanigaon, and Mundama) were selected in an organic ginger and turmeric cultivation project in Orissa University of Agriculture and Technology from 2009-2013 where the dissemination of better agro-technology was specifically through the formation of willing farmers in the form of SHGs (Panda et al., 2017). In addition to the spice economy, there are state-level programmes which allocate

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Volume 4, Issue 5, Sep-Oct-2026, PP: 01-7

revenue-generating public functions to the SHGs, such as operation of LPGs by 2,137 women's SHGs under Shakti Gram, and leasing of panchayat ponds for pisciculture by 6,291 SHGs (The Raisina Hills, 2023). This is reflected in the member level data from the tribal-belt evaluation, as shown in Figure 3: 87.24 per cent of members indicated an increase in income and 85.71 per cent an improvement in living standards. 80.1 per cent of members in the same evaluation were in the below-poverty-line and Antyodaya categories and these reported gains would benefit the poorest segment of the rural population – the evaluation that is most relevant to Kandhamal.

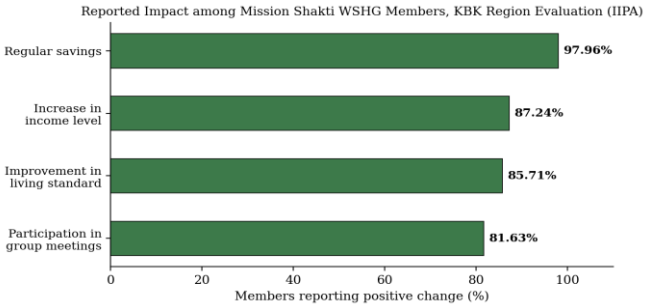


Figure 3. Reported impact among Mission Shakti WSHG members, KBK tribal region evaluation

Table 3. Member-level outcomes of Mission Shakti SHGs in Odisha's tribal belt (KBK evaluation)

Indicator	Members reporting (%)	Analytical significance for Kandhamal
Regular savings behaviour	97.96	Near-universal financial-inclusion baseline; doorstep banking substitute in low branch-density terrain
Increase in income level	87.24	Livelihood gains reaching predominantly BPL/Antyodaya households
Improvement in living standard	85.71	Translation of income into welfare; supports sustainability of participation
Participation in group meetings	81.63	Social capital and collective agency; precondition for federation-led enterprise
Members educated / scheme-aware	70.41	Moderates financial-literacy constraint; still leaves ~30% requiring intermediation
Members from BPL/Antyodaya households	80.10	Confirms pro-poor targeting of the platform in tribal districts

Source: Compiled from IIPA (2023), Evaluation of the Impact of Mission Shakti in Women Empowerment in KBK.

4. Entrepreneurship Development

The third dimension is the shift of the SHGs from thrift-and-credit societies to enterprise operating institutions. The journey from SHGs to SMEs is what Odisha has announced in the policy direction, namely the marketing strategy, distribution of smart phones to SHG groups, and lending of interest free loans to the SHG federation leaders for two-wheel mobility which is part of the Scooter Yojana (Government of Odisha, 2021; Testbook, 2026). Based on empirical study on the SHG enterprise, the key variables identified as significant in improving marketing performance of SHG enterprise in the field of sustainable livelihood orientation, entrepreneurial engagement and empowerment while group size and group age were found to be material in determining the probability of converting SHG to SME (Journal of Applied Research 2023).

In Kandhamal there are three entrepreneurship streams: The first is the premium branding of the turmeric with the GI which in turn makes it a differentiated product, thus creating national and international demand for the product where the SHGs and their Federations are the enterprise units in the value chain of the product. The second is NABARD's LEDP Architecture, the cluster structure of 15-30 SHGs in contiguous villages with end-to-end value chain support which is well matched with the cluster of villages that cultivate spices in the district. The third is that of the service-enterprise pathway which provides alternative income which is not directly related to agro-climatic risk, such as LPG distribution and pond pisciculture. The key studies that exist on entrepreneurship development, however, suggest that entrepreneurship development can remain welfare programmes and fail to generate structural change unless there is a continuous effort to develop entrepreneurial capabilities and market infrastructure (Sahu, 2023). This particular emphasis is given to the caution by the district's low level of road connectivity, which is crucial for value-chain benefits to be realised through the ability to transport products to markets.

5. Sustainable Rural Development: An Integrated Assessment

Together, the four pathways of the conceptual framework are mutually reinforcing, but bottleneck sensitive. Financial inclusion is the source of working capital for livelihood activity; livelihood income maintains discipline in saving and creditworthiness; entrepreneurship is the pathway from livelihood activity to accumulation; and social-capital dimension, reflected in 81.63 per cent meeting participation, is the capacity for collective action which federations rely on. Where the four pathways

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converge as in the case of turmeric value chain, organic cultivation supports the agro-ecological base, GI certification provides a price premium, SHG management ensures the sustainability of the value chain and federation structures institutionalise the value chain across generations of members, sustainability is most possible. In addition to economics, the documented impact of Mission Shakti on issues of child marriage, maternal mortality, sanitation and education implies spillovers to the social aspects of sustainable development (Testbook, 2026). Table 4 pulls together the district-relevant intervention portfolio.

Table 4. SHG-mediated livelihood and enterprise interventions relevant to Kandhamal district

Intervention	Mechanism	Documented status
Kandhamal Haldi (GI-tagged turmeric) value chain	SHG-managed aggregation, processing, and marketing of GI-certified organic turmeric; premium pricing	GI tag granted under GI Act, 1999; value chain managed by district WSHGs; international acclaim
DBT–OUAT organic spice project (2009–2013)	SHG-based delivery of organic ginger/turmeric agro-technology in four tribal villages	Implemented in Raipali, Kundanaju, Brahmanigaon, Mundama; PRA-based farmer selection
Shakti Gram LPG distribution	SHGs as last-mile LPG distributors; transparent, revenue-generating service enterprise	2,137 WSHGs engaged state-wide
Panchayat pond pisciculture	Leasing of village ponds to WSHGs for fish farming	6,291 ponds leased state-wide
NABARD MEDP/LEDP	Skill-to-enterprise programmes; cluster value-chain support for 15–30 SHGs	Operational nationally since 2006/2015; applicable to spice clusters
Shakti Sahayika cadre	Trained women business-development service providers for SHGs/federations	1,200+ trained state-wide

Source: Compiled from The Raisina Hills (2023); Panda et al. (2017); NABARD (2024); Intellectual Property India (2019).

V. CONCLUSION AND POLICY IMPLICATIONS

This paper has tried to incorporate all the available official and scholarly evidence in a multidimensional evaluation of SHG-based development in Kandhamal district. Three conclusions emerge. First, the SHG platform in Odisha is large and institutionalised, having expanded 14-fold in 20 years, and is structured in a three-tier system, with a dedicated state department, and is the main development platform for tribal women in districts like Kandhamal. Second, the findings of the outcome evidence collected from the state's tribal belt suggest that the platform achieves its first-order goals of near-universal savings behaviour and widespread reporting of improved living standards and income among members who are overwhelmingly poor. Third, in the GI-tagged turmeric economy, Kandhamal has a district-specific asset, which has taken its SHGs beyond the limits of thrift and credit to the scope of value-chain enterprise which most tribal districts have yet to achieve. There are four implications of this policy. First, financial-literacy intermediation must be seen as an infrastructure rather than an add-on service: In the district, female literacy is 51.94 per cent, so the expansion of the Shakti Sahayika cadre and digitised literacy tools must be a priority. On the other hand, it is a need to systematically map LEDP style cluster projects onto village clusters of Kandhamal, which are engaged in turmeric and ginger cultivation to reinforce and provide the advantage of GI to the village clusters under NABARD value chain instrument. Third, enterprise promotion efforts need to be complemented by the binding infrastructural constraint (road connectivity to markets), as value-chain returns depend on physical market access. Fourth, there needs to be capitalization of federation-level enterprises (DLF/BLF-run processing and branding units for Kandhamal Haldi) as the route for the SHG-to-SME transition as envisioned in the state policy. Limitations of the study restrict claims made in the study. It is based on secondary data, member level outcome figures are based on the KBK tribal-belt evaluation and extrapolated to Kandhamal as proxies instead of district specific figures and the latest programme statistics available are for 2020-21. The natural next step is a district-level primary survey of SHG members who were stratified by blocks and included financial behaviour, participation in the turmeric value chain, empowerment indicators and more, which would then be used to create the instrument structure for a primary survey.

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