

Reimagining Public Administration: Policy Innovation and Institutional Pathways to Empower Waste Pickers in Himachal Pradesh

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ABSTRACT

The bulk of Indian waste pickers continue to work in the informal sector because government agencies and NGOs and cooperative organizations have not succeeded in their attempts to establish social protection and welfare programs for these workers. The study examines how waste pickers access vital services through healthcare and education and housing and financial assistance based on the governance systems and public administration frameworks and national and state policies that exist in their environment. The waste pickers who deliver essential urban sanitation and environmental work face ongoing discrimination and hazardous work conditions and restricted access to essential services. The study investigates how policy innovation and novel institutional methods improve the delivery of services and the capacity of institutions to withstand challenges. The organization assesses rights-based methods and skill development programs that empower women waste pickers through programs of advocacy and awareness and capacity building and cooperative membership. The research studies major legal and regulatory frameworks through the Solid Waste Management Rules 2016 and the Street Vendors Act 2014 to determine the methods that will lead to official recognition and municipal integration and protections against exploitation. The research results show that waste pickers in Himachal Pradesh need governance systems that include all members of society while maintaining institutional resilience to protect their rights and job safety and social security benefits and highlighted existing challenges in implementing policies and delivering services.

Key Words: Governance, Institutional Resilience, Policy Innovation, Public Administration, Social Protection, Waste Pickers

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1.0 INTRODUCTION

The field of municipal solid waste management developed during the late twentieth century because environmental governance and labour relations and public health concerns combined to transform waste disposal from a basic sanitation problem into a complex socio-economic issue that impacted people's livelihoods. In the cities of India, informal waste pickers developed into essential resource recovery workers who helped recycle materials to protect the environment while they remained outside of the country's formal welfare and labour protection systems. The SWaCH cooperative in Pune demonstrated through its waste picking operations that waste pickers could access waste materials directly from homes to establish their right to waste collection while establishing an alternative municipal governance system. The implementation of institutional innovation pathways enables organizations in Himachal Pradesh to achieve their goals. The cooperative approaches established productive work opportunities which created circular economy outcomes and poverty reduction results while offering women the chance to build their economic power through group bargaining (Buch et al., 2021; Estrada et al., 2023). The national policy framework for social welfare and labour rights used by the country experienced significant difficulties during its implementation process despite policy advancements. The waste pickers reported unsafe work conditions which resulted in poor health results and limited chances for career advancement together with their unstable income situation and strong bargaining power limitations (Shankar and Sahni, 2018; Singh et al., 2023). The Solid Waste Management Rules 2016 and the Street Vendors Act 2014 established formal pathways for people to achieve inclusion through obtaining identity documents and accessing municipal services. The provisions failed to produce effective local protections which would enable people to access healthcare services and educational institutions and housing options and financial assistance. The work of informal waste economies resulted in environmental advantages which continued without providing any social security benefits to their workers.

The mountainous regions face greater challenges because their combination of difficult terrain and extreme weather conditions and seasonal tourist activities makes waste management systems more difficult to operate. The Indian Himalayan Region produced 1.905 Mt of waste during the year 2019 but only a small portion of this waste reached safe treatment facilities and composting operations proved ineffective in the cold weather conditions (Sharma et al., 2025). The towns of Solan and Shimla in Himachal Pradesh face service delivery problems which result from their fast urban development because their spatial limitations create health dangers for workers. The informal waste handlers manage a large portion of waste yet the systems for their governance inside the waste management systems remain ineffective while legal

recognition mechanisms and social protection systems remain undeveloped. Existing studies have examined livelihoods and cooperatives and policy frameworks, but research has not investigated how waste pickers' governance systems and administrative capacity and inter-institutional coordination affect their welfare outcomes through waste picker programs that target women in mountain regions. The present study evaluates social protection systems and empowerment programs and legal recognition methods and policy implementation practices in Himachal Pradesh to determine how participation-based governance systems increase service efficiency and rights protection and institutional strength for waste pickers.

The study intends to: (i) provide a comprehensive assessment of social protection, empowerment, legal recognition, and policy implementation for waste pickers, focusing on their exclusion from welfare programs; (ii) assess the impact of national and state policies on healthcare, education, housing, and financial inclusion for waste pickers, and identify barriers to access; (iii) investigate empowerment initiatives for women waste pickers through cooperatives, skill-building, and advocacy; (iv) examine the effectiveness of legal recognition, including identity cards and inclusion in municipal waste systems, under the Solid Waste Management Rules (2016) and Street Vendors Act (2014); (v) explore how governance systems and public administration frameworks influence service delivery, emphasizing policy innovation and institutional capacity; and (vi) highlight the need for inclusive, participatory governance systems to secure waste pickers' rights, job security, and social safety nets while addressing gaps in service delivery and policy execution.

2.0 MATERIALS AND METHODS

2.1 Study Area

The urban and semi-urban regions of Himachal Pradesh show various geographic and socio-environmental conditions through their Shimla, Mandi, Dharamshala, and Solan locations. The state extends between 30.38°N–33.21°N and 75.77°E–79.07°E through its mountainous landscape which reaches heights from 300 m to over 6700 m, resulting in weather patterns that range from sub-tropical to alpine with annual rainfall that reaches 50 mm to over 2600 mm and extended periods of snow cover in its higher elevations. The area contains various soil and vegetation types which include alluvial valley soils and forest and alpine ecosystems. Mandi and Solan serve as economic centers for trade and industrial activities and horticultural production whereas Shimla and Dharamshala function as the primary governmental and cultural hubs of the region. The cities show appropriate conditions to study waste management systems through their

combination of different waste disposal methods and the incomplete implementation of waste management policies.

2.2 Hypothesis of Study

The researchers established the following hypotheses based on the study objectives which stated that (i) waste pickers face welfare program exclusion through social protection systems and empowerment programs and legal recognition rights and policy implementation methods; (ii) national and state policies impact healthcare education housing and financial inclusion access for people yet access to these services remains inadequate; (iii) women receive economic advancement through cooperative programs and skill enhancement and advocacy initiatives; (iv) government-issued ID cards and Solid Waste Management Rules (2016) and Street Vendors Act (2014) municipal system integration bring legal recognition which safeguards people; (v) public administration systems and governance frameworks determine both service delivery effectiveness and fairness; (vi) political systems require active community involvement to maintain rights and job stability and social welfare programs while solving implementation problems.

2.3 Quantitative Data Collection

The research team conducted a structured survey with 100 waste pickers who were purposefully chosen from the research locations. The survey assessed access to healthcare, education, housing, financial inclusion, cooperative membership, skill development, advocacy participation, and occupational hazards using dichotomous (Yes/No) and categorical questions. The research team used percentages to report quantitative data because those numbers enabled them to identify which groups had better access to services and which groups showed different levels of participation and gender-based access differences.

2.4 Qualitative Data Approach

The research team gathered qualitative insights to provide background information about the quantitative research results and to investigate how waste pickers experience their daily existence. The study interviewed 20 participants who represented different genders and roles and geographical areas to investigate how social protection and legal recognition and occupational safety and gender-specific challenges affect collective empowerment. The three focus group discussions with women waste pickers studied the obstacles that women face when seeking to join cooperatives and develop skills and obtain social protection and ensure workplace safety and escape social stigma. The research team used thematic



analysis to study interview and focus group data which resulted in the discovery of common patterns and new issues and fundamental elements that affect waste pickers different experiences.

2.5 Mixed Method Approach

The research used mixed-methods to study social protection and empowerment rights and legal recognition and policy implementation through quantitative and qualitative methods. The structured survey measured service access and cooperative membership and skill training and advocacy activities and occupational risks and income, whereas the in-depth interviews and focus group discussions detailed the barriers and enablers and gender-specific experiences. The research team used triangulation to discover both measurable patterns and detailed information about structural and daily life experiences which enabled them to conduct analyses that included both gender perspectives and relevant policy information.

2.6 Policy Document Review

The research team conducted a systematic review of all relevant national and state policies which included SWM Rules (2016) and Street Vendors Act (2014) and Unorganised Workers' Social Security Act (2008) and HPULM (2016) and the National Policy on Urban Street Vendors (2009). The review identified legal and institutional mechanisms for social protection, formal recognition, empowerment, and municipal integration of waste pickers. The research team combined policy review findings with survey results and qualitative information to evaluate both coverage and practical implementation issues.

3.0 RESULTS AND DISCUSSION

The study uses quantitative surveys and qualitative interviews and focus group discussions and policy reviews to investigate the economic and legal and workplace and gender-related problems that waste pickers experience throughout Himachal Pradesh. The mixed-method research design offers complete insights into social protection access and empowerment rights and legal recognition and policy implementation success.

3.1 Quantitative Analysis

The research team used a structured survey method to assess 100 waste pickers in Himachal Pradesh about their social protection access and legal recognition and empowerment and skill development and occupational health and their views on policy implementation. The survey used dichotomous (Yes/No) and categorical scales to collect data about socio-economic status and formal integration and participation in

cooperatives and training and gendered empowerment and work-related hazards. Table 1 shows the quantitative social protection status and empowerment status and legal recognition status and policy implementation status of 100 waste pickers in Himachal Pradesh while identifying major gaps and gender disparities. The survey results from Table 1 show that waste pickers in Himachal Pradesh experience moderate but uneven access to social protection and legal recognition because systemic barriers restrict their educational and housing and financial access. Men show low participation in cooperatives and skill-building programs, but women participate more in collective empowerment activities while facing challenges that prevent them from participating in advocacy and training. Workers in this sector face occupational dangers because they must operate without safety equipment and work extended hours. The policy implementation process is perceived to be weak because there are deficiencies in both governance and coordination and institutional support. The study results show that waste pickers need stronger inclusive governance systems and targeted empowerment programs and better legal framework enforcement to achieve their right to social protection and recognition and skill development.

Table 1. Access to Social Protection, Empowerment, Legal Recognition, and Policy Implementation among Waste Pickers in Himachal Pradesh (N=100)

Objective / Theme	Indicator	Findings (N=100)	Interpretation
Social Protection & Welfare Access	Healthcare access	78%	Moderate coverage; some exclusion persists.
	Education access	45%	Low coverage; barriers include awareness and administrative hurdles.
	Housing access	38%	Limited access; highlights gaps in social welfare implementation.
	Financial access	40%	Poor access; shows need for targeted policy delivery.
Legal Recognition & Integration	ID card possession	52%	Partial formal recognition; moderate municipal integration.
	Municipal inclusion	55%	Moderate inclusion; incomplete enforcement of policies.
Empowerment & Capacity-Building	Cooperative membership	42%	Low participation; empowerment opportunities underutilized.
	Skills training	36%	Moderate access; women face additional barriers.
	Advocacy involvement	28%	Very low engagement; indicates weak awareness or support mechanisms.
Occupational Health & Working Conditions	No safety equipment	65%	High occupational risk; health hazards remain significant.
	Long working hours (>8 h)	30%	Long working hours contribute to labour stress.



Gender-Specific Empowerment (Females, N=50)	Cooperative membership	60%	Moderate engagement; women slightly more organized than general sample.
	Skills training	50%	Partial access; barriers persist for women.
	Advocacy involvement	35%	Low; highlights gendered gaps in empowerment opportunities.
Policy Implementation Perception	Policy satisfaction	30%	Low satisfaction; indicates weak enforcement, coordination, and governance gaps.

3.2. Qualitative analysis

The study used qualitative analysis to examine the waste pickers in Himachal Pradesh by investigating their socio-economic and legal and occupational and gender-based difficulties which these workers face. The study used data from twenty in-depth interviews and three women-focused FGDs to investigate how barriers to cooperatives and skill development and social protection and safety and stigma affect women. The essential themes which qualitative analysis identified are displayed in Table 2. Thematic analysis revealed recurring exclusion from welfare schemes, uneven access to legal recognition and empowerment, and limited policy coverage due to administrative and institutional constraints. Women encountered extra obstacles which included limited training opportunities and reduced workplace attendance and workplace safety dangers and social discrimination and domestic duties. Table 2 presents qualitative findings which demonstrate the intricate nature and extensive scope of these challenges. The quantitative survey data show partial social protection and legal recognition and empowerment program inclusion, but the qualitative narratives reveal structural and institutional and gendered barriers, which impede proper access. Waste pickers in Himachal Pradesh need support through inclusive governance and effective policy execution and gender-sensitive program design, which will provide them with essential social protection and legal recognition and empowerment.

Table 2: Assessment of Social Protection, Empowerment, Legal Recognition, and Policy Implementation among Waste Pickers (N=100)

Theme	Respondents Reporting Issue	Interpretation
Empowerment & Collective Action	42% participated in cooperatives/skill programs	Limited empowerment; cooperative and training initiatives are underutilized, especially for women.
Access to Social Protection	55% had partial access; 45% faced barriers	Policies have moderate impact, but administrative and awareness barriers limit effective coverage.



Legal Recognition & Integration	48% had ID cards; 52% faced barriers; 55% included in municipal systems	Partial legal recognition and formal integration limit access to entitlements under SWM Rules (2016) and Street Vendors Act (2014).
Working Conditions & Safety	65% lacked PPE; 30% worked >8 hrs/day	Unsafe conditions persist, reflecting gaps in enforcement, occupational health policies, and governance oversight.
Policy Implementation	70% dissatisfied with enforcement	Weak coordination and limited institutional capacity reduce effectiveness of social protection and empowerment programs.
Gender-Specific Challenges	56% reported limited training and stigma; 70% in cooperatives; 50% accessed skills; 40% aware of schemes; 65% unsafe conditions	Women face overlapping social, economic, and occupational vulnerabilities; gender-responsive governance and improved policy execution are needed.

3.3 Mixed Method of Approach

The mixed-method approach uses quantitative data to determine prevalence rates while using qualitative data to examine social protection and empowerment and legal recognition and policy implementation and gender-specific challenges faced by waste pickers in Himachal Pradesh. The method enables researchers to measure the extent of problems while identifying the main obstacles that exist in the particular context. Figure 1 shows a mixed-method study which evaluates essential themes found in 100 waste pickers. Figure 1 shows quantitative data, which demonstrate the degree of challenges, while qualitative data, which reveal structural problems, gender-based barriers, and governance issues, emerge from the research findings. The system creates partial social protection and weak empowerment and unsafe working conditions because of its policy implementation and institutional capacity limitations, which affect women more than men. Policy Implementation and Governance shows the highest concern in both measures (70%), indicating systemic weaknesses. Occupational Health and Safety reveals greater risks in lived experiences (65%) than statistics suggest (48%) and Empowerment and Collective Action shows low participation (40%) despite strong qualitative concerns (60%). The observed trends demonstrate the requirement for particular interventions, which should be participatory and responsive to gender needs.

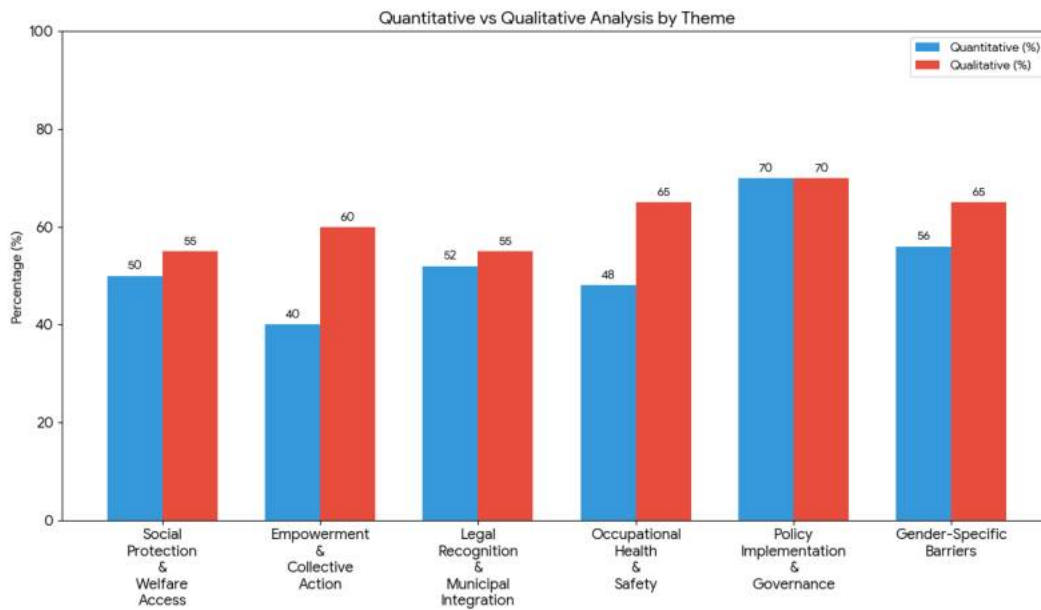


Fig. 1: Mixed-Method Assessment of Key Themes among 100 Waste Pickers

3.4 Hypotheses-Based Analysis of Social Protection, Empowerment, Legal Recognition, and Governance among Waste Pickers

The investigation employed a mixed-method approach to study how waste pickers in Himachal Pradesh face social protection and empowerment and legal recognition and policy implementation and gender-specific barriers. The quantitative surveys assessed the occurrence of the phenomenon, while the qualitative interviews and focus groups provided contextual information, which enabled researchers to assess both structural and individual obstacles.

H1 - Social Protection, Empowerment, Legal Recognition, and Policy Implementation Reveal Exclusion: Quantitative data show 50–55% of waste pickers access social protection schemes, while qualitative findings highlight administrative, geographic, and gendered barriers. Mixed-method findings validate partial access to services, but there exists ongoing exclusion for healthcare and education and housing and financial services, while beyond that, public participation in cooperatives and advocacy groups remains restricted.

H2 - Impact of National and State Policies on Access: Survey results indicate moderate access: 45% for education, 38% for housing, and 40% for financial inclusion. Qualitative interviews reveal low awareness (40% of women) and procedural barriers. The evidence shows that policies have a moderate



impact, but the remote location and administrative difficulties and information distribution limits result in policy implementation challenges.

H3 - Empowerment Initiatives Improve Socio-Economic Status, Especially for Women: The study found that 42% of people belong to cooperatives, while 60% of women participate, and 36% of people enroll in skill programs, while 50% of women participate. The qualitative findings show that social stigma persists at 80% and unsafe conditions exist at 65%, which indicates that empowerment initiatives need gender-sensitive and context-specific improvements.

H4 - Legal Recognition Enhances Protection: The study found that 52% of participants have ID cards, while 55% of people belong to municipal systems. The qualitative study found that waste pickers need legal recognition in order to obtain their rights, but their access to these rights is limited because of bureaucratic obstacles and incomplete enforcement of SWM Rules (2016) and Street Vendors Act (2014).

H5 - Governance and Public Administration Affect Service Delivery: The survey results show that 70% of respondents express dissatisfaction with how policies get implemented. The qualitative research shows that service delivery becomes fragmented because of poor coordination and institutional capacity limitations, which show how governance systems need to work for social protection and empowerment programs to achieve fairness in access.

H6 - Need for Inclusive, Participatory Governance for Rights and Safety Nets: Gender-specific findings indicate that 56–65% of women face overlapping social, economic, and occupational vulnerabilities. The research shows that participatory governance, which responds to gender needs, must exist in order to safeguard rights and create secure employment opportunities and establish social safety nets, which will address both systemic and operational gaps.

The integrated analysis demonstrates that waste pickers experience partial inclusion across social protection, legal recognition, and empowerment initiatives. The existing policies and programs face operational challenges because of administrative barriers and governance limitations and gender-based obstacles, which require activists to create inclusive and locally specific interventions.

3.5 Policy Document Review

The investigation required a thorough examination of national and state policies which included the Solid Waste Management Rules (2016), the Street Vendors Act (2014), the Unorganised Workers' Social Security



Act (2008), the Himachal Pradesh Urban Livelihoods Mission (2016), and the National Policy on Urban Street Vendors (2009). The research combined quantitative survey results with qualitative interview data and focus group discussion outcomes and mixed-method evaluations to study implementation difficulties and coverage issues.

The Solid Waste Management Rules (2016) establish municipal waste picker integration standards while granting waste pickers official recognition. The data shows that 52% of people possess ID cards and 55% participate in municipal systems which indicates their partial recognition status. The qualitative data shows that waste pickers face bureaucratic challenges and enforcement inconsistencies and they experience discrimination which results in almost half of them remaining unrecognized. The mixed-method outcomes show that the Rules establish legal standards but local authorities need to develop capacity through waste picker education programs and continuous operational monitoring to make their benefits available to all waste pickers.

The Street Vendors Act (2014) provides informal workers with both employment protection and legal rights. The cooperative membership rate stands at 42% which shows that only 42% of people belong to cooperatives while 28% of people participate in advocacy efforts. Social stigma restricts 80% of women from joining public programs while 50% of women use skill development programs. The mixed-method evidence shows that organizations need to improve their outreach through gender-sensitive community support systems which will help women gain access to protective benefits and power their development needs.

The Unorganized Workers' Social Security Act (2008) delivers medical coverage and pension and insurance benefits. The healthcare system grants access to 78% of people while education access stands at 45% and housing access at 38% and financial inclusion at 40%. The combination of administrative processes and limited knowledge about services and the remote location of services decreases access to services which impacts women who have 40% awareness of services. The mixed-method analysis shows that organizations need to implement registration procedures which should be made easier to understand and establish methods of communication which should be paired with specific actions to close operational gaps.

The Himachal Pradesh Urban Livelihoods Mission (2016) provides support for the development of cooperatives and the creation of employment opportunities through skill training programs. The cooperative membership rate stands at 42% overall which includes 60% membership for women. Domestic duties and social stigma and resource shortages create obstacles for women which highlights the requirement for



programs to implement gender-sensitive solutions and provide relevant contextual programs and mentorship pathways which will empower women to develop their skills.

The National Policy on Urban Street Vendors (2009) establishes guidelines for municipal vendors and members of cooperatives. The formal system acknowledges 55% of waste pickers who have achieved full social and economic integration. The combination of weak coordination with fragmented service delivery and institutional capacity limitations results in reduced operational benefits. The mixed-method outcomes show that government agencies must work together while the government must develop its monitoring systems and build its capacity at municipal levels to make policies work successfully through their various implementations.

The review of these national and state policies shows that formal mechanisms for social protection, empowerment, and municipal integration exist, yet significant implementation gaps remain. The data shows that people partially access social protection benefits through their membership in cooperatives while their participation in municipal systems remains restricted. The mixed-method analysis shows that organizations must enhance their governance inclusivity through institutional capacity development and better program design while implementing gender-responsive methods which protect their target women's rights.

3.6 Recommendations

The process of social protection for waste pickers needs better support through educational initiatives and improved governance together with streamlined procedures. Women and marginalized communities should receive priority in skilling programs through gender-sensitive policy innovations which include training programs and cooperative membership opportunities. Occupational health and safety requirements need PPE together with secure work methods and incident reporting systems. The implementation of policies needs enhancement through better execution methods and better interdepartmental coordination and monitoring systems. The governance process needs citizens to join public advocacy work because it helps organizations decrease stigma and enhance their understanding of rights and their ability to participate in gender-responsive governance.

3.7 Future Scope

The research must extend its borders to include additional states while its research design needs to implement longitudinal studies which evaluate how welfare access and empowerment and occupational health change over time. Research on how gender and caste and socio-economic factors operate in real-life

situations will result in successful interventions which operate in societies. The evaluation of the SWM Rules together with the Street Vendors Act and the HPULM initiatives needs to happen as it evaluates the laws efficiency and identifies governance shortcomings. Digital platforms and technological tools lead to higher financial participation and training and participation in cooperatives. The community development programs require funding because they promote economic growth and empowerment and social acceptance of waste pickers. The assessment should explore governmental systems which can operate in various hilly areas through their institutional pathways.

4.0 CONCLUSION

The social protection system fails to protect waste pickers in Himachal Pradesh because of incomplete social protection measures and missing empowerment initiatives and absent legal recognition and lack of policy execution. The study found that people could access welfare schemes at a moderate level because 78% of healthcare services were available but only 45% of education services and 38% of housing services and 40% of financial services were accessible. The community showed low participation in both cooperatives and skill-building programs because only 42% of people joined cooperatives while 36% participated in skill-building programs. The formal recognition process showed that 52% of people possessed ID cards and 55% of people had access to municipal waste systems, while people reported facing administrative and structural barriers. The qualitative study revealed that workers face dangerous conditions which increase their professional risks because they deal with social stigma and unique gender challenges which particularly harm women who have 56–65% of their vulnerabilities intersecting. The mixed-methods research shows that people experience partial inclusion, but the results indicate that empowerment and skill development and governance problems become worse than what survey data shows. The organization needs to develop skills for women while connecting cooperatives to social protection programs and developing new policy systems which need better policy execution to close these existing gaps. Future research needs to use longitudinal studies which include gender and participatory research methods to assess how policies affect waste pickers in Himachal Pradesh while establishing their social and economic and work inclusion.

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