

Landscape assessment of Occupational Health and Safety (OHS) of Sanitation Workers in Vikasnagar and Haldwani, Uttarakhand

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Sanitation workforce landscape in Uttarakhand

Urban growth in Uttarakhand

- overall urbanisation rate - 30.2, national average - 31.2%
- average annual urban growth rate - 4.0% > rural growth Rate - 1.2%



Unplanned growth that outpaces planning and resource capacities



Challenges

- concentrated low-income settlements
- strained equitable access to water and sanitation
- rising waste volumes.

Waste generation and treatment capacity



Sewage generation = 535.76 MLD

Treatment capacity = 428 MLD

Municipal Solid waste Generation and Treatment in TPD (2018-2022),

Source: [Uttarakhand SBM Journey](#)

Synopsis of the State	
Total number of ULBs	107
% D2D	57%
% Source Segregation	17%
% Processing	48.2%

8% decline in collection efficiency, treatment capacity improved by 43% (2016-2024)

Source: [Uttarakhand SBM Journey](#)

Sanitation workforce (Paryavaran Mitras)



Source: NIUA 2025



Source: NIUA 2025

- SSWs registered under NAMASTE – 635
- Safai Mitra Suraksha Shivar dashboard - 2,088 workers (1,648 solid waste; 448 used-water)
- Safai Mitra Surakshit Sheher – 5 ULBs

Waste pickers in Uttarakhand

- 1083 waste pickers identified
- 977 waste pickers registered



Need of the Study

1. Persistent occupational risks and safety failures

- Systemic gaps in PPE use, and unsafe working conditions (CAG, 2022).
- Recent septic tank worker death near Bhowali, Nainital (November 2025)

2. Large invisible and excluded workforce, especially waste pickers

- Official data underrepresents the actual number of waste pickers, working informally without recognition.
- 2024 suo motu case heard by the Uttarakhand High Court

3. Fragmented reforms and absence of city-level evidence

- 35/102 ULB received safety certification under SBM-U 2.0, HC Directive to Dehradun to provide minimum wages, safety gear, and incentive-linked payments to waste pickers, remain piecemeal and uneven across ULBs.



Aim and Objectives

Under a MoU signed between Urban Development Directorate, Uttarakhand and National Institute of Urban Affairs (NIUA), a **research based rapid assessment study on improving occupational health and safety of sanitation workers including sewer and septic tank workers and waste pickers** was proposed by the state to NIUA.

Two cities were proposed by the UDD - **Vikasnagar and Haldwani** for conducting a rapid assessment study, driven by their contrasting characteristics

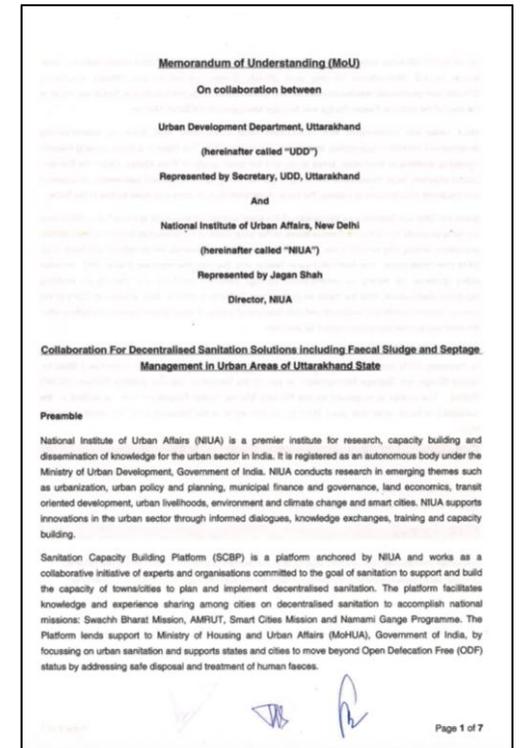
Objectives



To conduct a rapid and holistic assessment of the occupational, health, and safety risks of sanitation workers including sewer and septic tank workers and waste pickers.



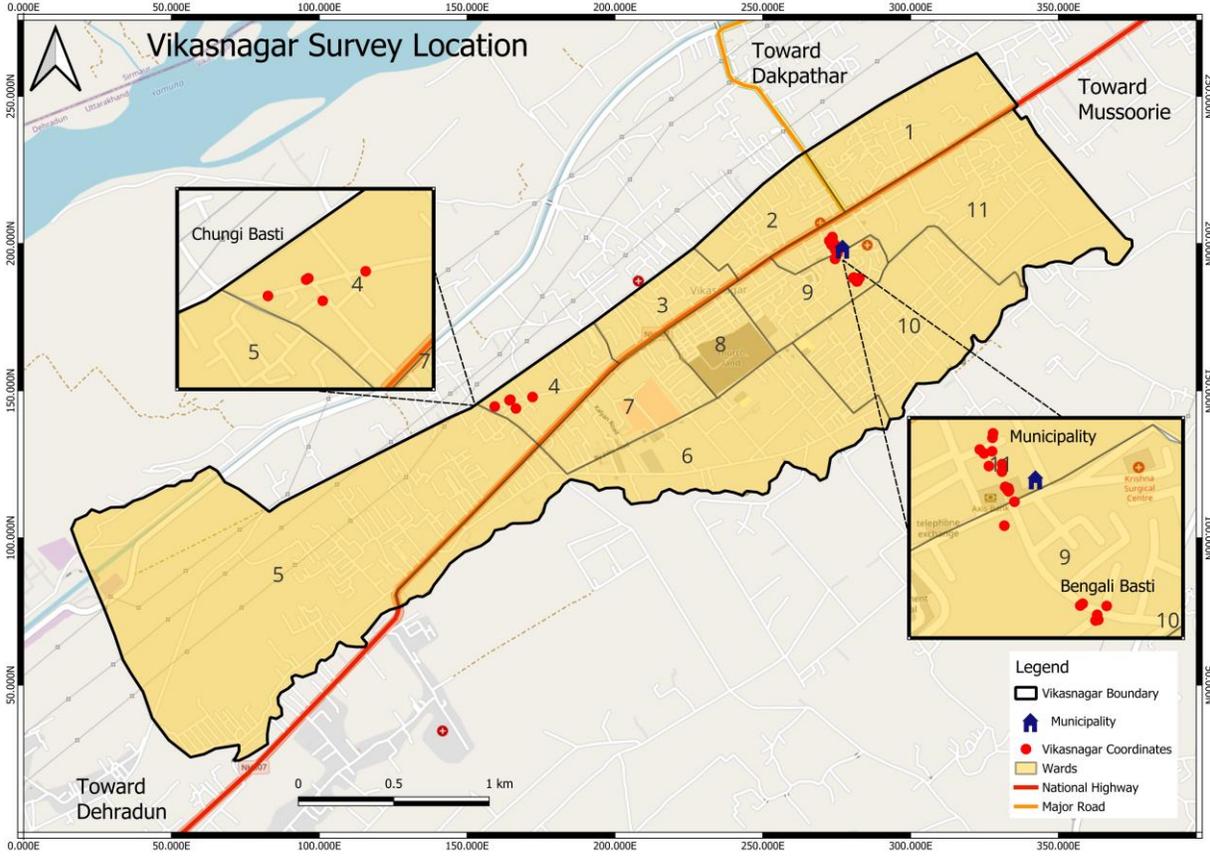
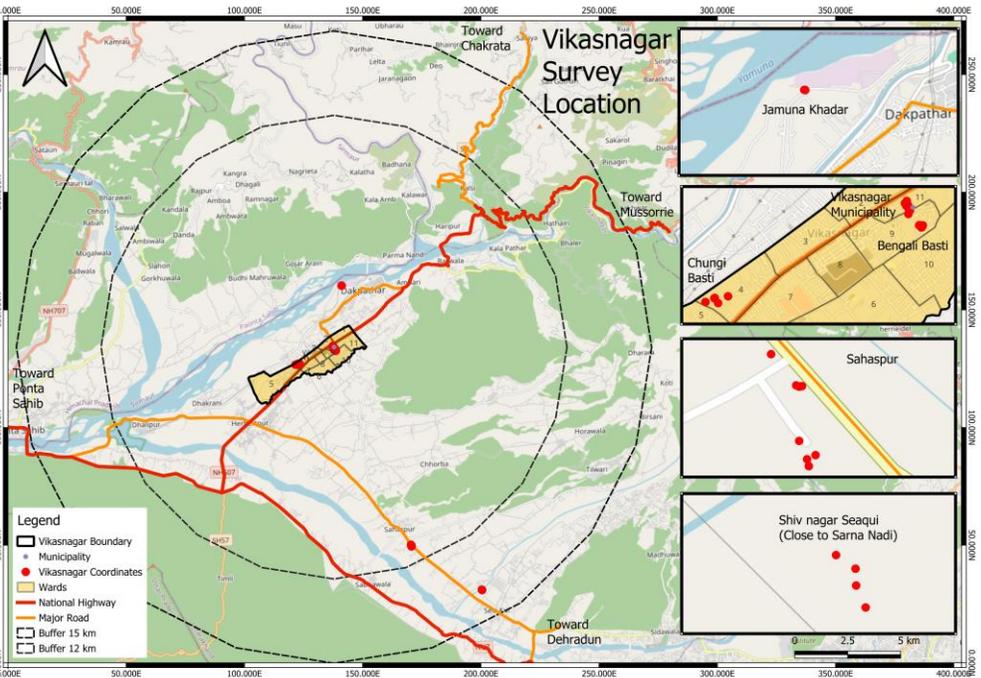
To study the challenges and opportunities regarding the socioeconomic conditions of the workers to provide actionable recommendations



Study Area



Garhwal Division: 44 km from Dehradun on NH-7, serving as a regional trade and transit node for the Jaunsar-Bawar region.



Source: NIUA 2025

Municipal Area: 9.33 sq km with 11 wards.

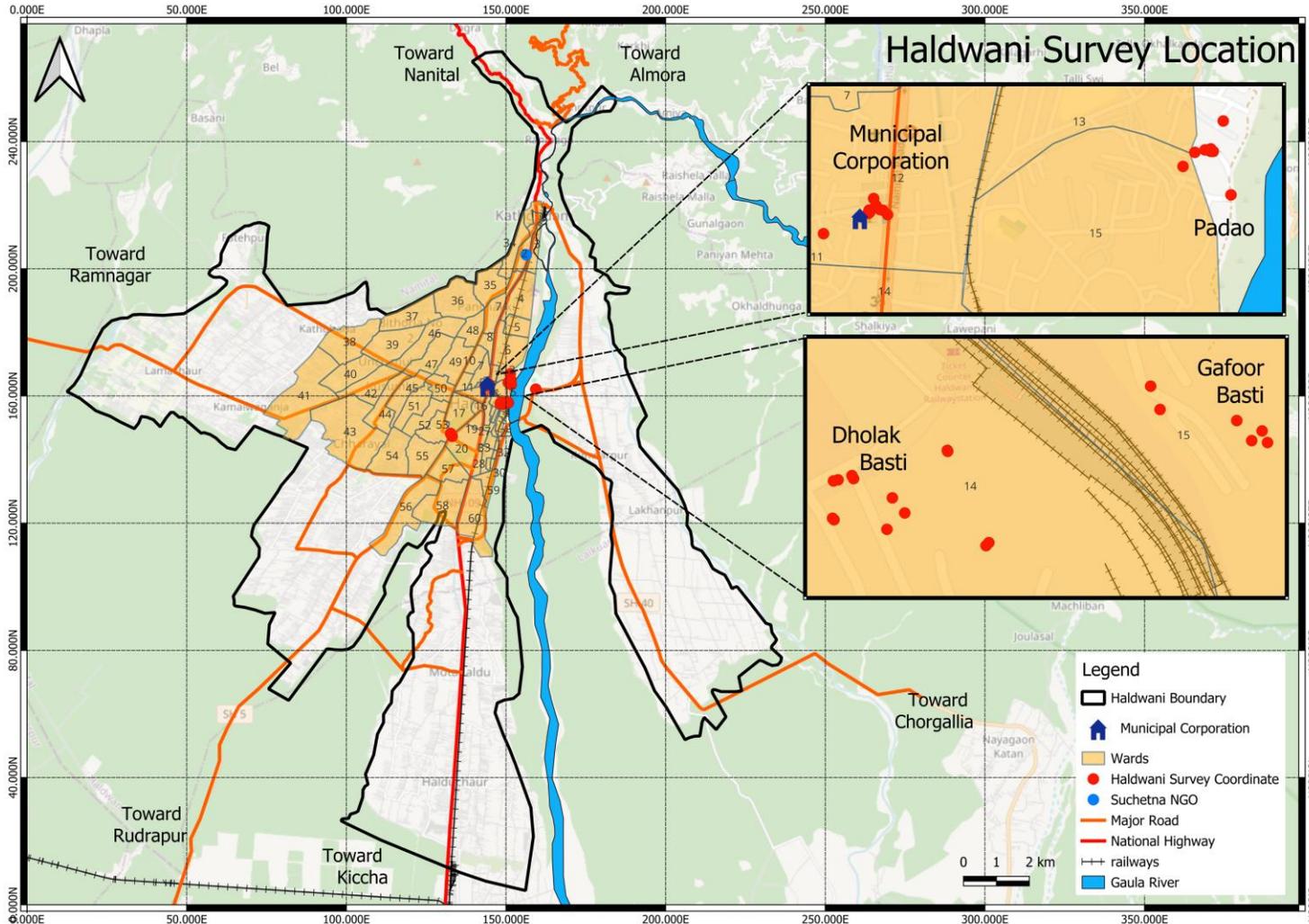
Population: 13,927 (2011, 30,000 (2025) , with a floating population ~50,000

Waste generation and processing: 100% door-to-door collection, 42% source segregation, 64% waste processing

Informal settlements & workforce: Slum population 6,348 (Census 2011); key settlements include Chungi Basti and Bengali Basti, with 350+ waste picker households across nearby clusters (Sahaspur, Selaqui), largely dependent on informal waste picking.

Haldwani Urban Agglomeration

Largest city of Kumaon division, along the Gaula River, serving as the main gateway between the Indo-Gangetic plains and the Kumaon Himalayas.



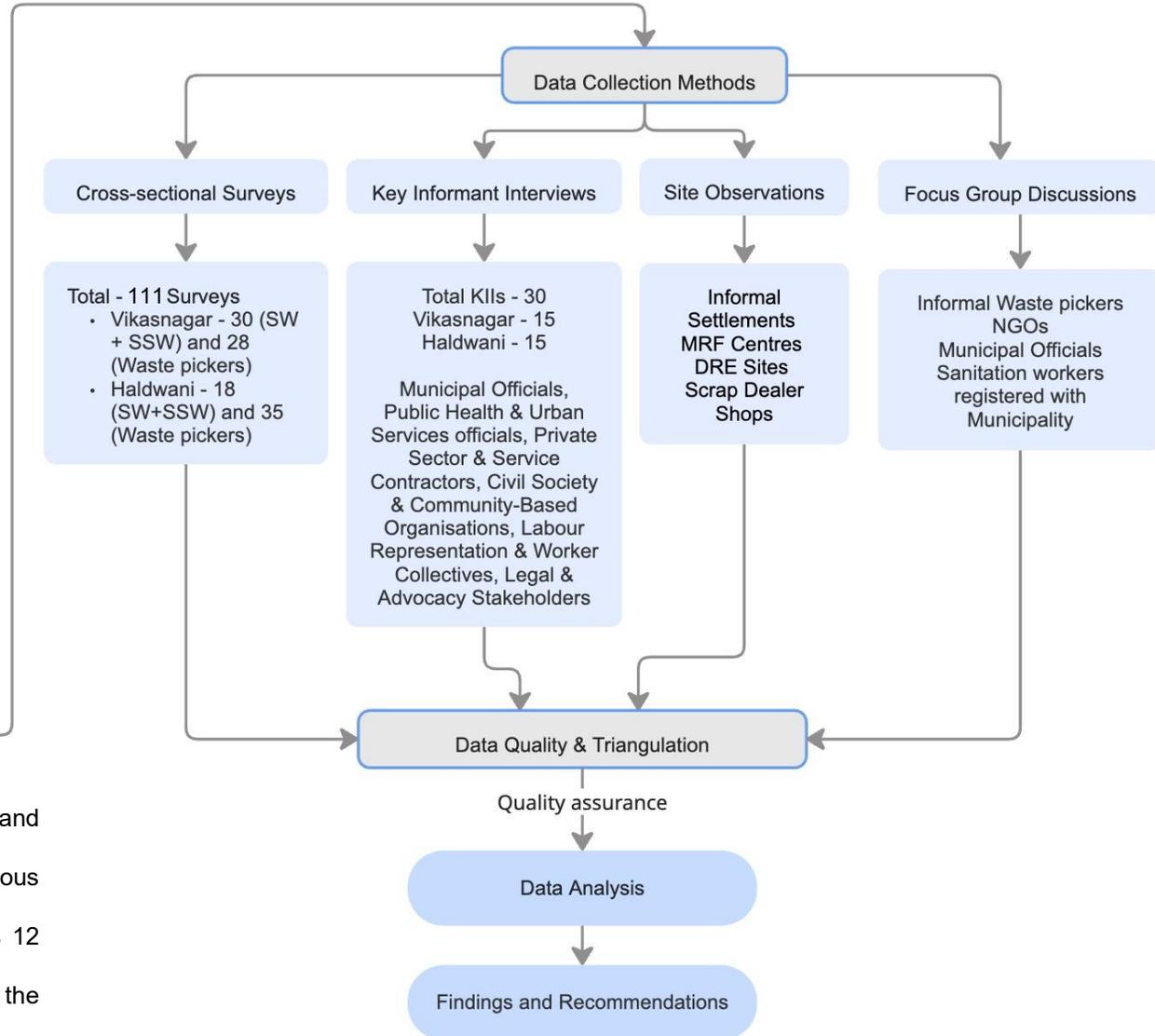
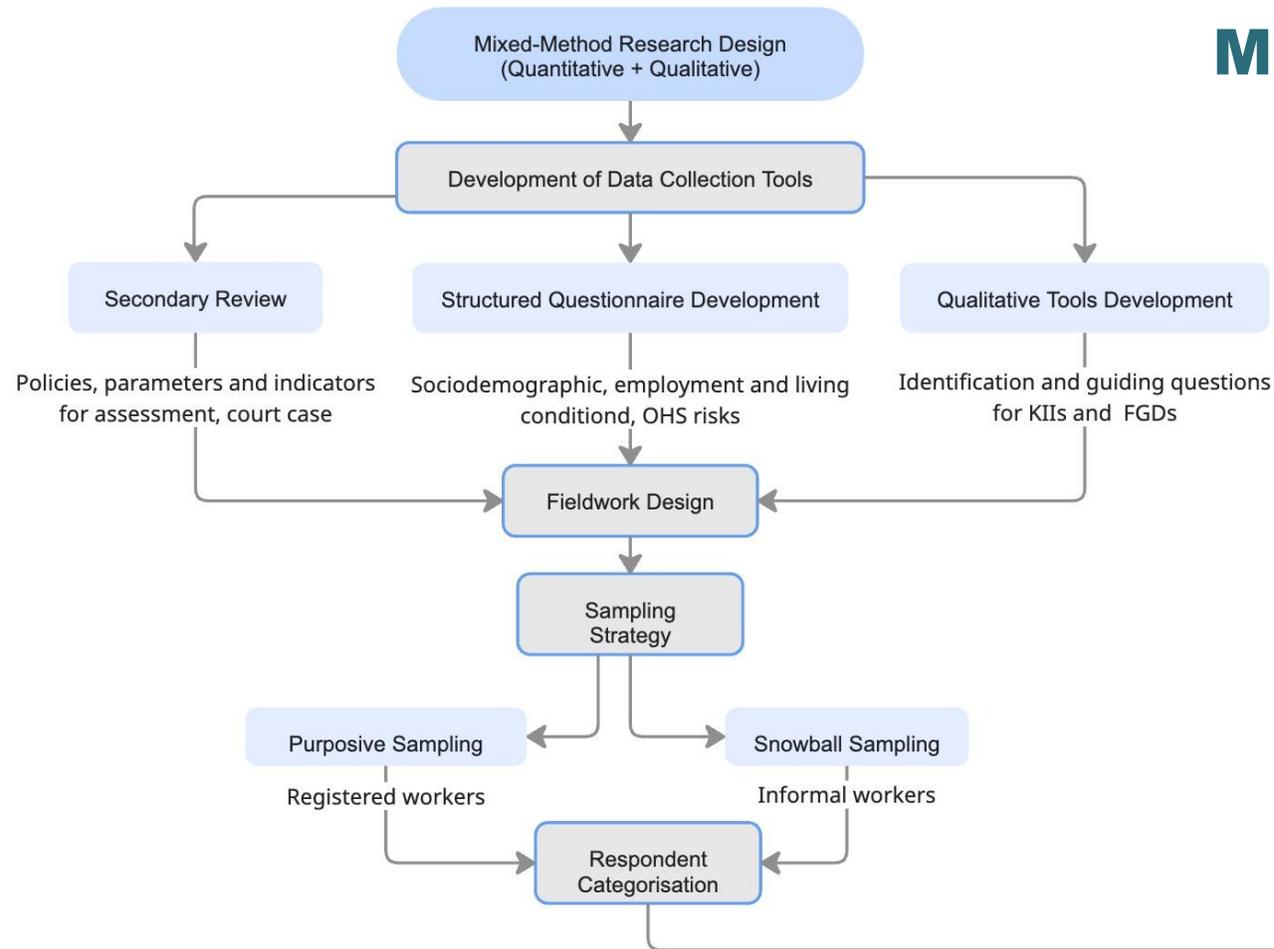
Source: NIUA, 2025

Area: Haldwani-cum-Kathgodam UA Area - 44.11 sq km
Population - 201,461 (Census 2011)
 Municipal wards increased from 33 to 60 post agglomeration.

Waste Generation and processing: Processes ~2,300 tonnes/month of solid waste, and 31 MLD of waste water generation. Treatment Capacity – 28 MLD

Informal settlements & vulnerability: Slum population 24,991; major settlements (Dholak Basti, Gafoor Basti, Jawahar Basti, Gola Padao – Rajpura area) predominantly house waste pickers facing insecure tenure, service deficits, and occupational risks.

Methodology



Limitations

- self-reported data – mitigation through cross-verification with secondary sources, field observations, and KIIs.
- Data collection at one specific time, constrains the capacity to ascertain causal linkages among various variables.
- Morbidity analysis is predicated on self-reported illness events that happened during the previous 12 months.
- The study was performed in two towns - located in the foothills. The geographies may restrict the applicability of the findings to alternative locations or populations.

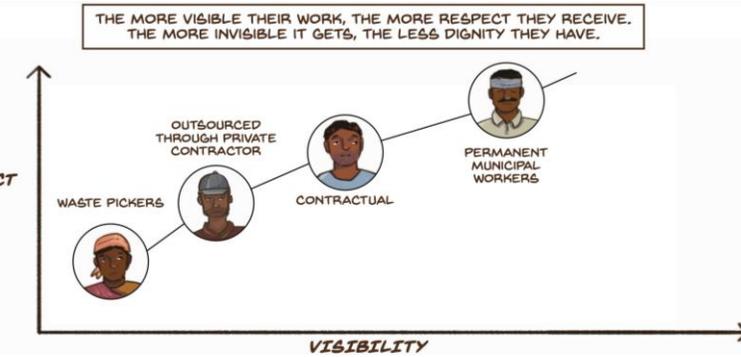
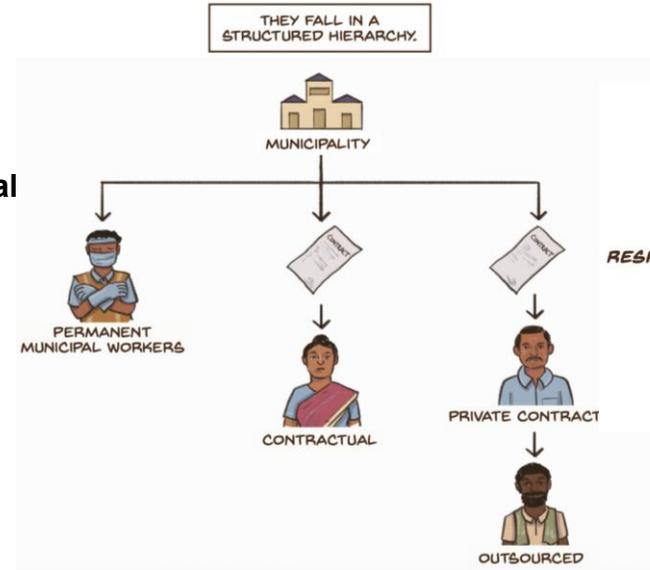
Findings

1. Lack of recognition and institutional support

- Categories based on type of employment – falling into structural hierarchy

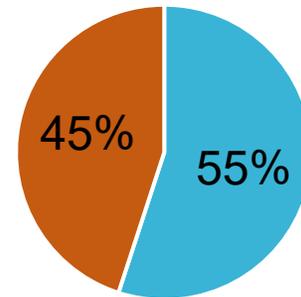
S.No.	Category of Sanitation Worker	Numbers as per Vikasnagar Municipality	Numbers as per Haldwani Municipality
1.	Sthai Paryavaran Mitra/ Permanent Sanitation worker	30	226
2.	Samvida Paryavaran Mitra/ Contractual Sanitation worker	3	28
3.	Outsourced Sanitation worker	14	214
4.	Mohalla Swachhata Samiti Karmi	5	548
5.	Sewer and Septic Tank workers (SSWs)	7	16
6.	Waste Pickers	8	105

S.No.	City	No. of waste pickers registered by Municipality	Approximate number of waste pickers based on Klls
1.	Vikasnagar	8	40 (Vikasnagar Municipality and Chungi Basti) 400 (Laxmipur, Sahaspur) 3000 (Sarna Nadi, Shivpur)
2.	Haldwani	105	4000-5000 (Dholak Basti, Gafoor Basti, Gola Padao)

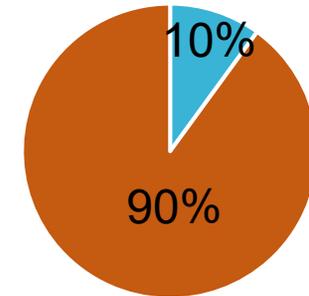


Source: NIUA, 2025

- Lack of formal employment and registration:** Sanitation workers, especially waste pickers and SSWs, remain largely invisible in formal systems despite their vital role in maintaining public health.



- SWs with Govt issued ID cards
- SWs without Govt issued ID Cards



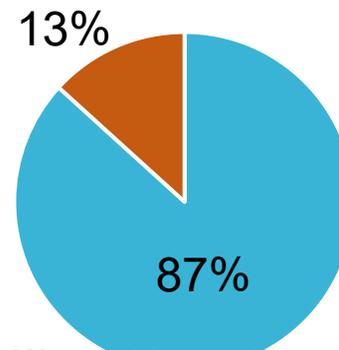
- Waste pickers registered with ULB
- Waste pickers not registered with ULB

Findings

- **Barriers to recognition**
 - Temporary employment, informal recruitment practices, migratory work patterns, and fragmented coordination among government bodies, NGOs, and private players.
 - Lack of official documents, encroachment and jurisdictional issues
- **Lack of representation and identification of vulnerable group**
 - Absence of a unified and inclusive survey mechanism
 - Vulnerable groups: waste pickers and children involved in waste collection lack collective platforms and participation to voice their issues
- **Halted Recruitments and staffing norms**
 - Recruitments on permanent posts based on 2011 census population, fail to account for the rapid urban population growth and the increasing demand for sanitation services, reinforcing informality.

City	Population (2025)	SWs based on MoHUA norms	Total SWs employed in 2025
Vikasnagar	30,000	84	52 (Permanent - 30)
Haldwani	337,000	943.6	1016 (Permanent – 226)

- **Access to Government schemes for children**



- Waste pickers with no access to govt. schemes for children
- Waste pickers access to govt. schemes for children



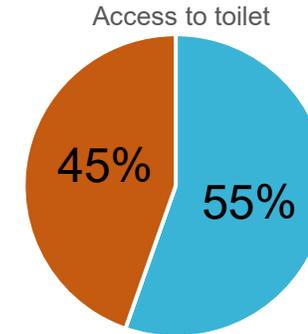
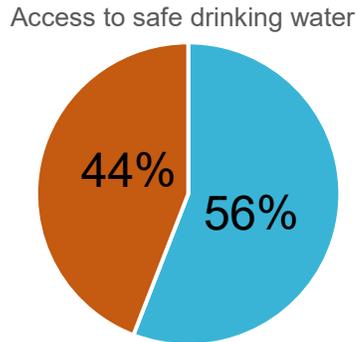
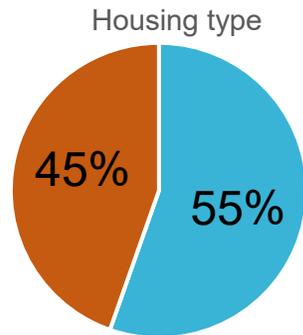
Suchetna NGO in Haldwani supports education of waste pickers children and documentation process for availing govt schemes to waste pickers

Source: Annual Report 2023-2024, Suchetna NGO

Findings

2. Hazardous Working and Poor Socioeconomic Conditions

- Precarious Housing and Living Conditions:



■ SWs with owned house

■ SWs living in rented house/informal settlements

■ SWs with access to safe drinking water

■ SWs without access to safe drinking water

■ SWs with access to toilets within housing premises

■ SWs dependent on CTs/PTs



Source: NIUA, 2025

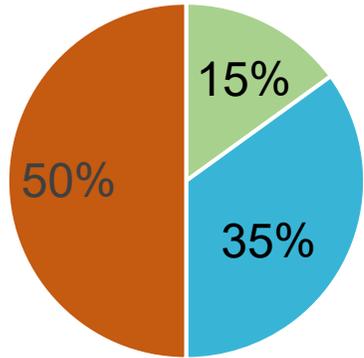
- Waste pickers mostly live in squatter settlements, on encroached railway land or near river banks in temporary structures with a tarpaulin roof without access to basic water supply and sanitation facilities

Findings

• Unsafe Work Environments and Occupational Risks:

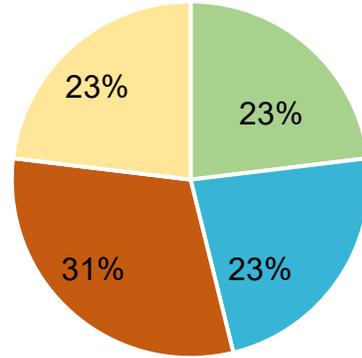
- Sanitation workers operate under high-risk conditions, often without basic safety measures. This neglect leads to chemical burns, injuries from sharp objects, road accidents, and dog bites.

Occupational Safety SWs



- SWs using safety gears and tools
- SWs using protective gear inconsistently
- SWs not taking any safety precautions

Occupational Safety SSWs



- SSWs using protective gears
- SSWs using protective gear inconsistently
- SSWs performing task manually
- SSWs not taking any precautions



Source: NIUA, 2025

Why PPE is being used inconsistently?

OFTEN ILL-FITTING AND UNSUITABLE FOR THE SEASON.

IN THE HUMID SUMMER GLOVES STICK TO THEIR SKIN.

AND IN WINTER THE THIN UNIFORMS OFFER NO WARMTH.

DURING MONSOON BOOTS FILL WITH WATER.

MANY END UP IMPROVISING WITH DUPATTAS OR PIECES OF CLOTH FOR PROTECTION

THIS RESULTS IN PARTIAL SAFETY

WITH NO HANDWASHING FACILITIES AT WORKSITES

LEADING TO CUTS, BRUISES AND BURNS

SKIN INFECTIONS

AND RESPIRATORY ISSUES

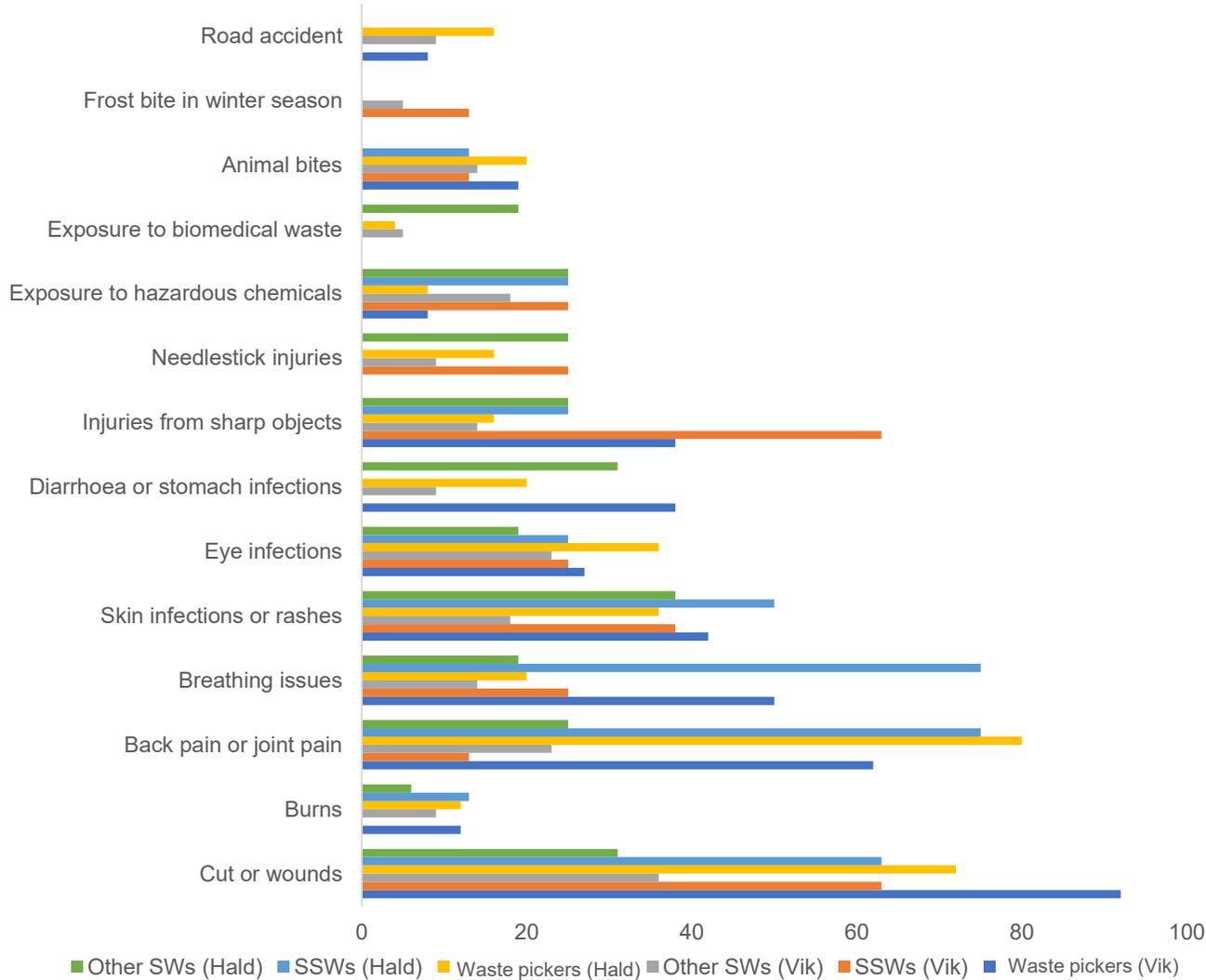
AND OTHER WORK RELATED ILLNESSES

Source: NIUA, 2025

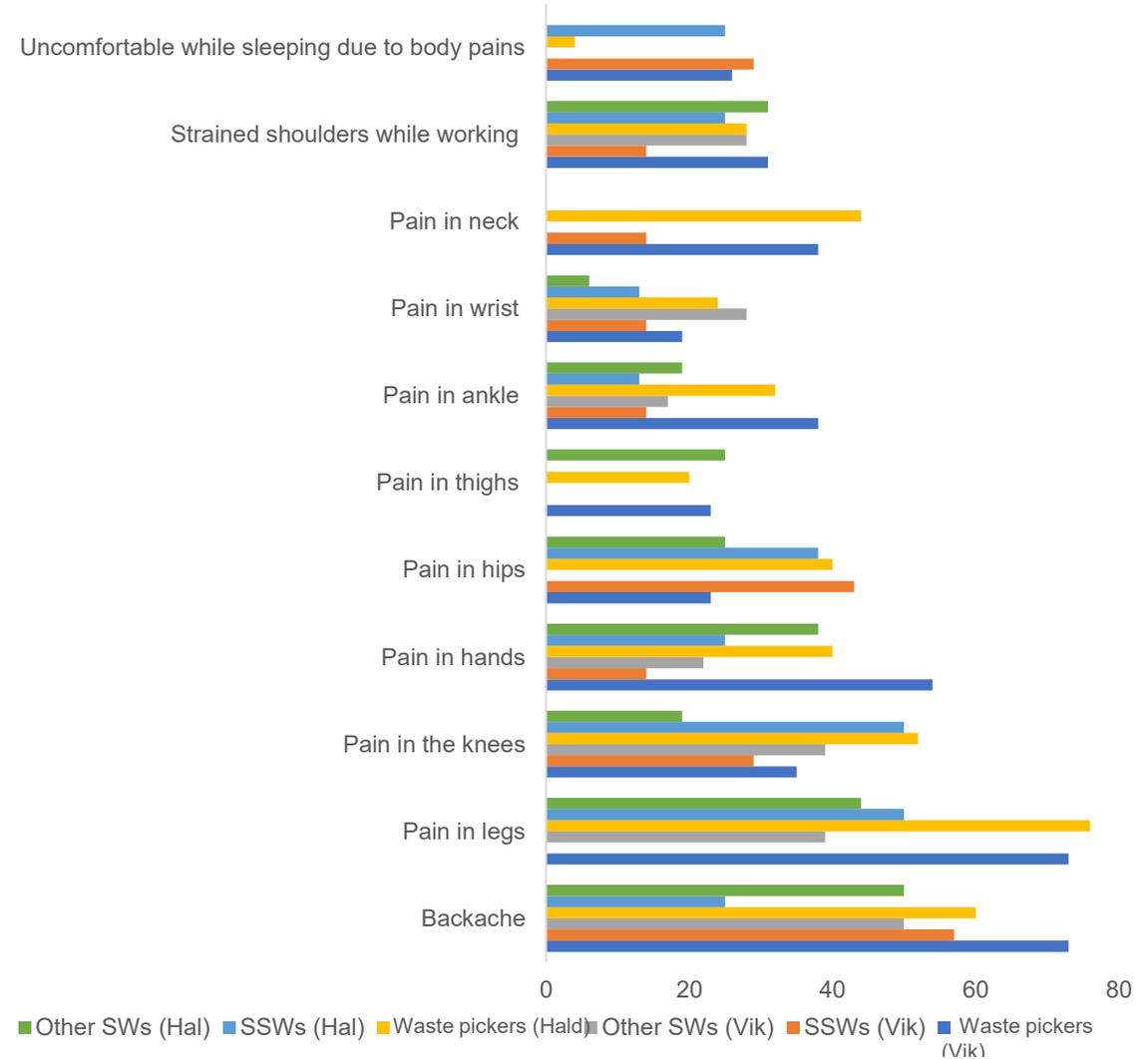
Findings

- Health Issues among SWs and waste pickers

Health issues among SWs and Waste pickers (in%)

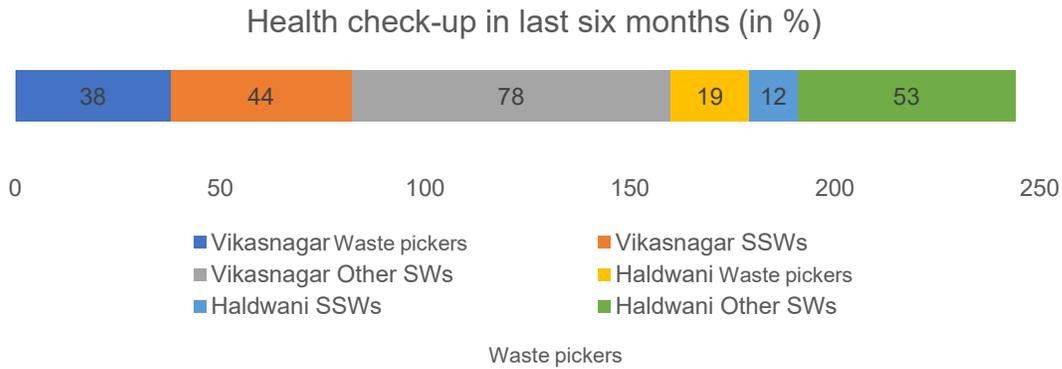


Body Pain and Discomfort Experienced by Sanitation Workers (in %)

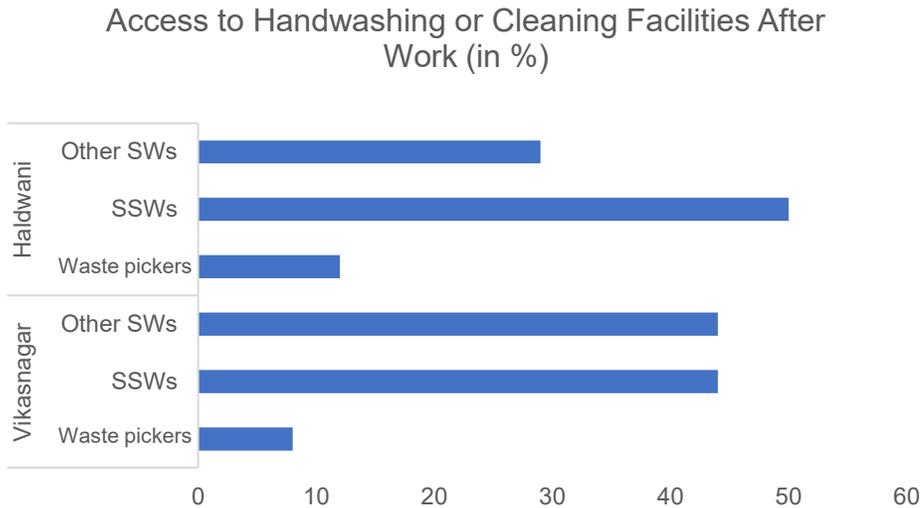


Findings

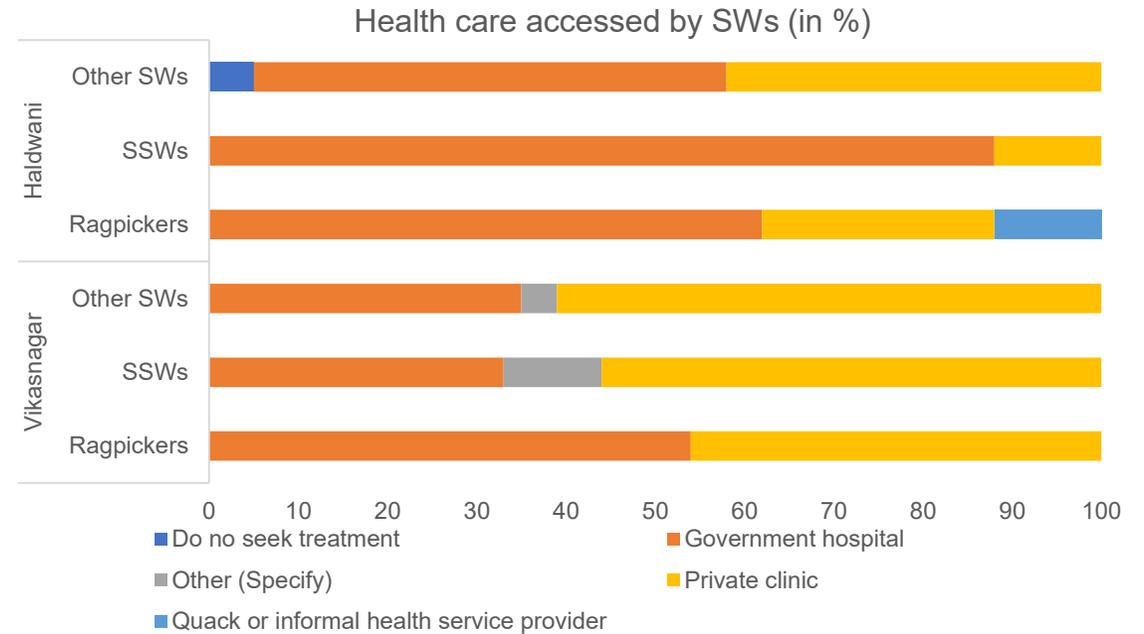
- **SWs access to Healthcare**



- **SWs access to Hygiene**



- **Type of Health care accessed by SWs**



- **Economic Hardship and Debt Dependency:** Many workers live under constant financial strain. **40%** are unable to meet their daily household expenses with their current income. As a result, **60%** have taken loans, most from informal and often exploitative sources.

Way Forward

1. **Identification and registration of Informal workforce through collaborative action**
2. **Ensure use of PPE Kits and safety gears:** Customisation based on work and season
3. **Workplace safety training should be mandatory, with visible signage and infographics on hazards and safe practices at worksites** – Training calendars and categorisation of Trainings, NIUA has also developed a training manual targeted at Sanitation workers across the sanitation service chain
4. **Regular Health check-ups with follow-ups and referrals to hospitals for immediate treatment.**
5. **Strengthen Social Security, Legal Identity, and Housing Access:** Identification and clustering through support from unions, SHGs, and cooperatives, provision of identity cards, shelters, and rental vouchers.
6. **Break Intergenerational Entrapment through Education and Livelihood Diversification,** through targeted scholarship programs, bridge schooling, and educational support for children of sanitation workers.
7. **Improve workers representation, Inclusion, and Accountability** - worker grievance redressal systems, representation in sanitation planning, and convergence between schemes and departments.



BETTER RECOGNITION AND REGISTRATION OF INFORMAL SANITATION WORKERS



BETTER TRAINING AND CAPACITY BUILDING FOR EACH DAY TO DAY TASK



BETTER AWARENESS AMONG WORKERS ABOUT THEIR RIGHTS



BETTER CO-ORDINATION BETWEEN WELFARE SCHEMES TO TRULY UPLIFT THEM



AND BETTER, CUSTOMISED PROTECTIVE GEAR-SUITED TO THE KIND OF WORK THEY DO, THEIR SIZE AND ENVIRONMENT



REGULAR HEALTH CHECK UP SHOULD BECOME A NORM FOR ALL TYPES OF WORKERS

Source: NIUA, 2025

Thank You

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