



MAHILA HOUSING TRUST

Towards Responsible Urban Development

ANNUAL REPORT

2024-25



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From the Director's Desk



Bijal Brahmbhatt

Director

These words of the Father of the Nation are a reminder of the responsibilities we have towards a sustainable future.

India's cities are expanding at an unprecedented pace, with the urban population expected to nearly double from 461 million in 2018 to around 800 million by 2050, making India a predominantly urban nation.

An estimated 40% of our people will live in urban areas by 2030. By 2050, this number will increase to 60%. Over 41% of our urban population lives in slums.

A third of India's fastest growing cities are smaller towns. They house 50% of our male and 20% female workers, a majority of them work in the informal sector.

These numbers throw up a myriad of complex habitat and climate change issues that the urban poor have to grapple with in a more pronounced way, impacting their quality of life. Climate shocks and stresses are increasing in frequency as well as intensity.

*'The future depends on
what we do in the present'
-Mahatma Gandhi*

To address this, our approach over the years has evolved from 'My House is my Workplace' to a comprehensive Habitat and Responsible Urban Development Model.

This model creation has led to increased partnerships with local Governments, enabling change at scale. We now have a presence in 41 Cities in 10 Indian States and also in Nepal and Bangladesh. We have impacted 4.46 million lives and 0.53 million households.

Our strategy of institution building with a bottom-up approach, aligns with local governance structures as well as with the Government of India's mandate of participatory local governance through the 74th Constitutional Amendment

We have been able to do meaningful work aligning with our Vision and Mission with initiatives like the pioneering Climate Risk Insurance, Heat Action Plans, Ahmedabad Heritage walk, 1st rank for Amalner on the Swacch Sarvekshan Index etc, detailed in this report.

Our sincere gratitude to the people we work with for believing in our shared Vision, our stakeholders and partners, Government agencies, the Private sector and many others who engaged with us to address issues that affect urban populations and to our Donors without whom our interventions would not have been possible.

About us



Mahila Housing Trust (MHT), established in the year 1994, is a **techno-social** organization, working to strengthen grassroot collectives of women in the urban informal sector.

Our 3E Approach:

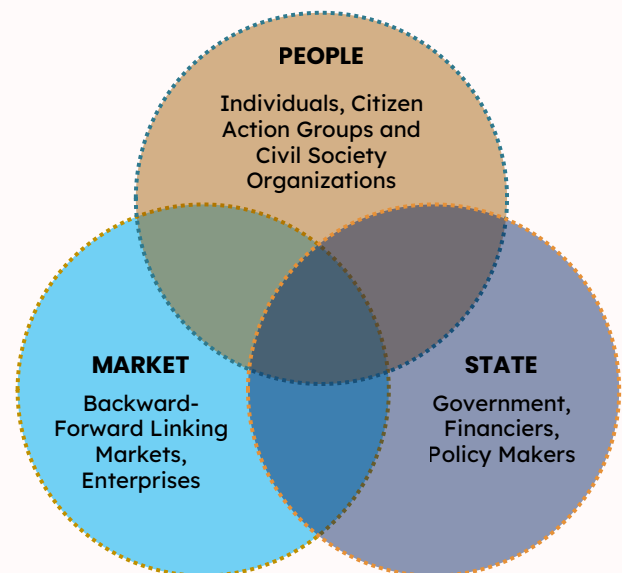
Engage Empower Enable to organise women

We develop social capital by mobilizing and organizing communities especially women, by investing in 'Grassroots Institutions' and empowering them scientifically and technically to address the social, physical, and environmental issues they face, to ensure sustained progress beyond our engagement.



Our model of grassroot institution building is designed to align with local governance structures.

Parallely MHT also support the partnerships of grassroots collective with three critical pillars i.e. people, state and market to enable responsible urban development.



VISION

Women shape participatory, responsible urban development.

MISSION

To strengthen grassroot collectives of women to serve as ecosystem catalyzers for fostering development of sustainable cities.

THEORY OF CHANGE

By forging a partnership with Mahila Housing Trust, a **Techno-Social organisation**, grassroots collectives of women are equipped with a knowledge, skills and technology, they become powerful ecosystem catalyst.

MHT contributes to the achievement of UN Sustainable Development Goals through it's multi-pronged interventions



Geographical Coverage



Delhi

Jodhpur, Jaipur, Churu

Ahmedabad, Gandhinagar
Surat, Patan, Rajkot

Madhya Pradesh
Bhopal, Indore

Lucknow, Varanasi

Patna, Gaya

Ranchi

Daman (UT)

Maharashtra
Amalner, Jalgaon, Nashik

Bangalore

Kolkata

Bhubaneswar

Nepal
Kathmandu

Outreach & Impact



Outreach	 1,358 Slum Settlements served	 7,70,124 Households reached	 1,57,64,721 Individuals served
CAG formation and membership	 817 CAGs formed	 88,673 Women trained	 18,097 Women Community Action Group leaders
Government partnership	 25 Policy Interventions	 29 Public amenities improved	 \$59.0 Mn Worth of public resources accessed for poor women
	 5,29,12,996 Sphere of influence (Population covered)	 8 Cities Councilors trained	
Habitat	 12,99,400 (2,59,880 hh.) Individuals accessing water/ water management	 3,85,780 (77,156 hh.) Individuals accessing toilets and sanitation	 31,803 (1,59,015 Ind.) Formal houses / land rights for women
	 14,323 Housing loans	 \$2.00Mn Amount saved by credit co-op members	 8,29,375 Households surveyed and listed
Energy and Climate change	 4,20,165 (84,033 hh.) Households adopted energy and climate resilient products	 2566 Renewable energy products installed	 29,290 Women trained as climate resilient specialists
	 1,52,24,000 Heat / Climate action plans	 15,10,684 Trees planted	 18 Climate action plans designed and implemented (heat, flooding, urban forestry, water management)

Programs and Initiatives



**Water, Sanitation,
and hygiene**



**Sustainable Energy
and Climate Change
Resilience**



**Affordable Housing
and Land Rights**



**Skill Development
and
Livelihoods**



**Democratic Urban
Governance &
Planning**

Focusing on women-led development, MHT actively contributes to the achievement of sustainable development goals (SDGs).



1. Water, Sanitation and Hygiene



From Access to Management: A holistic approach to Water, Sanitation and Hygiene.

In India, more than 1,600 children under five years of age die each day, only due to diarrhoea, caused by lack of sanitation and hygiene. Water related diseases cost the Indian economy 73 million working days each year.

Access to clean water, adequate sanitation, and hygiene is essential for human dignity, health, and sustainable development. However, for millions living in urban slums across India, these basic necessities remain unattainable.

MHT is committed to addressing this critical gap by empowering low-income communities, with a focus on women, to achieve safe and equitable WASH facilities.

MHT employs a participatory, community-driven model to address WASH challenges.

Women-led Community Action Groups (CAGs) play a pivotal role in this process. These groups are trained to identify local issues, engage with stakeholders, and advocate for sustainable solutions. By conducting needs assessments, raising awareness, and amplifying the voices of marginalized communities in urban planning, CAGs help ensure that WASH services are inclusive, equitable, and resilient.



The WASH related initiatives MHT engaged in during the year 2024-25 were the prestigious Australia India Water Security Initiative (AIWASI), under a programme between the Australian and the Indian Governments wherein rainwater harvesting systems were installed in Bakkarwala and Mubarakpur Dabas areas of New Delhi. Water and Vector surveillance was undertaken and vermi composting taken up. These interventions were a part of the water sensitive urban design approach of the programme, which also had a GEDSI (Gender, Equality, Disability and Social Inclusion) perspective.



In Lucknow we created a Model for Sustainable Sanitation and Behaviour Change through our interventions in Shram Bihar Colony 2, Dhobighat, Luv Kush Nagar and Gulzar Nagar impacting 4150 individuals. Multipronged WASH initiatives were undertaken along with capacity building of CAG members who progressed from taking up local issues to ward level issues with the Government. At the ward level, meetings were conducted in the Tilak nagar and Ambedkar nagar wards, after which the design and budget for community toilets was presented to the Municipal Corporation.



Regular water testing was done by CAG women in all the slums and due to increased bacterial presence reported by the women, distribution of chlorine tablets was undertaken by the ULB.

There are five water tanks in the area, which have decreased water intake due to drying up of ground water aquifers. MHT constructed two water recharge structures due to which the water levels will eventually rise and adequate water will be replenished for the communities. Because of vector drives undertaken by MHT in the past in these areas, the Municipal Corporation formally requested MHT to conduct these drives in Faizullaganj ward.

The city of Amalner, In the state of Maharashtra due to work done by MHT since 2017, where it supported 1583 toilets in slums and abolished open defecation spots, this year Amalner rose from 137th to 5th rank in the ODF status at the state level. To address the water scarcity gap, water audits were conducted by the CAG women who also became 'Water Managers'. The water audits then resulted into development of water resilience plans covering 11 slums.



Additionally water was recycled from the waste water treatment plant at Ambarishi tekri to develop urban forestry in the area through drip irrigation.

Sanitation Workers Education & Enhancement Programme (SWEEP) 2024

MHT was invited by the Ahmedabad Municipal Corporation (AMC) to engage with 8,500 *safai kamdars* and 1,500 drainage workers through a value-building initiative. The programme reinforced the critical role these workers play in keeping the city functional and healthy, while focusing on work-related skills, punctuality, and efficient service delivery. The engagement led to a marked increase in self-worth, ownership, and pride among the workforce. This strengthened sense of responsibility and motivation contributed to Ahmedabad securing 1st prize at the national level Swachh Sarvekshan in the category of cities with a population of over 10 lakh.



8,500

Sanitation Workers



170 TRAININGS

Across 7 zones of AMC



2. Sustainable Energy for Communities and Enterprises

The approach and enterprises to sustainable energy for MHT is bifold. Providing informal settlements with grid connections and ensuring that energy usage is efficient. A variety of efficient low-ticket products like led bulbs, emergency bulb, solar lanterns, efficient fans, mixtures, were promoted to 500 plus low-income households in 2024-25.

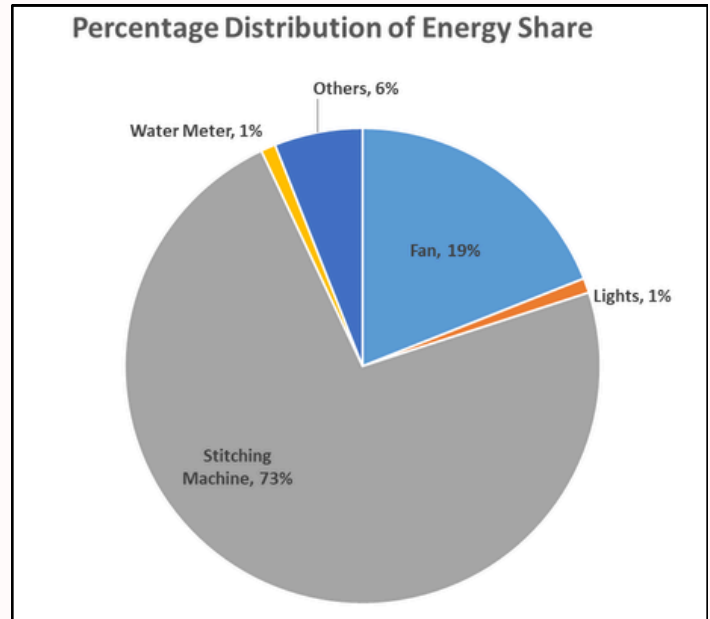
Alternatively, we also work with our PARTNER Awaas Sewa Pvt. Ltd. (ASPL) to introduce and give access to solar rooftops to Nano-Enterprises reducing their electricity usage and generating more income for Nano-enterprises that employ on an average 10 to 50 workers.

MHT conducts energy audits, mobilize, educate and trains households and owners of nano enterprises and convince them to adopt to efficient energy/ solar energy, and ASPL designs, installs and operationalizes systems for sustainable usage. In the year 2024-25, MHT supported 18 KW of solar rooftop to nano enterprises in Surat.

Solarising the Nano Enterprise of Sapnaben

Sapnaben runs a manufacturing unit in her house cum workshop in Surat, which produces approximately 200 stitches garments every day. She employs 18 women. MHT's technical team conducted an energy audit at Sapnaben's unit. The 14 Sewing machines installed in her house contributes 73% of the total electricity consumption expenditure her Nano enterprise consumed on an average, 90,000 INR (USD1000) annually for electricity.

MHT with AWAAS-SEWA designed and installed a solar roof top worth 4.64 KW in her workshop.



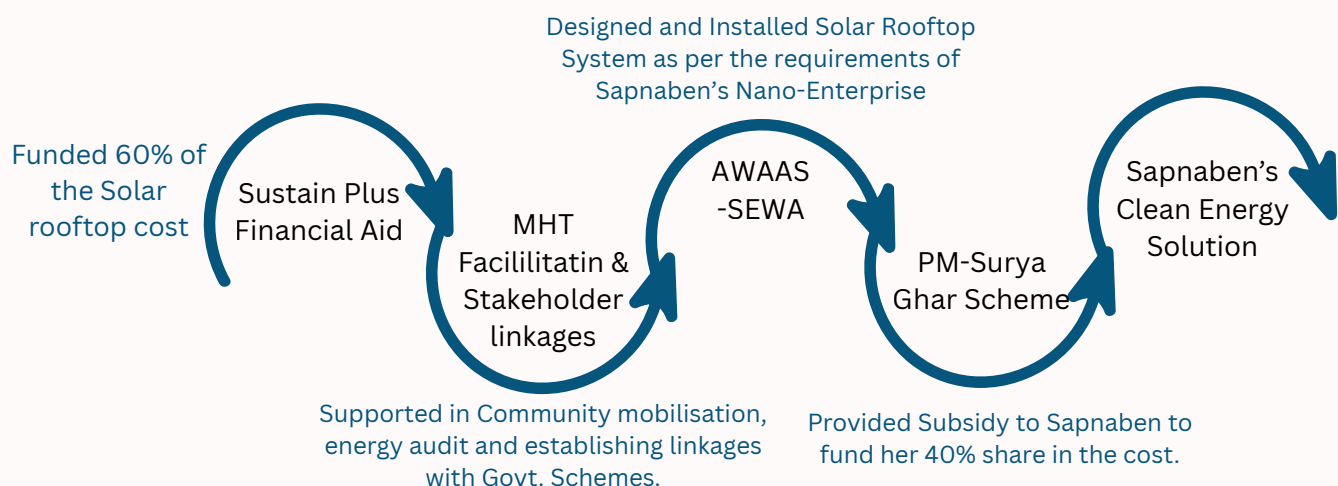
Financial Arrangement for the Solarisation.

MHT worked with sustain plus to provide 60 percent of the solar roof top. 40 Percent of the cost was borne by Sapnaben by taking a loan from Surat Credit Cooperative. These linkages were facilitated by MHT.

Her linkage with PM Surya Ghar Yojana already subsidised the cost.

Impact:

Solarisation ensured a 98 percent reduction in electricity charges for Sapnaben. The 2 percent remaining charges of a fixed nature to be paid to the utility. She now receives solar credits which are directly adjusted against her electricity bills. Every surplus unit of solar energy generated by Sapnaben is compensated to her at a rate of INR. 2.25 per unit. Thus, her savings of 1000 USD per annum is used to bring in a operational sustainability of the business and provides higher scope of business expanses.



3. Affordable Housing and Land Rights

MHT's affordable housing and land rights mission is in tandem with the housing for all mission of the Government of India while in the past, MHT has influenced policies at the Ministry of Housing and urban Affairs (MOHUA) and supported policy development for ISSR verticle in Jharkhanad and Uttar Pradesh, the current year (2024-25) focuses have on the state of Gujarat. MHT under the Insitu Slum Rehabilitation of the Government of Gujarat (GOG), in partnership with Ahmedabad Municipal Corporation (AMC), Developers, and Communities.

This year 2860 households cleared for eligibility under the scheme. Their documents were checked by MHT, verified by AMC, video recordings of data also eligibility determined for inclusion in the project.

Of these 1911 households have been allotted housing this year, creating an asset building of INR 4,77,75,00,000 (INR 47,775) million for the poor.

Redevelopment of Low-Income Housing with Gujarat Housing Board

Looking towards the success of the ISSR Verticle in Gujarat, the Gujarat Housing Board (GHB) also floated a redevelopment of Housing scheme, for its lower and middle income housing schemes, which were old and dilapidated. With reference from Ahmedabad Municipal Corporation, GHB invited MHT to partner, in the scheme, to ensure community engagement and community consent to redevelopment. A work order has been issued for 24 sites covering 11833 H.H. to MHT of which. work on 7422 has begun in the year 2024-25.



Conducting Social Audit of Pradhan Mantri Awas Yojana (PMAY) Housing in Small and Medium towns of Gujarat:

Social audit of the after mentioned housing, constructed under PMAY was undertaken by MHT. The process involved interviews with a selected sample of beneficiaries of the housing scheme. Interviews with other key stakeholders like engineers, utilities and chief officers of the municipalities regarding the initiative. This was followed by Focus Group Discussions and a Jan Sunvai (Public Hearing) where issues were discussed and resolved, to the extent possible social audit of 17 municipalities were conducted by MHT.

Strengthening Resident welfare Association of the Various Housing Schemes:

The communities in the housing scheme, have to register resident welfare association CRWAs for better management of housing societies. This in a way huge challenge because they are moving from horizontal to verticle housing units. Costs are incurred and to be managed for common services like elevators, corridor lighting, water pumping etc. This is a capacity building process and very challenging. So far 49 RWAs have been registered and last year 3 RWAs. Were trained on management and maintenance of their housing societies.

Resolution of the Issues and policy influenced.

Affordable housing must go beyond providing a shelters. It should offer family-friendly spaces. MH conducted social audits of Pradhan Mantry Awas Yojna (PMAY) 1.0 schemes and submitted detailed reports to state and central governments, along with key recommendations to ensure maximum benefit for the homeless. These included extending the eligibility cutoff date, increasing carpet area, enhancing subsidy benefits by reducing instalment burdens, and—most importantly—incorporating passive design features for climate resilience.

Many of MHT's recommendations, made post-PMAY 1.0 to state and central governments, were accepted during presentations for PMAY 2.0 to the Ministry. MHT also served as a key suggestion committee member of the PMAY 2.0.



4. Participatory Urban Governance and Planning

Urban Land Planning is largely a closed-door process in India. The citizens have access to the formal plan only through objection submission through newspaper advertisement.

MHT's tiered system of organizing women into Community Based Organizations, nurturing local leadership through Community Action Groups (CAGs) and federating their representatives to take up ward level and city level issues as Vikasinis is what embodies it's Democratic Urban Planning and Governance interventions

During the year, MHT facilitated the following interventions:

- In New Delhi's Bakkarwala, the perseverance of CAG members resulted in the area getting a new water pipeline
- It has been able to make this erstwhile male bastion in New Delhi not only gender inclusive through the participation of women, but also socially inclusive through the participation of Persons with Disabilities in CAGs
- Through the Ellara Bengaluru coalition Ward Fact Sheets were made detailing hotspots, solid waste collection points / dumping and AQI vulnerability



Completing the Circle of Participatory Urban Governance and Planning

In Ahmedabad, CAGs engaged in processes to develop tools for Slum Development Plans (SDPs). These were tested in **Ahmedabad, Jaipur and Bhubaneswar**. Subsequently, **97 SDPs have been made** and ranking assigned based on **13 parameters**. The emerging needs were categorized into Essential Services, Social Security, Local Amenities, Housing and Climate. This initiative is very powerful as it completes the full circle from need assessment at household beneficiary level to leveraging Government Funds for slum development. It involves capacity building of CAGs for need articulation, relationship building with Govt, write applications and present them to relevant authorities. The impact was greater as the approach was not merely complaining or listing difficulties, but recommending solutions too. MHT played the role of a facilitator and catalyst in bringing all stakeholders – people's representatives, Govt. Departments and other agencies related to Slum Issues & Development on one platform



4.1 Participatory budgeting process for the Cities

Ward level Planning and Action by CAGs

In Ahmedabad, citizens continue to play a participatory role in civic Budgeting through CAGs. They start the process by November- December every year, so that they are ready to respond when the Municipal Corporation invites suggestions through newspaper announcements. They analyse previous demands put vis-a vis budget allocations, utilizations, works done. Processes have matured, Vikasinis have developed analytical and strategic thinking, broadening their area of influence from the area level to Ward level eg. addressing safety issues like speed limits, speed breakers, placing of CCTV cameras, police presence in accident prone areas; Pink Toilets at places of livelihoods for women, market places etc.; greening in places of more heat stress, Anganwadis etc.



Women leaders conducted ward-level consultations to identify priority issues and assess community requirements. The consolidated findings were formally communicated to the Ahmedabad Municipal Corporation (AMC) through an official email.

In FY 2023-24, AMC allocated 37% of the budget requested. In FY 2024-25, the allocation increased significantly, with AMC approving 74% of the INR 40 crore budget requested.

They make pre & post monsoon action plans leading to working with the Govt on clean roofs, clean drains, tree trimming, marking of dangerous buildings, identity flood prone areas, ask for equipment etc.

Training Councilors on 74th Amendment and participatory budget.

In Jaipur, MHT developed a training module for Councilors. It included their Roles & Responsibilities, understanding Budgets, how they can get Budgets allocated for their Area and understanding the importance of Ward Committees. As a Pilot initiative MHT hand held the creation of a Ward Committee, facilitating the making of their Bye Laws. MHT also did a Swachh Sarvekshan awareness training in partnership with the Government. We have number for budget that was submitted and incorporated in last two years. You should add it.



The Journey from Home to the Nagar Palika

"We didn't know anything about the Nagar Palika – how it looked like and what they did. When we would go for MHT meetings, the men would say – What are you going to achieve by going there. Still, we went saying let us see what it is.... We gradually realized how this will be beneficial for us and our communities. Before, we never spoke assertively and confidently with anyone. When family members didn't listen to us, there was no question of talking to outsiders!!! Now, we don't even ask our families. If there's any problem in the area, we get the work done through our CAG group. The men now approach us with the problems in the area!"

Ms. Charu Kailashkad

Milchal Station – Amalner, CAG member



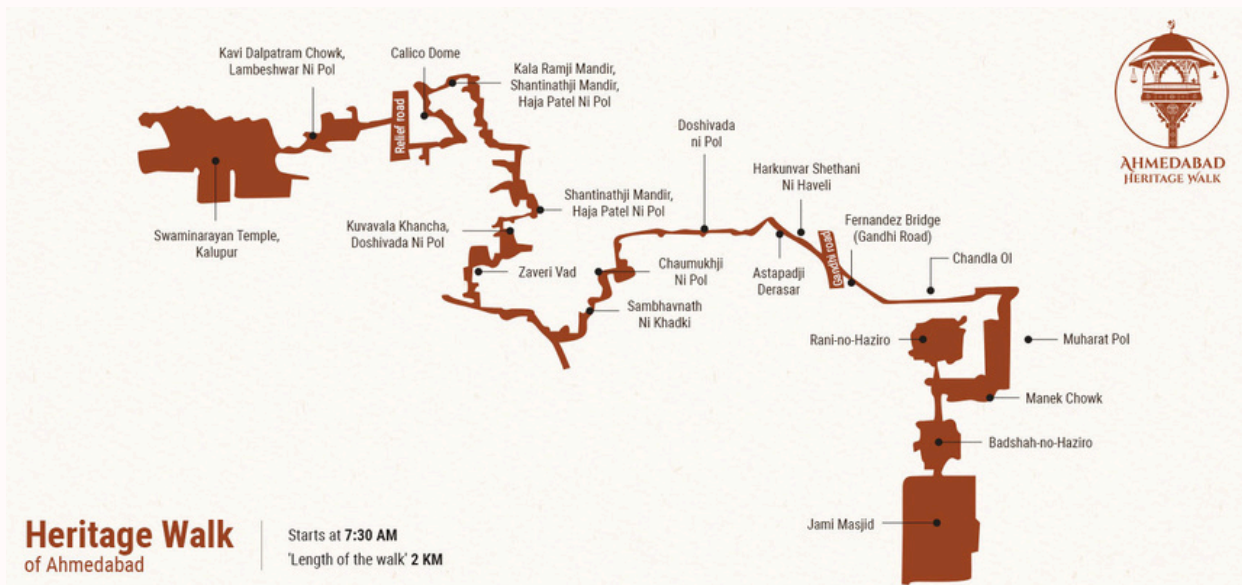
4.2. Improving Urban Community Infrastructure and Public Spaces

Contributing to Heritage Conservation

Enabling responsible urbanization mandates that we conserve our rich heritage. MHT has been awarded the work order MHT is providing technical support to the Ahmedabad Municipal Corporation for developing the 2 kms Heritage Walk from Swami Narayan Temple to Jama Masjid in the UNESCO recognized World Heritage City of Ahmedabad by the Municipal Corporation.

Work has been initiated for this in a participatory manner, taking people's inputs for earmarking open areas eg. For open spaces, parrot feeding, facilities for senior citizens by placing benches at strategic spots etc. thereby retaining the traditional cultural ethos of the area.

This was preceded by the Precinct Development Concept put forth by MHT to the Ahmedabad Municipal Corporation four years ago and successfully piloting this in Dhal-ni-Pol in the heritage area of the walled city.



4.3 Leveraging Technology to Empower Women

By taking new age technology like Artificial Intelligence (AI) to community women, MHT has given it the rootedness of peoples' connect. MHT ensures that technological solutions developed keeps "Human In Loop" and are designed to assist decision making by human being rather than replacing them. MHT has been using technology and AI to make better decisions and facilitate information sharing between People, the Government and Market forces.

The Heat Mapping project in Surat is a case in point. We built our own capacities on the methodology of tech driven data collection and took it to community women. This empowered women by enabling them to use equipment and technology, but more importantly helped us analyze data vis-à-vis ground level reality garnered through years of wisdom and lived experiences.

This is a great value addition to creation of tools that aid policy formulation, decision making and budget allocation. The quick adaptability and agility of technology like AI enables MHT contextualize and gauge qualitative impact with accuracy.



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We have empowered 88,673 women with knowledge and skills to influence Local Policy and Governance.

We envision furthering responsible urbanization through capacity building of Institutions within MHT eco system, developing and supporting a network of Civil Society Organizations with a special focus on gender and climate change and effectively leveraging digital technology & geospatial data from grassroots to aid decision making.



Women leaders of Amalner, Maharashtra, driving community-led water resilience—restoring wells, managing water resources, and using AI-enabled solutions with support from MHT to secure sustainable water for thousands.

FLOOD VULNERABILITY

Low Moderate
High Very High

5. Social Security & Entitlements

The informal sector contributes around 50% to India's GDP. 90% of women in paid work are in the informal sector. The Government has many schemes for them as individuals and entitlements which are their right as citizens. MHT helps the Urban poor access their entitlements and also works to devise mechanisms like enabling Credit access and Climate Risk Insurance to mitigate their risks, give them stability to enable them to secure their future.

MHT initiatives during the year were:

- MHT has given the world a model for Climate Risk Insurance. Through a participatory process in Ahmedabad, Vadodara and Surat; livelihoods, health, education and infrastructure were identified as the major risk determinants. With heat as the major focus, payouts were determined when temperature thresholds were breached. Of the 26,000 women insured, 2000 got payouts.
- In Jaipur, MHT facilitated the release of subsidies under the PM Awas Yojna.
- In Bhubaneswar, subsidies for 105 toilets were released under the Swachh Bharat Mission 2.

- In Ranchi, 24,000 women in 14 slums have been taken up for full entitlement coverage, including preparing basic documents and correction of documents to be eligible to avail benefits of various schemes. To ensure sustainability, this is being done through formation and capacity building of CBOs and CAGs and leadership building by handholding of Vikasinis. Advocacy was undertaken for policy change in schemes under the Women & Child Welfare Dept eg. the Widow Pension Scheme for which eligibility documentation was difficult.
- In MHT intervention areas focus on documentation like Aadhar cards, Abha cards, Labor cards, Ayushman Bharat cards etc. are integrated into the capacity building processes of communities for sustainability
- In Ahmedabad, work is underway in 5 slums of Sarkhej for access to civic amenities like water and sewer lines, paved roads and street lights. Continuous follow up is being done for the Charter of Demands submitted to the authorities earlier, which include public Transport facilities and Anganwadis.

They make pre & post monsoon action plans leading to working with the Govt on clean roofs, clean drains, tree trimming, marking of dangerous buildings, identity flood prone areas, ask for equipment etc.



Impact of accessing entitlements:

The wide spectrum of difference that access to entitlements has led to, humbles us and makes our resolve to deepen and widen it's outreach.

Widows started taking regular medication for ailments that need lifelong attention like diabetes, which they could not afford before.

A home-based worker making godadis (quilts) could afford spectacles, increasing her productivity and thereby her income for some senior citizens, it eased the pressure of going to work every day, reducing drudgery due to the amount of pension they now received. One lady shared that in adverse climate, she could now afford to miss work for a few days, positively impacting her health and well-being

Some used the pension and allowance amounts to start nano- businesses like small or home-based shops, some could add inventory and hence enhance income earning potential, some could educate their children , while some could save for their higher education

This impact has been made possible through access to various State and Central Government Schemes like the Mukhyamantri Rajya Vidhwa Samman Pension Yojna , Mukhyamantri Rajya Vriddhawastha Pension Yojana, Jharkhand Mukhyamantri Maiyya Samman Yojna etc



6.Climate Change Resilience



MHT recognizes that those living in informal settlements are the most vulnerable to impacts of climate change, as they are exposed to multiple stress factors, including geographical disadvantages, financial susceptibility, occupational risk, and infrastructure deprivation.

Community Led Interventions in Climate Action

MHT believes in demystifying the science of climate action to poor women, so that they can lead the processes and dialogue with other stakeholders at an equal level. The resultant behavior change that is expected, in our experience is more sustainable and everlasting. These women when given the knowledge and the skills have led climate action at all levels i.e. at the household level, at settlement level and even at the city level.

Women lead cool roof drives across India

Over 18000 women leaders across India have been scientifically trained in understanding the importance of cool roof for heat reduction. They lead the application of solar reflective paints within the communities. For wider adoption, temperature loggers are installed in



households, which initially opt for the same. Women in these households are trained to record the temperature and compare it with a control household. They observed a reduction of 2 to 4 degrees, depending upon other conditions, Thus spreading it's adoption, from first-hand experience. While MHT has covered 35000+ household under Cool roofs across India, over a period of time, In the year 2024 -2025 1515+ households adopted cool roofs.

Settlement Level Action by Community Action Groups

The Women leaders in the Community Action Groups are also working at the ward level identifying Public Institutions like Aanganwadis, (Child Care Centres) Government Schools and the like, to assess the thermal comfort at these Institutions. These assessments were undertaken as a part of the Ahmedabad Heat Action Plan and Jodhpur Heat Action Plan respectively during 2024–2025. The Aanganwadis experienced a 2 degree reduction on an average during peak temperatures.

After the assessments, an Aanganwadi in the Navrangpura Ward of Ahmedabad was cooled with solar reflective white paint. 30 young children benefitted from the initiative. In collaboration with the Education Department of Jodhpur, a school teachers training was organized by MHT to sensitize the teachers on the impacts of climate change.



“Since the application of the solar reflective white paint, the children have been much more comfortable. Even during the hottest afternoons, they stay active and engaged.”

– Anganwadi Teacher

City level Action: Community Heat Mapping Campaign in Surat:

MHT along with the women leaders in partnership with the World Bank, and CAPA, conducted a heat mapping campaign for the city of Surat. The purpose was that accurate hyper local data which takes air temperature be mapped for Heat, along with land surface temperature. On October 8, 2024, MHT conducted an online training session for **40 volunteers on the use of ATRH sensors and the BIKE GPX app**. The training covered the operation of sensors, navigation, and route planning. Volunteers were also educated on the proper use of visible and infrared imaging tools to capture heat data along the routes. Surat was divided into 15 routes, and heat mapping exercise was undertaken on the same day on all the 15 routes at the same time thrice in a day. The data collection exercise took place on the campaign day, scheduled in three time slots: 7:00–8:00 am, 3:00–4:00 pm, and 7:00–8:00 pm. This data was then coupled with six focus group discussion with women. This heat-mapping data for Surat will be used to understand how extreme heat is affecting different parts of the city—especially vulnerable communities—and to support city-level planning and targeted actions to reduce heat risks and impacts.

Such hyper local data collection is undertaken, with women leading the process makes the Action Plans more relevant ,ensures equal participation ,demystifies the science for the communities and brings about behaviour change.



Pioneering Heat & Humidity Mapping through technology in the hands of Community Women

MHT partnered a World Bank Project with technical expertise of CAPA Strategies . 15 routes were mapped, covering a distance of 200 square meters, thrice a day. CAPA provided 15 thermal Sensors and 5 Flir Cameras. The Watch Units were handled by 30 Vikasinis, 15 drivers, and 10 MHT Team members. MHT handled the challenging ground level processes, logistics, permissions and coordination with authorities including the Surat Municipal Corporation and the traffic police.

For the Vikasinis it was a journey from adjustments and acceptance from the family to empowerment – having technology literally in their hands! They had to leave their homes at 5.30 am for the first mapping of the day at 7 am and would reach home after the last mapping of the day ended at 8 pm, albeit with breaks in-between. For most of them, it was another first... a role reversal of sorts, directing and giving instructions to the men who drove the vehicles !!!

For MHT it was a great learning process. It leveraged technology to its strong grassroot level connect and experience.

Study Area
78 km²

Routes
15

Measurements
73,671

Max Traverse
Temperature
35.9°C

Max Temperature
Differential
7.5°C



6.1 Climate Action Plans / Heat Action Plans

The Approach:

All MHT's Climate Action Plan / Heat Action Plans begin initially with household level action in some of the most vulnerable settlements. These experiences by the women generate a demand for further action. MHT, then brokers a partnership between the women and city Governments, to develop and implement city level heat action plans/climate action plans.

Cities then, appoint a chief heat officer, and the first step is that Early Warning Systems are introduced and implemented at a city level. Our CAG women then reach it to the most vulnerable women, including the illiterate, with color codes.

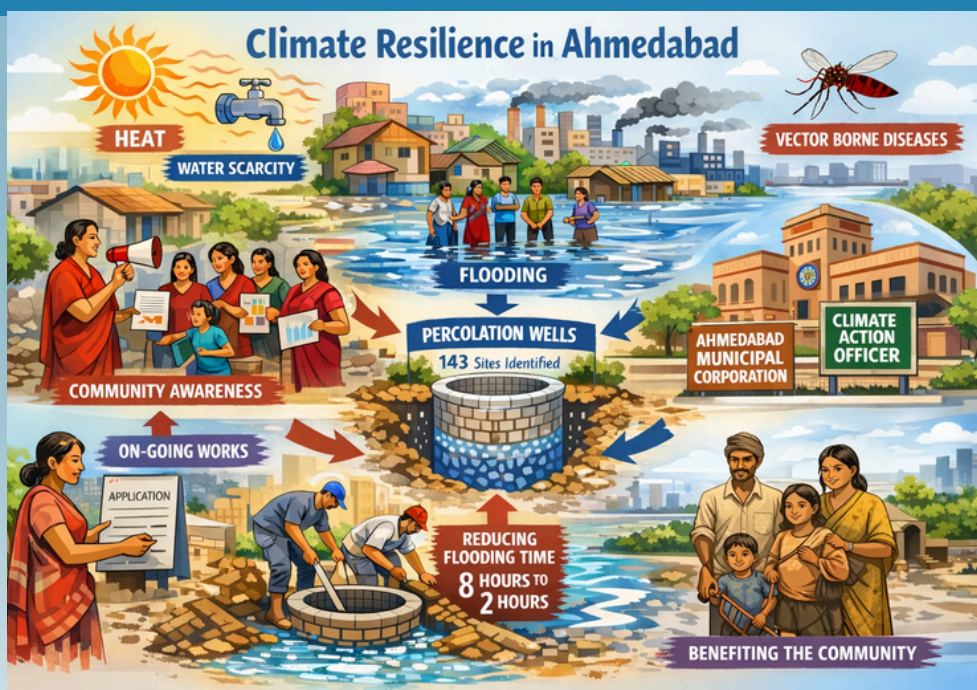
The climate action plan/heat action plan is then developed using land sat data, GIS and also hyperlocal data by the women, which increases the accuracy of the plan.

MHT has developed innovations across multiple levels: ie household level, settlement level and city level. The interventions have now spanned across heat, flooding, vector borne diseases, water scarcity, and also blue and green networks.

Such hyper local data collection is undertaken, with women leading the process makes the Action Plans more relevant ,ensures equal participation ,demystifies the science for the communities and brings about behaviour change.



MHT's Climate Change Resilience intervention in Ahmedabad focuses on 5 stresses – Heat, Water Scarcity, Flooding, Air Pollution and Vector Borne Diseases. The eastern areas of the city were selected for the intervention due to their higher vulnerability given their proximity to industrial areas. This was corroborated with the city's Slum Development Plan for vulnerability ranking. Community based awareness was undertaken, and issues identified in a participatory manner and representations made to the Municipal Corporation with solutions to address these. As a result, the AMC identified 143 spots for percolation wells which would reduce flooding from 8 hours to 2 hours. MHT through the leadership of Vikasinis took an area approach, irrespective of economic strata, as flooding affected everyone in the area. In fact, it was the resource poor spearheading initiatives that benefitted all! 25 applications have been made, work is ongoing for 3 and is due to start for 7 more. MHT could influence Policy- it's recommendation of appointing a Climate Action Officer was accepted by the Ahmedabad Municipal Corporation , albeit as additional charge, initiating a process of Climate Change issues receiving dedicated focus.



6.2 Technological Innovations: Bridging Technology and People



Technological Innovations: Bridging Technology and People

In the development sector, technology alone cannot drive transformation — it must be rooted in people's realities. While technological innovation brings efficiency, scalability, and precision, it is socio-technical innovation that ensures these advancements truly work for those who need them most. For communities living in informal settlements, innovation must be as much about access and inclusion as it is about engineering and design. From years of experience MHT as learned that technological solutions to be successful it must be Effective, Aspirational, User Friendly, Accessible & Affordable.

At Mahila Housing Trust (MHT), we see technology not as an end in itself, but as a tool for empowerment. As a techno-social organization, MHT bridges the gap between science, systems, and society — combining technical expertise with deep community engagement. Every innovation we develop or promote is co-created with women at the grassroots, tested in real-life conditions, and adapted to local contexts. From climate-resilient infrastructure and energy-efficient housing to digital mapping and data-driven governance, MHT's approach blends technical precision with social understanding to ensure that technology becomes truly inclusive, accessible, and transformative.

Cooling the Commons: Making Public Spaces Climate-Safe for All

As Indian cities grow hotter each year, something as ordinary as waiting for a bus can become an ordeal. In Ahmedabad, where March 2025 saw temperatures soar to 41.4°C — seven degrees above normal, MHT, in collaboration with the Ahmedabad Municipal Corporation (AMC) and the Ahmedabad Municipal Transport Service (AMTS), turned this everyday discomfort into an opportunity for innovation. Together, we launched India's first Cool Bus Stop — a climate-responsive public infrastructure that reimagines how cities can protect their people from rising heat.

Commuters immediately felt the difference. "It feels like air-conditioning," said one elderly passenger, while a woman daily-wage worker shared, "We are out in the sun all day — this bus stop gives us relief we've never had before." Over a 15-day monitoring period in summer 2025, the Cool Bus Stop consistently stayed 5–7°C cooler than regular shelters, proving that urban cooling can be sustainable, inclusive, and scalable. The Cool Bus Stop offers a replicable model for cities across India, showing that climate resilience begins with simple, humane interventions in everyday urban spaces.



Shri Pratibhaben Jain
Mayor of Ahmedabad

"A cooling bus stop has been set up by the Mahila Housing Trust. This shaded area will provide cool air using and bring relief to people during the summer. It will help protect them

India's First 'Cool Bus Stop in Ahmedabad

6.3 Flood management for climate resilience

For years, the residents of Vrundavan Park in Ahmedabad's Vastral Ward lived with a constant fear of the monsoon. Every heavy rain flooded their narrow lanes and seeped into homes, leaving behind spoiled food, damaged furniture, and illness. Streets stayed submerged for hours, children missed school, and families lost valuable workdays. As Radhika Ben, a local community leader, recalled, "For years, we were trapped by water — in our homes, our food, our lives. This well has finally freed us."

In response, MHT and its Community Action Groups (CAGs) joined hands with residents to design a simple but powerful solution — a Percolation Well. Guided by technical input from the Central Ground Water Board (CGWB), the team conducted GIS mapping and slope analysis to identify key water logging points within the settlement where rainwater consistently pooled and caused flooding. Instead of relying on pumps or large-scale infrastructure, MHT introduced a Recharge Rain injection recharge system — a sustainable technology that captures and filters rainwater before channelling it deep into the ground.



This not only prevents surface flooding but also recharges groundwater, ensuring long-term ecological benefits.

The impact was immediate and remarkable. When heavy rains hit in August 2024, areas that once took eight hours to drain cleared in less than one hour, providing instant relief to over 250 households. For the first time in decades, families could go to work, children could attend school, and homes remained dry. Cases of mosquito-borne diseases dropped sharply, household repairs declined, and community morale soared. The project also promoted a sense of collective ownership — each family contributed ₹500 towards construction, reinforcing local stewardship and care for the system.

Encouraged by its success, the Ahmedabad Municipal Corporation (AMC) is now planning to construct similar percolation wells across the city, targeting neighbourhoods that face chronic waterlogging. AMC has also partnered with MHT to mobilize communities, ensuring that residents remain active participants and co-owners of these urban resilience interventions.



For years, we were trapped by water. It was everywhere — in our homes, our food, our lives. This well has finally freed us. We don't have to miss work, and our children are safe from diseases. This percolation well has changed our lives.

— Radhika Ben, Social Worker
Vrundavan Park Resident

6.4 Climate resilience finance

6.4.1 Parametric Heat Insurance: A Data-Driven Financial Innovation for the Urban Poor

As India's summers grow longer and hotter, urban informal workers — vendors, daily wage earners, and service staff — are finding it increasingly difficult to work safely. Heatwaves not only threaten their health but also their ability to earn, often pushing families deeper into poverty. Recognizing this urgent need, Mahila Housing Trust (MHT), in collaboration with Global Parametric, Howden Group, and Digit General Insurance, launched India's first parametric Heat Insurance scheme in February 2024 — a pioneering effort to transfer climate risk and protect the livelihoods of the urban poor.

This index-based Climate Risk Insurance (CRI) provides automatic payouts when extreme heat crosses a defined temperature threshold. Unlike conventional insurance, beneficiaries don't need to file claims or provide documentation; compensation is triggered directly through real-time weather data. This technological model, backed by parametric design and local weather monitoring, ensures speed, transparency, and accessibility — crucial for low-income households that lack savings or safety nets.

However, what makes this initiative truly innovative is not just the technology, but its socio-technical design. MHT paired this digital system with community awareness and capacity-building — using interactive games like Snake & Ladder and the Gud Luck Climate Insurance Game to simplify complex ideas about climate risk and resilience.

The impact was both practical and profound. Thousands of women like Lilaben, a vegetable vendor, Bhagyashree Ben, a semi-skilled worker, and Ramila Ben, a construction labourer, were able to recover income lost to heatwaves through payouts in case of heat event. For many, it meant replacing spoiled goods, paying for medical treatment, or managing household expenses during heat-related work stoppages. Rekha Ben, a hospital cleaner, used her payout to cover her disabled daughter's medical expenses during a heatwave, while Daria Ben, a senior citizen, used the scheme to offset health costs and protect her limited earnings.



6.4.2 Climate Credit: When Resilience Meets Access to Finance

In India's rapidly growing cities, women in the informal sector live and work at the frontlines of the climate crisis. They face intense heat, flooding, and unsafe housing — yet they remain largely excluded from the formal banking system.

Recognizing this critical gap, Mahila Housing Trust (MHT), in partnership with its Credit Cooperative Society, designed a unique model of Climate Credit — an innovation that combines access to finance with climate adaptation. The initiative rests on a simple idea: the rate of climate adaptation increases multi-fold when access to finance is ensured for the urban poor, particularly women.

Through this model, MHT extends small, purpose-driven loans to women. These women, who often have no land or property rights, use the loans to make tangible improvements that build climate resilience in their homes and livelihoods. Some raise the plinth level of their houses or repair damaged roofs to prevent flooding during monsoons; others apply solar-reflective white paint to reduce indoor heat, lowering room temperatures by several degrees. For many, climate credit has enabled access to basic

services — paying the security deposits and installation charges for legal water and electricity connections — securing their families' safety, health, and dignity.

What sets MHT's Climate Credit apart is its deeply socio-technical design. The loan products are tailored to women's lived realities — flexible, low-collateral, and trust-based. MHT and the Cooperative continuously learn from borrowers, observing how climate risks evolve and refining financial products accordingly. By embedding financial literacy and resilience awareness into every stage, the model ensures that women are not just recipients of credit but active partners in designing and sustaining these solutions.

Research has consistently shown that linking microfinance to climate adaptation creates powerful results. According to the United Nations Institute for Training and Research (UNITAR), targeted microfinance for adaptation helps vulnerable households invest in protective measures, strengthen assets, and reduce long-term risks. MHT's experience demonstrates how these global insights translate into tangible action on the ground — empowering women to finance their own resilience, one small loan at a time.



6.5 Nature Based Solutions

Grassroot Women Led Climate Resilient Development of Amalner

During the training with grassroot women on Climate Change Resilience in Amalner, water scarcity and heat were highlighted as main issues. Following this, the **"Green and Blue Network Plan"** was prepared with an urban planning approach. This set the basis for the afforestation intervention, focussed at the city level and slum level.

Taking the proposed green cover in the Development Plan as reference, ground level ratification was done to compare the plan vs. actual situation. This initial study was followed by stakeholder consultations with the Urban Local Body (ULB)- specifically the Departments of Forests and Social Forestry, local communities, grassroot women, social groups, local nurseries and vendors. This included mapping exercises. This was followed by visualization and design, monitoring and maintenance to ensure environmental benefits of afforestation viz reduced heat stress, enhanced food security and improved water cycles and biodiversity. Green

spaces can regulate micro-climate, alleviating temperature by 1-3° C and increasing moisture by 2-8% to a distance of 60 meters for thick vegetation.

The initial study guided the selection criteria for afforestation sites based on availability of space, beneficiary impact, access to water and site topography. The selection criteria for trees was based on carbon sequestration, local availability and appropriateness. For execution, major plantation was done with key stakeholders eg. Plantation along the Bori river with Amalner Municipality, selected roads were taken up for greening, Plantation at Ambarishi Tekdi by Grassroot women leaders (**Green Sakhis**), schools etc.

The implementation was a learning, albeit with challenges. Environmental factors, including site topography, precipitation, weather including wind patterns influence tree growth and development. Tree size and height also play a crucial role in sustaining growth. External factors, such as roaming and grazing animals, can negatively impact tree growth. The human angle - lack of cooperation from beneficiaries can hinder effective tree maintenance.

The Green Cover Initiative has successfully planted and is regularly monitoring **14,195 trees** across key selected areas of Amalner. As per the literature review, **a mature tree absorbs approximately 22 kg of carbon dioxide** from the atmosphere each year.



For the large-scale afforestation at Amabrishi Tekdi, a comprehensive monitoring system has been developed to supply water to the trees, investing considerable time and efforts. 'Green Sakhis' were identified and trained for this. They ensure tree identification through numbering and tree labelling with stickers and tree protection measures. Systems have been created like maintenance zones for plantations and design of a survey form for tree growth management.

The afforestation at Ambarishi Tekdi has taken a comprehensive approach including a water treatment plant, greening around the central lake, water storage tank and introducing drip irrigation.

Green Sakhis have identified 169 households to develop kitchen gardens. A baseline survey was conducted for the households that have been selected to develop kitchen gardens.

The identified women have received the scientific knowledge about kitchen gardening. Through various training sessions, they were provided information about the benefits of kitchen gardens, types of soil, different plants, plantation techniques, and maintenance tips. Regular online meetings are organized to reinforce training and link them to expert inputs and guidance.

The women have begun cultivating a variety of vegetables at home including brinjals, coriander, fenugreek, tomatoes, radish, beat, poi, spinach, and drumsticks. This has led to better nutrition and hence health outcomes as well as increased real incomes due to savings on expenditure for food.



6.6 Government Engagement: From Grassroots Innovation to National Policy Influence

From Local Innovation to National Recognition: The Journey of the India's First Net Zero Cooling Station at Jodhpur

When temperatures in Jodhpur climbed past 45°C, life in the city's informal sector slowed to a halt. Street vendors packed up early, daily-wage earners struggled to work through the afternoons, and students sought shade wherever they could find it. Amid this reality, women organized through MHT's local collectives began to raise their voices: "We need a safe, cool space to rest—just to get through the day."

Out of this collective demand, MHT and Jodhpur Nagar Nigam North (JNNN) co-created India's first Net-Zero Cooling Station—a pioneering innovation that blends traditional cooling methods with modern, sustainable technology. The station's design was guided by science but rooted in community wisdom. It integrates passive cooling techniques such as Khas (vetiver) Curtain, Bison panels and mist sprinklers that lower ambient temperatures through evaporative cooling. Solar panels power fans, lights, and sprinklers, ensuring uninterrupted cooling even.

A wind tower with a turbo ventilator channels hot air out and draws in cooler air, maintaining natural air circulation. These innovations help reduce indoor temperatures by 7–12°C compared to outdoor heat, even during peak summer hours.

The Net-Zero Cooling Station is not just a shelter—it's a model of climate-responsive, low-carbon infrastructure for cities of the future. It provides safe, accessible spaces for informal workers, commuters, and residents during heatwaves while demonstrating how clean energy and local materials can create comfort sustainably. What makes this achievement remarkable is not just its design—but the pathway that led to it. MHT's bottom-up approach began with community action groups identifying heat stress as a critical urban issue. Their engagement with government led to Jodhpur's first Heat Action Plan, and soon after, to the creation of the Net-Zero Cooling Station. The model's success inspired rapid replication in other cities, and eventually caught the attention of national authorities.



In 2025, the National Disaster Management Authority (NDMA), recognizing the station's strategic importance, developed the National Guidelines for Cooling Centers with support from MHT and partners. **The Jodhpur Net-Zero Cooling Station is now featured as a national best practice and reference model, setting a benchmark for inclusive, climate-resilient urban cooling across India.**

Through this journey, MHT once again demonstrated how grassroots innovation can shape national policy—bridging the gap between local experience and systemic reform. The Cooling Station's story is a powerful example of how women-led community action can influence the way India plans for a hotter, more climate-vulnerable future.



Hema Ben, Anganwadi Worker
Resident of Chandpole

It was a very hot day. I was traveling from Chandpole to Pratap Nagar and looking for a place to stop in the shade. I saw a cooling station at Kailana Chauraha, so I decided to rest there for some time. After spending 5–10 minutes at the cooling station, I felt a lot of relief and became more comfortable. I feel this is a very good initiative for people who are traveling.

6.7 Building Climate-Resilient Livelihoods with JEEViKA

Building on its mission to place women at the heart of urban climate action, MHT deepened its policy influence through a pioneering partnership with BRAC International and JEEViKA, the Government of Bihar's flagship livelihood program. In this collaboration, MHT serves as a Technical Support Organization, integrating climate adaptation strategies into the livelihoods of the urban poor—ensuring resilience becomes a built-in feature of livelihood development, not an afterthought.

The partnership began with an action research study titled "Climate Vulnerability Assessment of Urban Poor Livelihoods in Bihar." Some of the findings revealed: "During extreme heat, livelihoods such as vending, tailoring, and daily-wage work face an average productivity loss of 20%, with overall household incomes dropping by up to 50% in peak summer months.

- Monsoon floods in low-lying urban areas lead to 45% income loss, as waterlogging disrupts work and damages goods.
- Cold waves cause another 25% reduction in earnings, with higher medical expenses due to cold-related illnesses.
- Taken together, these disruptions amount to an annual income loss of nearly 23% for urban poor households—threatening their financial stability and health security.

Armed with this evidence, MHT began embedding climate-smart awareness and adaptive solutions into JEEViKA's implementation systems. Master Resource Persons (MRPs), field cadre of JEEViKA were trained on climate adaptation concepts and livelihood-specific resilience techniques. These trained cadres now serve as on-ground mentors, guiding urban poor entrepreneurs to adopt simple, affordable, and context-driven solutions to heat, flood, and cold stress.



Across Bihar, these interventions are translating research into real impact:

- Anita Devi, a home-based tailor, applied solar-reflective white paint to her roof, reducing indoor heat and doubling her daily output from two to four blouses—boosting her income by ₹300–500 a day.
- Gunja Devi, a vegetable vendor, built a flood-retaining wall at her doorstep, protecting her shop from monsoon waterlogging and maintaining steady sales through heavy rains.
- Geeta Devi, a grocery shop owner with a disability, extended her shop with a shaded structure, protecting her stock from sun and rain, and increasing her monthly income by 55%.

From Lived Experience to Policy Influence

The story of Putul Devi, a food stall vendor from Gaya, illustrates how a single lived experience can ignite institutional change. Facing recurrent disruptions from heat and rain, she worked with MHT and JEEViKA to install a simple yet effective all-weather protection umbrella over her stall. This low-cost intervention shielded her from harsh weather, stabilized her income, and drew more customers.

Drawing directly from Putul's experience, JEEViKA integrated protective umbrellas into its official procurement policy. This policy shift is now benefiting hundreds of JEEViKA-supported entrepreneurs, ensuring that climate adaptation solutions—once born from lived experience—are now embedded in institutional practice.

This milestone represents MHT's broader advocacy vision: turning ground-level realities into policy frameworks.



8.Awards



SEOY - 2023

2023, Finalist in Social Entrepreneur of the Year (SEOY) India Award



2022, Prince Talal International Prize for Human Development 2021



2021, Women leaders forge change to reduce disaster risk for all



2020, Finalist in Ashden Award for cooling informal settlements



2019, United Nations Sasakawa Award for Disaster Risk Reduction



2019, Award for Women's Action towards Climate Resilience in South Asia



Ahmedabad, Gujarat

Head Office



701-702, 7th floor, Sakar – 4, Opp. M.J.
Library, Ashram Road, Ellisbridge,
Ahmedabad 380006, Gujarat



info@mahilahsg.org

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