



## WOMEN IN MANAGEMENT OF HOME ENVIRONS (FACTS AND EVIDENCES FROM A VILLAGE)

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### Abstract

In our society, women are managing water, firewood for fuel, food and other items from the forest and Agricultural fields in every family. Women play a very important role in the management of the home, and upbringing of children and teach consumption culture to them such as stopping wasting water, reducing consumption of electricity, reducing the uses of sprays, perfume, plastics disposable materials, plastic containers and proper use of detergent, saving fuel by reducing use of private vehicle etc. Also creates awareness of energy-saving practices, the use of sustainable goods, the reduction of the consumption of disposable goods, and the management of waste from factories, Agricultural fields and Households. Women, closely connected to nature, play a vital role in natural resource management, contributing significantly to environmental rehabilitation and conservation. Their interdependence with nature is evident through their foundational skills, effective resource management, environmental sensitivity, and high ecological consciousness. As primary managers of households, women interact more closely with the natural environment, contributing significantly to its development. This makes them more susceptible to degraded home environments and the associated burdens of living in poor housing and communities due to spending more time in and around their homes.

*Index terms: women management, home environment.*

### I. INTRODUCTION

In the early 1970s, Ester Boserup's book, "Woman's Role in Economic Development," sparked interest in the connection between women and the environment. By the 1980s, policymakers acknowledged this link, leading to changes in natural resources and environmental management with a specific focus on women. Today, they understand the impact of environmental degradation and actively work to safeguard it, as highlighted by the World Bank in 1991. Movements like India's Chipko and Kenya's Green Belt demonstrate women's commitment to environmental protection. Notable activists, including Jane Goodall and Greta Thunberg, contribute significantly. The 42<sup>nd</sup> Amendment Act of 1976 underscores the fundamental duty to protect the natural environment, with collaboration and support from men essential to enhance women's roles. Women have always played a vital role in managing households. Despite advancements in education and employment opportunities, they continue to contribute significantly to household responsibilities, including child development, healthcare, nutrition, cleanliness, and maintenance. Effective communication and interaction are essential skills. This research focuses on women's participation in decision-making, leadership roles, various household responsibilities, and their impact on children's roles in household tasks. (Kapoor, Radhika, 2019). The residential environment is key for responsible psycho-social behaviour. Women can promote eco-friendly practices within the home. This article discusses social support, family dynamics, housing, health, overcrowding, waste disposal, and noise to individual and family well-being, offering suggestions for women to manage and enhance a healthy residential environment (Akbar Husain, 1998). Women play a crucial role in passing on cultural and environmental values to future generations. While their roles often focus on family and education, women possess significant environmental management skills. They can utilize their innate abilities and managerial talents to address environmental issues and protect both the environment and their rights (Koohe et al. 2014). Women have a recognized role in environmental management and conservation. They often possess deep local ecosystem knowledge and are primary caregivers and providers for their families. They are disproportionately affected by environmental degradation, especially in developing countries where their livelihoods heavily rely on natural resources (Srinivasan Balakrishnan, 2023). According to the World Bank in 1991, "Women play an essential role in the management of natural resources, including soil, water, forests and energy...and often have a profound traditional and contemporary knowledge of the natural world around them".

### II. THEORY AND PRACTICE OF ENVIRONMENTAL MOVEMENT

Women play a central role in the intersection of environment and development. They are a significant part of the global agricultural labour force, involved in tasks such as small livestock production, caretaking of poultry and dairy animals, and participating in the sale of eggs and production of dairy products. (Genzebe et al., 2016; SOFA Team and Doss, 2011). Women manage tasks like firewood collection, and water fetching, and contribute to family income through various sales. Additionally,

they play a crucial role in childcare and household management. As resource managers, women are instrumental in accomplishing these tasks (Chen and Ravallion, 2008). They also play a key role in food production (IKNWP, 2013). Dankelman and Davidson (1998) highlight women's pivotal role in managing their natural surroundings and addressing environmental crises. Throughout history, women have been revered as powerful symbols of nature, such as Mother Earth and Earth Goddess in various mythologies. According to Schultz et al. (2001), the Women, Environment, and Development debate (WED-debate) critically examines the connection between modernization/industrialization, technology, and environmental deterioration. Originally focused on these aspects, the ongoing WED debate now centres more on globalization and sustainable development. The theoretical framework concerning feminism and the environment is as follows:

**Ecofeminism** posits that women's perceived closeness to nature results in a heightened sense of environmental care. Focused on patriarchal oppression and societal constructs, ecofeminism explores biological and cultural factors contributing to this connection. Ultimately, it asserts a direct link between the oppression of nature and the subordination of women.

**Environmental feminism** focuses on specific interactions with the environment, examining the gendered division of labour and roles. Women, assigned nurturing roles, are seen as closely connected to the environment. Despite their unique knowledge of the land, women are often excluded from policy decisions on land development.

**Feminist political ecology**, derived from ecofeminism and environmental feminism, focuses on three aspects: 1. Gendered knowledge in scientific and ecological realms. 2. Unequal access to environmental rights and responsibilities for men and women. 3. Examining women's roles, including leadership, in environmental movements and politics. The field aims to understand women's contributions to environmental development on a political scale.

**Bishnoi Movement-1700** (Amrita Devi and Bishnoi villagers hugged trees to protect them). **Chipko Movement-1973** (Led by Sundarlal Bahuguna, Gaura Devi, Sudhesha Devi, and others in Uttarakhand to save Himalayan slopes). **Silent Valley Movement-1978** (Sugutha Kumari and others protected Silent Valley from a Kerala hydroelectric project). **Jungle Bachao Andolon-1982** (Tribals protested the replacement of Sal forest in Singbhum, Bihar). **Appiko Movement-1983** (Southern Chipko movement where locals embraced trees against contractors). **Narmada Bachao Andolon-1985** (Farmers, Medha Patkar, and Babu Amte protested the Sardar Sarovar Dam). **Green Belt Movement-1977** (Led by Nobel Prize Winner Wangari Maathai, started with few women planting trees in Kenya; by 2005, 30 million trees were planted on private lands). (Ujjal Das, 2022). A survey in a coastal area of Bangladesh shows that women actively participate in environmental conservation alongside traditional household tasks. Their involvement brings benefits such as food security, income, healthcare, and maintaining a sustainable ecosystem. Expanding women's role in these activities is crucial for Bangladesh's socio-economic development and imperative for preserving sustainability. (Moinul Islam and Tanzina Alam Chowdhury, 2019). Akter, Alamgir, Islam, Rana, Ahmed, and Chowdhury (2010) analyze the different dimensions of the role of women in home gardens such as the participation of women in management activities, understanding the impact of home gardens on women's income and livelihoods and women's awareness of home garden oriented activities that support environment conservation.

Sinha (2004) underscores women's vital role in natural resource management, emphasizing their positive impact on conservation through improved forest protection, knowledge, and cooperation. Stressing the necessity of women's involvement, she highlights their need for greater control and information, advocating for education to enhance their effective management of natural resources. Some environmental scientists recognize the cultural dimension in sustainable development and the crucial role of women in environmental management. This study delves into women's positive impact on society through their participation in and administration of environmental culture. Women, central to managing natural resources in families and communities, are especially vulnerable to environmental deterioration. In various global communities, women are responsible for overseeing essential resources like water, food, fuel, and agricultural land. Women's well-being and societal contributions are influenced by environmental quality and responsibilities. They play a crucial role in managing environmental cultures and conserving natural resources. Increased participation in decision-making enhances awareness and active involvement, boosting the success of environmental protection initiatives. (Sampale, 2022).

Amrita Devi, Gaura Devi, Medha Patkar, Sunitha Narain, Vandhana Siva, Sugathakumari, Radha Bhatt, Menaka Gandhi, Saalumara Thimmakka, Indira Jaising and Shehla Masood (India). Rachel Carson, Wangari Maathai, Isatou Ceesay, May Boeve, Mei Ng, Maria Cherkasova and Marina Silva (World) have made substantial contributions to environmental management at both national and global levels, showcasing the essence of environmental protection.

**Table 1**  
**Mosaic of Jambuthuraikottai Village**

S. No.	Name of the Hamlet	Total HHs	Sample HHs (10%)
1.	Alagampatti	545	55
2.	Oothupatti	688	69
3.	Jallipatti	313	31
4.	Kamalapuram	989	99
5.	Mettur	275	27
6.	Sakkayanaickanur	877	88
<b>Total</b>		<b>3687</b>	<b>369</b>

**Source:** Jambuthuraikottai Village Panchayat Office, 2019

The present paper involved a genuine attempt to comprehend the roles of women in the management of home environs. This understanding was derived from studying the daily environmental activities of women in the household sector across six hamlets under Jambuthuraikottai village panchayat where 3687 households are present and 10.0 per cent of the households viz., involving 369 female participants were contacted with well-structured and pre-tested interview schedule (Table 1).

Table 2 presents the housing environment in the study village. The inferences drawn from the table are given below.

**Table 2**  
**Women and Housing Environment**

(n= 369)

Sl. No	Particulars	Number	%
<b>Land Area of House Site (in cent(s))</b>			
1	< 1	226	61.0
2	1 – 2	82	22.0
3	3 – 4	37	10.0
4	> 4	24	7.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>House ownership</b>			
5	Owned	196	53.0
6	Rented	159	43.0
7	Leased	14	4.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Types of house</b>			
8	Kutchra	267	72.0
9	Pucca	102	28.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Size of the house (in cent(s))</b>			
10	< 1	284	77.0
11	1 – 2	39	11.0
12	> 2	46	12.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Number of room(s) in the house</b>			
14	1	157	43.0
15	2-3	124	34.0
16	4-5	84	22.0
17	> 5	4	1.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Having multi-floors</b>			
18	Yes	97	26.0
19	No	272	74.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Size of Kitchen (sq.ft)</b>			
20	≤ 100	276	74.7
21	> 100	12	3.3
22	No Kitchen (Open Hearth)	81	22.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Type of Hearth</b>			
23	LPG stove	257	70.0
24	Kerosene stove	31	8.0
25	Traditional Chulha	44	12.0
26	Smokeless Chulha	23	6.0
27	Three Stone hearth	14	4.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Ventilation facilities</b>			
28	Yes	338	92.0
29	No	31	8.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>If no ventilation means, why?</b>			
30	Insufficient windows	8	26.0
31	No cross ventilation	6	19.0
32	House in congested place	13	42.0
33	No space	4	13.0
<b>Total</b>		<b>31</b>	<b>100.0</b>

cases. These reasons collectively provide insights into the specific challenges faced by households without ventilation facilities.

**Land Area of House Site:** The majority of respondents have relatively small house sites, with over 60% having less than 1 cent of land. This suggests a potential need for land and housing development in the region, as there is a shortage of larger plots.

**House Ownership:** A significant portion of respondents own their houses, indicating a degree of stability and property ownership in the community. A substantial percentage also rent their houses, suggesting a demand for rental housing.

**Types of House:** The prevalence of "Kutchra" houses indicates a need for housing improvement and infrastructure development to enhance the quality of living conditions. The presence of "Pucca" houses represents a more durable and permanent housing solution.

**Size of the House:** The majority of houses are relatively small, with over three-quarters having a size of less than 1 cent. This suggests that many houses may have limited living space, which could affect the comfort and quality of life.

**Number of Rooms in the House:** A significant number of houses have only one room, which may signify a need for housing expansion or improvement to accommodate larger families or provide more functional living spaces. Very few houses have more than 5 rooms, indicating that larger houses are relatively rare.

**Having Multi-Floors:** A quarter of the houses have multiple floors, which could suggest a certain level of affluence or larger, multi-generational families. The majority of houses do not have multiple floors, which is a common feature in single-storey houses.

**Size of Kitchen (sq.ft):** The majority of households (74.7%) have kitchens with a size of 100 square feet or less. A small percentage (3.3%) of households have larger kitchens, exceeding 100 square feet. A significant proportion (22.0 per cent) of households do not have a dedicated kitchen and rely on open hearths for cooking.

**Type of Hearth:** The most common type of cooking method used in households is the "LPG stove," with 70.0 per cent of respondents using it. This indicates a significant level of access to clean and efficient cooking facilities. "Kerosene stove" and "Traditional Chulha" are less commonly used methods, with 8.0 per cent and 12.0 per cent of respondents using them, respectively. These methods may be associated with lower fuel efficiency and potential health hazards due to emissions. "Smokeless Chulha" and "Three Stone hearth" are used by smaller percentages of households, with 6.0 per cent and 4.0 per cent using them, respectively. These traditional cooking methods may also have environmental and health implications.

**Ventilation Facilities:** The majority of the surveyed houses (92.0 per cent) have ventilation facilities, indicating a relatively high percentage of houses with adequate air circulation.

**Inadequate Ventilation:** While most houses have ventilation, there is still a small but significant proportion (8.0 per cent) of houses with no ventilation facilities. This 8.0 per cent represents households that may face issues related to indoor air quality and comfort due to insufficient ventilation.

**Reasons for Lack of Ventilation:** Among the 31 houses that do not have ventilation facilities, the reasons for this lack are: "Insufficient windows" account for 26.0 per cent of cases. "No cross ventilation" is cited in 19.0 per cent of cases. "House in congested place" is the reason for 42.0 per cent of cases. "No space" is mentioned in 13.0 per cent of cases.

Sanitation facility			
34	Yes	292	78.0
35	No	77	22.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
If yes, what type of sanitation facility?			
36	Bathroom	114	40.0
37	Bathroom and Toilet	178	60.0
<b>Total</b>		<b>292</b>	<b>100</b>
Number of Toilets available			
38	Only 1	178	48.2
39	No toilet	191	51.8
<b>Total</b>		<b>369</b>	<b>100.0</b>
The toilet separated from the house			
40	Yes	162	71.0
41	Not separated	16	29.0
<b>Total</b>		<b>178</b>	<b>100.0</b>
Toilet attached with			
42	Soak pit	157	88.0
43	Septic tank only	21	12.0
<b>Total</b>		<b>178</b>	<b>100.0</b>
Open defecation, if no toilet			
44	Public land	94	49.0
45	Private land	43	12.0
46	Street/ roadside	29	21.0
47	Sewage channel	25	18.0
<b>Total</b>		<b>191</b>	<b>100.0</b>
Garden in the house			
48	Yes	39	11.0
49	No	330	89.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
If yes garden size (sq.ft)			
50	≤ 100	28	90.0
51	> 100	11	10.0
<b>Total</b>		<b>39</b>	<b>100.0</b>
Number of tree(s) in the house			
52	No trees	185	50.1
53	≤ 5	138	37.4
54	> 5	46	12.5
<b>Total</b>		<b>369</b>	<b>100.0</b>
Plant(s) within house			
55	Yes	353	96.0
56	No	16	4.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
Number of plant(s)			
57	No Plant	16	4.3
58	≤ 10	278	75.4
59	11-20	33	8.9
60	> 20	42	11.4
<b>Total</b>		<b>369</b>	<b>100.0</b>

**Source:** Computed from Primary Data

diverse settings in which open defecation is practised and emphasize the urgent requirement for enhanced sanitation infrastructure and public health interventions to address this critical issue.

Achieving cent per cent sanitation, also known as universal sanitation, is a challenging but important goal for public health and well-being. Some ideas and strategies to improve sanitation and work towards the goal of ensuring sanitation for everyone:

**Awareness and Education:** Implement comprehensive awareness and education programs about the importance of sanitation, hygiene, and the risks of open defecation. Target schools, communities, and households to promote proper sanitation practices.

**Infrastructure Development:** Invest in building sanitation infrastructure, including toilets, sewage systems, and waste management facilities. Ensure that these facilities are accessible, affordable, and appropriate for the local context.

**Subsidies and Incentives:** Provide financial incentives, subsidies, or tax breaks to encourage individuals and communities to build and maintain sanitation facilities. Make it economically feasible for households to invest in toilets and sewage systems.

**Community-Led Total Sanitation (CLTS):** Implement the CLTS approach, which involves communities taking the lead in achieving and sustaining open defecation-free status. Facilitate discussions and collective actions within communities to build and use toilets.

**Public-Private Partnerships:** Collaborate with private sector organizations to improve sanitation infrastructure and services. Private entities can play a significant role in innovating and providing sanitation solutions.

**Behaviour Change Communication (BCC):** Develop and execute behaviour change campaigns to encourage good hygiene and sanitation practices. Use multimedia, community leaders, and influencers to spread the message.

**Regulation and Enforcement:** Establish and enforce sanitation-related regulations and standards. Monitor compliance and impose penalties for non-compliance.

**Innovation and Technology:** Explore innovative sanitation technologies like eco-friendly toilets, decentralized sewage treatment, and low-cost sanitation solutions. Leverage technology for data collection and monitoring of

**House in Congested Place:** The most commonly cited reason for the lack of ventilation is that the house is situated in a congested place (42.0 per cent). This suggests that urban planning and the density of housing in certain areas may lead to ventilation challenges.

**Insufficient Windows:** "Insufficient windows" is the second most commonly cited reason (26.0 per cent). This indicates that a substantial number of houses may need to consider increasing window coverage to improve air circulation.

**No Cross Ventilation:** "No cross ventilation" is the reason for 19.0 per cent of cases, highlighting the importance of designing houses in a way that allows for air to flow freely from one side to another.

**No Space:** A smaller percentage (13.0 per cent) attribute the lack of ventilation to "no space," which might refer to limited space for window installation or expansion.

**Sanitation Facilities:** A significant majority of households (78.0 per cent) have access to sanitation facilities, indicating a relatively high percentage of houses with sanitary amenities.

**Lack of Sanitation Facilities:** While most houses have sanitation facilities, there is still a notable proportion (22.0 per cent) of households without access to proper sanitation facilities. This 22.0 per cent represents households that may face issues related to hygiene, sanitation, and public health.

**Types of Sanitation Facilities:** Among the households with access to sanitation facilities, there are two common types: "Bathroom" is used by 40.0 per cent of households. "Bathroom and Toilet" is used by the majority, accounting for 60.0 per cent of households. This data reflects a substantial portion of households with improved sanitation facilities that include both a bathroom and a toilet.

**Number of Toilets:** Among the households with sanitation facilities, the distribution of the number of toilets is as follows: 48.2% have only one toilet. 51.8% have no toilet, indicating that they rely on alternative sanitation methods or shared facilities. The nearly equal distribution between households with one toilet and those with no toilet suggests variations in access to individual sanitation facilities.

**Toilet Separation:** The majority of households (71.0 per cent) have their toilets separated from the main house, which can help maintain hygiene and reduce the risk of sanitation-related health issues. However, 29.0 per cent of households have toilets that are not separated from the house, which may have implications for privacy and convenience.

**Types of Attachments:** Among the households with separated toilets, two common types of attachments are observed: "Soak pit" is the attachment for 88.0 per cent of households. "Septic tank only" is the attachment for 12.0 per cent of households. This data reflects the different sanitation infrastructure choices made by households with separate toilets.

Open defecation is prevalent among households without toilets, with 49.0 per cent resorting to "public land," 12.0 per cent using "private land," 21.0 per cent opting for "street/ roadside," and 18.0 per cent relying on "sewage channels." These findings underscore the

sanitation practices. **Microfinance and Loans:** Facilitate access to microfinance options and loans for individuals and communities to invest in sanitation facilities. Low-interest loans can make it easier for households to fund sanitation projects. **Collaboration with NGOs and Development Agencies:** Partner with non-governmental organizations and international development agencies with expertise in sanitation and hygiene. Benefit from their experience, resources, and global best practices. **Government Support:** Allocate sufficient government funding for sanitation programs. Ensure that sanitation is a priority at the national and local levels. **Rural and Urban Strategies:** Tailor sanitation programs to suit the specific needs and challenges of both rural and urban areas. Urban areas may require more advanced sewage systems, while rural areas might benefit from community-led approaches. **Monitoring and Evaluation:** Continuously monitor and evaluate the progress of sanitation initiatives. Collect data on open defecation, access to toilets, and health outcomes to assess the impact of interventions. **Cross-Sectoral Approach:** Recognize that sanitation is interconnected with other sectors, such as health, education, and the environment. Collaborate across sectors to achieve sustainable sanitation improvements. **Sustainability and Ongoing Maintenance:** Promote the sustainability of sanitation facilities by educating communities about maintenance and repair. Establish community committees responsible for the upkeep of facilities. **Legal Rights and Advocacy:** Advocate for the recognition of sanitation as a basic human right and work towards legal frameworks that support universal access. **Data-Driven Decision-Making:** Use data and evidence-based research to inform policy and program decisions. Data can help identify gaps and prioritize interventions. **Social Inclusion:** Ensure that sanitation programs are inclusive, considering the needs of marginalized and vulnerable populations. Eliminate gender-based disparities in access to sanitation. **Global Cooperation:** Collaborate with international organizations, such as the United Nations and WHO, to align with global sanitation goals and initiatives. **Community Mobilization:** Mobilize and empower communities to take ownership of sanitation initiatives. Engage local leaders, influencers, and grassroots organizations.

The utilisation of Extra space available in the house is illustrated in *Table 3*.

**Parking Vehicle Dominates:** The highest percentage of women (46.0 per cent) use the extra space for parking vehicles. This suggests that a significant number of women in the sample own and utilize vehicles. **Diverse Use of Space:** Women use extra space for a variety of purposes, which indicates that they are engaged in multiple activities within and around their households. **Waste Management:** About 32.0 per cent of women use the extra space for dumping waste, indicating a concern for effective waste management and cleanliness. **Kitchen Gardens:** 11.0 per cent of women are involved in kitchen gardening, suggesting an interest in growing their produce, which can have implications for self-sustainability and healthy living. **Animal Husbandry:** A smaller percentage of women use extra space for cattle sheds (5.0 per cent) and poultry sheds (6.0 per cent). This might indicate a rural or semi-rural setting where some households engage in animal husbandry. **Comprehensive Data:** The total percentage adds up to 100 per cent, which indicates that all the women surveyed use the extra space for one or more of these mentioned purposes. **Varied Household Needs:** The distribution of space utilization shows that households have diverse needs, and women play a crucial role in managing these spaces based on their family requirements and preferences.

**Table 3**  
Women and Utilisation of Extra Space in the House

S. No	Usages Pattern of extra space	Number	%
1	Kitchen Garden	39	11.0
2	Parking vehicle	167	46.0
3	Dumping wastes	119	32.0
4	Cattle shed	21	5.0
5	Poultry shed	23	6.0
<b>Total</b>		<b>369</b>	<b>100.0</b>

*Source: Computed from Primary Data*

**Table 4**  
Women & Cleaning the Home environs

S. No	Person responsible	Number	%
1	Mothers	195	52.8
2	Daughters	85	23.0
3	Mother-in-laws	48	13.0
4	Daughter-in-laws	41	11.2
<b>Total</b>		<b>369</b>	<b>100.0</b>

*Source: Computed from Primary Data*

Persons responsible for cleaning the home environs are put under *Table 4*. **Mothers Play a Central Role:** The data in *Table 4* show that mothers are the primary individuals responsible for cleaning the home environs in the majority of households, with 52.8 per cent of respondents. This suggests that mothers hold a central role in maintaining the cleanliness and organization of the household. **Generational Involvement:** Besides mothers, daughters also contribute significantly to cleaning, with 23.0 per cent of respondents. This implies that the responsibility for cleaning is often shared across generations, with both older and younger women actively involved. **Inter-generational Dynamics:** Mothers-in-law (13.0 per cent) and daughters-in-law (11.2 per cent) are also involved in cleaning the home environs. This indicates that there are inter-generational dynamics at play, with both older and younger generations participating in household chores. **Balanced Distribution:** The data suggest a relatively balanced distribution of cleaning responsibilities among different family members, which may reflect cooperative and collaborative efforts within the household. **Varied Family Structures:** The presence of mothers-in-law and daughters-in-law in the data hints at extended family structures, where multiple generations live together or in close proximity. **Gender Role Norms:** The data do not specify the involvement of men in cleaning the home environs. Traditional gender roles may influence these responsibilities, with women shouldering the primary cleaning duties.

Women's involvement in cleaning the environment and the duration of cleaning is given in *Table 5*. **High-Frequency Cleaning:** The majority of women (79.0 per cent) clean their home environs daily. This indicates a strong commitment to maintaining a clean and organized living space and suggests that daily cleaning is a common practice among the surveyed women. **Regular Cleaning Patterns:** A significant proportion of women (13.0 per cent) clean their home environs every two days. This indicates that a considerable number of households follow a strict and regular cleaning routine. **Weekly Cleaning:** Around 5.0 per cent of women clean their home environs weekly, suggesting that some households opt for a less frequent but consistent cleaning schedule. **Bi-Weekly and Monthly Cleaning:** A smaller percentage of women (2.0 per cent and 1.0 per cent, respectively) clean their home environs bi-weekly and monthly. This may reflect the cleaning preferences or availability of time among these individuals. **Cultural and Lifestyle Factors:** The variation in cleaning frequencies may be influenced by cultural norms, family size, work commitments, and personal preferences. For example, larger households with more family members might require more frequent cleaning. **Hygiene and Health:** The high percentage of daily cleaners may reflect a strong emphasis on hygiene and cleanliness, which is often associated with good health.

**Table 5**  
**Women and Frequency of Cleaning Home Environs**

S. No	Cleaning the home environs	Number	%
1	Daily	292	79.0
2	Two days once	49	13.0
3	Weekly	18	5.0
4	Bi-Weekly	6	2.0
5	Monthly	4	1.0
<b>Total</b>		<b>369</b>	<b>100.0</b>

*Source: Computed from Primary Data*

**Table 6**  
**Women and Types of Waste Management in Home environs**

S. No	Particulars	Number	%
<b>Quantity of wastes (in kg(s))</b>			
1	< 5	187	51.0
2	5-10	56	15.0
3	11-15	20	5.0
4	16-20	67	18.0
5	> 20	39	11.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Types of Wastes</b>			
6	Food	123	32.0
7	Cloth	76	21.0
8	Bottle	13	6.0
9	Plastic	141	37.0
10	e-Wastes	16	4.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Degradable Wastes (in kg(s))</b>			
11	< 5	53	14.4
12	5-10	16	4.3
13	> 10	22	6.0
<b>Total</b>		<b>91</b>	<b>24.7</b>
<b>Non-degradable Wastes (in kg(s))</b>			
14	< 5	147	39.8
15	5-10	92	24.9
16	> 10	39	10.6
<b>Total</b>		<b>278</b>	<b>75.3</b>
<b>Price of degradable Waste (Rs.)</b>			
17	< 100	32	8.7
18	101-500	15	4.1
19	501-1000	29	7.9
20	> 1000	15	4.1
<b>Total</b>		<b>91</b>	<b>24.8</b>
<b>Price of Non-degradable Wastes (Rs.)</b>			
21	< 100	159	43.1
22	101-500	63	17.1
23	501-1000	24	6.5
24	> 1000	32	8.7
<b>Total</b>		<b>278</b>	<b>75.4</b>

seen as a sustainable and eco-friendly practice, as it involves recycling or reusing materials.

Types of Wastes generated in households are indicated in *Table 6*. **Small Quantity:** The majority of respondents (51.0 per cent) generate less than 5 kg of waste. This indicates that a significant portion of the surveyed women produce a relatively small amount of waste in their households. **Varied Waste Generation:** The distribution of waste generation is diverse, with 15.0 per cent generating 5-10 kg, 18.0 per cent generating 16-20 kg, and 11.0 per cent generating more than 20 kg. This suggests variations in household waste production within the surveyed population. **Food and Plastic Dominance:** Among the types of waste, food waste (32.0 per cent) and plastic waste (37.0 per cent) are the most common. This highlights the need for proper disposal and recycling practices, especially for plastic waste, which is non-biodegradable and environmentally damaging. **Cloth, Bottle, and e-Wastes:** Cloth waste (21.0 per cent) and plastic bottles (6.0 per cent) are also significant components of the waste stream. The presence of electronic waste (e-waste) is relatively low at 4.0 per cent. **Majority is Degradable:** A significant portion of the surveyed women (51.3 per cent) generate degradable wastes. Within this category, 14.4 per cent produce less than 5 kg, 4.3 per cent generate 5-10 kg, and 6.0 per cent produce more than 10 kg of degradable waste. **Prevalence of Non-degradable Wastes:** The majority of respondents (75.3 per cent) generate non-degradable wastes. This highlights the importance of managing and recycling non-biodegradable materials effectively. **Value in Waste:** A notable portion of the surveyed women (24.8 per cent) earns income from selling degradable wastes, with 8.7 per cent selling for less than Rs. 100, and 7.9 per cent selling for Rs. 501-1000. **Income from Non-degradable Wastes:** A higher percentage of respondents (75.4 per cent) earn income from selling non-degradable wastes, with 43.1 per cent selling for less than Rs. 100 and 17.1 per cent selling for Rs. 101-500.

Methods of waste disposal are provided in *Table 7*. **Common Practice:** The most common method of waste disposal, as reported by 52.0 per cent of the respondents, is throwing waste in a corner of the house. This suggests that a significant number of people store waste within their homes rather than immediately discarding it. **Street Littering:** Approximately 16.0 per cent of the respondents dispose of waste by throwing it in the street. This indicates a considerable portion of the population engaging in practices that may contribute to environmental pollution and public health concerns. **Variety of Methods:** The data reveal that there are various methods of waste disposal used by the surveyed individuals, including storing, throwing in the street, putting in public dustbins, selling, burning, and putting in common places. This suggests a diverse set of waste management practices within the community. **Environmental Impact:** Practices like firing/burning waste (11.0 per cent) and throwing waste in the street (16.0 per cent) are environmentally harmful and can contribute to pollution. Efforts to promote better waste disposal methods and environmental awareness may be needed. **Limited Use of Public Dustbins:** Only 5.0 per cent of respondents report using public dustbins for waste disposal, indicating that public infrastructure for waste management might not be extensively utilized in the surveyed area. **Selling Waste:** Approximately 7.0 per cent of respondents reported selling waste, which could be seen as a sustainable and eco-friendly practice, as it involves recycling or reusing materials.

**Table 7**  
**Women and Methods of Wastes Disposal**

S. No	Methods	Number	%
1	Storing	27	7.0
2	Throwing in the street	58	16.0
3	Corner of the house	191	52.0
4	Putting in a public dustbin	19	5.0
5	Selling	28	7.0
6	Firing/ burning	42	11.0
7	Putting in commonplace	4	2.0
<b>Total</b>		<b>369</b>	<b>100.0</b>

*Source: Computed from Primary Data*

**Table 8**  
**Women and Strategies of Wastes Management**

S. No	Particulars	Number	%
<b>Keep household wastes in a Dustbin</b>			
1	Within the house	165	45.0
2	Nearby compound	143	39.0
3	Outside the House	61	16.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Type of dustbin</b>			
4	Plastic	196	53.0
5	Bamboo	17	5.0
6	Iron and others	156	42.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Number of times Sweeping</b>			
7	1	193	52.0
8	2	125	34.0
9	3 and above	51	14.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Disposable of sweeping wastes</b>			
10	Keeping the corner	154	42.0
11	Making composite	26	7.0
12	Putting in dustbin	87	24.0
13	Throw outside house	102	27.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Types of Wastes in the Households, Why Sweeping?</b>			
14	Dust particles	267	73.0
15	Papers	38	10.0
16	Hair	52	14.0
17	Dead ants and insects	12	3.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>Whether wastes are classified</b>			
18	Yes	167	45.0
19	No	202	55.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>If yes, types of Classification of waste(s)</b>			
20	Degradable	128	77.0
21	Non-degradable	39	23.0
<b>Total</b>		<b>167</b>	<b>100.0</b>

**Community Efforts:** A small percentage (2.0 per cent) of respondents put waste in common places, which may suggest a community approach to waste disposal.

Strategies adopted by women in Waste Management are highlighted in **Table 8. In-House Storage:** A significant portion of respondents (45.0 per cent) prefer to keep household wastes within the house. This may indicate a preference for keeping the waste concealed within the home environment until it is disposed of, possibly for hygienic or aesthetic reasons. **Compound Location:** A substantial number of respondents (39.0 per cent) keep household wastes in dustbins located in the nearby compound. This suggests that many households have designated areas or bins for waste storage in a shared or semi-outdoor space.

**External Disposal:** A smaller percentage (16.0 per cent) opt to keep their household wastes in dustbins outside the house. This practice might be influenced by convenience or local waste collection systems. **Plastic Dustbins:** The majority of respondents (53.0 per cent) use plastic dustbins for waste disposal. This might be due to the lightweight, durable, and easily cleanable nature of plastic bins, making them a practical choice for many households. **Iron and Other Materials:** Approximately 42.0 per cent of respondents use dustbins made from iron or other materials. These types of bins might be preferred for their sturdiness and durability. **Bamboo Dustbins:** A smaller proportion (5 per cent) use bamboo dustbins. Bamboo is a more eco-friendly option and might be preferred for its sustainability and biodegradability. **Frequency of Sweeping:** The majority of respondents (52.0 per cent) sweep their households once a day. This indicates that daily sweeping is a common practice among the surveyed individuals. **Regular Sweeping:** About 34.0 per cent of respondents sweep their households twice a day. This suggests a commitment to maintaining cleanliness and tidiness. **Less Frequent Sweeping:** A smaller percentage (14.0 per cent) sweeps three or more times a day. This may be indicative of households with specific cleanliness standards or routines that require more frequent cleaning. **Corner Storage:** The most common method of disposing of sweeping wastes is keeping them in a corner of the house (42.0 per cent). This practice is likely related to the convenience of temporarily storing the waste before final disposal. **Use of Dustbins:** Approximately 24.0 per cent of respondents put their sweeping waste in dustbins, indicating a preference for immediate and proper disposal. **Outdoor Disposal:** A notable proportion (27.0 per cent) throws sweeping waste outside the house. This may be due to convenience or local waste disposal practices. **Dust Particles:** The majority of respondents (73.0 per cent) sweep to clean dust particles. This highlights the need to manage indoor air quality and maintain a clean and healthy living environment. **Paper Waste:** Approximately 10.0 per cent of respondents sweep to manage paper waste, which may include discarded documents or packaging materials. **Hair and Insects:** Hair (14.0 per cent) and dead ants and insects (3 per cent) are also reasons for sweeping, indicating the need to manage hair shedding and pest control. **Classification Practices:** 45.0 per cent of the respondents indicated that they classify their waste, which means they separate waste into different categories based on its degradability or other characteristics. **Non-Classification:** The majority of respondents (55.0 per cent) do not classify their waste, indicating that a significant portion of households do not have a system in place for separating waste. **Degradable vs. Non-degradable:** Among those who classify their waste, the majority (77.0 per cent) classify it into degradable and non-degradable categories. This suggests that the most common classification criterion is the biodegradability of the waste. **Focus on Environmental Impact:** The emphasis on separating degradable and non-degradable waste might reflect a concern for environmental impact and the need to manage waste in an environmentally responsible manner.

S. No	Particulars	Number	%
<b>If not, why</b>			
22	Lack of information	113	55.9
23	Lack of knowledge	55	27.3
24	Lack of time	14	6.9
25	Not interested	20	9.9
<b>Total</b>		<b>202</b>	<b>100.0</b>
<b>Wastes compost made</b>			
26	Yes	26	7.0
27	No	343	93.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>If yes, Waste compost prepared</b>			
28	Within compound	22	84.0
29	Outside the house	4	16.0
<b>Total</b>		<b>26</b>	<b>100.0</b>
<b>If no, Wastes compost: Reasons</b>			
30	No backyard	18	5.0
31	No time	9	2.0
32	Lack of awareness	162	48.0
33	Duty of Panchayat	154	45.0
<b>Total</b>		<b>343</b>	<b>100.0</b>
<b>Wastes recycling</b>			
34	Yes	62	17.0
35	No	307	83.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>If yes, recycle wastes</b>			
36	Food waste	25	40.0
37	Paper	13	21.0
38	Leaves	24	39.0
<b>Total</b>		<b>62</b>	<b>100.0</b>
<b>If no, why wastes recycling</b>			
39	Household waste such as hair and dust	293	95.0
40	Hazardous items electrical and electronic materials	14	5.0
<b>Total</b>		<b>307</b>	<b>100.0</b>
<b>Scientific training need for preparing compost/recycling of wastes</b>			
41	Yes	253	79.0
42	No	116	21.0
<b>Total</b>		<b>369</b>	<b>100.0</b>
<b>If yes, what type of training needed</b>			
40	Organic manure preparation	134	53.0
41	Method of Recycling of degradable and non-degradable waste	119	47.0
<b>Total</b>		<b>253</b>	<b>100.0</b>
<b>Awareness of Solid Waste Management</b>			
42	Yes	159	43.0
43	No	210	57.0
<b>Total</b>		<b>269</b>	<b>100.0</b>

**Lack of Information:** The most common reason cited for not classifying waste is a lack of information (55.9 per cent). This suggests that education and awareness campaigns about waste management and classification could be beneficial.

**Lack of Knowledge:** A significant percentage (27.3 per cent) cited a lack of knowledge as a reason for not classifying waste. This indicates that there is a need for education and awareness programs on waste management and its benefits.

**Lack of Time:** A smaller proportion (6.9 per cent) mentioned a lack of time as a reason for not classifying waste. This may reflect busy lifestyles and the need for more convenient waste management solutions.

**Lack of Interest:** Approximately 9.9 per cent of respondents stated that they are not interested in waste classification. This suggests that some individuals may not prioritize or see the importance of waste separation.

In this context, it is evident that the majority do not engage in composting, with 93.0 per cent reporting that they do not create compost. Among those who do practice waste composting, the data reveal that 7 per cent of respondents do indeed make compost. For those involved in composting, a significant majority, 84.0 per cent of them, prepare the compost within their compound, indicating a preference for an in-house composting system. In contrast, a smaller proportion, 16.0 per cent, prepare compost outside the house, possibly indicating the utilization of a community composting facility or a different external location. For the substantial majority of respondents who do not compost, several reasons were provided for their non-participation. Among the given reasons, the most commonly cited is "Lack of awareness," with 48.0 per cent of non-composters indicating that they are unaware of composting practices or their benefits. Additionally, 45.0 per cent of those who do not compost mentioned that waste management is perceived as the responsibility of the Panchayat, suggesting a reliance on local authorities for waste disposal. Further, 5 per cent of non-composters cited the lack of a backyard as a constraint, and 2 per cent indicated a lack of time as a barrier to engaging in composting. Among the surveyed individuals, only 17.0 per cent (62 out of 369) reported that they engage in waste recycling, while the majority, constituting 83.0 per cent, do not actively recycle waste.

Among those who practice waste recycling, the data reveal that they recycle various types of waste: 40.0 per cent recycle food waste, indicating a commitment to reducing organic waste and promoting composting. 21.0 per cent recycled paper, showing an awareness of the importance of paper recycling for resource conservation. 39.0 per cent recycle leaves, suggesting an effort to utilize yard waste for composting or other eco-friendly practices.

The primary reason for not recycling waste, as reported by 95.0 per cent of non-recyclers, is that they consider their household waste, such as hair and dust, to be non-recyclable. This may reflect a lack of awareness regarding potential recycling options for these waste types or a perception that they do not have recycling value. A smaller proportion (5 per cent) of non-recyclers indicated that they do not recycle hazardous items like electrical and electronic materials. This indicates an understanding of the potential risks associated with certain waste materials and the need for proper disposal or handling.

A significant majority, 79.0 per cent (253 out of 369), of the surveyed individuals, expressed the need for scientific training in preparing compost and recycling waste. This indicates a strong interest and recognition of the importance of proper waste management and composting practices.



If yes, the awareness they knew			
44	Separate the solid waste materials	115	72.0
45	Preparing method for solid waste	44	28.0
<b>Total</b>		<b>159</b>	<b>100.0</b>
If no, give reasons			
46	Lack of knowledge	210	100.0
Awareness of health issues causing improper water management			
47	Yes	274	74.0
If yes, what type of health issues			
48	Attracts flies/mosquitoes	156	58.0
49	Attracts the rats	23	8.0
50	Attracts animal-like dogs, pigs	31	11.0
51	Attract the chicks	25	9.0
52	Creates odour/ bad smell	16	6.0
53	Creates nuisance to neighbours	12	4.0
54	Affect the health of family members	11	4.0
<b>Total</b>		<b>274</b>	<b>100.0</b>
If no, aware of health issues caused by improper water management			
55	Lack of scientific information/ knowledge	39	41.0
56	Lack of training	24	25.0
57	Insufficient support from family members	12	13.0
58	Not care about sanitation and health	20	21.0
<b>Total</b>		<b>95</b>	<b>100.0</b>
Types of waste arose in the households			
59	Used materials like bottle, tin, TV	187	51.0
60	Old clothes	58	16.0
61	Unused wood	73	20.0
62	Hazardous items	51	13.0
<b>Total</b>		<b>369</b>	<b>100.0</b>

*Source: Computed from Primary Data*

a nuisance to neighbours" is acknowledged by 4 per cent of respondents, indicating the awareness of the broader community impact. "Affecting the health of family members" is recognized by 4 per cent of respondents, emphasizing the direct health consequences of improper water management.

For the individuals who do not have awareness of health issues related to improper water management (26.0 per cent), the reasons cited for their lack of awareness are: 41.0 per cent mentioned "Lack of scientific information/knowledge," indicating that they believe they lack the necessary information to understand these health concerns. 25.0 per cent mentioned "Lack of training," suggesting they perceive the need for education on the subject. 13.0 per cent mentioned "Insufficient support from family members," implying that they require family support to gain awareness of these health issues. 21.0 per cent mentioned "Not caring about sanitation and health," indicating a possible lack of motivation or concern regarding health and sanitation.

The data show that various types of waste materials are generated in households, with the following distribution: "Used materials like bottle, tin, TV" account for the majority, with 51.0 per cent of respondents generating this type of waste. This category likely includes items like empty containers, electronic waste, and other used household materials. "Old clothes" constitute 16.0 per cent of the waste generated, indicating that clothing items are a notable source of waste in these households. "Unused wood" is responsible for 20.0 per cent of the waste generated. This may include wood from construction or renovation projects, which can become waste if not repurposed or recycled. "Hazardous items like e-waste, etc." are generated by 13.0 per cent of the respondents. This category could encompass items that require special disposal methods due to their potential harm to health and the environment, such as batteries or chemicals.

### III. CONCLUSION

Improving access to education and workforce-related skills for girls, providing support services like childcare and healthcare, and promoting women's leadership through mentoring and networking are crucial steps for empowering women. Addressing workplace and societal discrimination is essential, creating an enabling environment for women to engage in leadership roles. Population growth and technological advances strain the environment, particularly in rural areas where women are vital in managing

Among those who expressed the need for scientific training, the data reveal that the training needs are as follows: 53.0 per cent of respondents expressed the need for training in "Organic manure preparation." This suggests a desire to learn about the process of converting organic waste into valuable compost and organic fertilizers. 47.0 per cent of respondents expressed the need for training in the "Method of Recycling of degradable and non-degradable waste." This indicates an interest in understanding the science behind waste recycling, including the differentiation between biodegradable and non-biodegradable materials and their proper recycling methods.

Among those who are aware of solid waste management, the data reveal that they have awareness of the following aspects: 72.0 per cent are aware of "Separating the solid waste materials." This indicates a recognition of the importance of segregating different types of waste for efficient and sustainable waste management. 28.0 per cent know the "Preparing method of solid waste," which suggests an understanding of proper waste disposal and recycling methods. For the individuals who do not have awareness of solid waste management (57.0 per cent), the primary reason cited by all of them (100 per cent) is "Lack of knowledge." This indicates that those who lack awareness believe they are uninformed about the subject, highlighting the need for education and awareness campaigns on solid waste management in this community.

A significant majority, 74.0 per cent (274 out of 369) of the surveyed individuals are aware of health issues associated with improper water management. This indicates a high level of recognition of the potential health risks related to water management practices.

Among those who are aware of health issues, the data reveal that they have identified several health concerns linked to improper water management: The most commonly identified issue is "Attracting flies/mosquitoes," with 58.0 per cent of respondents recognizing this problem. Flies and mosquitoes can carry diseases and create a nuisance. "Attracting rats" is mentioned by 8 per cent of respondents, indicating awareness of rodent-related health risks and potential disease transmission. "Attracting animals like dogs and pigs" is recognized by 11.0 per cent of respondents, highlighting concerns about animals potentially contaminating water sources. "Attracting chicks" is mentioned by 9 per cent of respondents, indicating awareness of the potential for avian contamination of water sources. "Creating odour/bad smell" is identified by 6 per cent of respondents, recognizing the impact on air quality and living conditions. "Creating

and advocating against environmental degradation. The depletion of natural resources directly impacts women, increasing their workload and affecting the livelihoods of those dependent on these resources. Empowering women through measures like decision-making involvement, skill training, and education is crucial for reinforcing their role in natural resource management. However, involving women in additional conservation work without addressing labour availability and means of production may increase their workload, burden, and drudgery. In India, several policies and programs have been put in place to address the needs of women and girls. These programs aim to improve the social, political, and economic empowerment of women by addressing various critical dimensions needed for advancing gender equality. While there is no specific policy that addresses the improvement of home environs, there are several programs that indirectly target this issue. For instance, the government has implemented schemes that aim to provide better livelihood and employment opportunities for women, which can help them improve their homes. Additionally, some programs aim to improve health and nutrition outcomes by ensuring food security and maternity entitlements, which can help women take care of their families. It is also worth noting that women's representation and leadership can drive better environmental outcomes at both the national and community levels. Countries with higher percentages of women in parliament tend to adopt stricter climate change policies, resulting in lower emissions.

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