Vol.17

# The Urban World Quarterly Publication







Regional Centre for Urban and Environmental Studies All India Institute of Local Self-Government, Mumbai



#### Regional Centre for Urban & Environmental Studies (RCUES), Mumbai

(Supported by the Ministry of Housing and Urban Affairs, Government of India)

Established in 1926, the All India Institute of Local Self Government (AIILSG), India is a premier autonomous research and training institution in India. The Institute was recognized as an Educational Institution by Government of Maharashtra in the year 1971. The Institute offers several regular training courses in urban development management and municipal administration, which are recognized by the Government of India and several State Governments in India.

In the year 1968, the Ministry of Housing and Urban Affairs (MoHUA), earlier Ministry of Urban Development), Government of India (GoI) established the Regional Centre for Urban & Environmental Studies (RCUES) at AIILSG, Mumbai to undertake urban policy research, technical advisory services, and building work capabilities of municipal officials and elected members from the States of Goa, Gujarat, Maharashtra, Rajasthan and UTs of Diu, Daman, Dadra & Nagar Haveli. The Ministry of Housing and Urban Affairs (MoHUA), Government of India added States of Assam and Tripura from February, 2012 and Lakshadweep from August 2017 to the domain of RCUES of AIILSG, Mumbai. The RCUES is supported by the MoHUA, Government of India. The MoHUA, Government of India has formed National Review and Monitoring Committee for RCUES under the chairmanship of the Secretary, MoHUA, Government of India. The Principal Secretary, Urban Development Department, Government of Maharashtra is the ex-officio Chairman of the Advisory Committee of the RCUES, Mumbai, which is constituted by MoHUA, Government of India.

The RCUES was recognized by the MoHUA, Government of India as a National Training Institute (NTI) to undertake capacity building of project functionary, municipal officials, and municipal elected members under the earlier urban poverty alleviation programme-UBSP. The RCUES was also recognized as a Nodal Resource Centre on SJSRY (NRCS) and Nodal Resource Centre (NRC) for RAY by then the Ministry of Housing and Urban Poverty Alleviation, Government of India.

The then Ministry of Urban Employment and Poverty Alleviation (MoUE&PA), GoI and UNDP have set up the 'National Resource Centre for Urban Poverty' (NRCUP), which is anchored by RCUES at AIILSG, Mumbai.

AIILSG, Mumbai is empaneled by the Ministry of Housing and Urban Affairs, Government of India, for providing technical support to the ULBs in the field of water supply, sanitation, sewerage and drainage systems. RCUES, Mumbai is also identified as a technical service provider in Municipal Solid Waste Management projects under Swachh Bharat Mission (SBM) launched by the MoHUA, GoI.

Over the years, RCUES of AIILSG Mumbai has been working in close coordination with state and local Governments to provide strategic, advisory, technical and capacity building support for assessment and improvement in infrastructure service delivery in cities.

Maharashtra Urban WASH and Environmental Coalition (Maha UWES-C) is a joint initiative of the RCUES of AIILSG, Mumbai, and UNICEF Maharashtra. The Coalition brings together local organisations, through institutions and sector experts to strengthen municipal capacities and encourage collaborative action to enhance service delivery in WASH (Water, Sanitation, and Hygiene) in urban Maharashtra. The Secretariat of the Maha UWES-C is anchored at RCUES of AIILSG Mumbai. In 2022, MoU is signed with the Directorate of Swachh Maharashtra Mission, Urban Development Department, Government of Maharashtra for building capacities, facilitating partnerships, and supporting innovations under Swachh Maharashtra Abhiyan - Urban 2.0 under Maha UWES-C.

Along with ULBs, it is also engaging with multiple stakeholders like NGOs/CBOs, SHGs, private sector organisations, financial institutions at city level for providing technical and strategic support focusing on preparing action plans/strategies, technical assessment reports, CSPs/CDPs/DPRs as well as on-ground support by engaging with communities for improvement in various urban sectors to ensure improved quality of life to the citizens. AIILSG, Mumbai is also working at the grass root level in cities through field visits, guiding ULB officials, conducting situation assessments with the objective of bridging the gap between the cities and state for sustainable sanitation solutions under Swachh Bharat Mission Urban.

In February 2016, the then Ministry of Housing and Urban Poverty Alleviation, Government of India empaneled the RCUES of AIILSG, Mumbai for conducting training and capacity building programme for experts of SMMU, CMMUs, COs, Key Officials and other stakeholders of the states and ULBs under Deendayal Antyodaya Yojana – National Urban Livelihoods Mission (DAY – NULM).

In 2017, AIILSG was empaneled among one of the 35 agencies in India for conducting Integrated Capacity Building Programmes (ICBP). AIILSG Mumbai is supporting the states of Maharashtra, Rajasthan and Goa for the same.

Through all these activities, RCUES of AIILSG Mumbai is striving to transform the notion of capacity building by not limiting itself to trainings / workshops but engaging with the state and local governments at multiple levels. With a small but enthusiastic team, RCUES, Mumbai will continue to strive towards improving the capabilities of municipal officials with a broader objective towards developing able governments thereby enabling better cities.

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## **Editorial**

The Smart City Mission in India is a flagship programme touching lives of citizens in over 300 cities with a vision to improve quality of life of people in cities and towns by using best practices, information and digital technology, and more public-private partnerships. The program has made significant strides in the areas such as the Intelligent Transport System (ITS) that has significantly improved urban mobility. The launching of Pune Municipal Corporation's "Pune Waste-Wise Cities" program has led to more efficient waste collection and processing. In Bhubaneswar "Bhubaneswar.me" platform encourages citizens to engage with and contribute to city planning processes. The city of Surat has implemented smart water management systems, made considerable progress in flood management through reducing the impact of monsoon floods. The urban local government bodies of states in Karnataka, Tamilnadu, Kerala, Maharashtra, Gujarat haven been ensuring gender audit of budgets to reduce gender gaps in education, health and skill development and to facilitate safe transport and gender-child-elderly friendly town planning.

For long term sustainability of the commendable measures and to energise the remaining urban centre of India to improve infrastructure components such as water supply, power distribution, waste management, public transportation and safety, bottom up approach needs to be institutionalised. The community based organisations, civil society groups, professional bodies, non-government organisations, women's rights groups, migrant workers collectives know the grounded reality. Each city has specific requirements and challenges, necessitating a case-by-case approach in allocation of funds, functions, functionaries for human development of the citizens. The proactive participation all stake holders can ensure the most effective utilisations of national resources.

To foster this participatory spirit, several cities have provide praiseworthy examples. "My City My Pride" campaign in Indore has raised citizen awareness and enhanced their participation in maintaining cleanliness of Indore city. The citizens of Bengaluru have formed "Ward Committees," where local residents actively participate in governance, decision-making processes and also give report cards about efficacy of the local self-government body. Praiseworthy effort of the Pune Municipal Corporation of initiative of the "Participatory Budgeting" has resulted in citizens voice to directly influence budget allocation for local area development projects. The "Swachh Survekshan" awards have encouraged the administrators of the cities and the residents to improve sanitation and cleanliness. For the year 2023, Maharashtra, Madhya Pradesh and Chhattisgarh won the top three awards for Best Performing State.

All cities need to make their Smart City programmes, people's programmes so that the Urban World in Indian becomes child and elderly friendly, disable friendly, gender responsive, safe for women and secure for migrant city makers.

**The Urban World** invites scholars, policy makers, practitioners, urban planners and researchers to send their original research-based articles and book reviews with special focus on developmental concerns of the Urban India.

## Gender, Migration, Urbanisation and Development

#### Dr. Vibhuti Patel,

Distinguished Visiting Professor, Impact and Policy Research Institute (IMPRI), New Delhi.

#### Introduction

Gender studies and women's studies as a discipline have made efforts at a theoretical and conceptual rethinking of the linear relationship between migration, urbanisation and development. Along with the study of migrant masculinities, they have shown gender differential impact of rural-urban, urban-urban and cross-country migration (Christou & Kofman, 2022). The discourse on migration has included more nuanced categories to convey complex nature of intersectional hierarchies that signify disparities in entitlements, power equations defined by subordination of migrant women and nature of migration that explains how gender based division of labour and identity formation on gendered intersectional existential realities emerge and get moulded by paid and unpaid work for care economy as well as market economy resulting in class differentiations; and structures and systems of surplus extractions get institutionalised. According to intersectionality theory, simultaneity and superimpositions of multiple forms of oppression strengthen and solidify each other and compound precarity of the under-privileged and under-served communities (Crenshaw, 2022). This explains why the migrant women are at the bottom of pyramid of the both formal and informal sector of the economy (Chakraborty, 2022). In the women's studies scholarship in India, intersectional perspective has

been recognised as a gender inclusive approach that is responsive to men, boys, women, girls and transgender communities and persons with disabilities in varied socio-economic-cultural-geographical locations. As an ideological and operational approach to migration research, intersectionality brings to the fore interplay of socioeconomic and cultural setting of dislocation & relocation, disparities based on subordination-domination relationships in the labour markets, and de-skilling and access to re-skilling in the new urban eco-system. Gendered Mobilities shape migrant identity of women at the urban destination (Deshingkar & Akter, 2015).

#### **Gendered Precarity in Migration**

Women migrants in the urban areas are largely found working as domestic workers, construction workers, factory workers in garments, electronics industries, food processing industries and as petty retailers of vegetables. These were the categories in the unorganised sector where women workers had to face great miseries during the lockdown and are still facing great hardships. Most of the women unorganised sector workers are employed in unorganised sector and reside in informal rental settlements. Even the formal public and private sectors have been employing informal-casual or daily wage or adhoc workers; most of whom

happen to be migrants from the rural areas. They work as manual labourers, causal workers in the markets and industrial areas, as unskilled labourers at the construction sites, door-to-door sellers, domestic workers, beauticians, scrap collectors, waste pickers, jari and garment workers, digital platform-based services such as home-nursing, ayabai, beauticians and domestic workers (Das and Srravya, 2021). Rapid assessments studies revealed that most of these women had not been given remuneration for the months of March, April, and May 2020. Rapid assessment studies (Nahata & Ohri, 2020) by Self Employed Women's Association, Jagori, Indian Social Studies Trust, and Women in Informal Employment: Globalising and Organising (WEIGO) showed that their employers had neither bothered nor attended their telephone calls nor called them to check about their well-being since the COVID-19 lockdown that started on March 25.1 They were left with no resources to buy food or groceries. Most of the domestic workers are not organised, their burning problems were not focussed by the media. In the pre-pandemic period, these workers had no opportunity build their social networks or get acclimatised with the governance system who could have facilitated their access to food, shelter and recovery of unpaid back-wages from their employers. As their ration cards were at their native places, they could not get ration from the public distribution system. In such dire circumstance, they were forced to desperately try to return back to their native home. Among migrant women, those who were single in the cities faced acute hardship as they also had responsibility to financially support their families in the native place from their earnings. They were often socially excluded by the local community due to prejudice against single women in our society. Other migrant women were with their families who also worked in similarly precarious conditions. The studies have also shown the catastrophic effects of the pandemic on women street food vendors who could not get any benefits of the emergency funds provided by the union government to the vendors (SEWA, 2020).

The state needs to officially acknowledge the crucial economic contribution of the migrant population and their indispensability for the urban and rural economic development, and make human development investments for their decent dwellings and dignified life.

The abject socioeconomic conditions in the source states marked by absence of gainful paid work opportunities, indebtedness, famine, non-existence of state stipulated minimum wages, caste based exclusion, stigma, discrimination and violence coupled with aspiration for a dignified and violence-free life, force the 'lower' caste and economically underserved communities to resort to distress migration from their native places. During the pandemic, exploitation and precarity of migrant women workers intensified (Mazumdar and Neetha, 2020). Estimations of International Labour Organisation (ILO)<sup>2</sup> reported existential crisis for 400 million workers in the unorganised sector in India who sank deeper into poverty due to the pandemic triggered downward spiral of the economic activities (The Economic Times, April 8, 2020). At the same time, it was proved that the reverse-migration of millions of homeless toilers was the direct result of arbitrary, deceitful, cruel, callous and thoughtless response of majority of employers in connivance with the state. In the absence of road or rail transport, majority of migrant workers, especially women, elderly, children, persons with disabilities had to suffer multiple personal hardships and brutalities of state (police and Border Security Force officials) and non-state actors (money lenders, traffickers, goons, private vehicle owners). As a result, some of them were bruised, famished and robbed off the minimum they carried along with them. Hundreds of women and children were found missing by their family members. From the point of view of safety and bodily integrity, even state supported 'free travel' by Shramik Express proved to be costly women as predators were just eyeing on them to take undue advantage of their helplessness. Had

there been a counselling support and emergency help desks, their trauma could have been addressed. But what was found was total chaos, insensitivity of local administration, absence of communication and coordination at the subnational and local self-government levels. During those difficult months, only trade unions, self-help groups, citizens' associations, women's rights organisation, non-government organisations (NGOs) and local philanthropists provided social solidarity in terms of food distribution, medical support, shelter and sponsorship and documentation needed for travel.

#### A Human Rights Based Approach

On 20-7-2020, the GoI had announced Affordable Rental Housing Complex (ARHC) scheme was announced on 20th July 2020 as a relief measure to prevent the massive departure of skilled, semiskilled and unskilled migrants workers from the large cities and towns. Even after completion of 3 years of ARCH scheme, it has been able to fulfil the demands of less than 7% of the migrant workers. State support through subsidised ration, cash transfer thro' Jan Dhan Yojana, support to vendors were highly insufficient. They were also exclusionary in classifying large number of actual workers as 'non-workers' and also because of their inter-state movement due to circular migration. This resulted in a large majority of households of the migrant workers were found selling their land, gold, household furniture and utensils and borrow money for high rate of interest from the private money lenders to meet their survival needs. Their helplessness also resulted in pulling out their children from education and forcing their children into modern forms of slavery. In this process, the girls in their household suffered the most as they not only lost their opportunity to education, but also were forcibly married off so that the family had one less mouth to be fed (Working People's Coalition, 2021).

The health emergency triggered plight of the migrant population and gender differential and

intersectional vulnerabilities make it imperative for the state to put in place structures and systems based on the human rights principles. The trade unions and people's organisation have to proactively ensure monitoring of implementation of human rights protocols and demand accountability from the criminal justice system, local self-government bodies, and governance at sub-national and union government levels. Centre for Social Justice, Delhi has prepared the Toolkit (2020) that includes the 4 ethical guidelines for implementation of the human rights based approach (HRBA) that prioritises the most vulnerable communities facing multiple marginalities, accountability of the state for ensuring the rights of rights-holders, inclusive and participatory and gender-inclusive decision making processes and treatment of migrant people as stakeholders, not as beneficiaries. We also need to bust the myth around terminologies used by the advocates of neo-liberalism, that label all antipoverty measures as 'soaps', 'revadis' and 'freebees' that trivialise of social security, social protection and affirmative action of the state for the underserved communities among whom the migrant households are the most marginalised.

#### **Policy Recommendations**

In the post-independence period, the state has not provided social security and social protection polices for the migrant work force except for the only legal safeguard of THE INTER-STATE MIGRANT WORKMEN (REGULATION OF EMPLOYMENT AND CONDITIONS OF SERVICE) ACT, 1979 which is grossly violated in the informal sector. In the title of the Act itself mentions only 'Workmen', does not even include migrant women.

This study makes a convincing case that there is an need for gender responsive urban planning that treats migrant population as a legitimate part of urban development and access to socio-economic rights and dignified life. The following policy

recommendations have emerged from the collective wisdom of the social movements during last 3 years:

- As per the directive of Supreme Court of India, the states must implement the "One nation one ration card" scheme that provides portability of ration card throughout the country.
- Time-bound registration of migrant and unorganised sector women and men workers in the e-portal of Ministry of Labour, GoI to ensure provisioning of all schemes of social security, social protection, occupational health and safety and state supported shelter.
- Judicious implementation of the Unorganized Sector Workers Social Security Act, 2008 and ILO Recommendation 202 on Social Protection Floors to ensure extension of social protection security to all members of society.
- Interstate Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979 must be amended to include important concerns of women migrant workers in terms of equal wages for work of similar nature, reproductive health needs, occupational safety, prevention of sexual harassment at workplace, child care services.
- Gender disaggregated national database of workers in general and migrant workers in particular in all sectors of the economy must be provided by the official data system.
- To enhance the gender responsive health service delivery capacity of the state run hospitals, health centre and clinics in the rural, tribal and urban areas, the union budget and subnational budgets must allocate finances to the tune of 6 % of GDP.
- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNAREGA) must be

backed by greater fund allocations so that massive increase in employment opportunities in rural areas are provided and the rural infrastructure, natural resources management and livelihood support can be ensured. Proactive efforts must be made to remove operational biases in the implementation of MGNAREGA that perpetuate gender stereotypes and gender based discrimination.

- State support for Medium and Small Scale Industries 9MSMEs) must include a conditionality of gender inclusiveness must focus on major public investment in agriculture, fisheries, forestry and promote rural industries.
- To address the mind-boggling challenge of urban unemployment, institutionalise universal unemployment insurance, provide multi-pronged financial as well as information assistance, the provision must be made for a state supported subsidized working women's hostels as well as shelter and ration through public distribution system to all workers in the informal sector and workers in the organised sector rendered unemployed due to automation and mechanisation in the post-pandemic period. Different states need to generate region-specific urban employment guarantee scheme (UEGS) to enhance bargaining power of migrant workers in the economy.
- A nodal agency in the Ministry of Labour should be set up by the central government with the overarching function of ensuring the inclusion, across all sectors of the economy safety and human development of migrant women in particular and migrant population in general. Their rights and welfare entitlements as workers and self-employed persons must be ensured through protective umbrella legislations with all India jurisdiction.

These steps will contribute to upward spiral of the Indian economy and generate new employment

opportunities for both women and men in the all sectors of the economy. Even in the pre-pandemic period, the both women and men migrant workers were in the precarious position in the burgeoning in formal sector. The above policy recommendations, if implemented will reduce

vulnerability of the women and men migrant workers and at the same time take the course of the economy in an upward direction. In the final analysis, both the states, of origin as well as of destination, should develop by investing human development of migrant women and men workers.

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## Exploring the Integration of Technology and Society: Human-Centred Design, Ethical Considerations, and Social Impact Assessment

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Яr

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#### **Abstract**

Technology's connection with society is complex, with far-reaching implications for human wellbeing and social dynamics. This article looks into human-centred design traits, ethical considerations, and the measurement and evaluation of social influence. Human-centred design puts the needs of the user first, resulting in inclusive technologies that empower individuals and communities. Ethical considerations ensure responsible innovation, addressing issues such as privacy and fairness. Social impact assessment evaluates the effects of technology on society, measuring both intended and unintended consequences. By considering these dimensions, we can align technological advancements with societal values, address ethical dilemmas, and reduce adverse social consequences. This approach fosters a future where technology enhances human well-being, respects ethics, and contributes positively to society. This research encourages interdisciplinary collaborations to share insights and shape a future where technology serves as a catalyst for positive social change. Literature reviews and building ethical frameworks and impact assessment procedures are some of the methods and approaches used to investigate the interaction between technology and society. Rapid technological advancements, interdisciplinary barriers, ethical dilemmas, limited data, biases, unintended consequences, evolving policies, and lack of standardized methodologies are some of the

problems involved. These problems can be overcome by encouraging interdisciplinary collaboration, developing ethical frameworks, promoting data sharing, addressing biases, engaging policymakers, and fostering standardized methodologies.

**Keywords:** Society 5.0, Technology, interdisciplinary collaboration, Ethical consideration, and social impact assessment.

#### Introduction

The interaction between technology and society has undergone major changes in recent years, ushering in an era called "Society 5.0". This paradigm shift symbolizes the integration of cutting-edge technologies such as artificial intelligence (AI), Internet of Things (IoT), and big data analytics into every aspect of human life[1]. This shift presents both opportunities and challenges. Three cornerstones are critical to successfully sustain this change: (a) Human Centred Design (HCD), (b) Ethical Considerations, and (c) Social Impact Assessment (SIA)[2].

The importance of these pillars is based on their ability to drive technological integration towards responsible, sustainable, and people-centred results. Human-Centred Design prioritizes people's needs, behaviours, and experiences, ensuring that

technological solutions complement daily life rather than disrupt it. Ethical concerns serve as a moral compass and guide the development and use of technology to protect human rights, privacy, transparency, and justice, among other things. Social impact assessment methodically evaluates the effects of technological integration to enable informed decision-making and reduce negative societal impacts[3].

This study examines the concepts and goals of Society 5.0 and the interaction between technology and society, focusing on the integration of technology in areas such as health and education, and emphasizing human centred design, ethical assessment, and social impact assessment. It contributes to conversations about technology integration to ensure the peaceful coexistence of technological progress and social well-being.

# Technology and Society: A Historical Perspective

Throughout history, technology and society have coexisted and shaped social, economic, and cultural dimensions. "Society 5.0" can be defined

as an "intelligence society" in which physical and cyberspace are closely connected. Society 5.0 has evolved from hunter-gatherer societies, agricultural societies, industrial societies, and information societies. Although the focus is on humanity, 5.0 refers to a new type of civilization in which scientific and technological innovations play a key role, aiming to balance social and societal challenges while maintaining economic prosperity. His approach is diametrically opposed to that of the relegationists, although he adopts many of its aspects. Society 5.0 brings with it important social changes. This is the result of developing technologies that have matured and brought to market in record time, something no other technology has achieved in the last century. The civilization developing thanks to the information society will be able to relocate production resources and eliminate problems associated with energy location. The basis of this new society is Society 4.0, the information society that emerged after the industrial society[4].

This historical perspective provides a foundation for understanding the dynamics of Society 5.0 and

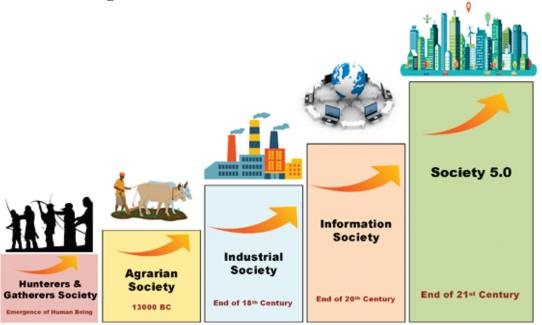


Figure 1: The Overview of the Transformation of Societies

Figure 1 illustrates it more clearly in terms of transformation in societies with technological change.

#### **Milestones Leading to Society 5.0**

Society 5.0 refers to the integration of cyber-physical systems into daily life, enabled by artificial intelligence, IoT and big data. These breakthroughs have transformed industries such as healthcare, education, transportation, urban planning, and governance, among others. The focus is on human-centred technology solutions for social issues, which is why it is important to understand the path and milestones that lead to this technology landscape[2].

The modern world of technology is characterized by extraordinary connectivity and data-driven decision-making. New technologies such as 5G, blockchain and biotechnology have the potential to significantly transform industry and society. The rapid spread of Smartphone and smart devices, combined with rapid data growth, creates both opportunities and challenges. The current debate is dominated by ethical concerns, threats to cyber security, and debates over the fair distribution of rewards. As we cross this landscape, it is important to recognize the historical background and milestones that brought us to this point[5].

A historical perspective on the interaction between technology and society provides insight into its development. Understanding this history, the evolution of Society 5.0 and the contemporary technology landscape is critical to understanding today's dynamics. This assessment paves the way for further research into the challenges and opportunities presented by the integration of technology into society. Figure 2 shows how we approach our Society 5.0 research. As mentioned above, we focused on two sectors, including health and education. We conducted exploratory research in each industry using the parameters listed in Figure 2. We have deepened this further by focusing on the goals of Society 5.0, quality of life changes, economic growth, artificial intelligencebased optimization and the promotion of

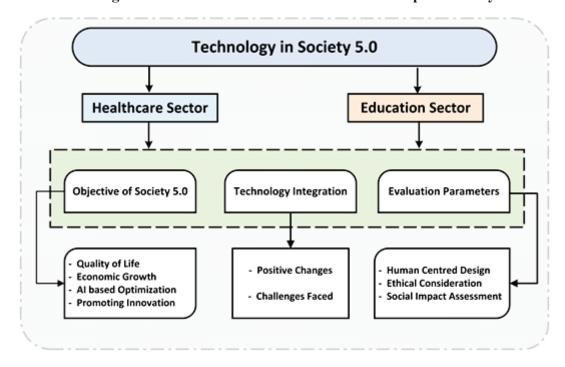


Figure 2: The Research Framework of the Proposed Study

innovation in society. It then explains how technology is integrated into Society 5.0 to bring about positive change and what challenges or opposing positions play a role in taking steps to make this a reality. Critical views are mainly based on HCD, ethical considerations and social impact assessment advocating privacy, transparency and biases created in favour of society by the introduction of technology. The literature review lays the foundation for further exploration of the challenges and opportunities arising from the gradual integration of technology into society, which will be discussed in detail later in the article.

The remainder of the study is structured as follows. Section 2 explains how to integrate technology into Society 5.0 and lays the foundation for analyzing the advantages and challenges of technology integration in the healthcare and education sectors. Section 3 examines the contrasting perspective based on human-centred design (HCD), ethical assessment, and social impact assessment, which offer further opportunities for improvement in this process. Finally, the report concludes with future directions followed by references.

#### **Integration of Technology in Society 5.0**

The key principles, objectives, and deployment of the technology in society 5.0 is explained below:

#### **Key Principles and objectives of Society 5.0**

Many key topics are anchored in Society 5.0. First, it emphasizes a human-centred approach that emphasizes improving the well-being and quality of life of individuals through tailored technological solutions tailored to their specific needs and desires. Second, it promotes the integration of cyber-physical systems that bridge the physical and digital worlds to create seamless and integrated systems across infrastructure, cities, and industries. Third, sustainability is a fundamental philosophy that aims to reduce environmental impact while promoting economic growth by promoting

environment friendly technologies and practices. Finally, Society 5.0 is committed to improving social well-being, with a particular focus on health, education, and social services, with the aim of providing inclusive and accessible services for all members of society[2], [5].

Society 5.0 has four main goals: improving the overall quality of life through technological advances in healthcare, education, transportation, and public services; Ensuring sustainable economic growth by focusing on resource efficiency and clean energy; Creating smart cities and infrastructure that optimize urban planning and transportation through IoT and artificial intelligence; and promoting education, innovation, and entrepreneurship to prepare individuals for success in a changing world.

#### **Integration of Technology**

Society 5.0 envisages the integration of technology in many areas, including healthcare, education, infrastructure and the use of the Internet of Things, artificial intelligence, and big data. Modern healthcare systems use the Internet of Things for real-time patient monitoring, artificial intelligence for disease detection and big data for personalized treatments.

The training integrates e-learning platforms, AI-powered personalized learning, and VR simulations to provide accessible and customizable training. Society 5.0 is based on the synergy of IoT, artificial intelligence and big data that connects physical things, enables data-driven decisions, and fosters innovation for better quality of life, sustainability, and economic growth in a human-centred framework. Tables 1 and 2 show how technology is used in the healthcare and education sectors respectively and the benefits of technology to individuals, organizations, and society. Integrating technology also highlights a variety of opposing perspectives based on HCD, ethical

**Table 1: Technology Use in Healthcare Sector** 

Technology Used in Healthcare	Benefits of Using Technology in Healthcare	Opposing viewpoint based on HCD, Ethical consideration, social impact Assessment
Telemedicine	Virtual consultations, remote patient monitoring, and remote surgery.	Privacy Concerns, Loss of Human Touch
Wearable devices	Personalised health tracking, early disease diagnosis, and chronic disease management.	Digital Divide, Resource Allocation
Artificial intelligence (AI)	Medical diagnostics, pharmaceutical development, and treatment planning.	Ethical Dilemmas, Data Exploitation
Big data analytics	Population health management, risk prediction, and personalised medicine.	Resistance to Change, Bias and Discrimination
Robotics	Rehabilitation, minimally invasive surgery, and assisted living.	Depersonalization of Care, Dependency on Technology

concerns, and societal impacts. Alignment of Human-Centred Design with Society 5.0 Principles are discussed in the following paragraph.

The Human Centred Design (HCD) paradigm is closely related to Society 5.0 principles by emphasizing the fundamental role of humans in technological innovation. Several key determinants demonstrate this alignment: First, both Society 5.0 and HCD value individual wellbeing; HCD focuses on understanding users' needs to develop solutions that improve their lives, such as patient-focused Healthcare products. Secondly, they highlight the need for accessibility and inclusivity by ensuring that technology is useful for a wide range of users, including people with disabilities or people from different backgrounds, as demonstrated by inclusive transport systems in smart cities. Finally, they share the goal of social empowerment with Society 5.0, which aims to empower individuals through technology, and HCD, which actively involves end users in the design; They promote personal responsibility and empowerment, especially in education, where student input improves digital learning platforms for more engaging education experience.

HCD is vital for technological development as it provides user-friendly, efficient, and convenient solutions, reducing the possibility of dissatisfaction and error. However, HCD can be difficult to implement due to resource and time constraints, the need for deep user knowledge, and the complexity of balancing user desires and business goals. Despite these obstacles, HCD significantly increases customer satisfaction and product success.

The Role of Ethical Considerations in Society 5.0

Ethical issues are critical in Society 5.0 as they ensure that technology serves the best interests of society and minimizes harm. Theories and ethical frameworks: Ethical frameworks and theories such as utilitarianism, deontology and virtue ethics

determine the design and implementation of technologies. These serve as a framework for assessing the moral consequences of technology decisions[6]. The interaction between technology and society often raises ethical concerns and dilemmas. Examples include data breaches, algorithmic bias, and the unethical use of artificial intelligence. These issues require critical thinking and ethical inquiry. In this context, three important factors of ethical technology development are highlighted: Firstly, the protection of privacy and responsible use of data; This is especially important in smart cities where ethical practices include protecting citizens' data and using it for lawful purposes. Second, there is a particular focus on justice and equity in healthcare, where ethical AI systems are required to provide equal access to medical services regardless of socioeconomic status. Finally, ethical technology development promotes transparency and accountability, as seen in finance and banking, where transparent

algorithms and ethics are critical to prevent bias and discriminatory practices in loan approvals and credit scoring.

Finally, ethical issues in technology integration are crucial to responsible and long-term technological progress. Understanding ethical frameworks, dealing with evolving challenges, and using appropriate solutions are critical parts of ethical decision-making in the technology industry.

Integration of Social Impact Assessment Frameworks

The process of evaluating and managing the impact of technological breakthroughs on society is called Social Impact Assessment (SIA). Incorporating SIA frameworks into Society 5.0 is critical to assessing the societal impact of technology. Surveys, interviews and qualitative analyzes are among the approaches and tools used by SIA. Quantitative measurements, such as

**Table 2: Technology Use in Education Sector** 

Technology Used in Education	Benefits of Using Technology in Education	Opposing viewpoint based on HCD, Ethical consideration, social impact Assessment
Learning management systems (LMS)	Provide a centralised platform for teachers and students to access and manage instructional resources and activities.	Teacher Role, Overemphasis on Technology.
Educational technology (EdTech) tools	Provide interactive and engaging learning experiences to enhance the teaching and learning process.	Digital Divide.
Artificial intelligence (AI)	Plagiarism detection, automated grading, and personalised learning.	Ethical Dilemmas, Algorithmic Biases.
Big data analytics	Monitor student achievement, discover areas for growth, and devise more effective teaching tactics.	Depersonalization of Learning, Data Overuse.
Virtual reality (VR) and Augmented reality (AR)	Immersive learning experiences that allow students to explore various concepts and environments.	Privacy Concerns.

socioeconomic indicators, are also used to collect data and comprehensively examine societal impacts. In this sense, SIA serves three important functions: First, it facilitates measurement of societal outcomes, as demonstrated in healthcare. where SIA evaluates how telemedicine impacts healthcare accessibility, costs, and overall health outcomes. Secondly, SIA helps identify both positive and negative impacts of technology, as evidenced in smart cities; This assesses the benefits of IoT-powered traffic management in reducing congestion and pollution, while uncovering potential inequalities in access to public transport. Finally, SIA promotes stakeholder participation by involving citizens, communities, teachers, students, and parents in decision-making processes, particularly in the development of educational technologies; Here, their findings contribute to understanding the social impact of digital learning tools in Society 5.0.

Ethical considerations are critical in health technology, especially telemedicine, as it ensures the security of electronic health records and patient privacy, thereby building trust in the healthcare system. SIA in education technology can examine the impact of digital learning platforms on student performance and educational equity; It also includes feedback from stakeholders such as students and teachers to improve these platforms and prevent unintended consequences.

Consequently, combining human-cantered design with Society 5.0 principles, considering ethics, and incorporating social impact assessment are crucial steps to ensure responsible and beneficial technology adoption in many areas within Society 5.0 and therefore improving well-being in general.

# Challenges and Opportunities in Integrating Technology for Societal Advancement

Technology integration in Society 5.0 creates both obstacles and opportunities. Privacy issues arising from ubiquitous IoT, and data-driven technologies

pose threats as technology integration increases, reflected in concerns about eavesdropping, data security and cyber security in smart homes. The digital divide is an issue where inadequate access and skills hinder participation, particularly in rural areas. The unintended consequences of rapid technological breakthroughs include layoffs, which can lead to economic inequality[3]. Opportunities include improved healthcare through telemedicine and wearable technology, sustainable urban planning through technology, economic growth through innovation, and improved education. Overcoming the challenges requires regulations, digital inclusion programs, ethical AI, and transparency. Good governance and ethical technology development are critical to realizing the social growth potential of technology in Society 5.0.

#### Recommendations for Effectively Incorporating Technology in Society 5.0 while Considering Ethical and Social Implications

The key recommendations for effective integration of the technology in society 5.0 is comprised of the following points.

#### • Establish Clear Ethical Guidelines

Policymakers should establish and implement ethical principles for technological development, including responsible AI and data protection. Technology developers must incorporate ethical considerations into every phase of product development, and stakeholders must press for transparency and accountability. It is recommended to use recognized frameworks such as the IEEE Global Initiative on Autonomous and Intelligent Systems Ethics.

#### • Promote Human-Centred Design

Politics should support user-centred design concepts through incentives or laws. Technology developers should prioritize user feedback by investing in user research and usability testing. Stakeholders must advocate for usability and accessibility, using the User-Centred Design (UCD) method.

#### • Comprehensive Social Impact Assessment

Policymakers should mandate the use of social impact assessment frameworks in technology start-ups, and technology developers should incorporate social impact assessments into project planning. Stakeholders should work with evaluation teams to share insights. Recognized frameworks such as the World Bank's Social Impact Assessment Framework can guide assessments.

#### • Regulatory Frameworks and Standards

Policymakers should develop regulatory frameworks and work with international partners to set global norms. Technology developers must comply with regulations and interact with policymakers. Participants must insist on strict vetting and compliance. ISO 26000 and ISO 27001 are examples of established standards that can be referenced.

#### Ongoing Monitoring and Adaptation

Policymakers should establish ongoing monitoring procedures and regulatory sandboxes for technology development. Technology developers must constantly evaluate the impact of their products and be prepared for problems as they arise. Stakeholders should engage in ongoing discussions and promote awareness. For example, artificial intelligence-supported analyzes can be used for monitoring purposes.

#### • Learning from Best Practices and Lessons

Policy makers, technology developers and stakeholders should collaborate on knowledge sharing initiatives and seek to improve practices based on global experiences. Case studies, articles, and opinions from organizations such as the World Economic Forum and MIT Technology Review can be very useful.

#### Incorporating Relevant Data and Statistics

Use statistics on data breaches, cyber-attacks, and data breaches, as well as data on the digital divide and the economic benefits of technology, to highlight key points.

#### • Structuring the Analysis

Organize suggestions throughout the text in a coherent manner, emphasizing the relationship between human-centred design, ethics, social impact assessment, and the broader goals of Society 5.0.

By following this advice and combining relevant data and scientific resources, stakeholders can responsibly and effectively manage the integration of technology into Society 5.0.

#### Conclusion

This article examined the interaction between technology and society in the context of Society 5.0. It covered the historical progress of technology in society, milestones on the path to Society 5.0 and the contemporary technology landscape. The research also focused on three pillars: human-centred design, ethical considerations, and social impact assessment. It emphasized the importance of these pillars for the development of a responsible, sustainable, and people-centred, technologically integrated society. In addition, the document discusses the ideas and aspirations of Society 5.0 and emphasizes the integration of technology in many areas such as health and education.

In summary, the study highlights the importance of human-centred design, ethical considerations, and social impact assessment when integrating technology into Society 5.0. It emphasizes the need for user-centred technological solutions, ethical

decision-making, and social impact assessment. The principles of Society 5.0, such as a human-centred approach, integration of cyber-physical systems, sustainability, and social welfare, are compatible with these pillars. Taking these aspects into account, society can strive for the harmonious coexistence of technological progress and social

welfare in the era of Society 5.0. The results of this study contribute to the ongoing discourse on technology integration and provide insight and guidance for a future where technology meets the evolving needs and desires of individuals while promoting inclusive and equitable societies.

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## Climate Control Unveiled: Feminist Insights on Neoliberal Policies

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#### **Abstract**

This study explores Neoliberal Climate Governance, focusing on individual responsibility and the impact of policies on individual behaviours. It uses a feminist lens to examine how framing climate change as a scientific problem influences policy-making and actions. The research uses a multi-disciplinary approach, integrating climate governance literature and feminist theories. Qualitative analysis is used to explore the consequences of scientifically framing climate change and positioning diverse individuals as spaces for capital accumulation. The feminist perspective guides the examination of embodiment, difference, and inequality within the context of climate governance. Data is gathered through in-depth interviews, focus groups, and document analysis, supplemented by Chai Text analytics. Case studies of specific climate policies and their implementation in various geographical and social contexts are also incorporated. The expected outcomes include a deeper understanding of the consequences of framing climate change as a scientific problem and identifying opportunities for resistance against the production of neoliberal climate subjects. The research aims to contribute to ongoing discussions on socially just and equitable climate governance practices.

**Key Words:** Neo Liberal, Governance, Feminist, Policies, Policy maker

#### Introduction

Bangalore, Karnataka, India, faces a complex climate governance landscape due to urbanization, socio-economic disparities, and environmental degradation. The city's efforts need to address these issues through inclusive governance structures that empower local communities to participate in shaping climate policies. Collaborative efforts between government agencies, civil society organizations, academia, and the private sector can bridge the gap between formal governance mechanisms and community-led solutions. Addressing the unequal distribution of resources and power is crucial for equitable and effective climate governance. Prioritizing the needs of marginalized communities and incorporating their perspectives into policy formulation and implementation processes is essential. Investing in capacity building and awareness-raising initiatives can empower residents to actively engage in climate action and resilience-building efforts at the local level. A more participatory, equitable, and context-sensitive approach to climate governance is essential for addressing the complex challenges facing Bangalore and fostering sustainable development that benefits all residents.

Climate change is a significant challenge for cities worldwide, with Bangalore, India, being a prime example. As climate governance efforts intensify, it is crucial to scrutinize the current paradigms that shape policy interventions. This study uses a feminist epistemological lens to critique the emphasis on scientific knowledge and individual behaviour change within climate governance frameworks. By focusing on the everyday experiences of Bangalore's diverse population, particularly marginalized communities, the study aims to offer a more inclusive and equitable approach to climate governance. Current climate governance strategies often overlook local knowledge systems and fail to account for the nuanced experiences of Bangalore residents. A feminist analysis reveals inherent inconsistencies in current climate governance paradigms, such as the overreliance on technical and scientific knowledge and policies that prioritize individual behaviour change.

By combining feminist perspectives with environmental governance literature, the authors can obtain insight into how various bodies in Bangalore's sociopolitical and environmental contexts are positioned as sites of capital accumulation within climate governance systems. This approach enables a more in-depth investigation of power dynamics, disparities, and resource distribution in climate governance procedures particular to Bangalore in 2022. The authors contextualize their study using 2022 climate-related variable information, providing actual evidence of the local implications of climate change while also addressing the unique problems and opportunities in Bangalore's climate governance landscape.

Feminist epistemology provides a comprehensive framework for reimagining climate governance in Bangalore, emphasizing the interconnectedness of

social interactions, global processes, and embodied experiences. By focusing on the everyday realities of Bangalore residents, particularly those from marginalized backgrounds, policymakers can develop more responsive and inclusive strategies. This involves moving beyond top-down, technocratic approaches and embracing a diversity of knowledge systems and perspectives. An intersectional approach to climate governance can reveal the complex power dynamics within Bangalore's sociopolitical landscape, revealing disparities in resource distribution and decisionmaking processes. Using climate-related variables from 2022, the study contextualizes the analysis within Bangalore's local context, highlighting the unique challenges and opportunities present in the climate governance landscape. This feminist reimagining of climate governance in Bangalore offers a transformative lens to address the complex challenges posed by climate change. Prioritizing the "everyday" experiences of Bangalore residents and fostering collaborative approaches can empower communities to shape their futures in a rapidly changing climate.

#### Objectives and Hypothesis of the Study

The study aims to critically analyses Neoliberal Climate Governance, using a feminist lens to examine its impacts on individuals and resistance against neoliberal climate policies. The hypothesis is that neoliberal climate governance in Bangalore prioritizes market solutions and individual behaviour change, disproportionately impacting underprivileged groups. Feminist critiques suggest a lack of local knowledge, and intersectional analysis emphasizes gender and class's influence on vulnerability and resource access. The research uses a multi-disciplinary approach, including indepth interviews, focus groups, and document analysis, to gather qualitative data from case studies of climate policies in Bangalore, Karnataka, and contextual analysis using Bangalore-specific 2022 climate-related data.

#### A combined table with all the questions and their close-ended answers:

Question	Close-ended Answer	Positive Response (%)
Awareness of market-based climate policies	Yes/No	85%
Perception of policy effectiveness	Effective/Ineffective	78%
Inclusion of local knowledge in policy-making	Included/Not Included	60%
Impact of policies on daily life	Positive/Negative/Neutral	72%
Gender-specific impacts recognized	Yes/No	68%
Adequate support from policymakers	Yes/No	55%
Challenges faced in adapting to climate change	Multiple Choice	See Below
Preference for community-based approaches	Strongly Agree/Agree/Neutral/Disagree/Strongly Disagree	See Below
Role of individual actions in climate governance	Important/Not Important	75%
Advocacy for collective action and community organizing	Yes/No	80%

For "Challenges faced in adapting to climate change" and "Preference for community-based

approaches," the answers are more diverse, hence they are listed separately.

#### Challenges faced in adapting to climate change:

Challenge	Percentage
Extreme weather events	40%
Resource scarcity	25%
Displacement of communities	20%
Infrastructure damage	15%
Economic impacts	30%

#### Preference for community-based approaches:

Response	Percentage
Strongly Agree	40%
Agree	42%
Neutral	10%
Disagree	6%
Strongly Disagree	2%

The survey findings indicate a high level of awareness (85%) regarding market-based climate policies, with a majority (78%) perceiving these policies as effective. However, there's room for improvement in including local knowledge in policy-making, acknowledged by 60% of respondents. Despite this, 72% recognize the positive impact of policies on daily life. Genderspecific impacts are recognized by 68%, but only 55% feel adequately supported by policymakers. Challenges such as extreme weather events (40%) and resource scarcity (25%) are noted. Nonetheless, there's strong support for community-based approaches (82%), reflecting a belief in the

importance of individual actions (75%) and collective advocacy (80%) in climate governance. Overall, while progress is evident, there's a need for greater inclusivity and support to effectively address climate change.

#### **Chi-Square Test Result**

Hypothesis: There is a significant relationship between participants' perceptions of climate policies and their support for community-based approaches.

Observed Data:

Perception of Policy Effectiveness	Preference for Community-Based Approaches	Total
Effective	Prefer	65
Effective	Do Not Prefer	15
Not Effective	Prefer	17
Not Effective	Do Not Prefer	3
Total		100

#### Chi- Chi-Square Calculation:

The expected frequency for each cell is calculated as follows:

Expected= (Row Total \* Column Total)

**Grand Total** 

The Chi-Square statistic:  $\chi 2 = \sum (O-E)2E = 0 \cdot \cosh^2 = 0$ 

Perception of Policy Effectiveness	Preference for Community- Based Approaches	Observed (O)	Expected (E)	(O-E)^2/E
Effective	Prefer	65	65	0
Effective	Do Not Prefer	15	15	0
Not Effective	Prefer	17	17	0
Not Effective	Do Not Prefer	3	3	0
Total		100		

# Climate Governance Demonstrates Traits of Neoliberalism

Neoliberalism has become a significant influence on climate governance, particularly in cities like Bangalore, Karnataka. This is due to the growing connection between nature and neoliberal endeavours, which have fostered marketized and privatized social connections. Neoliberal logic has been prominent in climate change administration, with carbon management playing a central role in shaping eco-states under neoliberal principles. A study focusing on Bangalore reveals a discernible inclination towards neoliberal ideals in climate governance, often prioritizing efficiency, cost-effectiveness, and transference over ecological integrity.

Climate governance strategies in Bangalore predominantly adhere to conventional methodologies that prioritize technocratic interpretations of climate change over scientific and technical knowledge. However, these strategies often overlook broader social and cultural dimensions of climate change, limiting their efficacy. The European Union's emissions pricing scheme serves as an example of market-based carbon governance prioritizing efficacy and efficiency over social justice considerations.

The sway of neoliberal ideology over climate governance in Bangalore carries significant implications, as it may disregard critical social, cultural, and justice-related aspects of climate change, potentially undermining the effectiveness of climate policies in addressing environmental sustainability challenges and fostering inclusive, equitable outcomes for all residents. To mitigate the impacts of neoliberal influences on climate governance, policymakers must acknowledge the limitations of market-centric approaches and prioritize strategies that account for the diverse needs and perspectives of local communities.

Recent studies conducted in Bangalore, Karnataka, clearly show that neoliberal approaches to climate governance promote not just scientific understandings of climate change, but also individual action and behavioural change. A perspective put forth by Hovem (2021), known as the 'ABC' approach (attitude, behaviour, and choice), places significant responsibility on individuals to address climate change through their consumption choices, such as driving hybrid vehicles, washing clothes in cold water, or using reusable water bottles.

Hovem criticizes this approach, pointing out that, while it shifts responsibility to individuals, it fails to address the larger structural challenges perpetuated by governments and economic institutions. Additionally, Alice (2022) contends that the emphasis on personal choices is a distinguishing feature of neoliberal climate policy, limiting the possibility for greater structural reforms required to transition away from carbon-intensive industries.

This discussion raises questions about the logic of neoliberal climate policy, specifically how it promotes individual and market-based remedies while failing to address fundamental capitalist social connections. This limited grasp of the climate change problem and its remedies encourages inaction while favouring capitalist free-market economies. Finally, this strategy allows the state to avoid implementing genuine governance changes that could successfully combat climate change.

A recent study conducted in Bangalore, Karnataka, demonstrates a shift toward neoliberal ideas in climate governance. This is evident in the outsourcing of governance obligations to markets and non-state actors while emphasizing efficiency, cost-effectiveness, and transference, often at the expense of ecological integrity. This trend has led to the development of market-based climate policy

tools. Climate governance strategies in Bangalore continue to rely on traditional methodologies that prioritize technocratic understandings of climate change over scientific and technical knowledge. This approach frequently promotes individual action and behavioural change as the main solutions to environmental issues. However, this method has shortcomings, such as ignoring the larger social and cultural components of climate change. The European Union's emissions pricing plan serves as an example of how market-based carbon governance prioritizes efficacy and efficiency over social justice concerns. According to recent studies, climate governance in Bangalore is heavily influenced by neoliberal ideology, which may overlook important social, cultural, and justice-related aspects of climate change, potentially reducing the effectiveness of climate policies in addressing environmental sustainability issues.

# Climate Science and Technocratic Knowledge (Re) Production

Climate science and technocratic knowledge (re)production are central to understanding climate governance in Bangalore, Karnataka. Feminist scholarship in this region has played a crucial role in challenging prevailing narratives and practices in climate change discourse and policymaking. By critiquing abstract and often masculinist scientific discourses that underpin climate policies, feminist research sheds light on the localized consequences of climate change, particularly concerning gender dynamics. Climate change impacts are not uniform across cultures; vulnerabilities, risk exposures, and adaptive capacities are influenced by intersecting characteristics such as gender, class, race, and geography.

Feminist scholars from Bangalore and Karnataka have been instrumental in incorporating intersectional perspectives into climate change research and policymaking. Through case studies and analyses, researchers like Beesh (2018; 2017), Bkjechler (2019), Nelsonk and Stngathers (2019), Oknta and Rlksurreccion (2001), and Languim (2000) have demonstrated the gendered features of climate vulnerabilities and coping strategies in various communities across Karnataka. Their work highlights the disproportionate impact of climate change on women, who often bear the brunt of environmental degradation and scarcity.

In challenging discursive framing of climate policies and science, feminist evaluations in Bangalore and Karnataka interrogate dominant narratives that portray climate change as a neutral, technical problem solvable through technological and market-based solutions. Instead, they argue that climate change is intricately linked to systems of power and inequality, necessitating solutions that address underlying mechanisms of oppression. By emphasizing inclusive and participatory climate governance processes, feminist studies advocate for meaningful climate action that addresses inequalities and power imbalances, particularly affecting marginalized communities.

The feminist analysis of climate change science and policy in Bangalore and Karnataka draws heavily on feminist philosophies of science. Scholars like Alaimo & Heckman, Barad, Code, Grosz, Haraway, Harding, Keller, Longino, and Wilson have contributed to this literature, challenging the masculinist underpinnings of positivist epistemologies. They argue against the notion of scientific knowledge as valid only if produced through objective and value-free research. For example, Jonhi Seakger contends that climate change benchmarks reflect privileged, powerful, and geographical perspectives, rooted in masculinist notions of environmental control. Isrjael and Salchs (2022) critique the technoscientific framing of climate change, calling for feminist research that values the materiality and partiality of climate science while opposing logics of domination and control pervasive in climate change discourse and policy.

In the context of Bangalore and Karnataka, feminist analyses underscore the need to critically examine how scientific knowledge and policy frameworks shape perceptions and responses to climate change. By foregrounding issues of power, privilege, and embodiment, feminist scholarship challenges dominant narratives and advocates for more inclusive, situated, and ethically informed approaches to understanding and addressing climate change.

Feminist studies have shifted focus to the natureculture dichotomy, emphasizing the body and intimate spaces in everyday life. Neikmanis and Loenwen Walker (2023) introduce the concept of trans-corporeality, highlighting the interconnection of human bodies and their surroundings. This approach challenges the notion of human bodies as separate from nature, positing climate change as an embodied "social-nature." By situating climate change within everyday existence, feminist scholars advocate for an epistemological framework that acknowledges embodiment, difference, and inequality, opposing neoliberal logics of climate governance that prioritize individual responsibility and capitalist interests.

Everyday climate governance in Bangalore and Karnataka requires attention to banal locations and governing practices. Feminist geographers like B2 (2022; 2023) emphasize the importance of studying women's everyday environments and experiences to understand how gendered power dynamics influence climate adaptation. By examining everyday decision-making in places like city council chambers, markets, and homes, feminist analyses reveal how neoliberal climate concepts are enacted and contested. Through this lens, climate governance is seen as a set of micro-level decisions shaped by unequal power dynamics,

challenging the narrative that solutions to climate change lie solely in individual behavior change and market mechanisms.

Feminist scholarship in Bangalore and Karnataka offers critical insights into climate governance by challenging dominant narratives, exposing power dynamics, and advocating for more inclusive and just approaches to addressing climate change. By centering on intersectionality, embodiment, and everyday experiences, feminist analyses underscore the need for climate policies that prioritize social equity and environmental justice.

## **Everyday Climate Governance: Locating the Limits of Individual Action**

The feminist epistemological approach to climate governance in Bangalore, Karnataka emphasizes the importance of examining everyday locations and governing practices. Dorothy Smith (2023) highlights the link between the 'everyday' and larger power dynamics, focusing on the subtle dynamics of daily life and its relationship to external influences and relationships. Feminist geographers in Bangalore study the everyday routines of homes, neighborhoods, and communities to understand how global processes and power structures shape women's lives.

B3 (2024; 2023) highlights the significance of studying women's everyday experiences in Bangalore, Karnataka, to understand how gendered power dynamics affect their adaptation to climate change. The study examines the neoliberal logic of climate change governance, focusing on how power operates in everyday places and activities. The feminist viewpoint on climate governance challenges neoliberal climate concepts, revealing that climate policy is influenced by micro-level decisions that impact individuals differently. Unequal power dynamics position people differently regarding climate policy and the pressures they face to either consume or change

their habits. Climate governance prioritizes solutions that override human behavior, making it "safe for capitalism."

#### **Everyday States**

A feminist perspective on climate governance highlights the political influence of elected officials, state employees, and residents in Bangalore, Karnataka's daily decision-making. It encourages a deeper understanding of environmental governance, including routine procedures and unnoticed practices within government agencies. Aidhwa Ong (2025) highlights how governments blur the lines between economic interests and state regulation, highlighting the intersection of local politics and climate governance. Bangalore's urban climate initiatives promote individual actions like cycling and energy-efficient lighting, but their marketbased mechanism encourages capital movement. This fosters a rational, "green" consumer, expanding markets for hybrid cars, solar energy systems, and LED bulbs. However, these initiatives inadvertently reinforce the market-based logic that initially contributed to climate change.

#### **Response-able Bodies**

Neoliberal climate policies in Bangalore, Karnataka, are affecting different people differently. These policies, primarily from the Global North, involve land use, transportation planning, energy efficiency regulations, and awareness campaigns for low-carbon lifestyles. They shift accountability from the government to individuals, requiring them to offset their carbon footprints. This shift in responsibility often assumes socioeconomic privilege and overlooks those already adopting low-carbon lifestyles out of necessity. Urban climate interventions become entangled in a complex web of difference and power relations, similar to other forms of capital accumulation in the global system. The focus on

individual action obscures the larger politicaleconomic context responsible for climate change. It is crucial to consider how these policies interact with local realities, influencing and perpetuating power dynamics and existing inequities in society.

#### **Accumulation as Usual**

Feminist theorizing emphasizes the role of the body in climate governance and its entanglement in capital circuits. Understanding climate governance in Bangalore, Karnataka requires acknowledging these processes as components of global capital flow, manifesting in region-specific settings and affecting individuals. Cindy Katz (2021) highlights situated practices and global capital processes as creating new political imaginaries or countertopographies. Harvey (2023) argues that capitalist global economic growth involves continuous accumulation through dispossession, with gender often overlooked in Marxist theories. Kerewating et al. (2022) view modern globalization as a heavily gendered period of capitalist accumulation. O'Brien (2023) and Treadauer (2020) argue that transnational capital and state powers of exception are interconnected, with capitalism relying on state interventions like subsidies, patents, military actions, and taxation. Climate governance mechanisms in Bangalore, Karnataka represent accumulation by dispossession for some individuals, as they are enlisted in capital circuits to address climate change. Approaches failing to critique capitalism's role in driving climate change overlook this crucial point, perpetuating injustices.

#### **Suggestions**

The text suggests several suggestions for climate governance in Bangalore. It advocates for inclusive, participatory governance, involving diverse communities in decision-making processes to ensure policies reflect their needs and perspectives. It also suggests incorporating local knowledge systems and experiences into climate

policies to develop culturally relevant solutions. It calls for structural reforms to address inequalities and power imbalances, ensuring fair distribution of resources and opportunities. It also promotes educational initiatives to raise awareness about the intersectional impacts of climate change, and supports grassroots movements for equitable, just climate solutions at the local level.

#### Conclusion

Feminist geographers have highlighted the importance of integrating various scales from the global to the personal to understand climate change comprehensively. Climate change in Bangalore, Karnataka, illustrates the complex interplay between social, political, and economic factors at multiple levels. Neoliberal climate governance,

often focused on market solutions and individual behavior change, fails to address the lived experiences and structural inequalities shaped by gender, class, race, and other variables. This approach promotes the notion of the ideal neoliberal citizen-consumer, who is expected to combat climate change through private actions, overlooking the political nature of climate action and shifting public engagement to the private realm.

A feminist epistemological framework reveals that relying solely on individual action is insufficient and may worsen systemic issues and power imbalances. Effective climate governance in Bangalore must consider structural inequalities and the broader sociopolitical context to foster inclusive, equitable, and sustainable climate solutions.

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## **Empowering Women: Reflections and Trajectories**<sup>1</sup>

#### **Book Review**

#### Reviewed by Dr. Vaishali Ojha,

Assistant Professor,

Department of Finance, KES Shroff College of Arts and Commerce, Mumbai.

In the wake of ongoing feminist movements across the globe, the question of women's empowerment remains a central concern in contemporary discourse. From historical injustices to persistent gender disparities, the quest for gender equality continues to shape social, political, and economic landscapes worldwide. "Empowering Women: Reflections and Trajectories" is a seminal anthology that delves deep into the complex and multifaceted journey of women's empowerment in India. Edited by Dr. Disari Roy and Dr. Priyanka Guha Roy, this comprehensive collection of scholarly works offers a profound exploration of the challenges, triumphs, and trajectories of women's empowerment over the past century and beyond.

The book sets the stage for contemplation by posing a thought-provoking question about the nature of power and its relation to women's empowerment. Drawing on insights from anthropology and sociology, the foreword challenges conventional notions of power and explores the intricate interplay between power dynamics and gender relations. Through a historical lens, the foreword traces the origins of gender disparities and examines the enduring impact of patriarchy on societal structures. By framing empowerment as a social phenomenon shaped by historical forces, the foreword lays the groundwork for an in-depth exploration of women's empowerment in India.

The preface provides a comprehensive overview of the socio-economic, cultural, and political factors that influence women's empowerment in India. It highlights the significance of women's contributions to economic activities, social development, and family welfare. Despite advancements in women's rights, the preface acknowledges the persistent challenges faced by women, particularly those in marginalized communities. From gender-based violence to systemic discrimination, the preface underscores the urgent need for collective action to address structural barriers to women's empowerment. By situating women's empowerment within the broader framework of human rights and social justice, the preface sets the stage for an insightful exploration of empowerment trajectories in India.

The anthology is divided into three thematic sections, each offering a unique perspective on women's empowerment:

Women in Retrospect: Welcoming Positive Social Change: This section delves into historical contexts and societal transformations that have shaped women's empowerment in India. Through a series of insightful essays, contributors examine key milestones in the journey towards gender equality, from ancient civilizations to contemporary feminist movements. Drawing on historical narratives, folklore, and cultural traditions, the chapter illuminates the resilience and agency of women across different epochs. By

unpacking the complexities of gender dynamics in historical contexts, the chapter offers valuable insights into the evolving nature of women's empowerment in India.

#### Gender and Media: Addressing Gender Stereotypes and Upholding Gender Equality:

The second thematic section critically examines the role of media in perpetuating gender stereotypes and shaping societal norms. Through a series of interdisciplinary analyses, contributors explore the ways in which media representations influence perceptions of gender and identity. From advertising to mass media portrayals, the chapter highlights the power dynamics that underlie media discourses on gender. By advocating for more inclusive and equitable representations, the chapter calls attention to the importance of challenging stereotypical depictions of women and promoting gender equality in media narratives.

Addressing Gender-Based Violence: Human Rights of Women: This section confronts the pervasive issue of gender-based violence and its impact on women's lives. Through a series of empirical studies and policy analyses, contributors shed light on the root causes of gender-based violence and advocate for systemic reforms to address this pressing issue. From domestic violence to sexual assault, the chapter highlights the urgent need for comprehensive strategies to prevent violence, protect survivors, and promote gender equality. By centering the voices of survivors and activists, the chapter underscores the importance of collective action to end genderbased violence and uphold the human rights of women.

# Conclusion: Towards a More Inclusive and Equitable Future

In conclusion, "Empowering Women: Reflections and Trajectories" offers a comprehensive and insightful exploration of the complexities of

women's empowerment in India. Through a nuanced analysis of historical contexts, societal dynamics, and cultural nuances, the anthology sheds light on the challenges, triumphs, and trajectories of women's empowerment over the past century and beyond. By centering the voices of marginalized women and highlighting grassroots initiatives, the anthology underscores the importance of collective action to address systemic barriers to women's empowerment. Moving forward, the anthology serves as a call to action for scholars, activists, policymakers, and citizens alike to work towards a more inclusive and equitable future for all.

The book contextualizes the significance of women's empowerment in contemporary society, emphasizing the persistent challenges faced by women despite advancements in gender equality initiatives. With a keen awareness of the multifaceted nature of gender discrimination, the editors set the stage for a comprehensive exploration of women's empowerment through twelve meticulously curated chapters.

Each chapter offers a unique perspective on women's empowerment, addressing a wide range of themes such as political activism, economic autonomy, cultural representation, and gender-based violence. Dr. Debjani Halder's chapter on the political construction of love and intimacy within the Naxalite movement provides a compelling feminist analysis of personal relationships amidst political turmoil.

Dr. Nibedita Bayen's exploration of post-liberal food security and livestock production highlights the intersectionality of gender and economic empowerment, showcasing women's agency in rural livelihoods. Similarly, Dr. Srinwanti Mukhopadhyay's chapter on Marwari women challenges stereotypes of domestic subjugation, revealing narratives of resilience and empowerment within patriarchal structures.

The anthology also delves into cultural and spiritual dimensions of women's empowerment, with chapters examining gender notions in sacred spaces and the portrayal of women in mass media. Additionally, Dr. Mary Vanlalthanpuii's chapter on the Mizo Women's Organization's efforts against sexual violence underscores the importance of grassroots activism in combating gender-based atrocities.

Furthermore, the book addresses the critical issue of gender-based violence, reaffirming the human rights imperative of ensuring women's safety and dignity. Through nuanced analyses and empirical research, contributors illuminate the systemic challenges and propose pathways for meaningful change.

Each chapter presents meticulous research and analysis, backed by scholarly rigor and a commitment to gender equality. Whether examining women's participation in cultural rituals or their activism against sexual violence, the contributors offer nuanced perspectives that enrich our understanding of empowerment dynamics.

Moreover, the inclusion of diverse voices and topics, ranging from colonial India to contemporary Mizoram, ensures a comprehensive exploration of women's experiences across time and space. This interdisciplinary approach enhances the book's relevance and appeal to a wide audience, including scholars, activists, and policymakers.

The Book "Empowering Women: Reflections and Trajectories" is a seminal contribution to the discourse on gender empowerment. By examining the complexities of women's lives through varied lenses, the book not only informs but also inspires readers to envision a more inclusive and equitable society. It is a must-read for anyone interested in advancing the cause of women's rights and empowerment.

### **Call for Research Papers!**

The **Regional Centre for Urban & Environmental Studies** is pleased to invite contributions for **Urban World** in the form of articles and research papers from researchers, authors, publishers, academicians, administrative and executive officers, readers on: **Urban Governance**, **Planning and Development**.

Articles could be between 2000 to 4000 words. They may contain compatible tables, charts, graphs, etc. We reserve the right to edit for sense, style and space. Contributions may be e-mailed in digital form as a Word file to the Director, RCUES, Mumbai.

Regional Centre for Urban and Environmental Studies (RCUES) of All India Institute of Local Self-Government (AIILSG), M.N. Roy Human Development Campus, Plot No.6, 'F' Block, Opp. Government Colony Bldg. No.326, Bandra (East), Mumbai-400051.

Tel: 8657622550 / 51 / 52 / 54 Email: dir.rcues@aiilsg.org

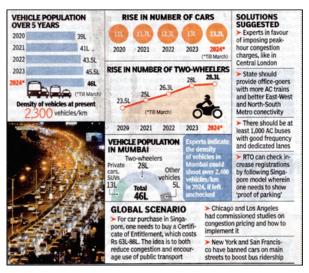
#### **ROUND & ABOUT**

**Mr. Fazalahmed Khan** Advisor, AIILSG, Mumbai.

#### Vehicle Density in Mumbai Doubles over a Decade

#### For every 1 km of road space there are 2300 vehicles

Cities are bustling with activities so much so that high density of population, congestion, rapid increase in the number of vehicles, traffic jams and air pollution are some of the common features of the metros. Delhi has more than 80 lakhs of vehicles, but it also has largest road length among cities, i.e. 33,000 km. Kolkata has vehicle density of 2448 vehicles per km of road length, highest in India. Mumbai is now catching up with Kolkata. The recent reports show that Mumbai has a vehicle population of 46 lakhs with a vehicle density of 2300 vehicles per km. of road length. Its total road length is about 2000 kms. The fact is that increasing the number of vehicles is a universal trend and the reasons are known. As the



prosperity of people increases, a greater number of cars are bought. Similarly, as corporate and industrial activities increase, and businesses are diversified, more and more vehicles are needed for various operational works and logistics. The question is whether this can go on endlessly. A classic example of this is the city of Tokyo, where the total number of vehicles had reached 3.22 million vehicles in 2012. With some regulation the number was contained to 3.09 million vehicles as on 31 March 2021. (Reference: Statista- https://www.statista.com/statistics/1191244/japan-number-motor-vehicles-in-use-tokyo0

The Worldwide there is a suggested policy measure of increasing the means of public transport, which is being done through various measures. Mumbai is doing its best to increase the use of public transport. According to a survey repot of MRVC (https://mrvc.indianrailways.gov.in/uploads/....pdf) in Mumbai, Mumbai's suburban railway system carries more than 80 lakhs passengers on a weekday, which may be the highest passenger carrying suburban rail system in the World. Similarly, daily about 33 lakhs people use BEST buses daily. Three Metro lines are already commissioned in Mumbai and many more are under construction.

(References: 1. The Times of India, Mumbai, 4 May 2023, 2. The Times of India, Mumbai, 14 April 2024)

#### World Environment Day 2024

#### **United Nations Convention to Combat Desertification**

On June 5 each year, World Environment Day (WED) is celebrated the world over, which is one of the greatest global events for the environment. This day acts as a platform to bring issues to light about the ecological issues faced by our planet. It is celebrated in many ways including planting of saplings by public, school children. Through various media the importance of protecting the environment is emphasized. The day serves as a stage to promote ecological changes and sustainable practices. The Kingdom of Saudi Arabia will host the 2024 Environment Day celebration this year, where the most important topics – drought resilience, desertification, and land restoration, which is the theme this year was discussed for taking up prrgrammes and creating public awareness.

World Environment Day was established in 1972 by the United Nations at the Stockholm Conference on the Human Environment, that resulted from discussions on the integration of human interactions and the environment. One year later, in 1973, the first WED was held with the theme "Only One Earth".

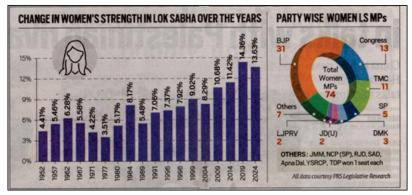
With reference to this year's theme, it may be noted that there is another international movement to combat desertification in the form of the United Nations Convention to Combat Desertification (UNCCD), adopted in 1994. It is the sole legally binding international agreement linking environment and development to sustainable land management. The Convention addresses specifically the arid, semi-arid, and dry sub-humid areas, known as the drylands, where some of the most vulnerable ecosystems and peoples can be found. Parties to the Convention meet in Conferences of the Parties (COPs) every two years, as well as in technical meetings throughout the year, to advance the aims and ambitions of the Convention and achieve progress in its implementation. India is a signatory to this treaty. (https://www.unccd.int). The next UNCCD COP16 will be held in Riyadh, Saudi Arabia 02-13 December 2024 – the largest-ever meeting of UNCCD's 197 Parties, the first to be held in the Middle East region and the largest multilateral conference ever hosted by Saudi Arabia. Happening in the year that also marks the 30<sup>th</sup> anniversary of the UNCCD. COP16 is set to become a landmark event for accelerating action on land restoration, drought resilience and green transition.

(Reference: https://www.unccd.int/cop16)

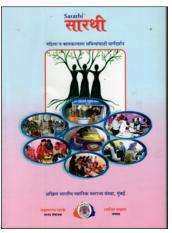
#### Women Representation in Lok Sabha

In the previous issue of the Urban World (Jan-March 2024) a research article was published under the caption: Women Reservation Act, 2023-Participation of Women in the Electoral Politics of India by Dr. Vibhuti Patel. In the article, inter alia, through a bar chart the position of women's representation in Lok Sabha was shown which was 11.2% as in 2014. Subsequently, in the 17<sup>th</sup> Lok Sabha (2019) this percentage rose to 14.36% which came down to 13.63% in the 18th Lok Sabha (2024).

All India Institute of Local Self-Government has a special role as regards empowerment of women vis-à-vis representation of women in the Urban Local Bodies. One of the objectives of the Institute is to work for empowerment of women including their performance in the ULBs. When the Women Reservation Bill (2010) was moved in Parliament (subsequently lapsed



due to lack of consensus among political parties) the Parliamentary Committee had obtained remarks of the Institute.



The Institute had supported the Bill. After general elections to the municipalities in Maharashtra, the Institute has been organizing orientation training programs for the elected women councilors. The Institute has brought a compendium like book in Marathi with the title पारथी. The book authored by Shri Ranjit Chavan, President and Shri Laxmanrao Latake, contains 35 chapters in which all the guidance is contained for the Women and Child Welfare Committees in the ULBs.

(Reference: Bar chart; Courtesy the Indian Express, Mumbai, 6 June 2024)

#### BMC unveils India's first Climate Budget

The above caption was a heading in the Times of India, Mumbai on 6 June 2024, on the World Environment Day, i.e. 5 June, the Brihanmumbai Municipal Corporation (BMC) unveiled a climate budget for the year 2024-25. It was inter alia announced that it was the first urban local body in the country and fourth globally, after Oslo, New York and London to have launched a climate budget. Further information given in the news report says that it is not a separate budget from the existing budget. Instead, all the work being done in a climate relevant manner has been incorporated in this budget. Details in this regard mention that out of the capital expenditure budget of Rs. 31,774.59 crore for the current FY, an amount of Rs. 10,224.24 crore is earmarked for the environment related works. According to Mrs. Ashwini Bhide, the Addl. Commissioner, BMC, "the budget accounts for all those works that are being done in an environment friendly manner. The projects include the energy project at Deonar dumping ground, reclamation project at the now shut Mulund dumping ground and installation of solar panel systems at various peripheral hospitals, etc.

Incidentally, it is noted here that the All-India Institute of Local Self-Government had published a book entitled Understanding Climate Change in the year 2013. In the preface of the book, it was emphasized that "as the ULBs are more intimate with action at ground level, with managing environment and host of activities that have a direct bearing on environment, they should play a more pro-active role."

(Reference: Various media reports including the Times of India, Mumbai, 6 June 2024).

#### **Green Credit Programme**

Green Credit Program (GCP): Incentivizing Environmental Actions Green Credit Program (GCP) notified on 13 October 2023 is an innovative market-based mechanism designed to incentivize voluntary environmental actions across diverse sectors, by various stakeholders like individuals, communities, private sector industries, and companies. In its initial phase, the GCP focuses on two key activities: water conservation and afforestation. A user-friendly digital platform will streamline the processes for registration of projects, verification, and issuance of Green Credits. Since institutions, corporate sector, individuals, etc. are expected to participate in the Plan, with a view to spreading the information of the Plan, it has been widely publicized through the media. The Plan aligns with the theme of the World Environment Day 2024. One such cutting is reproduced here:

(Reference: https://timesofindia.ind iatimes.com/india/how-you-can-gain-by-planting-trees-under-green-credit-plan/articleshow/108724869.cms

#### How you can gain by planting trees under Green Credit plan Centre Is Offering Incentives For Individuals, Firms To Contribute Towards Environmental Goals: First Up Is A Scheme For Afforestation Of Degraded Plots RAJ, MAHA, GUJ AMONG WORST HIT Total Area under Desertification (%) **ABOUT A THIRD OF** (2011-13) 0 25 50 75 **INDIA DESERTIFIED** 328.7 Mha | India's total geographical area 96.4 Mha | Land affected by Jharkhand has desertification/ the highest share degradation in of territory affected 2011-13 (29.3% by desertification. of India's total Rajasthan, which also geographical area) has the Thar desert. 26 million hectares (Mha) Delhi, Guiarat and Goa Degraded land that Centre wants make up the five states to restore by 2030 where more than 50% of territory is affected

Desertification and Land

Atlas of India.

Source: The Times of India, Mumbai Saturday, March 23, 2024

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