Identifying Challenges to Climate-Resilient WASH Governance at the Ward Level in the City of Bhubaneswar and Jaipur, India

Centre for Advocacy and Research

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List of Acronyms

AMRUT	Atal Mission for Rejuvenation and Urban Transformation
BMC	Bhubaneswar Municipal Corporation
CAA	Constitutional Amendment Act
CBO	Community Based Organisation
CCAP	Climate Change Action Programme
CMC	Community Management Committee
CMUIDS	Chief Minister's Urban Infrastructure Development Scheme
CPHEEO	Central Public Health and Environmental Engineering Organisation
CSCAF	Climate-Smart Cities Assessment Framework
CSO	Civil Society Organisation
CTC	Community Toilet Complex
FGD	Focus Group Discussion
GEDSI	Gender Equality, Disability and Social Inclusion
IHHL	Individual Household Latrine
IHSDP	Integrated Housing & Slum Development Programme
JE	Junior Engineer
JJM	Jal Jeevan Mission
JMC	Jaipur Municipal Corporation
JMP	Joint Monitoring Programme
MSF	Multi-Stakeholder Forum
MUKTA	Mukhyamantri Karma Tatpara Abhiyan
MSJKY	Mukhyamantri Shahari Jan Kalyan Yojana
NAFCC	National Adaptation Fund on Climate Change
NIUA	National Institute Urban Affairs
NUSP	National Urban Sanitation Policy
OSDMA	Odisha State Disaster Management Authority
PAS	Performance Assessment Systems
PHED	Public Health and Engineering Department
PMAY-U	Pradhan Mantri Awas Yojana - Urban
PwDs	Persons with Disabilities
SAPC	State Action Plan for Climate Change

SBM-U	Swachh Bharat Mission - Urban
SCM	Smart City Mission
SDA	Slum Development Association
SDC	Slum Development Committee
SDGs	Sustainable Development Goals
SHG	Self Help Group
SJED	Social Justice and Empowerment Department
SLB	Service Level Benchmark
SOP	Standard Operating Procedure
SSC	Sanitation Sub-Committee
SWF	Single Window Forum
SWM	Solid Waste Management
ULB	Urban Local Body
UWSS	Urban Water Supply and Sanitation
WASH	Water, Sanitation and Hygiene
WATCO	Water Corporation of Odisha
WATSAN	Water and Sanitation
WCC	Ward Core Committee

Acknowledgements

The study conducted by the Centre for Advocacy and Research (CFAR), titled 'Identifying Challenges to Climate-Resilient WASH Governance at the Ward Level in the City of Bhubaneswar and Jaipur, India,' would not have been possible without the support and mentoring of the Water for Women Fund, Department of Foreign Affairs and Trade, Australian Government.

We express gratitude to the technical experts and partners from the Multi-stakeholder Forum in Bhubaneswar and Jaipur who guided and steered the need assessment. We would like to express our sincere gratitude to the individuals for their valuable contributions and insights during the Key Informant Interviews (KIIs) conducted in Bhubaneswar and Jaipur. The individuals including Shri Gyana Ranjan Dash, Addl. Special Relief Commissioner cum MD, OSDMA in Bhubaneswar; Smt. Minu Shree Khuntia, Corporator, Bhubaneswar Municipal Corporation; Baladeb Hota, Sanitary Inspector, Ward Office, BMC; Mr. Purna Chandra Mohanty, Technical expert Water, WaterAid, Bhubaneswar; Dasharathi Das, Coordinator, Jiban Bikash, Bhubaneswar; Mr. Sunil Behera, Ward Officer (43), Ward office at Jatri Niwas, Bhubaneswar; and Mr. Paralaya Kumar Biswal, Sanitary Inspector, Wealth Centre - Ward no. 19, Bhubaneswar. In Jaipur, a sincere acknowledgment to Mr. Mukesh Kumar Mund, Deputy Commissioner, Health; Mr. Atul Sharma, Deputy Commissioner, JMC, Heritage; Mr. Satish Jain, Director, WSSO, Rajasthan; Mr. Rushabh Hemani, State WASH Expert, UNICEF, Rajasthan; Ms. Mukta, State Head, UN Women; Mr. Satyanarayana Valmiki, Service Provider, Municipal Corporation Jaipur; Mr. Kamal Singh, Safai Mitra - Sanitation Worker, Jaipur Municipal Corporation; and Mr. Yogesh Jangid, Assistant Engineer - AEN, PHED, Brahmapuri, Jaipur, Rajasthan.

Their willingness to share expertise and experiences has enriched our research, providing deeper insights into climate change impacts, disaster management, water, and sanitation issues. Their experience and cooperation significantly contributed to our research's success, and we extend heartfelt thanks to them.

We also express our heartfelt gratitude to Ward Councillors, Ward Officers, Slum Development Association, Slum Development Committee, Sanitation Sub-Committee, Self-Help Groups, Single Window Forum, Community Management Committee, and Frontline workers from ASHA and Anganwadi, as well as the Sanitation and Water Committees from Bhubaneswar and Jaipur city. Their pivotal role has been instrumental in shaping the study. Last but not least, sincere appreciation is extended to the Field Coordinators, Community Mobilisers, and Project Teams in Bhubaneswar and Jaipur for their invaluable assistance in conducting the FGDs in shaping the study.

Report prepared by Centre for Integrated Development, Ahmedabad with support from Centre for Advocacy and Research, New Delhi.

Executive Summary

Introduction

- As the impacts of climate change are felt most acutely at the local level, such as wards and settlements, the study takes a closer look at the functioning of the local governing bodies in Bhubaneswar and Jaipur, and their capability in executing projects related to WASH services.
- Despite launching many flagship programmes such as Swachh Bharat Mission-Urban, AMRUT 2 and Smart City Mission, marginalised sections face exclusion due to lack of access to services and hurdles in getting entitlements.
- Ensuring that the most vulnerable groups are included and consulted while formulating the solutions is imperative to address their exclusion.
- Exploring the landscape of WASH governance in these two cities, the study shed light on the intricacies, challenges, and pathways for an inclusive and climate-resilient WASH governance.

Problem Statement

- The problem statement reflects a series of interconnected challenges that prevent the realisation climate-resilient safe WASH practices in urban areas.
- These challenges can turn into opportunities by identifying opportunities within the existing framework and leverage them to bolster inclusive and climate-resilient safe WASH practices.
- The participatory governance at the third and fourth-tiers offers opportunity to enhance community engagement and involve communities in decision-making processes.
- In different ways, both Jaipur and Bhubaneswar show the potential to strengthen the power structure to shape the WASH initiatives for the marginalised community.

Study Framework

- Study assess the current situation of WASH governance in both cities, and identify that vulnerability and exclusion as key points for intervention.

Context

- Both cities face distinct climate-related challenges that impact WASH infrastructure and services, posing risks to public health and well-being.
- Limited awareness, lack of capacity and roadmap to address the challenges, poor infrastructure and finance are major problems in the informal settlements of both cities.

- Reforms encompass policy-level interventions, community engagement, capacity building at the third and fourth tiers of governance, and the integration of climate-resilient practices into urban planning and development processes.
- Focus should be on inclusive solutions that consider vulnerabilities based on gender, disability, age, and social status.
- Overall, the identified challenges offer scope for evidence-based interventions that can lead to resilient and inclusive urban governance.

WASH Governance

- Both cities offer distinctive opportunity to work on the community-level governance mechanisms.
- Bhubaneswar, which has a formalised structures like Ward Committees, faces challenges in realising their full potential whereas Jaipur lacks a formal structure.
- Strengthening governance by creating an enabling environment, and through an accountability framework for decision making is required to address the gap.

Policy Provisions

- Both national and state, and city-specific policies unveils opportunities as these policies incorporate climate-resilient elements such as waste management, climate-smart designs, and circular water economy.
- While Odisha's JAGA Mission focus on community-led development, challenges in beneficiary selection, equity assurance, and tenurial uncertainty calls for targeted interventions.
- In Rajasthan, the Mukhyamantri Shahari Jan Kalyan Yojana (MSJKY) looks into the provisioning of the basic needs of the poor, while the State Action Plan for Climate Change primarily focuses on the adoption of water harvesting structures.
- ULBs and the Ward-level institutions often lack the capacity and resources to implement the programmes and projects with all their provisions.
- Also, at times these programmes are implemented in silos at city and Ward levels, and lack of coordination limits the benefits and results desired from these programmes.

Institutional Arrangements

- The stakeholders are defined at two levels –
    a) Governance Institutions (authorities and officials at the city management level),

b) Civic Institutions (agencies and organisations which work with (and based in) communities).

- Self Help Groups (SHGs) in both cities serves as catalysts for behavioural change and grassroots mobilisation to effectively address WASH issues.
- Urban governance in both cities reveals the crucial role of the fourth tier of governance, including Community Based Organisations (CBOs), Slum Development Associations (SDAs), Slum Development Council (SDC), Sanitation Sub-Committee (SSC) and SHGs.
- Role of Ward Committees varies in effectiveness between the two cities, with Bhubaneswar exhibiting more structured participation than Jaipur.
- Both cities faces challenges due to lack of coordination among agencies, creating a common platform for dialogue is necessary to sort out issues.
- In Rajasthan, streamlining bureaucratic processes and strengthening inter-departmental coordination, especially for the PHED, offers an opportunity to improve the coverage of WASH services.

Devolution of power and finances

- 74th Constitutional Amendment, 1992, introduced decentralisation of powers and authorities to Urban Local Bodies (ULB)s, a significant step in devolution of power.
- Still fourth-tier governance and its agencies such as CBOs, SDAs, and SHGs require more support to take independent decisions and contribute to developmental process.
- Currently, the decentralisation process mostly involves incorporating civic institutions into decisions and planning already made at the higher levels; actual transfer of power is still limited in both cities.
- In Odisha, SDAs are not capacitated to manage and utilise the fund as per requirement.
- In Jaipur, in the absence of the Ward Committees and CBO structures, only minimal budget devolution to civic institutions.

A. Participation

- Interaction with stakeholders at the ULB and community level reveals that the decision-making process is still largely top-down.
- Participation of the fourth tier of governance institutions is limited in Bhubaneswar and negligible in Jaipur, except on issues advocated by NGOs.
- Involvement of community groups and ward-level committees is primarily centred

around disseminating information on schemes/programmes with minimum consultation.

B. Responsiveness

- Both cities have some complaint mechanisms for redressal, but its utilisation is poor at the community level due to low awareness.
- In Bhubaneshwar, in the absence of a unified grievance redressal mechanism the community resorts to various channels to address problems in the slums.
- In Jaipur, weak feedback mechanisms failed to address redressals and earn the trust of the community.

C. Performance Assessment

- Assessing the performance of WASH programmes is necessary for ensuring the quality and accessibility of water supply, sanitation, and hygiene services.
- For urban local bodies in 2008-09, the CEPT University introduced the Performance Assessment Systems (PAS), ensuring accountability.
- Both cities need to incorporate PAS to strengthen accountability.
- Another assessment framework is the Climate-Smart Cities Assessment Framework (CSCAF 2.0) by the National Institute of Urban Affairs (NIUA, 2021).
- With both the cities having received 2-star ratings in the Climate-Smart City Assessment, opportunities for improvement abound, particularly in enhancing water and wastewater management.
- Programmatic evaluation also aligns with the criteria of Swachh Survekshan under SBM-Urban, which help to assess the overall cleanliness and sanitation practices in urban areas.

Readiness of stakeholders

- Commitment from the top two tiers of government and administration to incorporate inclusive and climate-resilient WASH measures into the agenda.

A. Governance Institutions (State Departments, Development Authorities and ULB)

- Though various policies and plans mentions climate risks, their linkage to WASH activities and planning at different levels (city/state/centre) is limited.
- Institutional coordination and convergence are constrained due to the involvement of multiple agencies and departments.
- Sanitation strategy relied on supply-driven methods, indicating a need for

meaningful participation and mainstreaming the processes involving civic institutions.

- Devolution of power and finances to lower levels of governance institutions is slow and tentative.

B. Civic Institutions (Ward level and community-based groups)

- Power dynamics in the wards of Bhubaneswar are at times skewed towards Councillors, limiting the influence of designated other Ward Committee members; far more engagement is needed for meaningful participation.
- In Bhubaneswar, SDAs play a legitimate role, but capacity building is crucial as the decision-making still relies heavily on councillors and contractors.
- In Rajasthan, inactive Ward Committees require revitalisation.
- Engaging CBOs, including women and transgender SHGs, needs strengthening to empower them in decision-making and budgetary processes.

Way Forward

The forward-looking strategy involves a multifaceted approach, which include devolution of power and finance, capacity building, strengthening coordination, and empowerment at different levels of the institutions.

- **Building consensus:** Stakeholder consultations is imperative to build consensus on strategies aimed to strengthen WASH infrastructure and services.
- **Quality assurance:** Establishing a water quality testing mechanism with modern laboratories to ensure water supplied meets stringent quality standards.
- **Community involvement in governance:** Promoting the helplines and apps as accessible avenues for problem solving will encourage communities to actively engage in reporting and contribute to the overall improvement of WASH services.
- **Communication for change:** For conducting public awareness campaigns on government programmes and schemes communication channels such as social media, traditional media, and community events, must be used to educate residents about the schemes and programmes.
- **Community ownership:** Developing a sense of community ownership involves organising community-led initiatives and participatory forums that empower residents to actively engage in decision-making processes.
- **Convergence and coordination:** To address the issue of lack of coordination and convergence create a platform and conduct regular inter-departmental meetings

for developing collaborative strategies and streamline efforts for WASH governance.

- **Developing a responsibility framework:** For getting clarity on the responsibilities of institutions develop clear guidelines that delineate the functions of municipal bodies, community organisations, and relevant stakeholders.
- **Budgetary devolution:** Increased budgetary devolution ensures that funds are decentralised while strengthening the capacity of CBOs and other community-level organisations, to manage and utilise allocated funds effectively.
- **Climate-resilient WASH framework:** Effective implementation of WASH framework at the ULB level requires addressing capacity limitations and operational challenges. This can be done by involving various stakeholders, empowering community institutions, and designing gender-sensitive planning.
- **Strengthening building block of planning and monitoring:** Integrating climate resilience into urban planning and development processes involves conducting vulnerability assessments, incorporating climate-smart designs, and ensuring that WASH infrastructure is adaptable to changing climate patterns.
- **Revitalising urban water bodies and preventing encroachments:** This involves crafting city water balance plans to ensure equitable water distribution and mitigate flood impacts. Strategic measures like sustainable stormwater drainage, retention basins, and climate-resilient infrastructure should be integrated into urban planning to enhance flood preparedness.
- **Programmatic Approaches and Capacity Building of the Communities:** To enhance policy alignment and programmatic approaches in planning and implementation, provide voices to community and civic institutions in the monitoring and evaluation processes.
- **Establishing a City-Level Platform for Collaboration:** A common city-level platform can play a pivotal role in engaging and instilling confidence in the monitoring and evaluation processes and contribute to the betterment of services and governance.
- Thus, the **roadmap of overcoming the barriers** to strengthening inclusive and climate resilience WASH governance may involve the aspects of: a) Ensuring commitment to programmatic approach, processes and targets; b) Sensitisation and capacity building for inclusive and climate resilient aspect; c) Budgetary devolution and empowerment of fourth tier governance; d) Set up accountability mechanisms; e) Mainstreaming inclusive and climate resilient WASH approach.

Introduction

Climate change poses significant risks to water, sanitation, and hygiene (WASH) systems worldwide. In many cases, the impacts of climate change are felt most acutely at the local level like wards and settlements. Therefore, it is important to recognise that local governments play a big role in planning and carrying out essential development projects and services, like water supply and sanitation to mitigate the risks. This responsibility is clearly outlined in the 74th Constitutional Amendment Act (CAA), 1992. To effectively address climate risks, especially for vulnerable communities, we need to take a closer look at how well these local governing bodies at the third and fourth-tiers are functioning and how capable they are in planning and executing projects. This assessment will help us understand their strengths and areas where they might need support to reduce the impact of climate risks on the poor and marginalised.

Advancements in WASH Governance: The dimensions of WASH governance has witnessed commendable strides in recent years, with concerted efforts are being made in policy formulation, programme implementation, WASH financing, and the integration of climate change considerations. Acknowledging the importance of WASH in ensuring the well-being of urban populations, concerted efforts are being made to strengthen capacities at various governance levels. This approach reflects the recognition of WASH as not just a set of services but a crucial element in addressing broader challenges, particularly the interrelationship between WASH and climate change.

Intersectionality of Climate Change and Vulnerabilities: As the risks from climate change relate to a number of factors including vulnerabilities and capacity, climate change has the potential to exacerbate existing inequalities, including those based on gender, disability, age and status. Ensuring that the most vulnerable groups are included and consulted while formulating the solutions is, therefore, imperative. A closer look at the relationship between climate change and water reveals that investing in climate-resilient WASH services is essential for mitigating the risks.

National Programmes and Policies: Slum dwellers in urban areas are generally the first and foremost to bear the brunt of climate change impacts. The increasing instances of urban floods, cyclones affecting coastal areas, and the worsening water stress faced by large cities, are some of the challenges that serve as stark reminders for taking meaningful actions to address the vulnerabilities of those living in slums, who are disproportionately affected by the consequences of climate change. The national flagship programmes and policies related to WASH and part of urban planning have taken a proactive approach by integrating climate resilience, like AMRUT-2 (Atal Mission for Rejuvenation and Urban Transformation) and Smart City Mission (SCM), launched in 2021 and 2015, respectively. Additionally, there is a strong focus on inclusivity, making sure that everyone, especially vulnerable communities, benefits from improved WASH

services. The efforts include training and building the capacity of local decision-makers. Importantly, the intentional push for participatory governance at the grassroots level shows the commitment to involve communities in decision-making process.

Social and Structural Exclusion in WASH Services: The vulnerability of marginalised sections of society is exacerbated by social and structural exclusion in the provision of WASH services. This can be in the form of barriers in getting certain entitlements to lack of access to public WASH facilities for the marginalised groups like the elderly, disabled and transgender. This exclusion and disfranchisement widens the disparity of all social and economic indicators between the well-off and the marginalised.

As the project explores the landscape of WASH governance, a systematic approach across policy, programme, and governance levels emerges as a vital link for an inclusive governance. It further looks at the nitty-gritty of WASH governance in the cities of Bhubaneswar and Jaipur, shedding light on the intricacies, challenges, and pathways that characterise the pursuit of inclusive and climate-resilient WASH governance in these urban settings.

Project Intervention in Bhubaneswar and Jaipur: Our project intervention in Bhubaneswar and Jaipur focuses on climate risks and vulnerabilities in WASH services through a comprehensive assessment, focusing on various hazards like flooding, water scarcity, heat waves, and cyclones. Our approach aligns with JMP, RIO, and GEDSI indicators, expanding beyond basic services to implement climate-resilient safe WASH practices. Adaptation strategies include community resilience building and monitoring, contributing to evidence-based decision-making. The project spotlights governance principles by coordinating with local authorities and stakeholders, enhancing preparedness and response capabilities during climate-related emergencies. This transformative action aims to create a more equitable, climate-resilient, and sustainable future for the communities served.

The project from 2018 to 2022 focused on strengthening community groups and facilitating the actualisation of priority WASH needs of the vulnerable communities, including the Community Management Committee (CMC) at the settlement and the Single Window Forum (SWF) at the ward level. The focus was on making demand-driven development and enhancing governance at the point of service delivery. However, there was a recognition that to achieve lasting change and ensure better design and planning, action is needed at the upstream level, specifically, in governance. This involves decentralising essential functions to support the devolution of power for more effective and sustained impact. To identify the points of intervention at the governance level in the second phase of 2023 to 2024, it is important to learn about the opportunities and challenges from the extant governance processes, with a focus on the integration of climate risk activities into WASH programming at the community and at the level of local-self-government.

Problem Statement

In the context of WASH governance in Bhubaneswar and Jaipur, the problem statement reflects a series of interconnected challenges that prevent the realisation of inclusive services and climate-resilient safe WASH practices in urban areas. Despite many policy formulations, and implementing various programmes and capacity-building initiatives, there exist many concerns, which if addressed strategically, can transform challenges into opportunities for improved WASH governance. Therefore, the problem statement in many ways makes it imperative to identify opportunities within the existing framework and leverage them to bolster inclusive and climate-resilient safe WASH practices.

One significant opportunity lies in the linkages between WASH and climate change considerations. The recognition of this link provides a platform to not only mitigate the potential adverse impacts of climate change on water and sanitation infrastructure but also to integrate climate-resilient practices into the core of WASH governance. However, to fully capitalise on this opportunity, a deeper understanding of the specific vulnerabilities and adaptive capacities at the local level is necessary.

Further, the push for participatory governance at the third and fourth-tiers offers a unique opportunity to enhance community engagement in decision-making processes. Strengthening these participatory mechanisms provides communities, especially the marginalised, occasion to participate and have conversation in shaping WASH initiatives that directly affect them.

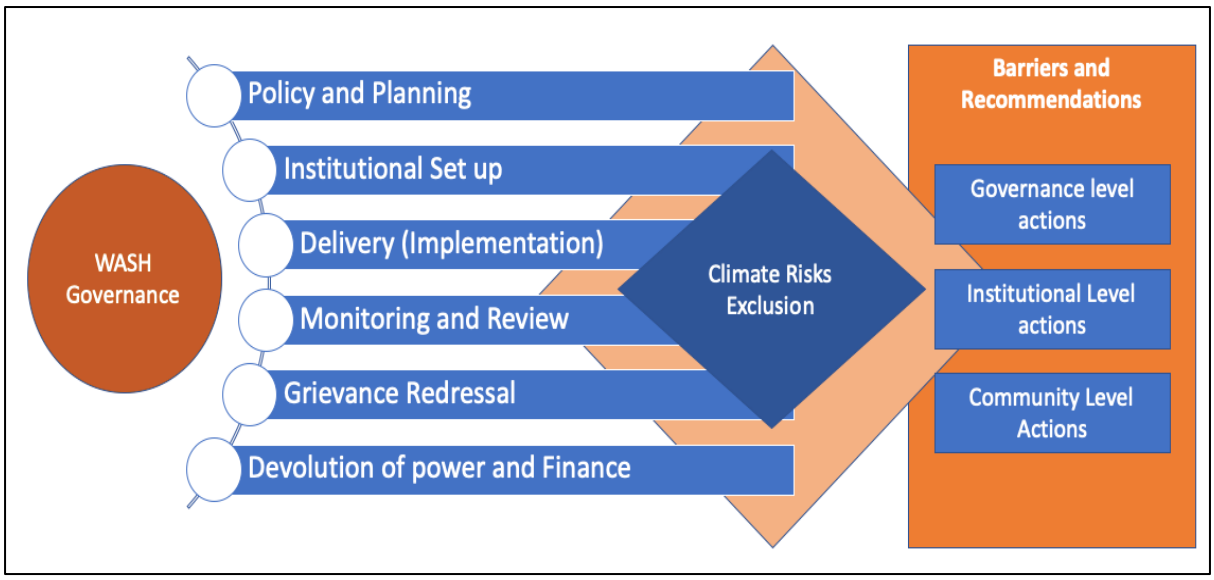
While the CAA and recommendations from the 15th Finance Commission advocates devolution of power to the third tier, there are gaps in its implementation which also creates opportunity for strategic capacity-building interventions. For example, empowering Ward Committees and Community-based Organisations (CBOs) to actively participate in climate-resilient WASH governance becomes a key opportunity. Unlocking the potential within the CAA through participatory governance and capacity-building efforts can bridge the existing gaps, which ensures that these governance structures contribute to inclusive and sustainable WASH governance, especially during slum redevelopment.

In Jaipur, the absence of structured community-level governance, like Ward Committees, is an opportunity for their establishment. Similarly, in Bhubaneswar, where a formal structure like the Slum Development Association (SDA) exists, there is untapped potential for enhanced power and budgetary controls at the fourth tier. The study emphasises the opportunity for institutional coordination, prioritising the potential for seamless linkages in the planning, financing, execution, and monitoring of WASH services. Recognising these issues as opportunities for context-specific intervention sets the stage for comprehensive transformation towards inclusive and climate-resilient WASH governance in urban settings.

Study Framework

The study assesses the current situation of WASH governance in Jaipur and Bhubaneswar to understand the barriers in governance at the Ward level through extensive desk research and consultations with the multi-sector stakeholders in both cities. The primary objective of this WASH governance study is to identify barriers and offer solutions. The study adopted a multifaceted approach, analysing various aspects including *'policy and programme; institutional arrangement; devolution; planning, monitoring and review; implementation; and feedback loop.'*

Figure 1: WASH Governance, Climate Risks, Exclusion - Barriers and Recommendations



Within this framework, vulnerability and exclusion become key points for intervention. Rather than viewing them solely as challenges, these aspects present opportunities for context-specific measures. Understanding the specific vulnerabilities and barriers in the context of urban climate resilience help to develop right strategies. Addressing these vulnerabilities at the core also throws opportunity to create more effective, sustainable, and inclusive urban WASH solutions. This reframing of challenges as opportunities sets the stage for innovative and transformative actions in the realm of urban climate resilience and WASH practices.

Context

Interconnectedness of Climate Resilience and WASH in Urban Areas: In today's urban landscape, there are opportunities to strengthen climate resilience, especially when it comes to the interconnectedness between climate issues and safe WASH practices. By specifically looking at issues of WASH services in slums, we can tackle the problems faced by these communities and turn them into opportunities for inclusive development.

Barriers to WASH in Informal Settlements: The major barriers related to WASH in the informal settlements of Bhubaneswar and Jaipur, particularly at the ward-level governance, are associated with limited awareness, lack of capacity and roadmap to address the challenges resulting in inadequate or poor infrastructure and finance. Both cities face distinct climate-related challenges that impact WASH infrastructure and services, posing risks to public health and well-being. Bhubaneswar contends with threats from cyclones, flooding, and heat waves, while Jaipur grapples with water scarcity, extreme climates, and heat waves.[1] The intersection of climate and WASH is multifaceted, with extreme climate events adversely affecting water resources, drinking water availability, and sanitation and hygiene services. The impending challenges of climate change have the potential to exacerbate existing inequalities, emphasising the importance of inclusive solutions that consider vulnerabilities based on gender,[2] disability, age, and social status.

> "CFAR, World Vision and other NGOs have made good effort to spread awareness about hygiene and sanitation. Their work with sanitation workers and frontline workers has created much awareness and improved WASH services. However, it is worrying that the community and public toilets are still littered with waste and not maintained properly. People still throw garbage and make toilets dirty by inappropriate behaviour. This has been the significant challenge before the government and service provider."
>
> ***Mr. Satyanarayan Valmiki, Safai Mitra - sanitation worker, Jaipur Municipal Corporation employee.***

Distinct Climate Challenges in Bhubaneswar and Jaipur: WASH infrastructure and services in these cities are largely affected by extreme climates and limited climate resilience practices in city planning and management. Addressing these challenges requires a comprehensive approach that involves coordination among government agencies, community

> "As the slum lies in low-lying area, we experience significant challenges during every monsoon season, with rainwater infiltrating all households, causing distress to the residents. Notably, the implementation of rainwater harvesting structures under the MUKTA scheme was successful in the ward, but regrettably absent in the Birsha Munda area, leaving residents more vulnerable to flooding."
>
> ***SDA Member of Balitola Sahi, Ward no. 38, Bhubaneshwar***

[1] Department of Environment and Climate Change (2022). *Rajasthan State Action Plan on Climate Change,* Government of Rajasthan.

[2] Sharma, A. (2020). How Gender-Responsive are India's WASH Policies, *Social and Political Research Foundation*.

participation, increased investments, and integrating climate resilience into urban planning and development processes.

Impact of Climate Change on Inequalities: Our baseline study in early 2023 on the slums of Jaipur highlights the disparities of WASH infrastructure within the city and brings forth the challenges and exclusion faced by transgender and other marginalised and vulnerable groups. The study states that poor communities living in slums run the risk of being systematically excluded from the urban planning process and service delivery mechanisms and are also most at risk from climate-induced vulnerabilities.

WASH Disparities and Challenges: Within informal settlements or slums, which are integral components of urbanisation, residents face distinct challenges in accessing inclusive and safe WASH facilities. In Bhubaneswar, government initiatives are taken to strengthen WASH strategies. However, challenges persist in overall slum redevelopment. The provision of facilities such as piped drinking water, access to municipal waste collection, and toilet use are increasing for the slum residents.[3] A study of slums in Bhubaneswar reveals issues related to water treatment, lack of toilet facilities, improper waste management, and the breeding of vector diseases, which are being taken care of by the third and fourth tiers of the government. In Jaipur, a similar study highlights disparities in water access, sanitation infrastructure, and waste management within slum settlements.[4] Residents face issues such as water quality concerns, irregular water supply, inadequate sewer connections, and challenges in solid waste management. Fostering awareness, addressing infrastructure constraints, and promoting community-led initiatives have significantly contributed to overcoming the complexity of WASH challenges.

"Big drains near my home carry wastewater as well as rainwater. But people throw garbage and plastic, and it gets blocked. Once it rained heavily, the entire colony was flooded. Those with big houses, moved to higher floor, while others took shelter in neighbouring houses. But there was a lot of damage and loss of property. The streets were flooded with mud and water for days. When it drained slowly, we had to clean lot of slush left behind in the houses. Many household items and ration was spoiled.

BMC helped in cleaning roads and street, but we struggled to clean our houses. We requested them every year in writing to clean the drain before monsoon starts. Since then the department started upkeeping of drainage before the rainy season. Some of the big drains like near Lanka Basti have been cleaned for the first time in 50-60 years. Still many drains have not been cleaned." **(Mention name)**

Ganga Devi, Resident of Transport Nagar, Jaipur

[3] SAPCC. (2018-23). *State Action Plan on Climate Change,* Government of Odisha.

[4] CFAR. (*2019-20). Access to Water Sanitation and Hygiene Services: Baseline Study Across 11 Slums of Jaipur, Centre for Advocacy and Research.*

Role of Community-Based Organizations (CBOs): The vulnerable and marginalised groups, including the urban poor, women,[5] transgender individuals, and those with disabilities, grapple with persistent challenges in accessing essential services like water and sanitation.[6] The CBOs play a critical role in addressing these issues by representing their communities and facilitating basic municipal services. Furthermore, there is an opportunity to address heightened vulnerability to climate change impacts and promote the inclusion of marginalised groups in urban planning processes within informal settlements.

Opportunity for Reforms: Reforms encompass policy-level interventions, community engagement, capacity building at the third and fourth tiers of governance, and the integration of climate-resilient practices into urban planning and development processes.

Table 1: Snapshot - Challenges of Climate-resilient WASH, Policy and Programme.

Aspect	Bhubaneswar	Jaipur	Governance Challenges
Urban Climate Resilience	Threats: Cyclones, flooding, heat waves.	Challenges: Water scarcity, extreme climates, urban heat island effect.	Building resilience to extreme climate events while addressing water scarcity.
Climate Vulnerabilities	Coastal vulnerability, water resource impacts, floods, droughts.	Erratic rainfall, extreme temperatures, sandstorms, droughts, famines, floods.	Adapting to climate vulnerability through adaptation and mitigation.
Climate and WASH	Impact on WASH infrastructure and services.	Impact on water resources, sanitation, hygiene services.	Ensuring climate-resilient WASH infrastructure and services, considering impacts on water resources, sanitation, and hygiene services.
WASH in Slums	Limited access, inadequate facilities.	Limited access, disparities in water, sanitation, hygiene.	Improving access to facilities and addressing disparities for WASH in slums.

[5] Khandker, V., Gandhi, V. P., & Johnson, N. (2020). Gender perspective in water management: The involvement of women in participatory water institutions of Eastern India, *Water*, *12*(1), 196.
[6] Alice, A., Behera, D., Behera, M. R., Patra, S. K., & Mishra, J. (2023). Assessment of sanitation and drinking water facilities among slum households in Bhubaneswar, Odisha–A cross-sectional study, *Journal of Family Medicine and Primary Care*, *12*(3), 484.

City Specific Challenges	Cyclone threats, flooding, water contamination, sanitation infrastructure issues.	Water scarcity, extreme climates, sewage issues, Sewerage problems, irregular waste collection.	Mitigating climate hazards and addressing irregular basic municipal services.
Stakeholder Engagement	Limited awareness, community participation issues.	NGO and CBO efforts, lack of functional ward committees.	Increasing awareness, fostering community participation, and ensuring functional ward committees.
Water Supply	Pipelines, 24x7 supply, multiple sources.	Regular supply, seasonal scarcity, water quality concerns.	Ensuring 24x7 water supply from diverse sources, addressing regular and seasonal demand, and maintaining water quality.
Toilets	Inadequate individual toilets, pit latrines.	Toilet sharing, sewerage system challenges.	Improving toilet coverage and sewerage connection.
Solid Waste Management	Waste collection and disposal issues.	Irregular waste collection, plastic bag littering.	Enhancing municipal initiatives, ensuring regular waste collection, and reducing littering.
Wastewater Management	Open drainage issues, health hazards.	Concerns about wastewater disposal, sewer line problems	Addressing overflowing of wastewater and resolving sewer O&M.
Policy and Programme Awareness	Limited awareness of entitlements, rights.	NGO and CBO efforts enhancing awareness.	Enhancing awareness on entitlements and rights through NGO and CBO efforts.
Key Recommendations	Community awareness, improved infrastructure, community capacity-building.	Inclusive programmes, accessible infrastructure, community capacity-building.	Emphasising community awareness and building community capacity for inclusive and accessible programmes.

Distinct Challenges and Vulnerabilities and Stakeholders' Engagement: The comparative analysis of Bhubaneswar and Jaipur shows distinct urban climate resilience challenges and associated vulnerabilities, providing a detailed understanding of areas for improvement. Stakeholder engagement, a key aspect in both cities, presents opportunities for NGOs and CBOs to strengthen community participation, especially by addressing issues related to functional Ward Committees. Water supply and sanitation challenges provide opportunities for both cities to invest in infrastructure, ensuring regular supply, water quality concerns, and addressing disparities in WASH services in slums. Overall, the identified challenges provide space for evidence-based interventions and collaborative efforts that can lead to resilient and inclusive urban governance.

Engagement with various stakeholders in Jaipur and Bhubaneswar brings forth the issues of limited awareness on climate-induced hazards, entitlements on delivery services, and unsafe WASH and waste management practices in the slums. This is further exacerbated by a lack of design provisions (like ramps, and signages), and a lack of designated sanitation infrastructures for transgender, and differently-abled persons.

> "Rainwater harvesting was traditionally practised by people in the state, but now it's not being considered. Encroachment on natural drains and haphazard development without considering terrain characteristics have increased problem of water retention in ground and also sometimes create water logging in some areas."
>
> **Mr. Atul Sharma, Deputy Commissioner, Jaipur Municipal Corporation Heritage**

WASH Governance

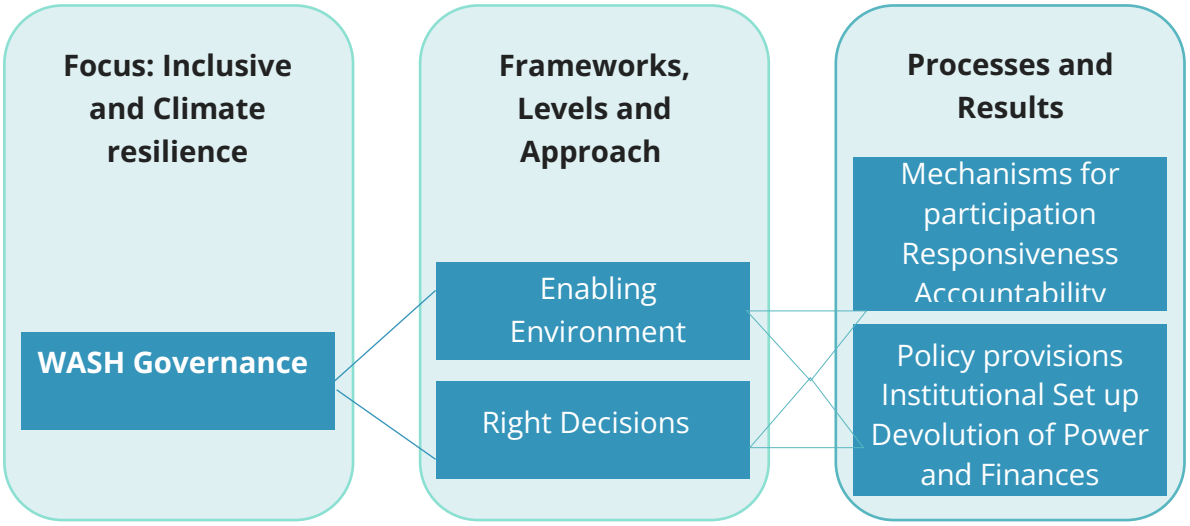
In exploring the governance structures of Bhubaneswar and Jaipur, a distinctive opportunity to work on the community-level governance mechanisms emerges. Bhubaneswar, despite having formalised structures like Ward Committees and the SDAs, faces challenges in realising their full potential. The Urban Local Bodies (ULBs), that is Bhubaneswar Municipal Corporation (BMC), is led by the Mayor and Deputy Mayor, supported by various committees and deputy commissioners overseeing specific services. The decision-making authority tends to concentrate on elected representatives, however, in areas where Ward Core Committees (WCCs) have been formed, more inclusive participation is evident.

> "CFAR facilitated meetings with Ward Core Committee, which has improved - reviewing the progress of developmental works taken up in the ward. This also works as platform for dialogue and discussion, which is the only platform that brings together different stakeholders from community and ULB."
>
> **Smt. Minu Shree Khuntia, Corporator, Bhubaneswar**

In contrast, Jaipur's governance landscape exhibits a distinctive feature with two municipal corporation bodies: JMC Greater and JMC Heritage. While this geographic division aids local governance, it poses sectoral challenges. Jaipur grapples with a

governance gap at the local level, notably lacking a formal structure of Ward Committees and Slum Development Committees (SDCs). Here lies an opportunity to work for a robust local governance mechanism.

Strengthening Governance at Third and Fourth Tiers: To address these issues, strengthening governance at the third and fourth tier, i.e. ULB and civic institutions is vital. It includes the creation of an enabling environment to address these issues and an accountability framework for decision-making process involving inputs from all levels. The study, therefore, explores components of Policy Provisions, Institutional Arrangements, and Devolution of Power and Finances as part of the enabling environment; while studying mechanisms for participation at the ward level, responsiveness of authorities and service providers, grievance redressal, and performance assessment to understand the barriers.



The detailed insights on these aspects of governance are covered as under:

Policy Provisions

Overview of National Flagship Programmes and Policies: The extensive study of national, state, and city-specific policies and programmes in the pursuit of inclusive and climate-resilient safe WASH governance in India, Bhubaneswar, and Jaipur unveils a multifaceted landscape with promising opportunities. National flagship programmes like the Swachh Bharat Mission-Urban (SBM-Urban), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Jal Jeevan Mission (JJM), and Smart City Mission (SCM) showcase major initiatives addressing sanitation, water supply, and urban development. Notably, these programmes incorporate climate-resilient elements such as waste management, climate-smart designs, and circular water economy. The existing challenges, including

capacity limitations in ULBs and issues of equitable service distribution, present opportunities for targeted capacity-building initiatives and behavioural change interventions.

There have been several programmes and projects implemented by the government in the WASH sector to improve infrastructure and service provision. Central programmes like Jal Jeevan Mission emphasise 100% coverage of households through tap water, and SBM-Urban focuses on achieving 100% coverage of sanitation services like individual household latrines (IHHL), community toilet complexes (CTCs), solid waste management, used water management, and faecal sludge management. AMRUT, SCM, Pradhan Mantri Awas Yojana--Urban (PMAY-U), Integrated Housing & Slum Development Programme (IHSDP) have components of city-level improved infrastructure for WASH integrated with other sectors, while *Namaste* mandates developing mechanised sanitation ecosystem. Another important policy focused on city-level sanitation plans was the National Urban Sanitation Policy (NUSP). Launched in 2008, the policy guides the overall process and provision of improving sanitation systems. A detailed review of the national flagship programmes and policies is attached in Annexure 3.

Overview of Odisha-specific Programmes and Policies: At the state level, Odisha stands out with a strong commitment to sustainable WASH through initiatives like the JAGA Mission, reflecting a commendable bottom-up approach. The focus on community-led development and legitimising the SDAs presents an opportunity for strengthened governance mechanisms. However, challenges in beneficiary selection, equity assurance, and tenurial uncertainty indicate the need for targeted interventions and enhanced governance structures. Despite the emphasis on achieving universal WASH coverage, there is scope for integrating climate resilience more comprehensively with state policies.

In the state of Odisha and Bhubaneswar city, the programmes like JAGA Mission and Biju Pucca Ghar Yojana (BPGY) ensure the tenurial rights and dignity of the poor while availing housing along with functional water supply and sanitation. This objective is supported and integrated with schemes like the Urban Water Supply and Sanitation (UWSS) Programme, The Odisha Urban Sanitation Strategy-2017, Odisha Septage Management Guideline, Mukhya Mantri Karma Tatpar Abhiyan (MUKTA), and Smart City and Sanitation in Odisha. Climate action is being guided by the State level Climate Change Action Plan, which primarily focusses on building capacity for mitigating natural hazards like cyclones and floods. Again, there is a high level of commitment towards developing sustainable WASH both at the state level as well as the ULB level. The issues of open defecation, and solid and liquid waste management have been a priority for ULB in Bhubaneswar. The

> "Though the practice of segregation of waste is increased significantly in the city, still there are households and establishments who do not segregate their waste. When fine is imposed as per the rules, there are quarrels."
>
> **Baladeb Hota, Sanitary Inspector, Bhubaneswar**

governance challenges recognised the urgency for capacity building, coordination, and convergence. These challenges provide opportunities for proactive measures to streamline programme implementation, ensuring coherence and inclusivity. A detailed review of the Bhubaneswar-specific programmes and policies is attached in Annexure 4.

Overview of Rajasthan-specific Programmes and Policies: Rajasthan's policies and programmes across state and city levels, with a focus on enhancing urban infrastructure and WASH development, present opportunities for integrating climate resilience into infrastructure planning and design.[7] The limitations, including difficulties in beneficiary identification and ensuring community ownership, provide opportunities for targeted interventions. Similarly, the limited provisions for climate resilience in policies provide opportunity for a more comprehensive approach. Overall, the identified challenges in governance and budgetary constraints points out the need for concerted efforts to integrate climate considerations into policies and enhance coordination mechanisms at various governance levels.

> "The concept of climate resilience is being incorporated in the planning and development of WASH services infrastructure in Jaipur city. Water from sewerage is used to water the plants in parks and garden of city after proper treatment. For solid waste management door–to-door garbage collection is done and from there it is taken to the transfer station."
>
> **Mr. Mukesh Kumar Mund, Deputy Commissioner, Health, JMC, Heritage**

In the state of Rajasthan and at the level of Jaipur city, developing WASH infrastructure has been mandated through schemes like the Chief Minister's Urban Infrastructure Development Scheme (CMUIDS), the State Sewerage and Waste Water Policy of 2016, Rajasthan Solid Waste Management Policy and Strategy of 2019, and Jaipur Septage Management Guidelines. The Mukhyamantri Shahari Jan Kalyan Yojana (MSJKY) also looks into the provisioning of the basic needs of the poor and marginalised groups. At the state level, the State Action Plan for Climate Change primarily focuses on the adoption of water harvesting structures, which has been mandated for large government infrastructure and private developers in urban areas, including Jaipur City.

However, what seems to be missing is city-wide adoption of gender and disabled-friendly inclusive designs for toilets in both cities of Bhubaneswar and Jaipur. Except for school toilets (which have ramps), public and community toilets are not disabled-friendly. Only a few community toilets with transgender signage were found in Jaipur. In Jaipur, climate resilience measures are restricted to standalone actions such as rainwater harvesting. Certain programmes emphasise supply-driven strategies, limiting bottom-up demand generation and posing challenges to long-term sustainability. A detailed review of the Jaipur-specific programmes and policies is attached in Annexure 4.

[7] State Action Plans on Climate Change, Government of Rajasthan.

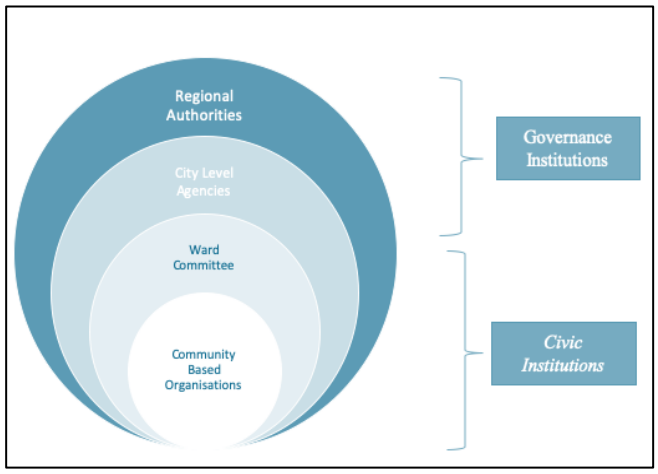
Implementation Challenges and Lack of Coordination: Engagement with various stakeholders in the study highlights that though there have been policy and programme recommendations that address the issues of governance and inclusion in both cities, the challenge lies in the implementation. It has been observed that the ULBs and the Ward-level institutions often lack the capacity and resources to implement the programmes and projects with all their provisions. In the pursuit of meeting targets, the processes crucial for ensuring equity and inclusion are sometimes compromised during execution. Also, at times these programmes are implemented in silos at city and Ward levels, and lack of coordination and convergence limits the benefits and results desired from these programmes.

Commitment to WASH and Climate-Related Programmes: There seems to be a high-level commitment to fulfilling the objectives of WASH and climate-related programmes and guidelines at national, state and ULB levels. These programmes address the issue of climate risks by emphasising on holistic, scientific and green approach to programmes of sanitation, and resilient infrastructure while encouraging convergence and conservation, energy efficiency, supporting research and innovation.

Lack of Capacity and Weak Institutional Arrangements: Another challenge is the lack of capacity and absence of integrated plans to design and implement provisions of flagship schemes in terms of planning, design, coverage and monitoring. The institutional arrangements to translate these provisions on the ground also seems to be weak, especially at the interface of third and fourth levels of governance, i.e. civic bodies and ULB governance.

Institutional Arrangements

A detailed stakeholder analysis was conducted to understand the roles and functions of multi-sectoral stakeholders and the institutional mechanism of governance at the city level, with a special focus on the third and fourth tiers of governance.



The stakeholders are defined at two levels – a) Governance Institutions (authorities and officials at the city management level), and b) Civic Institutions (agencies and organisations which work with (and based in) communities. Additionally, a city-level assessment of frontline stakeholders, service provider agencies,

CBOs, and NGOs operating across multiple sectors overlooking WASH and climate change in both cities was conducted and listed separately.

> "We have created very simple messages on sanitation and cleanliness so that it is easily understood by people. But people still don't follow it. There is greater need for all of us (including NGOs) to work on behavioural change, especially related to throwing garbage in drainage channels, public toilets and other open spaces."
>
> ***Yogesh Jangid, Jr. Engineer, PHED, Brahmapuri, Jaipur***

Roles and Functions of Stakeholders in Bhubaneswar: In Bhubaneswar, there are institutions, agencies, and multi-sector stakeholders in the governance structure pertaining to inclusive and climate-resilient safe WASH services in the city. At the top level of ULB, the Mayor and Deputy Mayor, elected by citizens and councillors respectively are key decision-makers for policy and programmes. The Commissioner and Deputy Commissioners (DCs) of BMC look after planning, implementation, grievance redressal and coordination aspects. Deputy Commissioners manage different municipal services like health, water supply, sanitation, housing, and slum development. The Standing Committee of ULB also plays a key role in decision-making for implementing programmes at the Municipal level. At the Ward level, Councillors and Ward Committees play key roles in outreach, implementing the programmes and grievance redressal. In Bhubaneswar, SDA has been legitimised by the State Government as the fourth tier of government for representing the voices of slum dwellers. The SDAs have decision-making power and allocated financial resources to plan, implement, and manage developmental works in the slums. Moreover, statutory agencies like Bhubaneswar SMART City Limited (BSCL), and Water Corporation of Odisha (WATCO) play important roles in infrastructure development and service provisioning. Many NGOs, SHGs, CBOs, and volunteers like Jal Sathis have been engaged in service provisioning, monitoring, user fee collection and other aspects of city governance. Several NGOs are actively seen in the slum community working on issues of WASH, Health, Education and Waste Management. BMC has also engaged NGOs for collection of waste, parking fees and other civic functions. Furthermore, maintaining the cleanliness of the city is closely monitored by Swachh Sathis (Cleanliness Volunteers) and supervisors to ensure effective solid waste management (SWM) within the community. A detailed table on the list of stakeholders and their roles, level of engagement, and influence across different government and civic institutions in Bhubaneswar is attached in Annexure 6.

Roles and Functions of Stakeholders in Bhubaneswar: Jaipur has a distinct feature of having two municipal bodies; Jaipur Municipal Corporation (JMC) Greater and Heritage. While geographically it helps in better governance, sectorally (Water, Health, Sanitation, etc) it becomes difficult to plan, coordinate, and converge the resources seamlessly

across the city. The top governance structure of each of the ULBs in Jaipur includes the Mayor, Commissioner and Deputy Commissioners, and standing committees, who play key roles in decision-making over policies and programmes. However, at the Ward level, the Ward Committees, though formed on paper are inactive and non-functional and the SDCs are not legally institutionalised like in the case of Bhubaneswar. Thus, the fourth-tier governance is weak in Jaipur. Statutory agencies like SMART City Board and PHED (Public Health and Engineering Department) among others also play important roles in WASH infrastructure development and service provisioning. Multiple NGOs and CBOs have been working in Jaipur both independently and with the JMCs on issues of WASH, climate resilience, equity and inclusion. However, the role of these NGOs in governance is limited compared to what it is in Bhubaneswar. A detailed table on the list of stakeholders and their roles, level of engagement, and influence across the different government and civic institutions in Bhubaneswar is attached in Annexure 7.

> "The men in the slum weren't very active, so the women took charge and started working on improving our neighbourhood and solving problems. Now, the BMC has set up a group called SDA with 11 members, and 60% of them are women. But this group doesn't meet regularly. They only come together when it is urgent, like recently when BMC approved Rs 6.5 lakh for building a community centre called Parichaya Gruha."
>
> ***Women SDA Member of Birsha Munda Slum Ward No 30, Bhubaneswar***

Role of CBOs: The engagement of women's Self-Help Groups (SHGs) serves as an effective catalysts for behavioural change and grassroots mobilisation and bringing out the potential of community-level governance structures for effectively addressing WASH issues. Moreover, the urban governance in both cities reveals a crucial role of the fourth tier of governance, including CBOs, SDAs/SDCs, and SHGs. The role of Ward Committees, a cornerstone of decentralised governance under CAA, varies in effectiveness between the two cities, with Bhubaneswar exhibiting more structured participation than Jaipur. However, the existing challenges in fully devolving decision-making powers to these entities of fourth-tier governance draw attention to higher involvement through advocacy and capacity-building initiatives **in both cities.** Despite challenges, their role signifies the importance of empowering and leveraging these groups in promoting resilience and inclusivity in WASH services.

Coordination Challenges and Opportunities: In both Bhubaneswar and Jaipur, the lack of coordination among various agencies is affecting the work of urban development projects. There is no common platform to discuss issues and sort out problems. The low awareness level about grievance redressal mechanisms also make it underutilized. Hence sensitisation and capacity building on climate resilience is important, particularly in the context of WASH. While top officials exhibit some awareness of climate change, what is lacking is a broad understanding of climate resilience in WASH services.

This lack of coordination and convergence opens an opportunity for intervention to establish a common platform for dialogue and collaboration. Addressing this gap can significantly enhance the efficiency of urban development projects, minimise delays, and improve engagement of stakeholders. The limited awareness and usage of grievance redressal mechanisms, particularly in informal settlements, opens another opportunity for conducting awareness campaigns and community engagement initiatives. Leveraging these opportunities, coupled with a focus on sensitisation and comprehensive capacity-building efforts, can pave the way for resilient and inclusive urban governance in both Bhubaneswar and Jaipur.

> "Coordination of departments is always depended on willingness of the personnel of that department and their leadership. He said that some time when we start process with department and that officer transferred and some new officer joins then the process needs to start again."
>
> ***Satish Jain, Director, WSSO, Jaipur***

Opportunities in Rajasthan - Addressing Governance Structure Challenges: In Rajasthan, where a well-evolved fourth-tier governance structure is absent, the challenges in ensuring equity, inclusion, and service quality present scope for establishing robust structures such as Ward Committees and CBOs. Streamlining bureaucratic processes and enhancing inter-departmental coordination, especially for the PHED, offers another opportunity to overcome hurdles and improve the comprehensive coverage of WASH services.

Overall, strengthening decentralisation, improving coordination, enhancing grievance redressal mechanisms, and investing in capacity building are needed for resilient and inclusive urban governance in both Bhubaneswar and Jaipur.

Thus, it was noted that the power structures for governance in these third and fourth tiers are highly skewed to upper authorities of the ULB and state-level departments. Community groups, Ward-level committees and service providers have limited say in planning activities and budget allocation.

> "There is willingness and desire in departments and agencies to contribute to greater good in terms of WASH, health and cleanliness. With some focus on better coordination and planning we can overcome this challenge. There is need to bring in all departments and agencies to create synergy by better coordination mechanism."
>
> **Mr. Rishabh Hemmani, State WASH Expert, UNICEF Jaipur**

Devolution of power and finances

Decentralisation through the 74th Amendment: The 1992 CAA had introduced decentralisation (74th Amendment) by creating the third level of governance at the municipal level, alongside the existing Union and State tiers. This move signifies democratic decentralisation and the transfer of executive and legislative powers. In urban areas, the authority of the third tier was previously limited, preventing citizen

participation. The constitutionalisation of this third-tier governance was a significant step in overcoming these challenges.

Role of Local Stakeholders: The Ward Committees play a decisive role in urban governance in Indian cities by facilitating local participation and decision-making. Comprising elected representatives and residents from a specific geographic area or Ward, these committees act as intermediaries between citizens and municipal authorities. Their primary functions include monitoring and assessing local development projects, addressing community concerns, and recommending budgetary allocations for Ward-specific needs. In practice, Ward Committees enhance transparency and accountability in urban governance, enabling citizens to voice their opinions, influence policies, and ensure that public services are delivered effectively at the grassroots level. However, insights from local stakeholders reveal a different picture in both cities. In Bhubaneswar, while the Ward Committees have defined structures and representations in different functionaries, still the deciding power lies with the Corporator (Ward Councillor) in most of the wards. In the Wards, in which CFAR has formed the WCC, the participation of other members other than the Corporators is more evident as found during the FGDs and also informed by the frontline stakeholders like SDAs, SHGs, and CMCs. In Jaipur, the situation is different with no formal structure of Ward Committee in place, and is only on paper. Odisha has also pioneered the process of community-led development by legitimising the SDAs in fourth-tier governance and engaging CBOs (SHGs and other groups) in service delivery, operation and maintenance. The fourth-tier governance in Rajasthan has not evolved as much as in Odisha which makes it difficult to ensure equity, inclusion and quality of services across informal settlements.

Fourth-Tier Governance in Odisha and Rajasthan: Further, the fourth-tier governance and its agencies such as CBOs, SDAs, and SHGs require support to take independent decisions for the community and actively contribute to developmental planning, execution, and monitoring. Currently, the decentralisation process mostly involves incorporating civic institutions into decisions and planning already made at the higher levels, that is at the state and central government levels. The actual transfer of power is still limited in both cities, though civic agencies are more engaged and participatory in Bhubaneswar compared to Jaipur.

Opportunities for Capacity-Building Interventions: Given the constitutional changes and advice from the 15th Finance Commission pushing for more power at the third tier, the gaps in implementation makes way for strategic capacity-building interventions. Analysis of budgetary allocation to ULBs for WASH programmes reveal that there has been significant investment in this sector. State government have earmarked funds for devolution to ULBs as per 15th Finance Commission recommendations. However, further devolution to fourth tier governance institutions remains negligible in Rajasthan and minimal in Odisha.

Climate Finance and Budgetary Devolution: The study of climate finance and budgetary devolution in Indian cities reveals an indispensable relation between funding allocation and financial autonomy. In India, climate finance encompasses both external and public sources, with a significant share (41%) attributed to public financing to mitigate the impacts of climate change. To support climate change adaptation interventions, the government has instituted funds such as the National Adaptation Fund on Climate Change (NAFCC) and the Climate Change Action Programme (CCAP). While a review of budget allocation and expenditure patterns in Odisha's State Action Plan for Climate Change (SAPCC) reveals challenges, including a lack of coherence between activities reported in SAPCC and state budget documents, there exists an opportunity to address different dimensions of climate change through both state and national action plans, each contributing distinct perspectives and strategies.

Finance Commission Recommendations and Fund Allocations: The 15th Finance Commission outlines a comprehensive framework aimed at supporting WASH-related initiatives in urban areas, encompassing local government grants, performance-based grants, tied grants for ULBs, and a dedicated focus on capacity building. The potential success of these provisions hinges on the effective devolution of budgetary power to the ULBs. In Odisha, notable efforts aligning budgetary allocations with climate actions are evident, yet challenges persist in areas such as monitoring and priority allocation, and the absence of a comprehensive climate change policy further complicate the issue.

According to the Fifth State Finance Commission of Odisha, Rs. 130 crore was earmarked as devolution funds according to recommendations of the 15th Finance Commission. In Bhubaneswar, there is a provision to allocate 7.5% of funds from the total project budget of developmental works in slums to the SDAs. However, as of now most of the SDAs are not capacitated to manage and utilise the fund as per requirement, hence corporators and contractors manage this fund indirectly.

In Rajasthan, although funds align with the 15th Finance Commission's recommendations, there is scope for enhancing devolution to the third and fourth-tier of governance in Jaipur. This would address concerns related to effective local decision-making and encourage community participation in budgetary processes.

"In accordance with the Government of Odisha's resolution, OSDMA has undertaken a comprehensive disaster management training initiative, spanning from Ward members to the Chief Minister. This programme includes the organisation and allocation of funds, sourced from 10% of the National Disaster Risk Mitigation Funds (NDRMF), in line with the recommendations put forth by the 15th Finance Commission regarding capacity building. Notably, this training endeavour extends to all functionaries of ULBs across the State, encompassing entities such as the BMC."

Shri Gyana Ranjan Dash, Addl. Special Relief Commissioner cum MD OSDMA, Bhubaneswar

As per the report of Sixth State Finance Commission of Rajasthan, funds are allocated based on recommendations, including 75% for basic and development functions, 20% for national/state priority schemes/activities, and 5% for ULB incentives. The total allocated funds for ULBs for the financial year 2021-22 is Rs. 1474.08 crore, as per the guidelines of the fifth Finance Commission. Unfortunately, the lack of functioning of the Ward Committees and CBO structures like SDCs means community consultation is nearly non-existent in determining fund allocation, leading to minimal budget devolution to civic institutions.

Participation

Top-Down Decision-Making Process and Limited Participation of Local Stakeholders: Interaction with stakeholders at the ULB and community level reveals that the decision-making process is still largely top-down. The participation of the fourth tier of governance institutions is limited in Bhubaneswar and negligible in Jaipur, except for the issues which are advocated through NGOs. The involvement of community groups and ward-level committees is primarily centred around disseminating information on schemes/programmes with minimal room for consultation.

Most of the time, community and ward-level stakeholders are provided with information about decisions, policies, or projects, but there is no formal mechanism for incorporating their feedback or input. Even in instances where inputs are sought through ward-level consultation, final decisions typically rest with authorities at the second-tier level. This signifies that the process of participation and consultation has not evolved to empower the lowest rung of governance. In Jaipur, the absence of functioning ward committees and any legitimate structure for fourth-tier governance compounds the challenges, making participation difficult for civic institutions.

In both cities, efforts to incorporate the perspectives of marginalised communities in WASH planning and implementation heavily depends on the advocacy of NGOs working in urban areas. Bhubaneswar exhibits a relatively better situation with the recognised role of SDAs in implementation and the involvement of the CBOs in service delivery. However, in Jaipur, the constraint of platform for dialogues on planning and prioritisation prevent the community's ability to influence the planning process at the ULB level.

Responsiveness

Responsiveness of ULB: The responsiveness of ULB can be attributed to how effectively the communication channels are used to get and address feedback and complaints from the public and how swiftly the action is taken. In both Bhubaneswar and Jaipur, some channels of complaints and redressal have been set up by government departments and ULB, but awareness and its use seem low at the community level. However, the grievance

redressal system becomes effective only when the groundwork for the provisioning of services has been completed, which is not the case in all slums.

Grievance Redressal Mechanism: In Bhubaneswar, a unified grievance redressal mechanism for WASH-related issues is absent. The community resorts to various channels to address different problems in the slums. For water-related concerns, residents reach out to the Junior Engineer (JE) of WATCO. If the JE's intervention proves ineffective, they escalate the matter to the corporator to exert pressure. CFAR has made efforts to educate people about using the common helpline number 1929 for registering complaints, but community members report minimal utilisation of this helpline. Additionally, the BMC introduced the SAFA App for monitoring waste collection and cleanliness, with QR codes placed in slum areas and BMC offices. However, the awareness and usage of this helpline number and the app remain low among slum dwellers.

> "People have started using SAFA app to lodge complaint about the cleanliness, but still the usage is very low. Frequent awareness campaigns and mobilisation of community groups to use this app is needed."
>
> **Mr. Paralaya Kumar Biswal, Sanitary Inspector, Ward 19, Bhubaneswar**

In Jaipur, multiple platforms, including "Samadhan" and the common helpline number 181, exist for registering complaints on civic services within JMC Greater and Heritage. However, due to the gap in the feedback loop, continuous follow-up has to be done to ensure that complaints are effectively addressed. Also no clear assurance from the feedback mechanisms that complaints will be resolved. Residents in Jaipur's slums noted that complaints related to water supply are addressed more promptly compared to those concerning sanitation and cleanliness. No charter or SOP (Standard Operating Procedure) is formulated to ensure the timely redressal of grievances. Resolution of the problem often depends on the influence of local leaders and community groups.

Performance Assessment

Importance of Performance Assessment: Assessing the performance of WASH programmes in cities is vital for ensuring the quality and accessibility of water supply, sanitation, and hygiene services. Performance assessments help identify areas for improvement, contributing to the enhancement of WASH services and the overall well-being of urban communities. The synergy between urban governance, performance assessment, and adherence to technical standards is key in building resilient, inclusive, and effective WASH systems in urban areas. This collaborative approach ensures that water and sanitation infrastructure meets rigorous standards, and contributes to a sustainable and equitable urban environment.

Performance Assessment Systems (PAS) by CEPT University: For urban local bodies in 2008-09, the CEPT University introduced the Performance Assessment Systems (PAS).[8] This system was ensured to establish internal, upward, and downward accountability, placing ULBs at the core. It functions as a linkage, by upwardly connecting ULBs with state and national governments and downward with citizens. Importantly, it aligns with the CPHEEO's (Central Public Health and Environmental Engineering Organisation) Service Level Benchmark (SLB) framework under the Status of Urban WATSAN (Water and Sanitation) overlooked by the Government of India.[9] Given the importance of technical assessments, cities like Bhubaneswar and Jaipur need to incorporate PAS to strengthen accountability. While the SLB framework and programmes like the SBM provide programmatic appraisals and public feedback mechanisms, a comprehensive city-level assessment is missing.

Climate-Smart Cities Assessment Framework by NIUA: Another important assessment framework is the Climate-Smart Cities Assessment Framework (CSCAF 2.0) by the National Institute of Urban Affairs (NIUA, 2021)[10] offers a valuable reference point, ranking cities based on performance indicators, including climate-resilient water and wastewater management. With both the cities of Bhubaneswar and Jaipur having received 2-star ratings in the Climate-Smart City Assessment, opportunities for improvement abound, particularly in enhancing water and wastewater management.

Service level benchmarking suggested by MHOUD is looked at as the reference point for goals for different schemes, which has its own performance assessment measures. A comprehensive public feedback system is part of the evaluation strategy under this process. The National Institute of Urban Affairs (NIUA) has come up with the CSCAF-2.0 under the Smart Cities Mission, to rank the cities according to performance indicators under five themes of climate-smart initiatives. Indicators on climate-resilient water and wastewater management are covered under these schemes. Public involvement is limited in these assessments except for Swachh Survekshan where public feedback is taken into account for fulfilling the objectives of SBM-U.

Swachh Survekshan Evaluation: Another important programmatic evaluation aligns with the Swachh Survekshan under the national flagship programme of SBM-Urban, focusing on various criteria such as door-to-door waste collection, source segregation, waste generation vs processing, remediation of dumpings, cleanliness of residential and market areas, water bodies, and public toilets. These criteria collectively contribute to assessing the overall cleanliness and sanitation practices in urban areas. Notably, Bhubaneswar had demonstrated improvement in its Swachh Survekshan ranking,

[8] https://www.pas.org.in/

[9] CPHEEO. (2011). *A Handbook on Service Level Benchmarks (2011*). Central Public Health & Environmental Engineering Organisation (CPHEEO), Ministry of Housing and Urban Affairs, Government of India. https://cpheeo.gov.in/upload/uploadfiles/files/Handbook.pdf

[10] https://niua.in/intranet/sites/default/files/75.pdf

progressing from the 80th position in 2022[11] to the 34th position in 2023 among the ULBs across India with a population exceeding 100,000. In contrast, JMC Greater and JMC Heritage hold the 173rd and 171st ranks, respectively, among ULBs with a population exceeding 100,000 in the Swachh Survey of 2023.[12]

Readiness of stakeholders

Though there has been a commitment from the top two tiers of government and administration to incorporate inclusive and climate-resilient WASH measures into the agenda there is need for greater sensitisation and improved operational mechanisms to advance this commitment. The assessment takes a stakeholder-centric approach, evaluating the readiness of functionaries across multi-sector stakeholders to enhance inclusive and climate-resilient WASH governance, while also highlighting existing gaps in this regard.

A. **Governance Institutions** (State Departments, Development Authorities and ULB)

Governance institutions, including State Departments, Development Authorities, and ULBs functionaries, demonstrate awareness and commitment to address inclusion and climate risks in WASH services. However, the study notes a lack of prioritisation in planning and implementing actions in this domain. While various policies and plans talks on climate risks, its linkage to WASH activities is limited at different levels (city/state/centre). Institutional coordination and convergence are constrained due to the involvement of multiple agencies and departments, particularly at mid and lower levels of ULB functionaries, where a common understanding of climate resilience and inclusive WASH services is crucial.

In both cities, the sanitation strategy still relied on supply-driven methods, indicating a need for meaningful participation and mainstreaming of participatory processes involving civic institutions. The devolution of power and finances to lower levels of governance institutions is slow and tentative. Additionally, the absence of a comprehensive performance assessment framework for the WASH sector, encompassing both inclusion and climate resilience, poses challenges for ULBs in focusing on these aspects. Regarding inclusion, some changes have been made in the designs of public sanitation infrastructure to make them more accessible to marginalised groups. However, a sensitisation programme could facilitate a broader consensus and agreement to incorporate inclusive designs in new structures and retrofit older assets.

[11] https://ss2022.sbmurban.org/#/ranking

[12] https://ss2023.sbmurban.org/#/scorecard

B. **Civic Institutions** (Ward level and community-based groups)

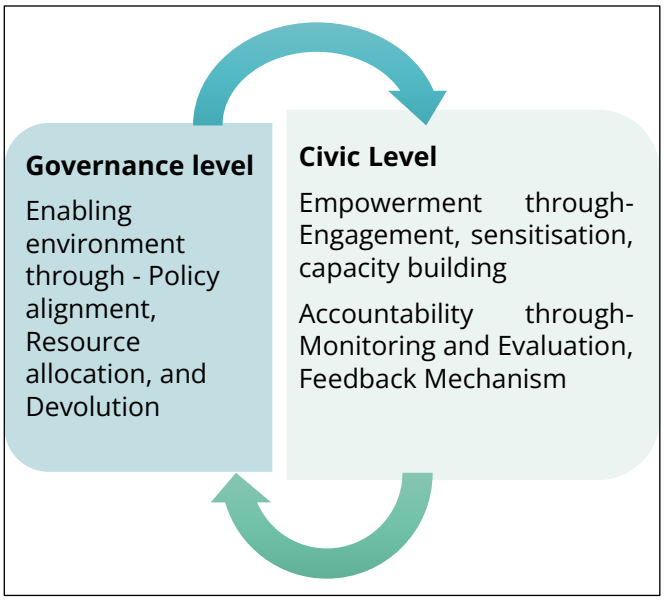
At the Ward and community level, the main barriers are a) lack of awareness on issues of climate resilience; b) lack of capacity building to influence, plan and manage WASH projects; and c) lack of sensitisation on inclusion of marginalised groups.

In both cities, there is a pressing need to raise awareness and sensitise committee members about inclusive and climate-resilient WASH to ensure meaningful participation in planning and implementation. Power dynamics in the wards of Bhubaneswar are skewed towards Councillors, limiting the influence of designated other Ward Committee members. The initiatives like WCC facilitated by CFAR have enhanced governance participation, however, meaningful participation in planning and implementation is still limited and needs more engagement. In Rajasthan, inactive Ward Committees require revitalisation. In Bhubaneswar, SDAs play a legitimate role, but capacity building is crucial as the decision-making still relies heavily on councillors and contractors. Engaging CBOs, including women and transgender SHGs, needs strengthening, with a focus on empowering them in decision-making and budgetary processes.

Sensitisation programmes are lacking for disabled, third-gender, and marginalised groups at the community level, perpetuating their exclusion. NGOs, such as CFAR, UNICEF, and Water Aid, have played a vital role in advocating inclusive and climate-resilient WASH. While readiness exists at all levels, establishing a common agenda and roadmap at the city level is crucial. The absence of a unified platform hinders progress and makes collaboration with experts and stakeholders difficult.

Way Forward

The forward-looking strategy involves a multifaceted approach, advocating for increased devolution of power and finance, emphasising capacity building and coordination at mid-management levels, and empowering community-level institutions for meaningful participation in governance. The recommendation is for a comprehensive strategy encompassing advocacy for devolution, capacity building, coordination enhancement, and empowerment at different levels.



Overcoming challenges in ward-level governance for climate-resilient and inclusive WASH requires a two-pronged approach. First, create an enabling governance environment at the third and fourth tiers. This involves devolving power and finances to these levels, and creating a framework where community groups and civic institutions can effectively fulfil their roles. Secondly, communities and civic institutions must be empowered to carry out their responsibilities successfully. Capacity-building is crucial to enable these groups to plan and utilise resources effectively, ensuring the attainment of development objectives. Therefore, a comprehensive strategy should address both governance and civic institutions simultaneously.

Building consensus: Stakeholder consultations affirm the commitment to enhancing WASH infrastructure and services, stressing on sensitisation, coordination, and community empowerment.

Quality assurance: Creating a water quality testing mechanism is important for both cities. Establishing routine testing protocols supported by modern laboratories will ensure that the water supplied to urban areas and eventually to the slums meets stringent quality standards. This includes addressing issues related to contamination, microbial presence, and chemical pollutants. Results from these tests should be made transparent, promoting trust and confidence in the water supply system.

Community involvement in governance: Launching extensive awareness campaigns is essential to educate residents on utilising toll-free numbers for reporting water, sanitation, and drainage-related issues. Promoting these helplines (1929 in Bhubaneswar and 181 in Jaipur) as accessible avenues for problem redressal will encourage communities to actively engage in reporting and contribute to the overall improvement of WASH services. Introducing and popularising app-based redressal mechanisms, such as the SAFA app in Bhubaneswar, is necessary for enhancing the efficiency of grievance resolution. It can significantly contribute to improving response times and service delivery.

Communication for change: Implementing public awareness campaigns focused on government programmes and entitlements is essential. Recognising various communication channels, including social media, traditional media, and community events, will inform residents about available services, subsidies, and entitlements. This initiative would promote transparency and encourage citizen participation.

Community ownership: One basic thing is to develop a sense of community ownership. This involves organising community-led initiatives and participatory forums that empower residents to actively engage in decision-making processes related to WASH governance. Additionally, sensitisation and capacity building of frontline workers like SDA, Sanitation Sub-Committee, Jal Sathis (water volunteer), Swachh Sathis (cleanliness

volunteer), SWF, and CMC is important. This will equip them with the skills needed to effectively manage and address local challenges.

Convergence and coordination: Addressing the issue of coordination and convergence among various government departments and vertical institutions requires a strategic approach. Establishing regular inter-departmental meetings, creating a unified communication platform, and developing collaborative strategies for WASH governance will contribute to streamline efforts and enhanced service delivery.

Developing a responsibility framework: Clarity on the responsibilities of various institutions is required for effective WASH governance. Developing clear and accessible guidelines that delineate the functions of municipal bodies, community organisations, and relevant stakeholders will help in promoting accountability and streamlining efforts. This understanding ensures that each entity plays a synergistic role in the overall WASH ecosystem.

Budgetary devolution and the empowerment of third and fourth-tier governance: To do this Ward Committees must be strengthened. Advocating increased budgetary devolution ensures that funds are decentralised while simultaneously strengthening the capacity of CBOs and other community-level organisations, which is essential to empower them to manage and utilise allocated funds effectively.

Climate-resilient WASH framework: The UNICEF Climate Resilient WASH framework stands as a valuable guide, emphasising the importance of sustainable, safe, and resilient WASH systems in building community resilience (GWP & UNICEF, 2017).[13] However, its effective implementation at the ULB level necessitates addressing capacity limitations and operational challenges. Opportunities arise from recommendations by various stakeholders, emphasising the empowerment of community institutions, gender-sensitive and context-specific planning, and cross-learning. This commitment should extend to defining specific processes and targets aligned with these principles, ensuring that overarching policies and strategies explicitly integrate considerations for climate resilience and inclusivity.

Strengthening building block of planning and monitoring: Integrating climate resilience into urban planning and development processes is an adaptive and mitigating measure. This involves conducting vulnerability assessments, incorporating climate-smart designs, and ensuring that WASH infrastructure is adaptable to changing climate patterns. Collaborating with climate experts and organisations can provide valuable insights and expertise.

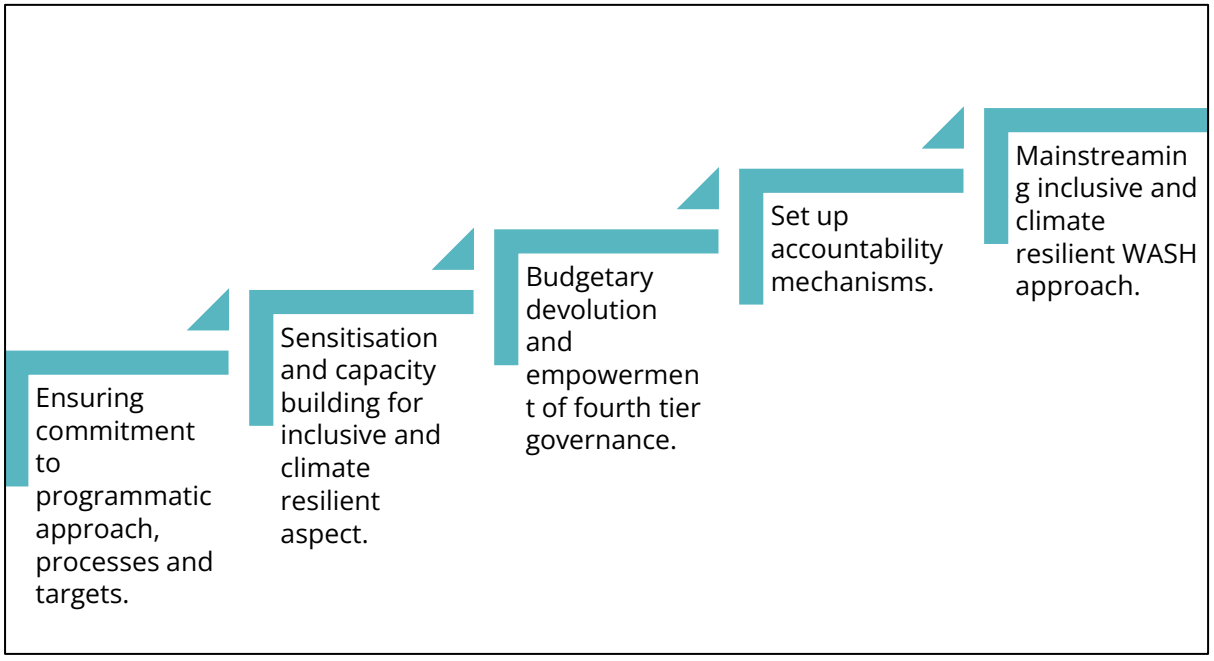
[13] GWP & UNICEF. (2017). *Guidance Note: WASH Climate Resilient Development - Risk assessments for WASH.* Available at https://www.gwp.org/globalassets/global/toolbox/publications/technical-briefs/gwp_unicef_guidance-note-risk-assessments-for-wash.pdf

Revitalising urban water bodies, preventing encroachments, and embracing circular water economy: These principles are imperative for sustainable water management in cities like Bhubaneswar and Jaipur. This involves crafting city water balance plans to ensure equitable water distribution and mitigate flood impacts. Strategic measures like sustainable stormwater drainage, retention basins, and climate-resilient infrastructure should be integrated into urban planning to enhance flood preparedness.

Programmatic Approaches and Capacity Building of the Communities: To enhance policy alignment and programmatic approaches in planning and implementation, a heightened focus on climate, gender, and inclusion aspects is imperative. Prioritising sensitisation and capacity-building initiatives, alongside strengthening coordination and convergence among diverse agencies and stakeholders will contribute to more resilient and inclusive urban WASH governance. At the community level, a meaningful engagement through sensitisation and capacity-building is necessary to address issues of inclusion and climate risks. Providing legitimate roles and voices to community and civic institutions in monitoring and evaluation processes, facilitated by robust feedback mechanisms, will empower these entities for improved governance and service delivery.

Establishing a City-Level Platform for Collaboration: The establishment of a common city-level platform is recommended for engaging all stakeholders to discuss on WASH governance issues. This platform can play a pivotal role in evolving ideas and solutions to the entire governance mechanism. The success of these initiatives ultimately depends on collaborative efforts, informed citizens, and a steadfast commitment to building an equitable and sustainable urban environment.

Thus, the roadmap of overcoming the barriers to strengthen inclusive and climate resilience WASH governance may involve the following aspects:



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Annexure 1 - List of Stakeholders Consulted

KII (Key Informant Interview)			
Name	**Designation**	**Organisation**	**Type of Stakeholder**
Bhubaneswar			
Shri Gyana Ranjan Dash	Addl. Special Relief Commissioner cum MD	Odisha State Disaster Management Authority (OSDMA)	Govt. officials
Smt. Minu Shree Khuntia	Corporator	Bhubaneswar Municipal Corporation	Corporator
Baladeb Hota	Sanitary Inspector	Ward Office, BMC	ULB Official
Mr. Purna Chandra Mohanty	Technical expert Water	WaterAid, Bhubaneswar	NGO
Dasharathi Das	Coordinator	Jiban Bikash, Bhubaneswar	NGO
Mr. Sunil Behera	Ward Officer -43	Ward office at Jatri Niwas, Bhubaneswar	ULB Official
Mr. Paralaya Kumar Biswal	Sanitary Inspector	Wealth Centre -Ward no-19, Bhubaneswar	ULB Officials
Jaipur			
Mr. Mukesh Kumar Mund	Deputy Commissioner, Health	Jaipur Municipal Corporation, Heritage	Govt. Official
Mr. Atul Sharma	Deputy Commissioner	JMC, Heritage	Govt. Official
Mr. Satish Jain	Director	Water and Sanitation Support Organisation (WSSO), Rajasthan	Govt. Official
Mr. Rushabh Hemani	State WASH Expert	United Nations International Children's Emergency Fund (UNICEF), Rajasthan	UN Agency
Ms. Mukta	State Head	UN Women	UN Agency
Mr. Satyanarayana Valmiki	Service Provider	Municipal Corporation Jaipur	Service Provider
Mr. Kamal Singh	Safai Mitra-Sanitation Worker	Jaipur Municipal Corporation	ULB Worker
Mr. Yogesh Jangid	Assistant Engineer- AEN	Public Health Engineering Department (PHED), Brahmapuri, Jaipur, Rajasthan	Govt. Official

Annexure 2 - List of FGDs Conducted

Bhubaneswar
Pandakudia Sahi / Ward no: 22, Bhubaneswar
Birsha Munda Slum Ward No 30, Bhubaneswar
Balitola Sahi / Ward no: 38, Bhubaneswar
Bharatpur Cluster 6 /Ward No 22, Bhubaneswar
Ward Core Committee, Ward 5 (Corporator, BMC Supervisor, Representative of Feedback Foundation, Swachh Sathi, CFAR Representative, Sanitary Inspector, Jal Sathi)
Jaipur
Atma Nirbhar Shashakt Jeevan, CBO - person with disability
Manisha SHG
Shanti SHG
Nai Bhor, CBO, Sexual Gender Minority
Sanitation Sub Committee (Old Settlement)
Slum Development Committee

Annexure 3 – Review of National-Level Policies

National Level Influencing Policies	Salient features	Relevance to Climate Resilient WASH (CRW)	Limitations
Swachh Bharat Mission (Urban) (SBM-Urban), 2014. **SBM-Urban 2.0, 2019.**	Launched in 2014, this flagship programme by the Government of India focuses on achieving universal sanitation coverage and eliminating open defecation. It involves constructing individual household toilets and community toilet complexes in urban areas, including slums, to improve access to sanitation facilities. The SBM 2.0 focuses on garbage-free cities by improving solid and liquid waste management, and treatment and reuse of wastewater (now termed used water).	Systematic and scientific waste management reduces GHG emissions. Properly planned and designed waste management infrastructure increases resilience against climatic shocks and reduces health hazards.	Many ULBs are not able to capitalise on provisions of this scheme due to limited capacity in planning, designing and implementing robust waste management systems. Behavioural change aspect is difficult to ensure in short-term target-based interventions.
Atal Mission for Rejuvenation and Urban Transformation (AMRUT), 2015. **AMRUT 2.0, 2021.**	Aims to improve urban infrastructure, including water supply and sanitation services in 500 cities with more than one lakh population. Projects are undertaken to upgrade water supply systems and construct sewerage networks in cities, which can benefit slum areas as well.	Robust water and sanitation infrastructure increases resilience against climatic shocks and reduces health hazards.	Capacity constraints of ULBs result from delays and inefficiencies in projects. Land acquisition and tenurial issues, particularly in slum areas, complicate the implementation of infrastructure projects, and equitable distribution of services may be compromised.

Jal Jeevan Mission – Urban (JJM-U), 2019.	Jal Jeevan Mission - Urban aims to create universal coverage of water supply in all 4,378 statutory towns as well as sewage management in 500 AMRUT cities. Includes rejuvenation of the water bodies, and promotes a circular economy of water through the development of the city water balance plan in each city. Emphasis on technology, quality monitoring and private partnership.	Provisions of JJM can be leveraged for planning and executing climate smart designs for conservation and management of water resources, water supply and WASH infrastructure.	Challenges in community ownership. Lack of resources with ULBs for operation and maintenance of new infrastructure.
National Urban Sanitation Policy (NUSP), 2008.	This policy was formulated in 2008 to promote sanitation and hygiene practices in urban areas, including slums. It emphasises creating an enabling environment for improving sanitation, public awareness campaigns, and encouraging community participation in sanitation initiatives.	Provisions of NUSP can be leveraged by integrating the climate resilience aspect in planning, designing WASH infrastructure, capacity building on CRW and water management practices, and promoting research and innovation.	Does not address climate change explicitly. Coordination between various government departments and stakeholders involved in sanitation projects is lacking, leading to delays and inefficiencies.
Smart Cities Mission, 2015.	Launched in 2015, this mission focuses on transforming select cities into smart cities with improved infrastructure and quality of life. Water supply	Projects integrate climate resilient designs, Energy efficiency, Green and Blue Infrastructure	Many ULBs struggle to prepare DRRs due to capacity constraints. Coordination with multiple departments becomes difficult.

	and sanitation are key components of the Smart Cities Mission, and efforts are made to address these issues in slums as well.	planning and Disaster risk reduction aspects.	
Pradhan Mantri Awas Yojana (PMAY-Urban), 2015.	This affordable housing scheme, launched in 2015, aims to provide "Housing for All." One of the components of this programme is the provision of basic infrastructure services, including water supply, sanitation, and solid waste management, in slum areas and informal settlements.	Shelter with WASH facilities reduces climate-induced shocks and stresses and reduces vulnerability.	Difficulties in beneficiary identification, title and tenure issues, and inadequate participation of the private sector.
Integrated Housing and Slum Development Programme (IHSDP), 2005.	Implemented by the Ministry of Housing and Urban Affairs, this programme aims to improve the living conditions of slum dwellers by providing basic amenities, including water supply and sanitation facilities.		Difficulty in the coordination of different departments and agencies.
National Action Plan for Climate Change (NAPCC), 2008.	Launched in 2008, NAPCC provides a comprehensive policy framework that outlines the country's strategies and initiatives to address the challenges posed by climate change. It includes aspects of policy integration, community participation, research and development, capacity building, international	Includes components of National Water Mission, climate-resilient infrastructure, Disaster Risk Reduction, Green initiatives and sustainable urban habitat mission.	Limited implementation, coordination challenges, funding constraints, policy fragmentation, and limited focus on adaptation.

	cooperation, climate finance and vulnerability reduction. It also includes eight national missions.		
National Action for Mechanised Sanitation Ecosystem (NAMASTE), 2007.	**Union Budget 2023-2024** has allocated nearly **Rs 100 crore for the National Action for Mechanised Sanitation Ecosystem. (NAMASTE)** which aims to end unsafe sewer, septic tank cleaning practices, empower sanitation workers, increase awareness, and promote hiring skilled workers.	Does not address climate change explicitly.	Does not address climate change explicitly.

Annexure 4 – Review of Bhubaneswar-specific Policies

Influencing Policies in Odisha	Salient features	Relevance to Climate Resilient WASH	Limitations
JAGA Mission	This ambitious initiative focuses on transforming slums in urban areas of Odisha into liveable habitats. The mission aims to provide land rights to slum dwellers and improve infrastructure, including water supply and sanitation facilities.	Provisions of JAGA Mission can be leveraged by integrating climate resilience aspect in planning, designing of WASH infrastructure and management practices.	Difficulties in identification of beneficiaries for (ensuring equity), ensuring community ownership, title and tenurial issues).

Biju Pucca Ghar Yojana (BPGY)	While primarily a housing scheme, BPGY also includes provisions for improving water supply and sanitation facilities in rural and urban areas of Odisha.	Relevant to climate-resilient WASH practices by integrating climate-resilient design features, water supply and sanitation infrastructure, disaster preparedness measures, and community engagement.	
Urban Water Supply and Sanitation (UWSS) Programme	This programme focuses on providing adequate and safe drinking water and improved sanitation facilities in urban areas, including slums, in Odisha.	Integrating climate-resilient practices into its projects enhances the sustainability and effectiveness of water supply and sanitation services in urban areas.	Difficult to ensure equitable access to services, difficulty in monitoring quality of works and performance of services.
Odisha State Action Plan for Climate Change	Includes Odisha specific aspects of vulnerability assessment, sectoral focus, mitigation and adaptation measures and climate-resilient infrastructure along with climate financing aspects.	Guides pioneering in climate finance policy in Odisha. DRR, coastal zone management and green ecosystem are important aspects.	Building expertise and capacity at all levels is challenging. Ensuring equitable impact is also challenging.
The Odisha Urban Sanitation Strategy-2017	Includes strategy on cost recovery, offering end-to-end sanitation services, and encouraging reuse of resources. Addressing liquid waste management and providing fecal sludge and septage management services in the sanitation chain.	Useful for monitoring approach and processes adopted for safe and equitable sanitation services.	Relies on supply-driven methods, and there is a need to make it more demand-driven.

	Ensuring equitable access and safety for vulnerable and underserved populations, raising awareness, defining institutional roles and responsibilities, and enhancing capacity building.		
Odisha Septage Management Guideline	Standards and operating procedures for Septage Management.	Useful to monitor fecal sludge management and septage in informal settlements.	
Mukhya Mantri Karma Tatpar Abhiyan (MUKTA)	Addresses Rainwater Harvesting Structure, Water Harvesting structure in the open space at the ward level.	Useful for monitoring flood and deluge hazard and risks in informal settlements.	Only rainwater harvesting approach may be applicable to climate resilience.
Smart City and Sanitation in Odisha	The major focus is on access to clean water and proper sanitation for all. This includes waste collection, recycling, and sewage management. They are also trying to make public toilets more accessible and eliminate open defecation.	Useful for advocacy to enhance sanitation infrastructure and services in informal settlements.	

Annexure 5 – Review of Jaipur-specific Policies

Influencing Policies	Salient features	Relevance to Climate Resilient WASH (CRW)	Limitations
Mukhyamantri Shahari Jan Kalyan Yojana (MSJKY)	This scheme, launched by the Government of Rajasthan, aims to improve the living conditions of the urban poor, including those residing in slums. Under this programme, various infrastructure development projects are undertaken, including water supply and sanitation facilities.	Provisions of MSJKY can be leveraged by integrating climate resilience aspect in planning, designing of WASH infrastructure, and capacity building on CRW.	Difficulties in identification of beneficiaries (ensuring equity), ensuring community ownership, coordination between different departments, and quality and sustainability issues of project
Chief Minister's Urban Infrastructure Development Scheme (CMUIDS)	This scheme focuses on enhancing urban infrastructure, including water supply, sewerage, and sanitation facilities, in cities and towns of Rajasthan.	Provisions of CMUIDS can be leveraged by integrating climate resilience aspect in planning, designing of WASH infrastructure.	Limited funding, Cumbersome Bureaucratic Procedures and Land Acquisition and Tenure Issues
Rajasthan State Action Plan for Climate Change	Includes Rajasthan specific aspects of Vulnerability Assessment. Sectoral Focus, Mitigation and Adaptation Measures, Climate-Resilient Infrastructure, Water Resource Management	Its broader objectives and strategies can contribute to enhancing the resilience of WASH services to climate change impacts, specifically in Water Resource Management, Rainwater Harvesting, Water Quality Management, DRR.	Limited Implementation, Coordination Challenges, Funding Constraints, Limited focus on Adaptation.

The State Sewerage and Wastewater Policy 2016	Includes guidelines for treatment of wastewater and its optimum reuse. Outlines roles of municipal local bodies and enumerates various sources of funding for sewage projects, pricing, financing and investment. Enumerates the standards, regulations and quality assurance by legislation and institutional arrangements and emphasises on public awareness, human resource development and research and development by establishing "State Water and Wastewater Training Center" at state level.	May be useful for monitoring status infrastructure and services of wastewater collection, treatment and reuse.	
Rajasthan Solid Waste Management Policy and Strategy, 2019	Includes 5R approach (Reduce, Reuse, Recycle, Recover and Remove) by imparting thrust on collection, segregation, improving data and analytics, minimising environmental impacts, creating market for recyclable products and aiming towards sustainable development.	May be useful for monitoring solid waste management.	
Jaipur Septage Management Guidelines	Provisions of fecal sludge management and septage management.	May be useful for monitoring fecal sludge management in informal settlements.	

Annexure 6: Governance and Civic Institutions in Bhubaneswar

A.1. Governance aspect			
Stakeholder	**Status / Role**	**Engagement aspects**	**Influence**
The Mayor	Directly elected by the citizens with Councillors.	Climate resilient WASH related Policy and programme decisions	High
The Deputy Mayor	Elected by the Councillors		Moderate
Corporation standing committees	ULB level decision maker bodies at corporation level	Programme and corporation decision	High
Bhubaneswar Municipal Corporation (BMC) Commissioner Additional Commissioner Deputy Commissioner (MUKTA HEALTH/SANITATION PR and Communication) Deputy Commissioner (Housing Slum Development /ODA court / ABC)	Primary agency for city governance Main Programmes include ▪ Rajiv Awaas Yojana ▪ PMAY ▪ Urban Poverty Alleviation ▪ Go Green Campaign ▪ NUHM ▪ AMRUT ▪ Swachchh Bhubaneswar Abhiyan ▪ FSSM	Planning, implementation, grievance redressal, coordination with community representatives	High
Departments under BMC ▪ Disaster Management	▪ Disaster Management ▪ Health and Sanitation ▪ Finance ▪ Environment ▪ Land and Assets	Climate risks and mitigation Climate finance Health and sanitation	High

▪ Health and Sanitation ▪ Finance ▪ Environment ▪ Land and Assets		tenurial issues	
Bhubaneswar Development Authority (BDA)	Responsible for all planning functions like Master plan, Zonal Plan	Planning and tenure related issues	High
Standing Committee Slum Settlement Additional	Seven members in committee	Implementation decisions on tenure of slums	Moderate
A2. Civic Agencies under Municipal Structure (Fourth tier Governance)			
Stakeholder	**Status /Role**	**Engagement Aspects**	**Influence**
Councillor	Each ward has an elected councillor, 67 councillors.	Planning, Outreach Grievance redressal Bridge between ULB and Community	High
Ward Committee	Headed by the Ward Councillors or one representative of Mayor, and one officer. *(In practice SHG Members, Youth Senior citizens, SDA, ICDS workers, Residential Welfare Associations etc. should be part of ward committee but they are not part of it)*	Outreach Grievance redressal Bridge between ULB and Community	High
Slum Dweller Association (SDA)	SDA is fourth tier of governance. Each Slum has an SDA with 50% women members.	Development Planning, mobilisation and implementation	High

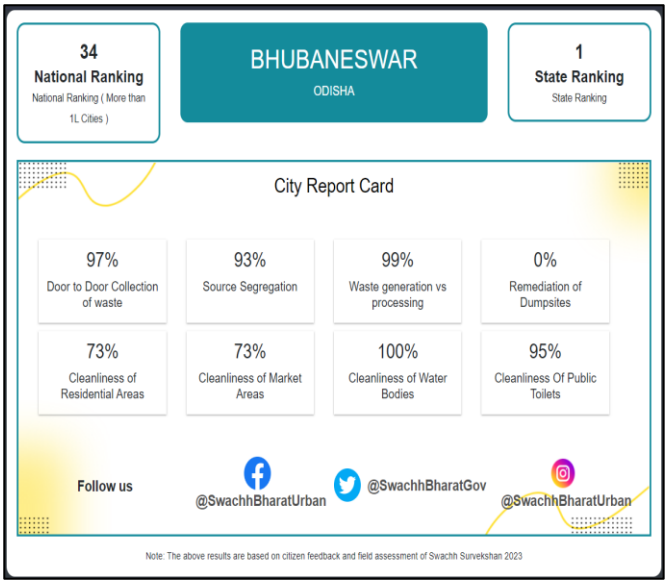
Annexure 7: Governance and Civic Institutions in Bhubaneswar

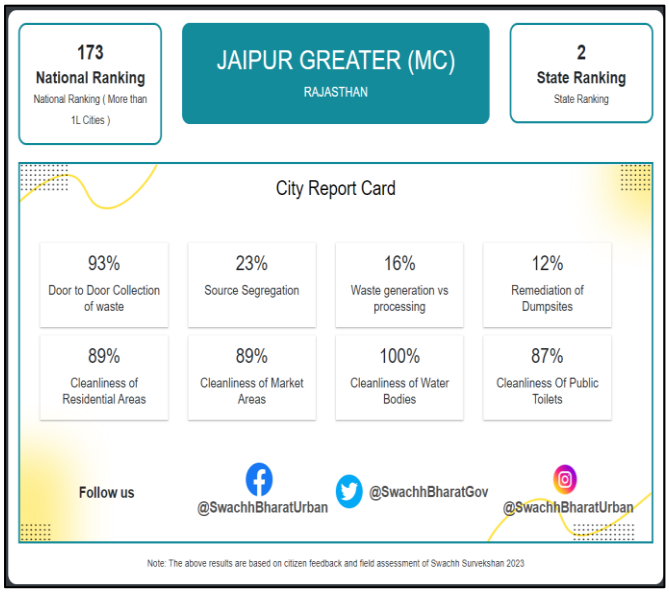
B.1 Governance agencies			
Stakeholder	**Status /Role**	**Engagement Aspects**	**Influence**
Mayor (JMC Greater) Mayor (JMC Heritage)	Directly elected by the citizens with Councillors.	Climate resilient WASH related policy and programme decisions	High
Jaipur Municipal Corporation (Greater) Jaipur Municipal Corporation (Heritage) ▪ Commissioner ▪ Deputy Commissioner – Health ▪ Deputy Commissioner – Slum development ▪ Superintendent Engineer – Nodal Person Swachh Bharat Mission	Primary agency for city governance There are 100 wards in the Heritage Jaipur divided into 5 zones and 100 Wards There are 150 wards in the Greater Jaipur divided into 5 zones and 150 Wards	Planning, implementation, grievance redressal, coordination with community representatives	High
Jaipur Development Authority	Responsible for all planning functions like Master plan, Zonal Plan	Planning and tenure related issues	High
Standing Committees • Slum Development Committee • Health & sanitation Committee • Building & Works	Decisions on implementation of various projects	WASH services and infrastructure Basic amenities in settlements Climate Resilient WASH activities	Moderate

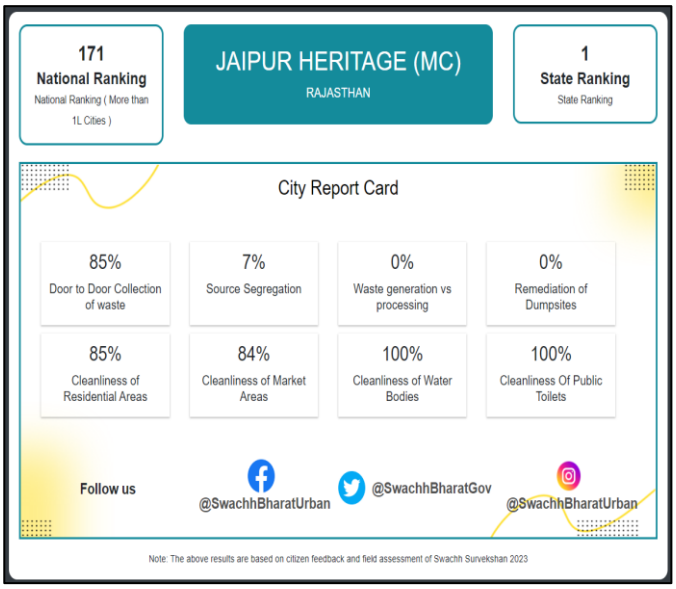
Committee • Anti-Encroachment and Vigilance Committee • Special Scheme and Environment committee • Finance Committee		Tenure related issues Climate Finance	
Civic Agencies under Municipal Structure (fourth tier governance)			
Agencies/ Department	**Status /Role**	**Engagement Aspects**	**Influence**
Councillor and Ward Committee	150 Councillors in Jaipur Greater 100 Councillors in Jaipur Heritage	Planning, Outreach Grievance redressal Bridge between ULB and Community	High
Slum Dweller Association (SDA)	211 SDAs	Development Planning, mobilisation and implementation	High

Annexure 8: Swachh Survekshan Ranking, 2023

National and State ranking of Municipal Corporations of Bhubaneswar, Jaipur Greater, and Jaipur Heritage.







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