**City Audit Assessment Study**

# Understanding Varanasi City from the lens of Disability Inclusion

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# List of Abbreviations

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| **ABD** | Area Based Development |
| **AI** | Assessment Indicators |
| **AIC** | Atal Incubation Centres |
| **AMRUT** | Atal Mission for Rejuvenation and Urban Transformation |
| **ASHA** | Accredited Social Health Activist |
| **ASI** | Archaeological Survey of India |
| **AT** | Assistive Technology |
| **ATM** | Automated Teller Machine |
| **BASIIC** | Building Accessible, Safe and Inclusive Indian Cities |
| **BHU** | Banaras Hindu University |
| **CBID** | Community Based Inclusive Development |
| **CCTV** | Closed- Circuit Television |
| **CEO** | Chief Executive Official |
| **CLAF** | City Level Advisory Forum |
| **CPWD** | Central Public Works Department |
| **DEPwD** | Department of Empowerment of Persons with Disabilities |
| **DIAUD**- | Disability-Inclusive and Accessible Urban Development |
| **DLW** | Diesel Locomotive Works |
| **DPO** | Disability People's Organisation |
| **DPR** | Detailed Progress Report |
| **EPC** | Engineering, Procurement and Construction |
| **ESRI** | Environmental Systems Research Institute |
| **FCDO** | Foreign, Commonwealth Development Office |
| **FFL** | Finished Floor Level |
| **GDIH** | Global Disability Innovation Hub |
| **GoI** | Government of India |
| **HRIDAY** | National Heritage City Development and Augmentation Yojana |
| **ICCC** | Integrated Control and Command Centre |
| **ICT** | Information and Communication Technology |
| **IIMT** | Institute of Integrated Management Technology |
| **IIT** | Indian Institute of Technology |

| | |
|---|---|
| **ILO** | International Labour Organisation |
| **ISO** | International Organization for Standardisation |
| **JICA** | Japan International Cooperation Agency |
| **KPA** | Key Performance Area |
| **MoHUA** | Ministry of Housing & Urban Affairs |
| **MoSJE** | Ministry of Social Justice & Empowerment |
| **NBC** | National Building Code |
| **NIUA** | National Institute of Urban Affairs |
| **NSSO** | National Sample Survey Office |
| **PMAY-U** | Pradhan Mantri Awas Yojana- Urban |
| **PRM** | Person with Reduced Mobility |
| **PwD** | Person with Disabilities |
| **RPwD**- | Rights of Persons with Disability |
| **SBM-U** | Swachh Bharat Mission- Urban |
| **SCM** | Smart City Mission |
| **SDG** | Sustainable Development Goal |
| **SME** | Subject Matter Expert |
| **SOP** | Standard Operating Procedure |
| **STP** | Sewage Treatment Plant |
| **SWM** | Solid Waste Management |
| **TGSI** | Tactile Ground Surface Indicator |
| **UBS** | Urban Bus Specification |
| **UDID** | Unique Disability Identity |
| **UK** | United Kingdom |
| **UNCRD** | United Nations Centre for Regional Development |
| **URDPFI** | Urban and Regional Development Plans Formulation and Implementation Guidelines |
| **UTTIPEC** | Unified Traffic and Transportation Infrastructure (Planning & Engineering) Centre |
| **VDA** | Varanasi Development Authority |
| **VNN** | Varanasi Nagar Nigam |
| **VSCL** | Varanasi Smart City Limited |
| **WASH** | Water, Sanitation and Hygiene |
| **WC** | Water Closet |

## Message by CEO, VSCL

Varanasi, also known as Kashi or Banaras, is renowned as India's "Cultural Capital" and "Heritage City." With a history reaching back to 1000 BC, it is one of the world's oldest living cities. The name "Kashi" for most Indians incites a sense of spirituality and tranquility towards something ethereal. The city has a rich cultural heritage, tradition and history that often connotes the journey that India has made through various kingdoms and leaders and has stood as a shining beacon through ages for all. Over the years, the city has organically evolved from an old city to a thriving urban centre. Due to geographical expansion, Kashi has experienced a significant influx from peri-urban and rural areas of the state. Such a trend presents a bouquet of opportunities and challenges that weren't previously considered or prioritized. One among them would be the emphasis on creating "**Cities for all**", which in essence would entail creating scope for equal access to services and infrastructure for all including persons with disabilities, elderly, women, children, etc.

Statistically it is estimated that nearly 2.21% of the country's population is living with some form of disability. While percentages don't always paint a fair picture, it would not be farfetched to say that the actual numbers; including transient and old age related disabilities, will be significantly higher. Unlike other states, Uttar Pradesh is home to the highest number of persons with disabilities. At a district level, Varanasi is one of the top ten districts out of the seventy-one districts (as per census 2011) that has the highest number of people with disabilities.

This unequivocally calls for adopting a holistic and multidimensional approach towards building accessible, safe and inclusive cities for all. National missions i.e. Smart Cities Mission have laid the right kind of foundation to ensure equitable access to basic service and infrastructure for all. With a vision and motivation to build green, sustainable, accessible, safe, technology-driven and digitally accessible cities, missions/schemes are committed to focusing on achieving inclusive and sustainable urban development. Moreover, the "Rights of Persons with Disabilities Act, 2016" and the flagship campaign of "Accessible India Campaign " under Ministry of Social Justice & Empowerment (MoSJE) further highlight the need and efforts made by cities to ensure accessible built environment, access to public transport and promote digital information.

## Varanasi Smart City Limited (VSCL)

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While urban development is often seen as infrastructural progress there is much work that needs to be done to bring reforms in our policies to mainstream disability inclusion into every single aspect of city development. It is a matter of pride to be leading Varanasi Municipal Corporation and its Initiatives, which was also deemed as one of the best performing cities in the country. More so because my team at Varanasi Smart City limited (VSCL) including those at the Department of Empowerment of Persons with Disabilities (DEPwD) and other city stakeholders have worked tirelessly to achieve the vision of "Sugamya Kashi" to promote the overall development and empowerment of persons with disabilities in the city. The remarkable efforts of state, district, and city level administration has played an important role in the socio-economic upliftment of the community at large. I hope such efforts will continue to push forward to the vision of universal accessibility and inclusion for all.

On that note, I would like to particularly mention our partnership with the **National Institute of Urban Affairs** (NIUA) under the ambitious **Building Accessible Safe Inclusive Indian Cities** (BASIIC) Programme. The initiatives under this programme have been greatly beneficial esp. through its technical assistance for juxtaposing the lens of inclusion to our ongoing infrastructure interventions. The team from NIUA has been pivotal in supporting key institutional and policy reforms that promote inclusion and universal access for persons with disabilities. The collaborative research study of '**city audit and assessment study**' in Varanasi implemented by NIUA in collaboration with Global Disability Innovation Hub (Lonodn based academic research centre) is one such initiative. The study has helped us identify tangible areas of opportunity associated with disability in an urban environment and devise innovative solutions and recommendations. The research engagement has generated evidence based recommendations which would serve as an instrument for bringing policy reform, resource mobilisation, investment prioritisation and management of urban services/infrastructure in an inclusive and sustainable manner.

I congratulate the NIUA team for successfully completing the research study. I appreciate the efforts undertaken to understand the unique character and complexities of the city while developing contextualised solutions to achieve the vision of 'Sugamya Kashi'. I look forward to our continued partnership which would also set examples to replicate and adopt the key learnings from Varanasi in other Indian cities.

**Pranay Singh (IAS)**
**Municipal Commissioner VNN,**
**& Chief Executive Officer, VSCL**

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# Foreword (GDI Hub)

By 2050, 66% of the world's population will live in cities; 90% of which will be in low-middle-income settings. This growth is not always accompanied by equitable access to infrastructure and services, leading to 'urban inequality' or an 'urban divide'. UN-Habitat estimates that in 75% of cities people have less access to basic services, quality public spaces, affordable housing and livelihood opportunities now than two decades ago and that spatial inequality like this exacerbates social exclusion.

Cities in low-resource settings are central to the Habitat III, New Urban Agenda, the United Nations 2030 Agenda and Sustainable Development Goal 11 to 'Make cities and human settlements inclusive, safe, resilient and sustainable'. However, inclusive cities are often discussed in their broadest terms and explicit attention to disability-inclusive cities remains limited within policy agendas. The 2018 Global Disability Summit held in the United Kingdom was a pivotal event where inclusive infrastructure was highlighted as one of six spotlight issues and commitments to embedding disability inclusion in the infrastructure sector were made.

India is urbanising and by 2050, 58% of India's population will reside in cities. India's progress on disability inclusion has been substantial in recent years, from the Accessible India campaign launched in 2015 to the updated Rights of Persons with Disabilities Act in 2016. India's Smart City Mission aims to enhance economic growth and improve the quality of life in 100 cities across India, including Varanasi.

The city audit assessment study in Varanasi is a collaborative effort of the UK Foreign Commonwealth and Development Office (FCDO) aid-funded 'AT2030: Life-changing assistive technology for all' programme led by the Global Disability Innovation Hub (GDI Hub) and the BASIIC Programme led by the National Institute of Urban Affairs (NIUA). Uttar Pradesh state is home to 15% of India's disabled population, suggesting that research on its largest city, Varanasi, has the potential to have a great impact and provide an example for the rest of the country.

The collective research undertaken in Varanasi has supported a better understanding of the current state of inclusive urban design and environments in the city through engagement with policy, industry and community stakeholders. The evidence-based research has the potential to influence existing policy and the institutional framework, enhancing the technical capacities of the city stakeholders for promoting inclusion and universal access for persons with disabilities in the urban environment. The evidence-based recommendations provided can help pave the way towards a more inclusive and accessible Varanasi.

I believe that the partnership between VSCL, NIUA, and GDI Hub will continue and the shared learnings from our work in Varanasi will help bridge the development divide to ensure, 'No One is Left Behind'.

Iain McKinnon
Director of Inclusive Design, GDI Hub

# Preface

Urban living is challenging in India because of the development divide among the vulnerable/marginalised sections including Persons with disabilities, elderly, women, children, urban poor and transgenders amongst others. This stands truer for a city like Varanasi, with its historic and cultural heritage, and an intricate urban ecosystem in place. The unequal access to basic services and infrastructure have become more evident with the onset of the unprecedented times of Covid-19.

A total of 28.6 million (2.21 per cent) people were counted as differently-abled in India out of which 8 million reside in urban areas. By 2021, 470 million people are projected to live in urban India, comprising 34.5 per cent of the total population. Lack of data and research-based evidence creates a significant barrier for policy and decision-makers, which in turn influence the ability of persons with disabilities to access equal rights to basic urban services. Uttar Pradesh State being the state with the highest prevalence of Persons with Disabilities population, there is a dire need to bring policy/reforms to mainstream disability inclusion across sector specific interventions, identify the barriers associated with disability and to improve the access to basic services and infrastructure in Varanasi. The city has immense potential to promote inclusive tourism and develop Disability-Inclusive infrastructure. This would also lead to enhance the untapped tourism potential and promote economic growth for the entire region.

The city audit assessment study conducted in Varanasi is the collaborative research of Global Disability Innovation Hub and National Institute of Urban Affairs with support from Varanasi Smart City Limited. The key findings from the study focussed on the need for adoption of multidimensional approach towards inclusion - spatial, social, economic and digital. This has also assisted to identify the key barriers and challenges associated with Persons with Disabilities living in the city. The outcome from the site specific pilot audits would be used for replication and adoption of the audit process across smart cities (with diverse demographic structure and urban complexities). The recommendations highlight the scope of improvement/opportunities for implementation of inclusive policies or provisions at city level and identify best practices for replication at pilot scale or pan city level. It would also serve as an instrument for bringing policy reform, resource mobilisation, investment prioritisation and creating equitable provision for urban services and infrastructure.

The collaborative and participatory approach of the study has assisted in successful completion of the study. As an extended part of the audit research, a need based action plan for site specific infrastructure would be developed for phase wise implementation of the prioritised recommendations. The action plan would also highlight the time frame for implementation and safeguarding of funding/resource allocation either from a convergence mechanism from state/centre government funds.

The research has been conducted by the efforts of BASIIC and GDIH team, but most of it is an outcome of the efforts being undertaken by Ms. Prabha Roy and Ms. Mikaela Patrick. The members have played a crucial role in conceptualising the framework of the study, devising methodology for data collection, collating -analysing data, generating evidence resource and recommendations for adoption and replicating in the city. I am hopeful that our engagement would set aside the path for future collaborations and activities. The dissemination of key learnings from the research study would be beneficial for other cities and global/national partners to resonate the tenets of accessibility, inclusion and safety across all spheres of urban development.

**Mr. Hitesh Vaidya**
**Director, NIUA**

# Acknowledgement

# Executive Summary

It is estimated that nearly 15% of the global population experience some form of disability with the disability rate more prevalent in developing countries. Around 25% of India's population need universal accessibility to live independently and with dignity. Rapid urbanisation has further widened the development divide causing urban poverty with unequal access to basic services/infrastructure which acts as a roadblock to promoting equitable and sustainable growth in Indian cities. Globally, cities are taking innovative measures to mainstream disability inclusion within their development agenda based on a participatory and collaborative model. Cities need to be planned and designed based on an inclusive approach to ensure universal access to urban services and infrastructure and to bridge the development divide so that 'No One is Left Behind'. There is a need to view accessibility as an investment in public goods that contribute towards the larger goal of ensuring resilient, sustainable and inclusive urban development. There has been tremendous progress in India under the ongoing missions/schemes to achieve the targets of the sustainable development goals and the new urban agenda. The approach to inclusive growth has been a key concern due to the rapid urbanization process in the last decade. The ongoing missions such as Smart Cities Missions, AMRUT, SBM, etc have laid out necessary mandates at the central/state/city level to promote inclusive, resilient and sustainable development. This would also play a crucial role in mitigating the issues of urban poverty, illiteracy, unemployment and include the vulnerable/marginalised sections of the society in the development process.

Under the BASIIC Programme at NIUA, a city audit and assessment study to understand the state of disability inclusion in Varanasi was conducted between Nov 2020 – Mar 2021. The research study captures and maps the existing status of city infrastructure and services from the perspective of disability inclusion. The study has been jointly conceptualised, designed, and implemented with the Global Disability Innovation Hub (GDI Hub), which is a UK-based academic research centre and community interest company based in London, United Kingdom. GDI Hub is conducting a series of global case studies on inclusive cities and infrastructure, funded by the Foreign Commonwealth and Development office (FCDO) of the UK government.

The geography of the study focuses on the state of Uttar Pradesh owing to a few critical deterministic factors i.e., it is home to the highest number of persons with disabilities and is also the most populous state in India. Varanasi district is one of the top ten districts out of the seventy-one districts (as per census 2011) that has the highest number of persons with disabilities.  In the last few years, Varanasi has made tremendous progress under the ongoing missions of GoI such as SCM, AMRUT, SBM, HRIDAY, etc. The unique urban characteristics and organic pattern of development in the city facilitated in understanding the existing barriers and challenges associated with inaccessibility,  particularly with regards to heritage, culture and tourism. The collaborative efforts of the research study would further help the city in championing the narrative of disability inclusion through support in research, advocacy, policy interventions and building capacities of the stakeholders.

The research has helped in understanding the legislative/policy and governance setup of the city for the adoption of an integrated approach for inclusive development, especially focussing on the needs of persons with disabilities irrespective of age, ability and gender. The study further captures the process of conceptualising and designing the framework for conducting an audit of urban infrastructure and services specific to Varanasi city. It also explains the use of qualitative and quantitative approaches adopted for the survey and other relevant data collection processes. The participatory and collaborative approach of the study has assisted in baselining the  the existing state of disability inclusion in the city, including mapping various inclusive efforts (policy/project interventions) undertaken at the city level.

Under the study, 18 interviews were conducted with persons with disabilities to understand and  map the lived experience of persons with disabilities in the built environment. This further assisted in identifying the key barriers and opportunities for creating a more inclusive urban environment in Varanasi. The qualitative assessment exercise was designed based on participatory and collaborative research.  It involved discussion with diverse

city stakeholders (including 11 city officials e.g., Government officials, decision-makers, urban practitioners, policymakers, etc.). A co-design workshop was also conducted to capture the experiences and everyday life of persons with disabilities living in Varanasi by engaging them in participatory design activities. The workshop also intended to map innovative ideas in improving the city from the perspective of accessibility, inclusivity and safety aspects. A city stakeholders' consultation was conducted to create a collaborative and participatory roadmap towards the vision of 'Sugamya Kashi.'

The site specific pilot audits captured the performance of urban development initiatives with respect to accessibility benchmarks/standards and helped to assess the compliance with policies/guidelines/development norms. The key learnings from the pilot audit exercise have assisted in evaluating the major lacunas in the city planning and development process and have identified certain action areas/opportunities for improvement. The key insights from the above-listed activities reflect the social, economic, and spatial characteristics of the urban environment that support and improve the quality of life of Persons with Disabilities (including children, women and elderly persons). The respondents highlighted the need for an accessible public transport system, making the ghats and heritage sites accessible for all, provision for accessible WASH infrastructure and improve access to government services and information. Moreover, the mapping process also highlighted the importance of mitigating social and attitudinal barriers associated with disabilities through sensitisation and awareness efforts.

The findings have been used to develop a set of recommendations to improve the access to city infrastructure and services from the perspective of accessibility, inclusivity and safety. The sector-specific recommendations further would assist the stakeholders in devising phase-wise action plans for adoption and implementation. It could also serve as a roadmap for the city stakeholders to integrate the recommendations within the city infrastructure development plan.

The report highlights the importance of adopting institutional and policy level changes which would act as key enablers for the adoption and replication of the recommendations at the grass-root level. There is the need to diversify and adopt a holistic and multidimensional approach for inclusive development in the city to achieve spatial, social, economic and digital inclusion. A collaborative, integrated and participatory approach to urban development would be quintessential to improve the service delivery and governance mechanism system in the cities. The dissemination of the key learnings from the research study across 100 smart cities and global/national partners would facilitate them with stepwise guidance to replicate the audit exercise at pilot/pan city level and mainstream the narrative of disability inclusion based on the policy, people and practice approach.

# Introduction

Cities with accessible infrastructure and services play a crucial role in mitigating the barriers/obstacles that persons with disabilities encounter in their everyday lives. In the current context of rapid urbanisation, the deep-rooted issues/challenges associated with urban inequality, urban poverty, lack of access to basic services/infrastructure have further widened the development divide  and thus impacting the standard/quality of urban-living for persons with disabilities.

Currently, 55% of the world's population live in urban areas and is expected to increase to 68% by 2050[1]. One billion people, or 15% of the world's population, experience some form of disability[2]. Whereas, in India, around 3 million persons are 'disabled' which is 2.21% of the total population. While estimates vary, there is growing evidence that persons with disabilities are around 40-80 million, which constitute between 4-8% of India's population (World Bank report). Persons with disabilities also face widespread lack of accessibility of basic services and urban infrastructure and remain excluded from emergency response/resilience programmes. Informational, cultural and attitudinal barriers further widen the exclusion and marginalisation of persons with disabilities in an urban environment.  Building accessible and inclusive urban environment require a holistic approach to mitigate the multi-dimensional barriers associated with disability and to bridge the development divide so that 'No One is Left Behind'. It is imperative for the policymaker, urban planner, designer, economist, sociologist and other stakeholders to understand the intersectionality and prevalent urban barriers faced by persons with disabilities and implement measures to address them.

Accessibility rights, perspectives, and concerns of persons with disabilities need to be further incorporated within the urban development policy frameworks, strategies and policies. There is a need to ensure that cities are planned and designed based on an inclusive approach for claiming equal rights, avail access to opportunities and  urban services (education, health care services,  employment, etc.).  Further, public investments in accessible infrastructure ( public spaces, built environment, public transport, etc.) would also enhance national economic growth through increased productivity and well-being, reducing stigma/discrimination in the workplace and reduced welfare demands[3]. Including Persons with Disabilities in the labour market could also contribute towards a country's Gross Domestic Product by three to seven per cent[4].

The accessibility audit acts as a useful tool to assess the aspects of accessibility in the urban system (infrastructure/services).  The implementation of the city audit research study (piloting of the audit tool) has  assisted in understanding the  current legislation, policy framework, urban initiatives and the on-ground implementation of city's efforts towards disability inclusion.  It also  helped to systematically measure the urban barriers  and serve as an instrument for bringing policy reform, resource mobilisation, investment prioritisation and management of services.  The research study has been implemented by National Institute of Urban Affairs (NIUA) in collaboration with Global Disability Innovation Hub (GDIH) in Varanasi, a city that holds a rich historical, heritage and touristic importance.  Under the Smart City Mission, Varanasi has made tremendous efforts  to create adaptive, inclusive and resilient infrastructure which also assisted to mitigate the impact of COVID-19. The efforts and outcomes of the study would also set as an example for other cities in championing disability inclusion based on the

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[1]*https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html*

[2]*https://www.worldbank.org/en/topic/disability#1*

[3]*Buckup S., The price of exclusion: The economic consequences of excluding people with disabilities from the world of work, Employment Working Paper No. 43, (2009) International Labor Organization.*

[4]*International Labor Organization, Inclusion of people with disabilities in national employment policies (2015)*

narrative of policy, people and practice approach. The inclusive strategy/recommendation for Varanasi also tries to accommodate the rich heritage and urban characteristics of the city with collaborative participation of city stakeholders including communities and citizens.

## 1.1.    The Rationale Behind Conducting the City Audit Assessment Study

Cities are engines of growth, investment and economic opportunities. However, the rapid urbanization trend and unplanned development pattern have failed to consider the unique ways that spatial, socio-economic, behavioural and informational barriers limit the participation of persons with disabilities in an urban environment

The government of India has launched numerous schemes/programmes e.g., Smart Cities Mission, Swachh Bharat Mission, AMRUT, HRIDAY, etc. to promote equitable, sustainable, shared prosperity and development for all while focusing on safety, accessibility and inclusivity aspects of Indian cities. The 'Ease of Living Index launched by the Ministry of Housing and Urban Affairs, GoI in 2018, highlights the need to focus on inclusive development by creating an urban database on parameters such as safety and security, identity and culture, affordable housing, etc. The flagship program 'Accessible India Campaign' or 'Sugmya Bharat Abhiyan' launched by the Hon'ble Prime Minister of India (under the Ministry of Social Justice and Empowerment) in 2015 and later supported by the enactment of the Rights of Persons with Disability (RPwD, Act in 2016), addresses the concerns of inaccessibility related issues in the urban context.

Cities have the potential to drive sustainable and transformative economic development that promotes equality, empowerment and economic inclusion for persons with disabilities. However, disability inclusion is usually not addressed across policy and programme interventions. The audit study was conducted to understand the existing policy/legislative landscape which supports adoption and implementation of disability inclusive approach for urban development.  The study was based on a collaborative and participatory approach which intended to understand the grass root level issues associated with disability, challenges faced at implementation level and build a roadmap for 'Sugmaya Kashi' or inclusive Varanasi.  The key outcomes from the audit study would emphasis on creating an accessible, inclusive and  resilient urban environment by addressing urban inequities through the restructuring of urban functions, systems, and economies with government engagement. This would further complement the efforts of ongoing mission/ schemes at city level to promote sustainable and inclusive development, and improve the overall quality/standard of living of citizens.

## 1.2.    Context of  City Audit Assessment Study

Varanasi Smart City Ltd (VSCL) and the National Institute of Urban Affairs (NIUA) have formalized a partnership through a Memorandum of Understanding under the Building Accessible Safe Inclusive Indian Cities (BASIIC) programme in May 2020. Under the partnership, Technical Assistance and Support Unit (TASU) at NIUA has extended technical assistance to VSCL for their ongoing and proposed pilot projects, facilitated the exchange of knowledge, dissemination of learnings from global/national practices, and supported to take institutional/policy reforms for promoting inclusion and universal access for persons with disabilities in the city environment.

As a research initiative, a city audit and assessment study on Disability Inclusion has been conducted in Varanasi City (being a Partner City under BASIIC Programme). The study focused on understanding the current approach and mapping the city level efforts across urban planning, policy, practices to transform Varanasi City as accessible, safe and inclusive for all.

The study has been conducted in collaboration with the Global Disability Innovation Hub (GDI Hub), a UK-based academic research centre and community interest company. GDI Hub has been conducting a series of global case studies on inclusive cities and infrastructure, funded by the Foreign Commonwealth and Development office (FCDO) of the United Kingdom Government so the findings of these studies will also have global relevance. The case study on Varanasi will join other case studies in Ulaanbaatar, Mongolia; Surakarta, Indonesia; Nairobi, Kenya and Freetown, Sierra Leone.

The qualitative assessment part of the study has been developed by GDI Hub and focuses on two aspects. Firstly, capturing the experiences of persons with disabilities and co-designing solutions. Secondly, building understanding on the current awareness and application of inclusive planning and design approaches among policy and practice stakeholders. The qualitative component of the study has been designed by the BASIIC team

to capture the performance of urban development initiatives (policy and project interventions) through the use of an audit framework. The framework has been developed to measure the performance of pan-city/site-specific initiatives with respect to the accessibility benchmarks/standards and assess their compliance with policies/ guidelines/ development norms across various urban pillars and categories.

The qualitative and quantitative data collected against each assessment indicator would assist in mapping the city's efforts and to further establish whether city-level initiatives are compliant with the existing rights/policies/ guidelines which mandates the integration of the rights and special provisions for Persons with Disabilities. The outcome from the site-specific pilot audits would be used for replication and adoption of the process across smart cities (with diverse demographic structures and urban complexities). The framework offers a series of metrics that can be replicable across different cities and adapt to different contexts supporting inclusive city design that considers the diversity of Indian cities.

# Purpose of the Study

The city-wide audit and assessment study envisioned to map the city's efforts towards disability inclusion. The study also intended to assess the compliance and adoption of disabled-friendly policies/guidelines/development norms, inclusive design and planning principles to promote Disability-Inclusive and Accessible Urban Development (DIAUD) for Varanasi. The key findings from the assessment exercise would aim to assist the city stakeholders in understanding the accessibility gaps at the institutional, policy, program, design, implementation level and monitoring the initiatives for mainstreaming the future development goals to create an accessible, safe and inclusive urban environment for all.

The findings aim to identify the scope of improvement/opportunities for implementation of inclusive policies or provisions at a city level and identify best practices for replication at the pilot-scale or pan-city level. The findings would also assist in the framing of short- and long-term recommendations for city stakeholders to meet the future goal and visions for DIAUD.

It would assist the city stakeholders to compliment the laudable efforts of the Government of India through measuring the outcomes, assessing the current gaps and on-ground realities in the implementation process. In addition, the audit process would also steer the adoption of multi-dimensional, innovative and sustainable approaches aligned with the objectives of the New Urban Agenda and Sustainable Development Goals, particularly Goal 11, to 'Make cities and human settlements inclusive, safe, resilient and sustainable. The study would set forth the path for the city decision-makers/urban leaders, policymakers and urban practitioners to ensure the inclusion of vulnerable and marginalized populations at every aspect of an urban environment.

## 2.1.  Aim and Objectives

The aim of conducting the study was to identify the gaps and barriers in the planning, design and implementation process of DIAUD at the city level. The findings and inferences drawn would assist the city stakeholders in mainstreaming the inclusive policy and project interventions through introducing evidence-based planning and an informed decision-making process.

The broad objectives of the city audit exercise would be defined as follows:

- **Assessment -** Assess the current issues and gaps towards the adoption and implementation of DIAUD.
- **Base-lining -** Generate qualitative and quantitative information to assist the city stakeholders in adopting an evidence-based approach for urban planning and development.
- **Validation -** Assist and improve the city's decision-making process to catalyse actions for improvement.
- **Recommendations -** Framing a road map for ensuring cities are accessible, safe, inclusive, and for all.

## 2.2.    Intended Outcomes

The outcomes of the city study would benefit the cities in improving the access to urban services and infrastructure for all. The broad outcomes could be elaborated as follows:

- **Build a city database** that reflects  diverse demographic dividends, real-time status of the inclusive policy, programme and project level interventions. That is developed in a participatory way including persons with disabilities in the research process.

- **Enhance technical knowledge and capacities** of the city stakeholders to mainstream the adoption and implementation of the inclusive approach for urban planning and development.

- **Improved urban governance and an institutional mechanism** by ensuring accountability, predictability, transparency, and a participatory approach.

- **Enhance city competitiveness**, urban productivity, economic growth and functioning.

- **Strengthen the city's monitoring mechanism** to measure the outcomes of schemes/missions based on the findings of the audit framework.

- **Improve overall quality and standard of living** of the users in an urban environment.

## 2.3.    Limitation of the study

Following limitations were faced during the course of the study:
- Challenges in conducting citizen perception survey for pilot audits due to imposition of lockdown measures in the city.
- Restriction in travelling by the research/data collection team to the city due to Covid-19 restrictions and imposition of lockdown.
- Adaptation of the research and on-site team to the ongoing covid-19 norms and protocols for site visits and data collection process.
- Challenges of the research team to work on virtual mode.
- Challenges in reaching out to persons with disabilities due to their limited access to technology and particularly due to restrictions imposed in the city.
- Acclimatization of the participants towards the use of digital tools for participating in the interviews and consultative process.
- Challenges to engage city officials in the interview process due to additional responsibilities assigned to manage Covid-19 related.
- Hesitation by persons with disabilities to share their honest thoughts on the barriers/challenges associated with their disability.
- Disproportionate representation of persons with disabilities in terms of disabilities and gender balance identified in the interview process. Most of the participants identified for interaction were male and had locomotor disabilities although the study aimed to study the multi-dimensional aspects of disability such as visual, hearing, cognitive and neurological impairments.
- Lack of collection of desired primary data sets due to non-availability of the city officials for consultation/ interaction.
- Non-availability of city-level/ ward level database on various aspects of the disabled population including demographic profile, socio-economic structure, access to basic services and infrastructure.
- Non-availability of appropriate secondary data on city-level information related to the efforts to achieve the targets of disability inclusion.
- Lack of coordinated efforts of city stakeholders leading to limitations in collecting information on sector-wise efforts towards disability inclusion.
- The research deliberately focused on understanding the accessibility and inclusion challenges experienced by persons with disabilities in an urban environment owing to the limitation of the objectives of the BASIIC and AT2030 programme. However, on wider perspective, inclusion is considered for the targeted beneficiaries irrespective of age, ability, gender, socio-economic status, etc.

# Methodology Adopted for the Study

The methodology adopted for the city audit study involves a series of literature studies, secondary research, consultations, data collection and analytic process. The broad steps of the study consisted of the following broad steps:

**Figure 1: Approach to City audit assessment study**
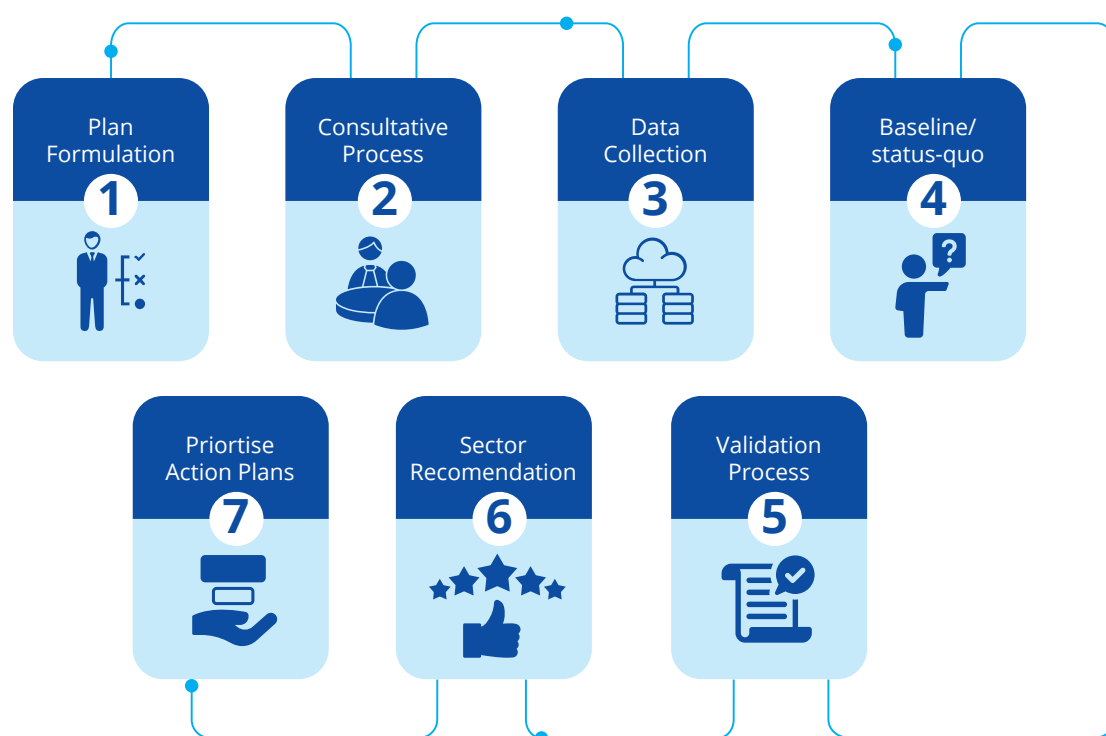


The details of the above-listed steps can be further elaborated as follows:

**1. Plan Formulation**

- Developing an audit framework to assess the performance of city infrastructure/services.
- Secondary research on existing city-level policy/project and information on ongoing mission/schemes.
- Understanding the city profile, geography and socio-economic profile.
- Identification of pilot audit sites within the city limits.
- Identification of key city stakeholders involved in the development process.
- Designing a framework for data collection, survey questionnaires for primary and secondary data collection.
- Finalising the fieldwork plan.

**2. Data Collection**

- Developing a framework for quantitative and qualitative data collection.
- Conducting interviews/discussions with city stakeholders and persons with disabilities.

- Individual consultation with city officials from different city departments.
- Conducting a co-design workshop with persons with disabilities.
- Auditing the existing infrastructure/services of the two pilot sites, based on the audit framework.
- Conducting an online survey to map the city's wide efforts on disability inclusion.

## 3. Baselining
- Collating the findings/analysis/inferences from the qualitative/quantitative data collection process.
- Identifying existing accessibility gaps and barriers within the urban development initiatives
- Establishing a baseline status by mapping the existing status of policy and project level interventions in the city.
- Identifying major gaps/issues and challenges associated with disability inclusion across urban sectors.
- Comparing the study's finding with the global/national standards and establishing adherence to existing policies/acts/guidelines for implementation of disabled-friendly infrastructure.

## 4. Validation Process
- Conducting multi-stakeholder consultation to share and validate the findings from the study.
- Mapping the recommendations/suggestions for improvement in the city.

## 5. Recommendations and Prioritising Action Plans
- Suggesting possible action plans/solutions for effective implementation of the disabled-friendly infrastructure within the pilot areas as well as for Pan City.
- Framing of city's road map for creating an inclusive and accessible Varanasi.

The methodology and approach adopted have further been illustrated into the following stages:

### Figure 2: Detailed Approach & Methodology

| Stage Wise Activities | Activity Details | Data Sources | Outcomes |
|---|---|---|---|
| **STAGE I** Plan Formulation | **Back Ground Research** <br>• Establishing the need of conducting the City wide audit exercise. <br>• Understanding the state of city infrastructure and services. <br>• Identification of key city stakeholders. <br>• Involvement of NGOs, Communities and Citizens <br>• Formulation of audit framework, relevant questionnaires and data tools/techniques. | City Characteristics Demographic Structure Socio Economic Profile Governance Structure Policy Landscape City Infrastructure | Establishing the need to conduct the city wide audit. |
| **STAGE II** Qualitative Data Collection | **Stakeholders Interview** <br>• Assess the awareness/ understanding about Disability Inclusive-Accessible Urban Development. <br>• Knowledge about relevant inclusive policy/guidelines/standards. | Interview with Sector-wise City stakeholders/ urban Practitioners. | Validation of key findings and mapping of actions towards creating accessible and inclusive urban environment. |
| | **Persons with Disabilities Interview** <br>• Understand the barriers and challenges associated with living with disability in the city environment. <br>• Identify gaps and opportunities to promote inclusive urban environment. | Interview of Persons with Disabilities (from varied spatial, economic and social background). | |

| Stage Wise Activities | Activity Details | Data Sources | Outcomes |
|---|---|---|---|
| **STAGE III** Quantitative Data Collection | **Pilot Audits** <br>• Indicators based audit of site specific urban infrastructure and services. <br>• Perception survey with citizens (including PwDs) within the specific sites. | Sector-specific audit of city level infrastructure and services within the selected pilot areas. | Understanding the current state of accessibility, inclusivity and safety aspects of the city environment. |
| | **Sector wise Data Collection (City level)** <br>• Consultation with relevant stakeholders to understand the state of inclusive planning, policy and project interventions across the city. | Consultation/ Survey with Sector-wise City Stakeholders. | |
| **STAGE IV** Consultative Exercise | **Co-design Workshop** <br>• Experience sharing about living with disabilities in the city. <br>• Map the daily life journeys of PwDs. <br>• Identify the least and most accessible places in the city. | Key recommendations and suggestions for improving city level barriers and issues. | Validation of key findings and mapping of actions towards creating accessible and inclusive urban environment. |
| | **MultiStakeholders' Consultation** <br>• Share and validate key findings of the primary and secondary data collection process. <br>• Identify areas of opportunity for city improvement. <br>• Seek recommendations for future action plans. | Action-Based recommendations for city based improvement of accessibility, inclusivity and safety aspects. | |
| **STAGE V** Data Analysis and Collation | **Baseline Assessment** <br>• An evidence and research based status-quo (baselining of city's efforts) on building accessible, safe and inclusive city environment. | Existing status on city level accessibility compliance of infrastructure and services wrt to policies/standards. | Baseline Audit - Assessment Report |
| **STAGE VI** Key Findings and Recommendations | • Collation of inferences drawn from data analysis, city baseline formation, validated key findings and stakeholder based recommendations, etc. | Final report with city recommendations to ensure accessibility, inclusivity and safety improvement. | Final Audit - Assessment Report |

## 3.1.    Data Collection Tools & Techniques Adopted

For the research study, an in-depth review of existing literature, coupled with a series of primary and secondary data collection processes, has been adopted to fulfil the objectives of the study. Participatory planning tools e.g., co-design workshops, photo diaries, stakeholders' consultation, focussed group discussions city-wide consultations have been used to involve stakeholders throughout the process of the study. This section highlights the detail of the data collection tools and techniques adopted for the study:

**Table 1: Details of Primary and Secondary Source of Data**

| Tools/ Technique | Description | Data Sources |
|---|---|---|
| **Interviews with Persons with Disabilities** | • Map the daily life, every day's journey and experiences of living with a disability in the city.<br>• Map the access to basic services, urban infrastructure and assistive technologies.<br>• Assess the existing barriers (physical, socio-economic, attitudinal) identify gaps and opportunities to promote inclusion of persons with disabilities in an urban environment.<br>• Awareness about welfare schemes/aids and access to assistive tools/technology. | Individual Consultation with Persons with Disabilities (sample size of 15-20) Key Findings from Interview transcripts. |
| **Interviews with City Stakeholders** | • Awareness and knowledge on city-based policy/ guidelines/standards on Disability Inclusive Accessible Urban Development.<br>• Understanding the accessibility/inclusivity/<br>• safety aspects of the city environment.<br>• Technical knowledge on Inclusive Design & Planning Principles, welfare schemes/aids, Assistive Technology, etc.<br>• Understanding the implementational issues/ challenges (technical, financial, social) to implement the existing guidelines/development control norms related to disability inclusion. | Individual Consultation with key stakeholders e.g., Government officials, policymakers, built environment urban practitioners, academicians (sample size of 10- 15). Key Findings from Interview Transcripts. |
| **Co-Design Workshop** | • Map the daily life journeys of PwDs.<br>• Participatory mapping exercise to identify areas in the city that are accessible and safe for all.<br>• Identify priority areas and inspirations for city improvement.<br>• Map key recommendations for adoption and implementation. | Workshop with Persons with Disabilities (15-20 participants) Key findings/ recommendations |
| **Pilot Audit** | • Selection of pilot sites in the city (considering the distinctive urban typology, level of development, activities, land use, characteristics, tourist footfall, etc) in consultation with the city stakeholders.<br>• Indicator based audit of site-specific urban infrastructure and services.<br>• Mapping of disabled-friendly infrastructure within the sites.<br>• Mapping of gaps and issues in the planning, designing and implementation of inclusive urban infrastructure.<br>• Perception survey with citizens (including PwDs). | On-ground assessment and accessibility compliance of existing infrastructure and services wrt. accessibility standards/guidelines within the sites.<br><br>Project information related to the inclusive interventions within the pilot audit sites.<br><br>Pictorial and graphical representation of existing barriers and areas for improvement. |
| **5 Citywide survey** | • Consultation with relevant stakeholders to understand the state of inclusive planning, policy and project interventions across the city.<br>• Assessing the compliance of city-level policy/project interventions with accessibility standards as well as the incorporation of universal design features/barrier-free elements within the sector-specific infrastructure and services.<br>• Mapping of the city's future vision to achieve the goals of DIAUD. | Key findings from the survey. Related data/information on: Project DPR, feasibility reports, etc. Policy level interventions – legislations, acts, standards, guidelines, etc. Findings from relevant research studies conducted in the city. Disaggregated database on persons with disabilities. |

**PRIMARY SOURCE OF DATA:** The involved on-ground survey, consultation with citizens (especially Persons with Disabilities) and city stakeholders, conducted a situational analysis of existing infrastructure and services of two pilot sites in the city.

| Tools/ Technique | Description | Data Sources |
|---|---|---|
| **Literature Review** | • Details on the city's geographical location, city profiling, urban characteristics, demographic structure, stakeholder mapping, urban research studies, etc.<br>• Understanding the institutional setup and governance mechanism in the city<br>• Mapping of major urban sectors, socio-economic policies and program interventions<br>• Investment pattern towards disability inclusion<br>• Status-quo on adherence to existing policies/acts/guidelines/norms relevant for inclusive development.<br>• Study on the existing city planning interventions to assess the availability and requirement of barrier-free, disability-inclusive infrastructure. | Master Plan, City Development Plan, zonal/ ward level plan Projects/Interventions under SCM, AMRUT, AIC, etc.<br>Existing legislation, policy, regulation, acts and guidance documents.<br>NSSO Data on disability |
| **City-based sector-specific initiatives** | • Status on policy and project level interventions across the four urban pillars (Institutional, Economy, Society & Culture, Physical Infrastructure,).<br>• Status of existing funding mechanism, investment pattern, procurement policies to enable Disability Inclusion at various strata of urban development.<br>• Measure the efforts undertaken to ensure equal participation of persons with disabilities in the planning and development process. | |
| **Multi Stakeholders consultation** | • Share and validate the identified issues/challenges associated with inaccessibility issues in the city.<br>• Seek suggestive measures to build the capacities of stakeholders.<br>• Create awareness on adopting an inclusive development approach at the city level.<br>• Identify areas of opportunity for city improvement.<br>• Identify possible solutions and recommendations for effective implementation of disability-inclusive infrastructure in the pilot areas.<br>• Vision/road map for replicating the recommendation at the city level. | Key recommendations from the consultation.<br>Finalization of priority goals for short-, medium- and long-term implementation. |

**SECONDARY SOURCE OF DATA:** Extensive literature study on policy landscape, institutional setup, governance mechanism and ongoing city's urban development initiatives, the progress of ongoing efforts under the SCM, AMRUT, AIC, etc. and related missions of GoI, understanding additional city's efforts being undertaken towards disability inclusion.

# An Overview of Disability Inclusion in India

By the year 2041, 50 per cent of India's population will reside in urban areas and by 2050, it will comprise around 58 per cent of the total global population. In India, around 3 crore persons are 'disabled' which is 2.21per cent of the total population. The current urbanisation trend necessitates developing sustainable and inclusive cities with a focus on providing equal access to services and amenities for all. The lack of adequate infrastructure and services has been recognized as one of the most important roadblocks on the path to rapid, equitable and sustainable growth in Indian cities.

Lack of data and research-based evidence create a significant barrier for policy and decision-makers, which in turn influence the ability of persons with disabilities to access equal rights to basic urban services. Lack of participation and engagement of such communities within the urban program/project cycle as well as in the decision-making process demonstrate a significant challenge and thus the initiatives do not necessary caters to the barriers and challenges associated with disability. There is a need to fill the gap between existing policies and practices by adopting an evidence-based inclusive planning approach and making the urban environment accessible, connected, healthy, resilient, safe and secure for all irrespective of age, gender and ability. Improved access to the urban environment can facilitate the participation of persons with disabilities in economic, social and political aspects and enhance their participation in the decision making process.

Local and national governments in India are exploring mechanisms to accelerate infrastructure development and services delivery process to cope with the growing needs resulting from the current urbanization trend. To align with the Sustainable Development Goals (SDGs), the Ministry of Housing and Urban Affairs (MoHUA) has also initiated its efforts by implementing various flagship missions and programs. With a vision and motivation to build green, sustainable, accessible, safe, technology-driven and digitally accessible cities, missions/schemes are committed to focusing on achieving inclusive and sustainable urban development.

Disability Act of 1995 mandates the provision of accessibility for persons with disabilities. India is a signatory to the 'Declaration on the Full Participation and Equality of persons with disabilities in the Asia Pacific Region (2000), the 'Biwako Millennium Framework (2002)' and has also ratified the 'UNCPRD (2008)'. Under the National Policy for Persons with Disabilities (2006), India has recognized the importance of tapping the potential of persons with disabilities as a valuable human resource and creating an enabling environment that provides equal opportunities and focus on the protection of their rights. Rights of Persons with Disability (RPwD) Act, 2016 has reframed the definition of disability and has specified around 21 types of disabilities based on physical, visual, hearing and cognitive impairments. It mandates the Government bodies to consider the rights and entitlements, access to education, skill development and employment, social security, health, rehabilitation and recreation, enforcement to make existing public buildings accessible, duties and responsibilities of appropriate governments, setting up of central and state advisory boards/district level committee on disability for the enforcement of the Act.

Numerous norms and standards for designing spaces specific to the barrier-free environment have been prepared periodically and enforced under the supervision of many government bodies and allied agencies. NBC Building Code (NBC) 2016 contains regulations (a set of minimum provisions) to design an accessible built environment to be enacted for use by various departments, municipal administrations and public bodies. Harmonised Guidelines

(2016) has been prepared through a participatory approach in consultation with relevant Ministries and incorporate sections on Universal Design Elements to make the built environment accessible for all. Model Building Byelaws (2016) has also incorporated the provisions for Differently abled, Older Persons and Children. Urban and Regional Development Plans & Formulation (URDPFI) Guidelines (2015) has been formulated keeping in view the emerging scenario in the planned development of cities and towns and broadly highlights the importance of planning and designing barrier-free infrastructure for an urban environment. Apart from these, there are other pertaining guidelines owned by various government agencies/civil societies leading to duplicity and discrepancy which is reflected in the poor implementation of the provisions. It is estimated that around 25% of India's population need universal accessibility to live independently and with dignity. Therefore, it is imperative to emphasize 'Disability Inclusion' across policy and urban development practices.

**Figure 3: Timeline of Disability Inclusion**
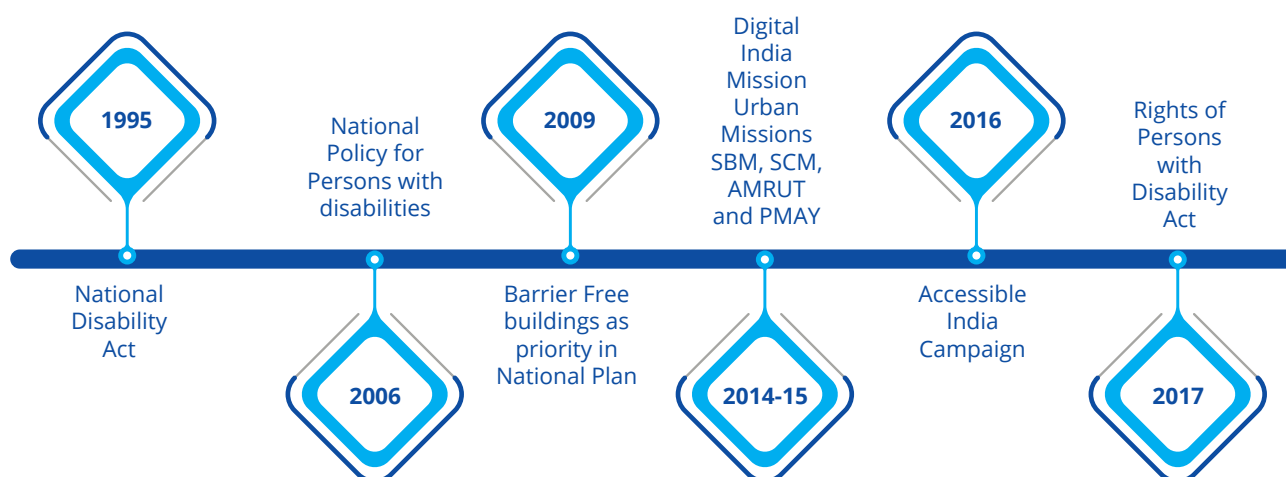


In addition to the guidelines, since 2016 the National Building Code also includes requirements for accessibility for people with disabilities and older people. Each state and city have their by-laws. However, in most cases, these follow the nationally developed 'Model Building By-Law', published in 2016. More recently, the Central Public Works Department published a manual on accessible built environments. However, versions of the manual available online are not digitally accessible[1]. Various other specific regulations exist, such as the Urban Bus Specifications (UBS) I and II and the UTTIPEC Street Design Guidelines[2]. One of the challenges with implementing a good inclusive design in India is the lack of coherence amongst these guidelines thus makes adherence a complex process. Local and regional bye-laws and planning processes have an important role to play in ensuring the successful implementation of inclusive design guidelines. There is a need for a unified approach to ensure consistent adherence and compliance with the guidelines/standards within the planning, design and implementation process.

In the Indian context, even though, the mandates of recent missions and ongoing programs of the Ministry of Housing & Urban Affairs e.g. Swachh Bharat Mission (SBM-U), Pradhan Mantri Awas Yojana- Urban (PMAY-U), Smart Cities Mission (SCM), Atal Mission for Rejuvenation and Urban Transformation (AMRUT), National Heritage City Development and Augmentation Yojana (HRIDAY) ensure enforcement of accessibility and inclusivity practices in the development process, the disparity can be seen on the on-ground implementation practices. The gap between programs' objectives and achievement process necessitates to clearly define the extent of an inclusive approach to ensure its adoption at the city level. Design and implementation of policies and programs across scales and urban levels should consider the needs, rights, involvement and encourage participation of persons with disabilities followed by stringents monitoring mechanisms.

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[1]*CABE Foundation: Resources', CABE Foundation, 2020, https://www.cabefoundation.com/p/resources.html.*

[2] *Anjlee Agarwal and Andre Steele, 'Disability Considerations for Infrastructure Programmes' (Evidence on Demand, 8 March 2016), https://doi.org/10.12774/eod_hd.march2016.agarwaletal.*

# Project Geography - Varanasi City

Varanasi being a partner city of the BASIIC programme has been selected as a pilot for the collaborative research study conducted by GDI Hub and NIUA. The unique characteristics and organic pattern of development in the city has been an excellent case study to understand the existing barriers and challenges related to inaccessibility, particularly in regards to the city's heritage which is a priority area for the city development. The diverse nature of the city stakeholders and the efforts undertaken to improve the quality and standard of living for all would bring insightful perspectives to fulfil the objectives of the study. Also, Uttar Pradesh state has the greatest number of persons with disabilities in India as it is the most populous state. Hence, there is a dire need to bring policy/reforms to mainstream disability inclusion across sector-specific interventions, identify the barriers associated with disability and how to improve the access to basic services and infrastructure. The city has immense potential to promote inclusive tourism and develop disability-inclusive infrastructure based on the universal design principles. This would also help to enhance the untapped tourism potential and promote economic growth for the entire region. Varanasi being a popular tourist destination, this will also be an opportunity for the city to exemplify good practice for India.

## 5.1.  City Characteristic

Varanasi, also known as Banaras', or 'Kashi' is the 'religious capital of India' and is one of the oldest living cities of the world. The city is evident of living traditions of religious faith, rituals, myriads of festivals, traditional and ancient forms of worship and belief. Situated at the banks of the Ganges River, Varanasi is particularly known for its temples, ghats, archaeological sites, silk and textile industry, varied expressions of asceticism, spiritual and meditative exercises, education, music, dance, handicrafts and art forms that still continue to flourish across generations. Heritage monuments and temples such as Kashi Vishwanath, Sarnath, Ramnagar Fort, the 84 ghats (spread along 6.8 km along the banks of River Ganga) are a few of the major tourists' attractions for the city. The city also derives its identity from its dense built-up areas and narrow lanes. Its evolution as the most important holy destination for the Hindu religion and the historic amalgamation of different cultures over a long period of time with a magnificent blend of natural heritage and man-made marvels have given the city its unique characteristics and a distinct urban fabric. The interwoven network of narrow streets across the old city connects the major heritage sites, the ghats and provides access to the river. The city of Varanasi geologically is located in the fertile alluvial Gangetic plains. The Assi and Varuna rivers also merge with the Ganges from the north and south of Varanasi. Because of its strategic location, the city has a perennial source of water. Except for the core city, the rest of the city can be observed to be mostly heterogeneous in the social composition. The city is divided into 90 wards and five major zones namely Adampur, Bhelupur, Dashashwamedh, Kotwali and Trans Varuna Zone.

Figure 4: Location Map of Varanasi

## 5.2. City Profile

Varanasi is the fifth most populous city in the state of Uttar Pradesh. It is a Class II city with a total population of the municipal area of 1,201,815 (Census, 2011) and the total population within the Urban Agglomeration is 1,435,113. The area under the Municipal Corporation is 82.1 sq. km. whereas the area under the urban agglomerations would be 793 sq. km. The population density of Varanasi city is 15,170 persons per square kilometres. There is a huge variation in the city density ranging from 16 persons/ha to 1991 persons/ha within the different wards of the city.  The average rainfall received in the city is 1,110 mm. Over the recent years, the water level of the Ganges River has significantly decreased. This is attributed to the regulated water extractions by upstream dams and declining glacial sources owing to global warming and climatic change.

# Figure 5: Varanasi City Map



**Legend**

**Major Landmarks**

- Cultural Centre
- Ghat
- Govt. Building
- Green Areas
- Hospital
- Hotel
- Health Centre
- Intersection
- Market
- Public Utilities
- Railway Station
- Recreational
- Religious Buildings
- Religious/Heritage Site
- School/College
- Water body

- Park
- Municipal Boundary
- Ward Boundary
- Road Network
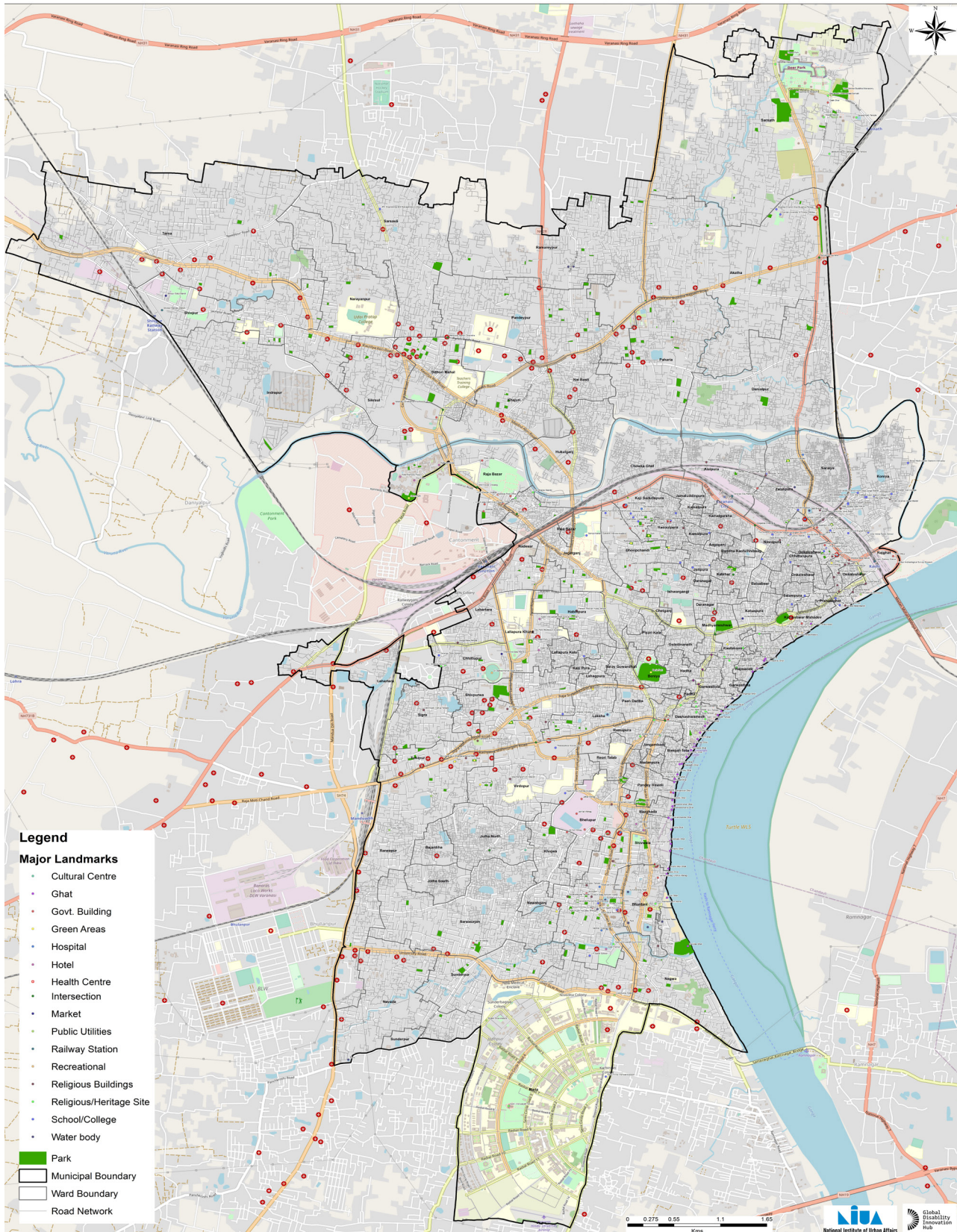
**Figure 6: City Snapshot**



## 5.3.  Infrastructure  Profile

**Physical Infrastructure:** The water supply system for Varanasi introduced in the year is as old as 125 years. At present, the Jal Nigam, which acts as the nodal agency, supplies 170 lcpd but the users receive only 70-80lcpd. The distribution system is also more than 100 years old. The lifeline of the city is the River Ganga, which takes care of approximately 45% of the water demand for the city. 50% of the water supplied is met out of 112 deep tube wells operated by Jal Sansthan and the remaining 5% is supplied by publicly and privately owned 1559 hand pumps. At present, the length of the distribution network is 590km. The raw water extracted from the Ganga River at Bhadaini gets treated at two water treatment plants in Bhelupur waterworks. Varanasi Jal Sansthan meets 51 to 75% of the city's water supply-demand through a centralized water supply system.

**Sewerage Network:** Only 30% of the total city area is under sewer coverage, with an underground sewer network extending up to a total length of about 400km.  Due to which most of the untreated sewage is disposed of in the river Ganga. The city has trunk sewer 750mm to 2400mm which are hundred years old and the length of this stretch extends up to 7.4km. There are three Sewerage Treatment Plants (STPs) in Varanasi viz. Dinapur, Bhagwanpur and Diesel Locomotive Works (DLW)STP. Furthermore, most of the septic tanks are manually cleaned by the sweepers under the supervision of Varanasi Nagar Nigam.

**Sanitation Infrastructure:** There are around 239 public toilets at present (VSCL database). These toilets are concentrated majorly around the ghats and the tourist sites. Only 51 to 75 % of the population has proper hygienic access to sanitation facilities.

**Solid Waste Management:** The total waste generated in the city is around 600 MT or 0.46 Kg per capita per day. In Varanasi, the system of door-to-door collection of wastes is not practised in all parts of the city. Various initiatives have been taken up for the waste collection in the city and a few private organizations are being involved by the Varanasi Nagar Nigam to collect, recycle and manage the waste generated in the city. Further, 76 to 100 % of the city's solid waste gets collected every day but 100% of it goes untreated before dumping and only 11 to 25 % of it is recycled.

**Transport:** The city is well connected by rail, air and road network. The Lal Bahadur Shastri Airport. is situated at a distance of about 24 km from the main city area.  The city lies on the Delhi-Kolkata railway route and has primarily three rail lines entering into the city; Lucknow, Bhadoi and Prayagraj.  The city's roadway is connected to major metropolitan cities like Delhi and Kolkata and major cities of Uttar Pradesh such as Lucknow, Prayagraj, Jaunpur, Gorakhpur, etc. E-rickshaws and autos are the major form of public transportation within the city. 50 per cent of the carriageway capacity in the heart of Varanasi is occupied by irregular parking and encroachments. Varanasi has a road network on 11 to 15% of its land and less than 50% of the city is accessible by paved roads. In addition to this, the organic pattern of the city growth, lack of awareness amongst the citizens and non-functional traffic signals have added to the traffic woes of Varanasi.

**Figure 7: Varanasi City Traffic**



**Housing:** According to the  2011 census of India, the average household density is 2202, per sq. km. 62% of the 'census house' are in good condition, 34% in liveable condition and 3% are in dilapidated condition. Meanwhile, 153,985 households own the house, and 23,160 occupies rented accommodation in the city.

**Institutional Mechanism:** There are around 353 government buildings in the city and mostly located around areas like Bhelupur, Adampur or in close proximity to the ghat area. The government offices of Varanasi Smart City Ltd, Municipal Corporation, District Magistrate, Development authority, etc. are located around Sigra, the cantonment area and Kacheri road.

**Social Infrastructure:** Education - The city is known as an ancient educational hub. Banaras Hindu University, Sampoornanand Sanskrit University, Mahatma Gandhi Kashi Vidyapeeth are a few of the pioneering universities in the city. Students across the region and globe study in these universities.

**Health Infrastructure:** there are a total of 286 (both private and public) medical centres in the city. While the city has a decent number of hospitals (mostly run by the government and charitable trust), the city has limited access to basic health care services for all.  Public hospitals lack adequate medical facilities, trained health care workers while private health care services are beyond the reach of vulnerable/marginalised communities.

**Safety & Security:** Varanasi Nagar Nigam plans and maintains the street lighting infrastructure in the city. With the average distance between two street lights of 50 metres, the distance is more than the norm of 30 metres. However, the Varanasi Smart City has been taking certain initiatives to improve the street lighting condition and ensure a safe urban environment for its citizens. There are at present 26,373 streetlights and around 25 police stations in the city to maintain the law and order.

**Tourism:** The riverfront and the ghat area acts as the major heritage zone for the city. There are a total of 1564 heritage sites including ghats, kunds, temples, mosques and other ancient sites in the city. According to Uttar Pradesh Tourism reports (2018), Varanasi received over 233 million tourists (23 crores).  That is over 56 times the native population of the city. Varanasi has around 600 hotels and 587 eateries/restaurants. Around 20,655 domestic tourists and 43 foreign tourists visited the city during Jan 2021. There has been a sharp decline (approx. 86%) in the tourist flow due to the restriction in travel and imposition of lockdown measures in lieu of the Covid-19 pandemic.

**Figure 8: Tourists in the city**

**Open/Recreational Space:** There are currently around 229 parks/gardens in the city[1]. Some of the major parks/gardens in the city are Sant Ravi Das Park, Tulsi Manas Mandir colony park, Cantonment park, Circuit House Garden, Nehru garden.

**Economic Centre:** There are a total of 5227 registered industrial units and a total of 9 registered medium and large units in the city. These are mostly located along the peripheral region. The city has a 26% informal sector (including trade and commerce), which is dominating and affecting the economic growth rate in the region. The overall economy of the city is dominated by the tertiary sector with 56% of the total formal employment followed by secondary and primary sector with 40% and 4% respectively. Manufacturing industries account for most of the employment generation, whereas trade and commerce stand next. Trade and commerce dominate the tertiary sector with a 36% share of total formal employment generation. The industrial sector is of great importance as it is a major source of employment/livelihood generation for many.

## 5.4. Socio-economic profile of Varanasi

As per the Census of India 2011, the population of Varanasi City is 1,198,491, out of which 635,140 are male and 563,351[2] female. The population growth rate has gradually dropped from a growth rate of 37% in 1991 to a 10% in 2011. In 2011, the decadal growth rate in the city is around 10% lesser than the state's growth rate of 20.23%. This could largely be because of the urban growth expansion in the peripheral region. The average literacy rate is 79.27% with the literacy rate of males comparatively higher than the female by 8.91%. Males form the majority of the population, accounts for about 53% of the total population, while women form 47% and children 10.75% respectively. A large portion of the population falls in the working-age, i.e., 15-59 yrs. A total population of 302,025, which is around 25.20% of the city's population resides in the slums. The percentage share of the urban population in the Varanasi district is 43.4% as against 22.3 of the population in urban areas of the state. Varanasi district has a population density of 2,395 persons per sq. km. which is more than the state average of 829 persons per sq. km. Varanasi district ranks 25nd in terms of sex ratio (913) which is higher than the state average (912) females per thousand males. The average literacy rate is 79.27% and the literacy rate of males is higher than that of females by 8.91%. The average annual per capita income of Varanasi city is INR 1,93,616, which is higher than the national average of INR 68,747.

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[1] https://map.varanasismartcity.gov.in/varanasismartcity/index.html

[2] https://www.census2011.co.in/census/city/153-varanasi.html; http://uphwd.gov.in/page/en/district-wise-population-of-disabilities

Figure 9: Population Growth Trend[3]
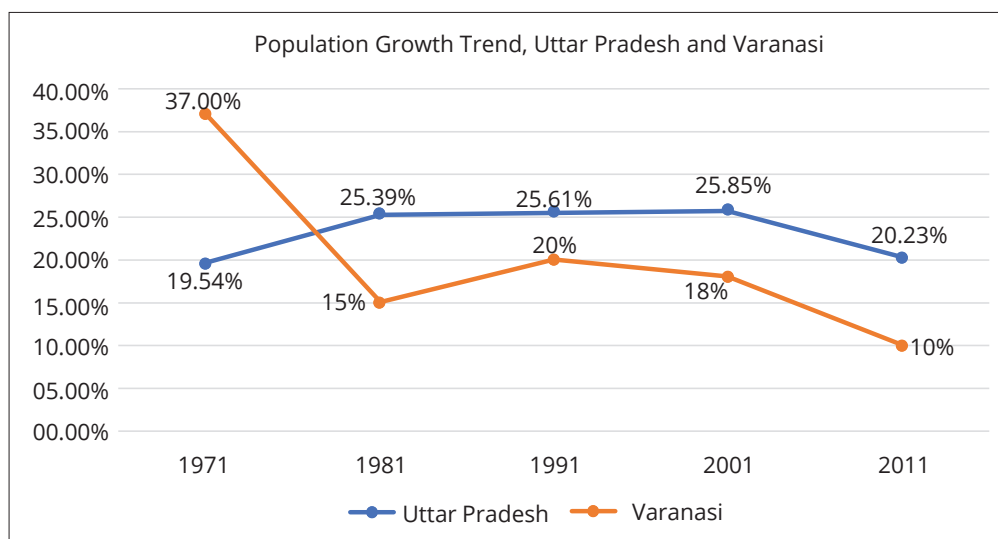
## 5.5.  Socio-economic profile of Persons with Disabilities

The state of Uttar Pradesh accounts for the highest number of persons with disabilities across states in India. Varanasi district is one of the top ten districts out of the seventy-one districts (as per census 2011) that has the highest number of people with disabilities. In Varanasi district (urban and rural), there are 96,924 persons with disabilities; of which 54,297 and 42,627 are male and female respectively. There are a greater number of males with disabilities as compared to the female population both at the district and the city level.

In Varanasi city, there are 39,408 persons with disabilities including 22,087 males and 17,321 females. The sex ratio stands at 784 females per 1000 males.  Out of the total share, 12,037 are between the age group of 5-19 years with a literacy rate of 61%.

The following graph indicates a comparative trend of the population data on disability at the district and city levels:

Figure 10: Distribution of Persons with Disabilities at District and City level



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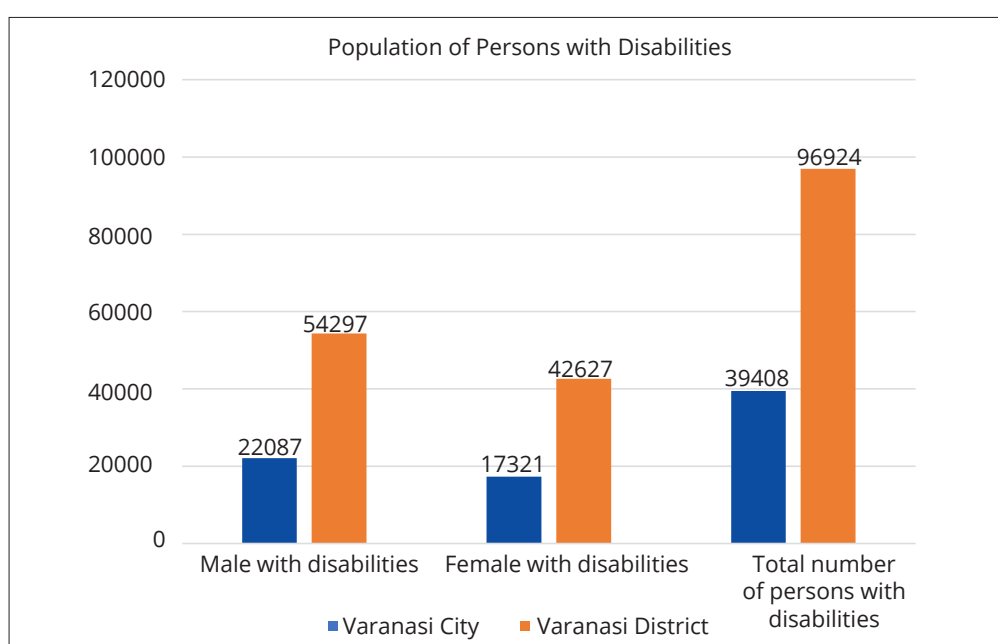
**Figure 11: Distribution of Persons with Disabilities at District level[4]**

District Wise Population of People with Disabilities



Female ■ Male ■ Total number of people with disabilities
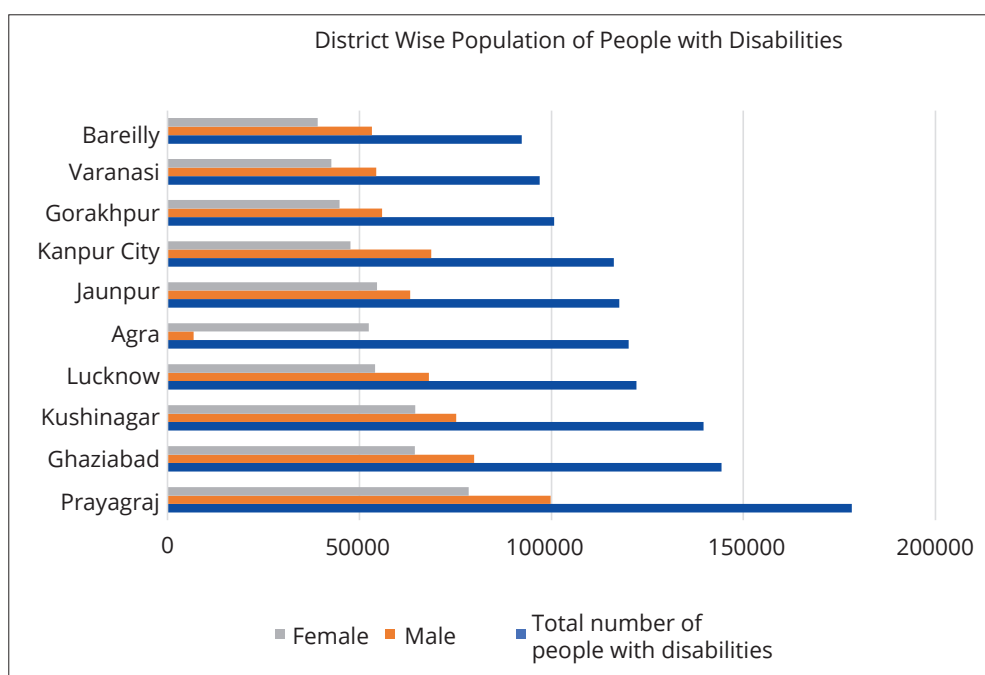
Varanasi district and city have the highest share of persons with visual impairments followed by visual and related disabilities. Mental illness constitutes the least percentage with around 2% out of the total share.

**Figure 12: Distribution of the types of disabilities at Varanasi district and city level**

Share of Types of Disabilities



■ Varanasi District ■ Varanasi City
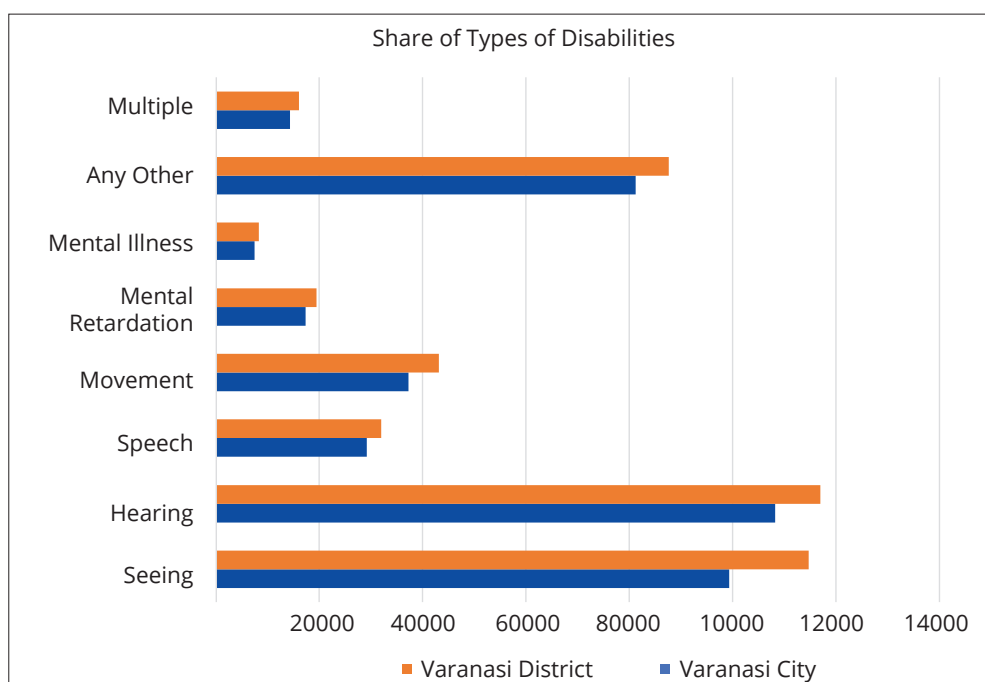
However, the disability rates per 100, 000 shows that Varanasi district has the highest rate of mental illness and mental retardation cases out of all the districts in the state of Uttar Pradesh.

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[10]*Source: http://uphwd.gov.in/en/page/district-wise-population-of-disabilities*

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## Figure 13: Disability rates per 100 000 according to the type of disability[5]



Disability rates per 100 000 according to the type of disability

Legend: Mental Retardation, Mental Illness
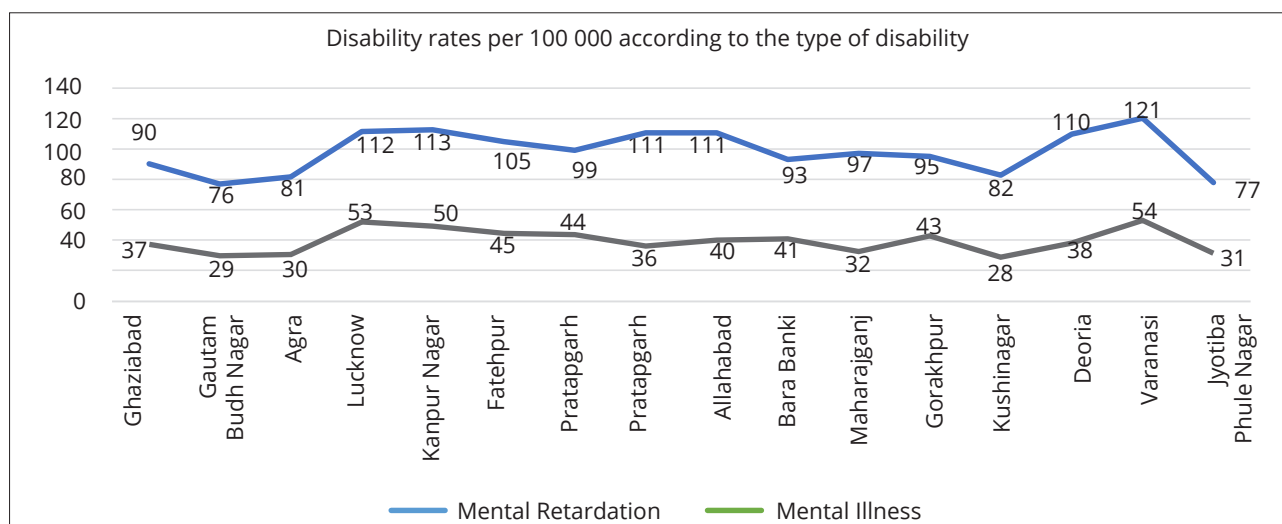
The below figure indicates the number of children and adolescents with disabilities in Varanasi City. The number of males with disabilities is higher as compared to the female population.

## Figure 14: Disability rates amongst children and adolescents



Number of children and adolescents with disabilities (5-19 years age group)
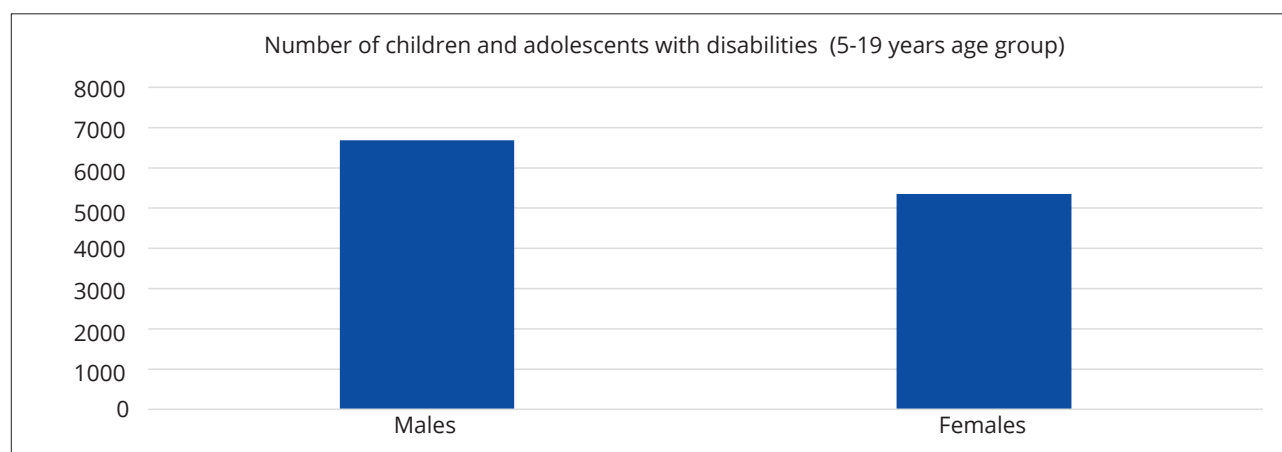
## Figure 15: Age disability -wise distribution



Age- Disability wise Distribution of PwDs in Varanasi District

Legend: Sum of In seeing Persons Total, Sum of In Hearing Persons Total, Sum of In Speech Persons Total, Sum of In Movement Persons Total, Sum of Mental Retardation Total, Sum of Mental Illness Total, Sum of Any Other Total, Sum of Multiple Disability Total, 2 per. Mov. Avg. (Sum of In seeing Persons Total)
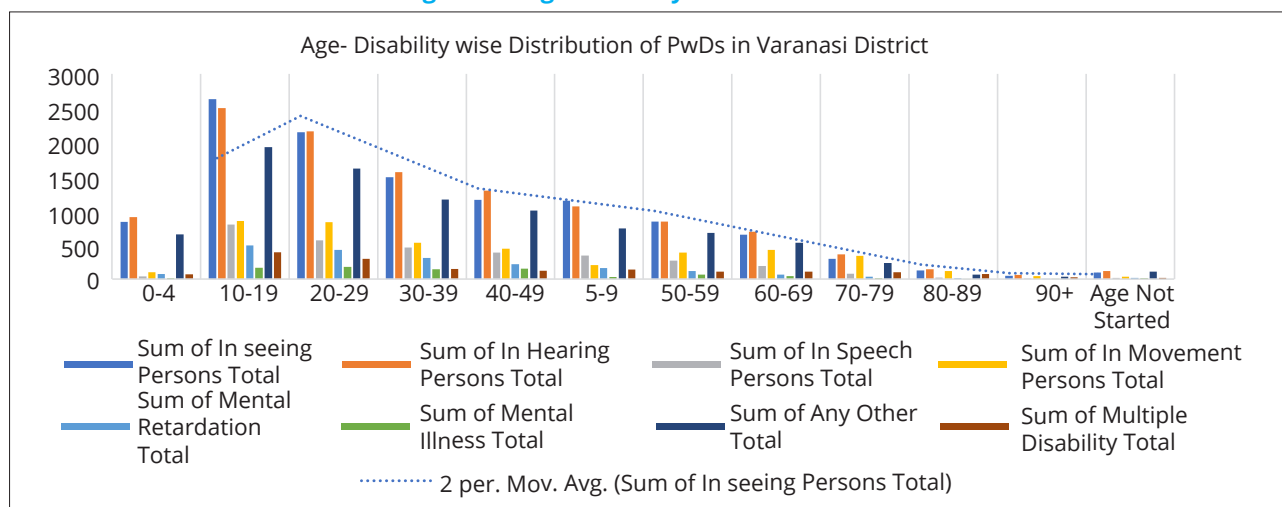
Access to education for both male and female populations is seen to be almost at par in Varanasi city.

Out of the total children of age group 5-19 years affected with disability, only 3.2% has access to special schools. Whereas for students with disabilities attending special schools, male students are seen to have more access to special education than females.

**Figure 16: Access to Schools**

Access to Education

| | Value |
|---|---|
| Percentage of male children with disabilities (5-19 years aged) attending educational institutions | 61.02 |
| Percentage of female children (5-19 years aged) attending educational institutions | 61.50 |
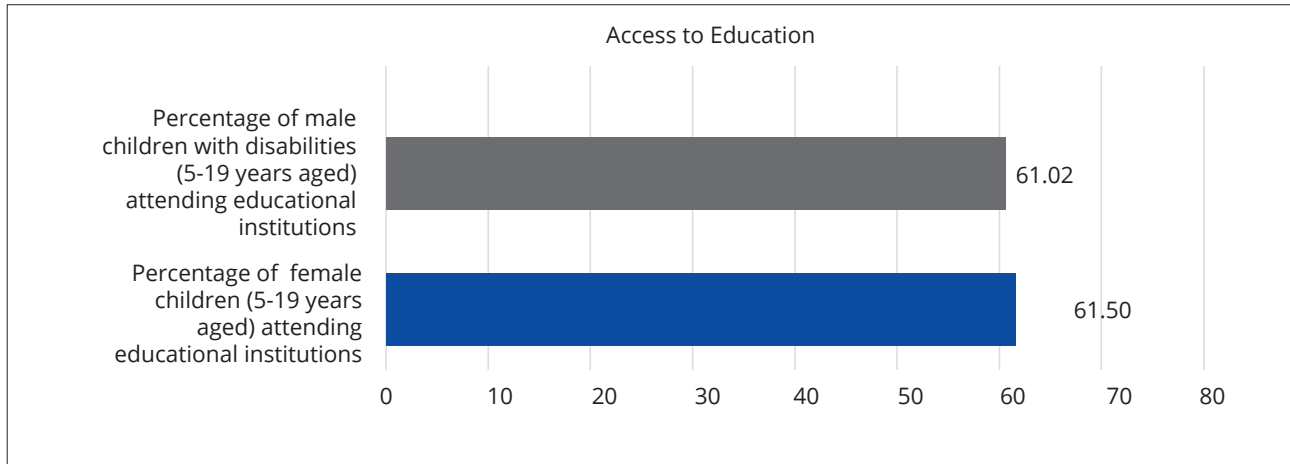
The following figure shows the number of male and female students attending special schools:

**Figure 17: Access to Special Schools**

Students with disabilities attending in special schools

| | Value |
|---|---|
| Females (all ages) | 513 |
| Males (all ages) | 717 |
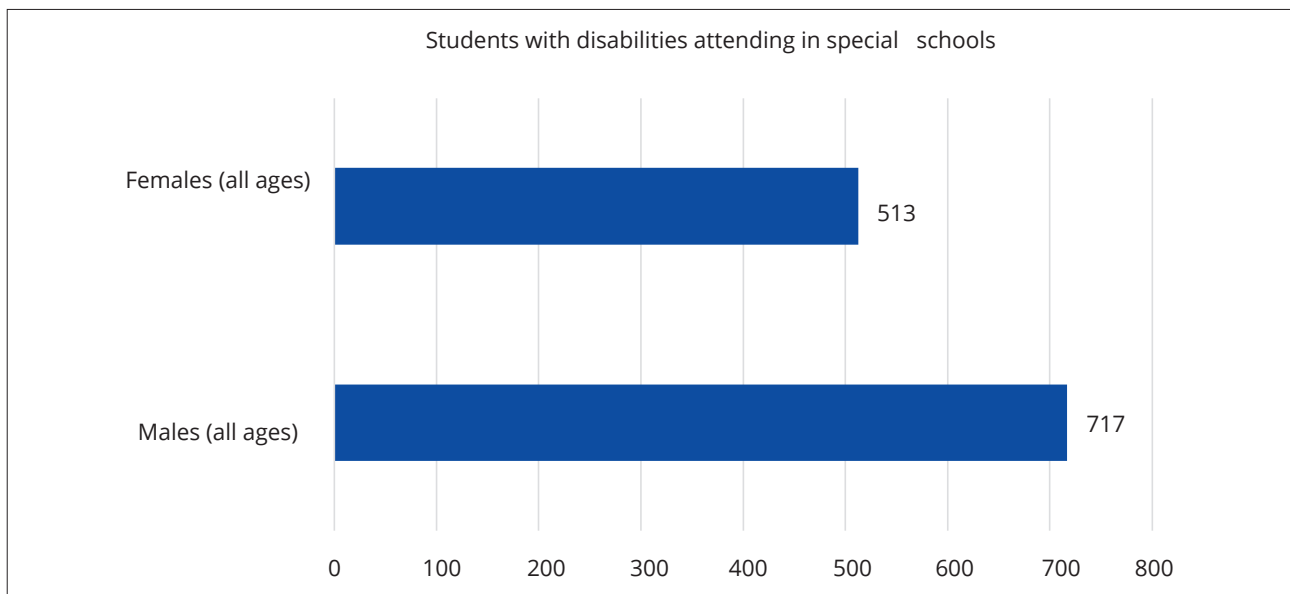
Only 27% of the total workforce is employed in the permanent service sector. 8.3% of persons with disabilities population is employed as marginalised workers whereas the rest of them are unemployed. Agriculture, horticulture, livestock rearing and fisheries remain the primary source of employment. The handloom and handicraft industries (small and micro enterprises) form an important part of the city's economy. The total working population of Varanasi district is 12,20,708 out of which around 75% of the workforce is male, while only 25% is constituted by the female workforce.

**Figure 18: Categorical Representation of Workers (Main and Marginal) in Varanasi district**
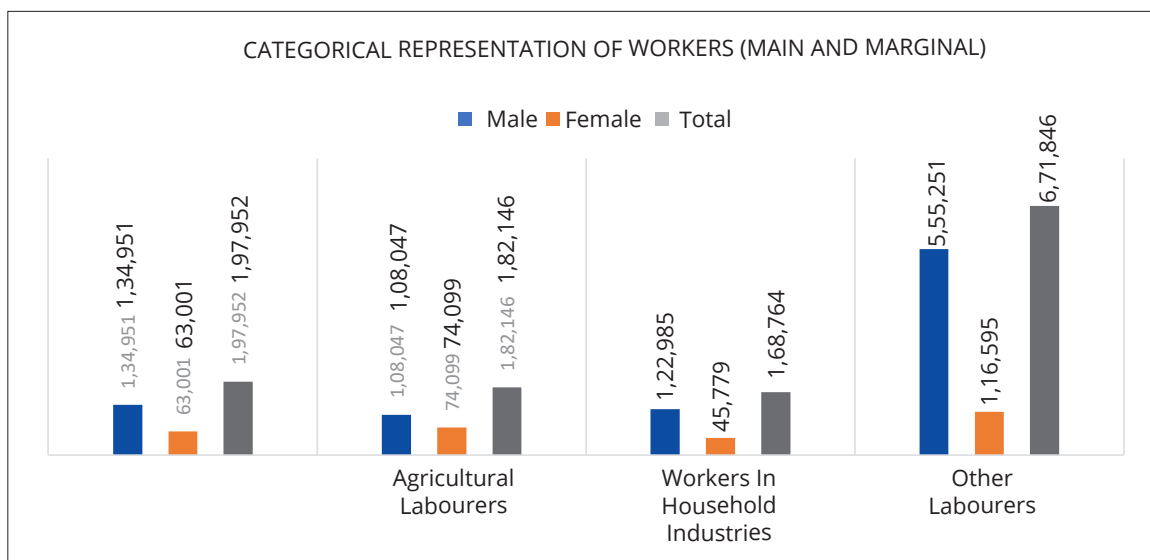


As per the census 2011, the number of unemployed persons with disabilities is seen to be disproportionately higher than the employed population. Further, the number of male workers is four times higher than that of female workers. The figure below indicates the distribution of employed persons with disabilities at the city level:

**Figure 19: Number of persons with disabilities (workers and non-workers) in Varanasi City**
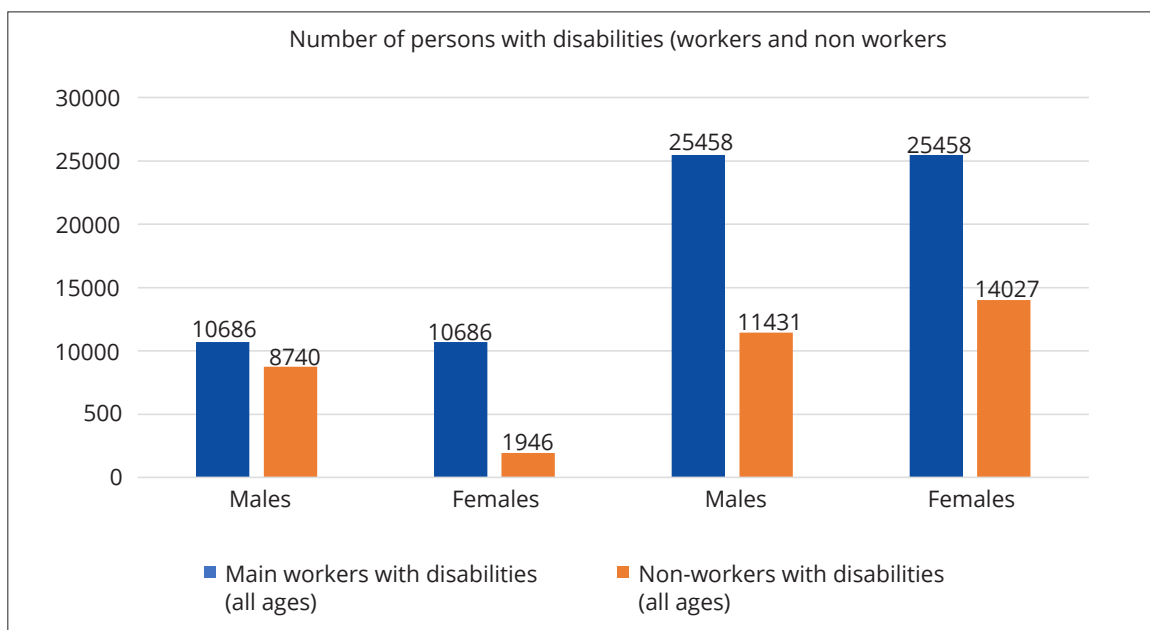
## 5.6.  Stakeholders Involved

Urban development is a diverse phenomenon in any Indian city and hence, it is governed and jointly managed by diverse government bodies. Communities and citizens also play an important role in managing the urban systems and functions at a local level. The following are the major city stakeholders which have played a vital role in implementing the city audit -assessment study in Varanasi:

**Table 2: Relevant Stakeholders in the city**

| Sl. No. | Key Stakeholders | Responsible Officials | Concerned City Sectors/Elements | Roles and Responsibilities |
|---|---|---|---|---|
| 1. | **City Municipal Corporation City Development Authority Smart City's Special Purpose Vehicle Public Works Dept.** | Project Manager *(overall in charge of city audit)* Technical Persons - Architect/Urban Planner/Engineer | Built Environment Street Improvement WASH Utilities Recreational Facilities Parks & Open Spaces Public Services | • Formulate and implement urban development schemes/missions, related projects and strategies at the city level. • Ensure access to basic infrastructure (water supply, sewerage, SWM, open spaces, recreational facilities, etc.) |
| 2. | **Dept. of Empowerment for Persons with Disabilities** | Disability Rights Officer | Socio-economic upliftment of persons with disabilities | • Ensure implementation and operation of beneficiaries' schemes related to disability inclusion. • Ensure equal access to education, employment opportunities and related basic services for Persons with disabilities. |
| 3. | **Tourism Dept.** | Tourism Officer | Tourism based infrastructure/services | • Ensure development, promotion, expansion and maintenance of tourism-related infrastructure and services in the city. |
| 4. | **Traffic & Transportation Dept.** | Transport Planner/ Engineer | Improvement and maintenance of Roads, Streets, lOperation of Public Transport | • Plan, operate and maintain hassle-free inter and intra city road connectivity for all. |
| 5. | **Education Dept.** | Education Officer/ Siksha Adhikari | Access to education for all | • Development of the education and health infrastructure/services at the city level as per the mandate of relevant standards/byelaws. |
| 6. | **Dept. of medical health & family Welfare** | Chief Medical Officer | Access to health services | |
| 7. | **Disabled Peoples' Organization** | Disability Rights Experts | Understanding grass root level challenges related to accessibility and inclusivity. | • Undertake advocacy-based efforts to bring policy level changes. • Ensure access to equal rights and opportunities for persons with disabilities. |
| 8. | **Communities** | Head of the community/Chief member | Lived experiences of persons with disabilities in an urban environment. Inaccessibility related issues in the urban environment. | • Active Participation in the city advocacy, planning and development process to have equal access to rights and basic services. |
| 9. | **Persons with Disabilities** | Individuals | | |

Apart from the above, Govt. of Uttar Pradesh and departments at the state level play a crucial role in the socio-economic development of Persons with Disabilities. The office of the Department of Empowerment of Persons with Disabilities, based in Lucknow monitors the implementation and progress of the ongoing schemes across urban and rural districts in the state. Department of Urban Development office creates provision for equal access to basic services and infrastructure for persons with disabilities.

## 5.7.    Mapping the City's Efforts - Policy and Project Interventions

Government at the national, state and city level have undertaken numerous initiatives to ensure equal access to basic services and infrastructure for persons with disabilities. Department of Empowerment of Persons with Disabilities under the Government of Uttar Pradesh aims to promote the overall development and upliftment of the socio-economic condition of persons with disabilities by ensuring the smooth operation of welfare aids/ schemes. Similarly, other city stakeholders including academic institutes and Disabled Peoples Organisations in the city have realised the importance of making urban infrastructure and services inclusive for all.    The state of Uttar Pradesh has also been awarded the National Award of Excellence for Rehabilitation of Persons with Disabilities. The remarkable efforts of state, district and city level administration have played an important role in the socio-economic upliftment of persons with disabilities.  Under the Accessible India Campaign, there have made tremendous efforts to solve the issues of inaccessible urban environments. Few of the government and public buildings have been integrated with barrier-free infrastructure such as, ramps, lifts, tactile paving, accessible digital information, etc.

### 5.7.1  Policy level interventions

**Table 3: List of schemes under the Central Government**

| Name of the Scheme | Objectives |
|---|---|
| **Deen Dayal Rehabilitation Scheme** | • Provision of grants for NGOs/DPOs to implement rehabilitation services available for persons with disabilities. This includes early intervention for impairment, skill development, training and education.<br>• An organisation can avail aid up to 90% of the project cost. |
| **District Disability Rehabilitation Centre** | • Provision of comprehensive services to persons with disabilities at the grassroots level.<br>• Building inclusive infrastructure.<br>• Conducting capacity building at the district level for sensitisation and awareness generation amongst city officials and grassroots level functionaries.<br>• Implementation of rehabilitation programmes. |
| **Unique Identity Card for Divyangjan Scheme** | • The Unique Disability Identity (UDID) Card has been implemented to create a National Database for persons with disabilities.<br>• The card acts as a one-stop to avail services, and streamlines the tracking of the benefits availed by the beneficiaries. |
| **Adherence to Rights of Persons with Disabilities Act, 2016** | • The scheme provides financial assistance for undertaking the activities outlined in the RPwD Act, 2016, particularly relating to rehabilitation and provision of barrier-free access for services/infrastructure for Persons with Disabilities.<br>• Grant-in-aid is provided under this Scheme to government bodies including autonomous bodies, research and academic institutes for adherence and implementation of the mandates. |
| **Accessible India (Sugamya Bharat)** | • Accessible India is a nationwide flagship campaign for achieving universal accessibility for Persons with Disabilities that was launched in 2015. It aims to create an enabling and barrier-free environment for persons with disabilities specially focussing on Built Environment, Public Transportation and Digital/ Information & Communication Technologies.<br>• Grant in aid is released to States/UTs for making selected and access audited buildings within identified 49 cities across India to be made accessible through retrofitting/redevelopment process. |
| **Swavalamban Health Insurance Scheme** | • The scheme provides affordable health insurance to persons with blindness, low vision, leprosy-cured, hearing impairment, loco-motor disability, mental retardation and mental illness.<br>• It is applicable for a population aged between 18 - 65 years with a family annual income of less than INR 3,00,000 p.a. |
| **Financial Assistance to Disabled Persons for Purchase/ Fitting of Aids and Appliances** | • Provision of financial assistance to avail assistive devices and aids are provided to persons with disabilities.<br>• Grants-in-aid are also released to various implementing agencies for the distribution of the same. |
| **Supported Guardianship Scheme** | • Provision of financial assistance to the legal guardians for the upkeep of persons with disabilities suffering from autism, cerebral palsy, mental retardation and multiple disabilities.<br>• Beneficiaries should hold a disability certificate and should be from Below the Poverty Lines to avail the benefits. |

*Source: (http://uphwd.gov.in/en)*

**Table 4: List of schemes under the Uttar Pradesh State Government**

| Name of the Scheme | Objectives |
|---|---|
| **Divyang Pension Scheme** | • Provision of monthly pension of INR 500/- for persons with disabilities.<br>• Criteria for beneficiaries – age limit of 18 years and above, the benchmark of 40 per cent disability.<br>• Beneficiaries can directly apply to the website sspy-up.gov.in and the amount is disbursed quarterly directly to the account of the beneficiaries.<br>• For persons with leprosy, the pension amount is INR 2500/-. |
| **Physical Rehabilitation scheme** | • Applicable for persons with disabilities with 40 per cent as the benchmark and above.<br>• Provision of free assistive devices such as a wheelchair, inclusive education kit, prosthetics, assistive daily living kits with a sum of INR 10,000/- etc.<br>• To avail motorised tricycle, a subsidy of INR 25,000 is provided to beneficiaries with 80 per cent and above disability of age 16 years and above. |
| **Purchasing/ repairing of Artificial Limbs and Hearing Aids** | • Provides financial grants to persons with disabilities to buy artificial limbs and auxiliary equipment.<br>• Any person with disabilities of any age who is a resident of Uttar Pradesh and whose family's income is not more than the BPL limit is eligible for the scheme. |
| **Marriage Assistance Scheme** | • Provide incentives for marriage to persons with disabilities (a sum of INR 15,000/- if the male is disabled or INR 20,000/- if the female is disabled and if both persons are disabled, a sum of INR 35,000/- is provided).<br>• Beneficiaries should be between the age of18-60 years.<br>• Beneficiaries can apply online on the website: divyangjan.upsdc.gov.in |
| **Livelihood Support Scheme** | • Beneficiaries with 40 per cent disability to be granted a sum of INR 20,000/- for setting up of small business (e.g., a shop).<br>• Beneficiaries should be of age between 18-60 years with an annual income within the Below Poverty Line.<br>• Out of the total sum INR 15,000/- is provided in the form of a loan at 4% interest and INR 5,000/- is provided as a grant.<br>• INR 10,000/- to be granted for street vendors/hand cart owners.<br>• Out of the total sum, INR 7,500/- is provided in the form of a loan at 4% interest and INR 2,500/- is provided as a grant. |
| **Corrective Surgery Support Scheme** | • Provides a maximum of INR 8000/- financial aid per year for persons with disabilities to undergo corrective surgery.<br>• Beneficiaries or their parents to avail of the benefit should have an annual income of not more than INR 6000/- or less.<br>• To lessen the impact of disabilities, required corrective surgery is done so that the beneficiaries could live like normal people. |
| **Free Public Transport (Bus services)** | • Free bus rides on state-run Uttar Pradesh Road Transport Corporation bus services.<br>• For persons with disabilities, who has more than 80 per cent disability, their assistants/ helpers can also avail the benefits of free bus rides. |
| **State Level Awards for the empowerment of Persons with Disabilities** | • Awards (a certificate and an amount of INR. 25000/- cash ) who have done meritorious work for empowerment persons with disabilities.<br>• People/voluntary organisations who have provided employment for Persons with disabilities or have contributed significantly in the field of disability inclusion. |
| **Training of teachers** | • Teachers to be trained to identify children affected with Dyslexia, Attention Deficit and Hyperactivity Syndrome.<br>• Parents and society at large are also sensitised and made aware of the above-mentioned disability. |
| **Assistance to voluntary organizations/ NGOs** | • Grants are provided to the voluntary organizations for operating shelter-houses cum training centres for people with mental illness. |
| **Operation of Braille Press** | • Grants for a braille press for publishing books in Braille to facilitate the reading-writing of visually impaired students |

| Name of the Scheme | Objectives |
|---|---|
| **Aid to Voluntary Organizations/ Institutions** | • Grants to sensitise about disability, prevention, treatment, rehabilitation of Persons with Disabilities<br>• Spread awareness and the right information to avail the benefits of the above-mentioned schemes and provisions. |
| **Accessible India Campaign** | • Launched by GoI and is being implemented phase-wise across the Indian States.<br>• In phases 1 and 2, buildings of public importance were identified in Varanasi and were made disabled-friendly. Total 3 renovation projects have been completed to date.<br>• At present 9 projects have been identified to be made disabled-friendly.<br>• Besides this, accessible toilets are to be constructed along with the major ghats and tourists' sites. |
| **State-Run Special Schools** | • The Amaravati Purushottam Multi-Purpose Institute for Empowerment of Persons with disability: It is a school being operated in Varanasi district and provides residential facilities and vocational training for people with intellectual disabilities (Mental Retardation).<br>• The Bachpan day Care: The day care centre is being operated across the eight cities of Uttar Pradesh state; Lucknow, Allahabad, Varanasi, Agra, Saharanpur, Jhansi, Bareilly, Gautam Budh Nagar. The first three cities have seat intakes of 60 children, while the latter six cities have a seat intake of 30 children. Up until the year 2008-2009, the centres received funds from the 'Education for All 'campaign, post which it is being operated under the Department of Empowerment of Persons with Disabilities. The centres provide free education/training for children with disabilities from the age 03 - 07 years along with transportation facilities. The centres have arrangements for coordinators and special teachers, attendants, and additionally, also facilities the provision of a physiotherapist, psycho counsellor, speech trainer on need basis. |

Unique disabled identity cards are being made available through the swalambhan website for persons with disabilities A state and district wise online database of the applicants is being maintained. The district rehabilitation centre monitors the progress of the implementation of these schemes at the district level.

In addition, a 'six-month programme on rehabilitation of differently-abled people' was launched by the central government. The Community Based Inclusive Development (CBID) programme aims to create a pool of grassroots rehabilitation workers at the community level, who can work alongside the ASHA and Anganwadi workers to handle cross-disability issues and facilitate the inclusion of the persons with disabilities in the society. The programme has been designed to provide competency-based knowledge and skills to enhance their ability to successfully discharging their duties. These workers will be called "Divyang Mitra" (friends of persons with disabilities). This CBID course has been co-designed by the Rehabilitation Council of India and the University of Melbourne as a joint initiative under a memorandum of understanding signed between India and Australia on November 22, 2018, for cooperation in the disability sector[6].

### 5.7.2 Project level interventions

In the pretext of the prestigious Smart Cities Mission of the Government of India, Varanasi has recently been ranked amongst the top 20 smart cities. The Smart City vision of Varanasi is to "rejuvenate the oldest Indian living city of Varanasi as a great place to live and visit by conserving and showcasing its enriched heritage, culture, spirituality, and traditions through innovative social and financial inclusion solutions." The Varanasi Smart City Limited (VSCL) is responsible for executing the Smart City Mission (SCM) in Varanasi, led by the Divisional Commissioner, Varanasi Division of Uttar Pradesh. It works closely with the Varanasi Nagar Nigam (VNN) along with the other city stakeholders in the implementation of the Smart City Projects in Varanasi.

VSCL has taken numerous initiatives with the objective to create accessible, inclusive and sustainable infrastructure. This would lead to the overall improvement in the city environment and provide quality of life for its citizens. Recently, the Prime Minister of India, Shri Narendra Modi inaugurated various development projects

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[6]*https://economictimes.indiatimes.com/news/india/govt-launches-six-month-programme-on-rehabilitation-of-persons-with-disabilities/articleshow/82769968.cms*

worth more than INR 1,500 crore during his visit to Varanasi.

Under the partnership of VSCL and the BASIIC Programme, technical assistance has been leveraged to VSCL and VNN for their ongoing and pilot projects. The partnership has been mutually beneficial and has facilitated the exchange of knowledge on disability inclusion and dissemination of learnings from global/national practices, and supported institutional/ policy reforms for promoting inclusion and universal access for persons with disabilities.

The below list of projects highlights a few of the inclusive efforts of VSCL in Varanasi City:

**Table 5: List of Inclusive Interventions**

| Sl. No. | Name of the Scheme | Project Factsheet | Broad Objectives | Stakeholders Involved |
|---|---|---|---|---|
| 1. | **Smart School at Machodari (Completed Stage)** | Area - 4,600 sq. metre and the built area is approximately 1500 sq. metre.<br><br>Budget - INR 14.21 crore<br><br>Type of Intervention - Inclusive Education, Digital learning<br>Targeted Beneficiaries - Children and young adults \| Students with disabilities \| Women \| Transgender community \|Urban poor | • To provide inclusive and affordable education for all sections of the society and with special consideration for children with disabilities.<br>• To make access to education for children with disabilities more affordable and inclusive.<br>• To empower the vulnerable section of the society, such as children with disabilities, women and transgender by facilitating skill development and vocational training courses. | Implemented by Varanasi Smart City Limited in support of Basic Shiksha Vibhag of Uttar Pradesh state.<br><br>It will be handed over to Varanasi Nagar Nigam for overall in charge, operation, and maintenance of the facility. |
| 2. | **Rudraksha International Cooperation and Convention Centre, Varanasi (Completed Stage)** | Area - 2.87 hectares, can accommodate more than 1,200 people and has a parking space for 120 cars.<br><br>Budget - 3,042 million Japanese yen (approximately INR 200 crore) under the Japanese Official Development Assistance scheme.<br><br>Type of Intervention - Inclusive tourism development \| Enhancing the city's economic productivity<br><br>Targeted Beneficiaries - Citizens of the city \| Tourists \| Persons with disabilities \| Women \| Children \| Older Persons | • To act as a social and cultural gathering space for the citizens of Varanasi.<br>• To strengthen the city's competitiveness by boosting the tourism sector and create a platform to exhibit the city's art and culture.<br>• The state of the art infrastructure would also be a platform to improve the real estate leading to a rise in land prices and thus enhancing the city's local economy | Central Public Works Department has implemented the project with support from (Japan International Cooperation Agency) JICA and a Japan-based consultancy firm.<br><br>The facility has been handed over to Varanasi Smart City Limited for operation and maintenance purposes. |
| 3. | **Redevelopment of Dr. Sampoornanand Sports Stadium (Proposed Stage)** | Area – 64648.391 Sq. Mt. (15.97 Acres).<br><br>Budget - INR 111.08 Crore to be funded under the Smart Cities Mission.<br><br>Type of Intervention - Inclusive Recreational Facilities \| Barrier-Free Sports Infrastructure \| Enhancing the city's economic productivity<br>Targeted Beneficiaries - Persons with disabilities \| Sports Persons \| Women \| Children \| Older Persons \| Citizens of the city \| Tourists | • To create a barrier-free/ disabled-friendly sports facility<br>• To uplift the sports infrastructure as a world-class facility<br>• To develop an integrated sports facility that follows SAI guidelines<br>• To promote sports tourism and encourage sports mapped to local culture and context<br>• To promote a healthy lifestyle for the citizens of Varanasi<br>• To formulate revenue generation model through multi-use mixed-use functions<br>• To be known as a city identity that resonates with its contribution in the field of sports in the past. | Varanasi Smart City Limited would be responsible for overall designing and planning the project.<br><br>A consulting firm would be onboarded by VSCL on the EPC model to implement the project. |

| Sl. No. | Name of the Scheme | Project Factsheet | Broad Objectives | Stakeholders Involved |
|---|---|---|---|---|
| 4. | **Redevelopment and Landscaping of Beniya Bagh Park (Implementation Stage)** | Area - 52454.00 sq. m. or 12.96 acres<br><br>Budget - INR 92 Crores<br><br>Type of Intervention - Inclusive Recreational Spaces<br><br>Targeted Beneficiaries - - Persons with Disabilities (irrespective of age ability & gender) \| Women \| Children \| Older Persons \| Transgender \| Urban poor | • To serve the purpose of reducing the surrounding traffic congestion by creating an underground basement (two levels) parking infrastructure.<br>• To improve the urban environment and to humanize these infrastructures, reclaim the underutilized spaces, a landscape area would be developed above basement parking.<br>• To develop a sprawling green public park in the heart of the old city which shall serve the local community as well as tourists.<br>• To preserve the historical significance & associational value of the park and important features inside it. | Varanasi Smart City Limited is responsible for overall designing and planning the project. |
| 5. | **Street Redevelopment Project (a stretch of 1.2 km (between Sajan Tiraha to Rath Yatra Chowk)**<br><br>**(Design Stage)** | Length - Stretch of 1.2 km extending between Sajan Tiraha to Rath Yatra Chowk).<br><br>Budget - INR 98 crores *(Overall urban revitalization of Roads and Junction Improvement Project)*<br><br>Type of Intervention - Improve Walkability/ Pedestrianisation Infrastructure<br><br>Targeted Beneficiaries - - Persons with Disabilities (irrespective of age ability & gender) \| Women \| Children \| Older Persons \| Transgender \| Urban poor | • To ease the existing traffic congestion and improve vehicular/pedestrian movement in the ABD area.<br>• To improve its connectivity with the other surrounding areas.<br>• The stretch to be developed is based on the concept of inclusive design aspects.<br>• To create scope for integrating formal spaces/vending zones.<br>• To improve walkability and pedestrian infrastructure. | Varanasi Smart City Limited is responsible for overall designing and planning the project. |

**Figure 20: Mapping the Inclusive Efforts of the city**

**Inclusive efforts of Varanasi Smart City Ltd**


Machhodari Smart School


Rudrakhsha International Cooperation & Convention Centre


Multi-level car parking, Godowlia market


Pedestrianisation project along Godowlia Chowk

**Inclusive efforts of the Department of Empowerment for Persons with Disabilities**



Redevelopment of Asi Ghat and Raj Ghat

**Efforts to promote inclusive tourism**



Redevelopment of Raj Ghat, Ravidas Ghat and Khirkiya Ghat

Apart from the above, there are several projects in the pipeline with a focus on improving equal access to urban infrastructure for all. A few of the projects are listed below:

**1. Provision of Inclusive residential school for children with disabilities**
The project would be implemented by the Department of Empowerment of Persons with Disabilities (DEPwD) in support of the Ministry of Social Justice and Empowerment (MSJE).

**2. Provision of Accessible Toilets**
DEPwD would be developing accessible toilets across major city heritage/tourists' sites and busy city centres.

**3. Kashi Ropeway Project**
The ropeway would cover an area of 5-km area between the Cantonment railway station (Varanasi junction) and Godowlia Chowk with the provision of two three intermediary stations at major city locations. The project would aim to decongest the existing road traffic and improve the city's tourism image. The stations would be designed with a deep focus on making them accessible for persons with disabilities. VDA would be the lead implementing agency in collaboration with relevant city stakeholders.

**4. Kashi Geo-hub portal**
The hub is developed by ESRI in collaboration with VSCL. It acts as a configured cloud platform that integrates city-level data and information and its alignment with the government missions/schemes. The hub also acts as a source of knowledge repository to understand the deep-rooted history, culture and urban fabric/characteristics of the city.

**5. Redevelopment of Ghats**
The UP government, on Jan 1st, 2020, has released half of the 3-crore budget sanctioned by the Centre for redevelopment work in Assi, Manikarnika and Dashashwamedh ghats which are most visited (due to religious and ancient traditions) in Varanasi.7 The redevelopment work aims to ensure the integration of universal design elements (ramps, handrails, accessible toilets, braille signage and drinking water facilities etc.) which would assist the wheelchair users to access the ghats and witness the Ganga Aarti. It would also improve the connectivity to the ghats areas by creating scope for levelling the road, pedestrian infrastructure, separate lanes for persons with disabilities and a dedicated parking zone to reduce the congestion caused by the haphazard traffic movement. The project would be executed in support of the Accessible India Campaign under the Government of India.

**6. Inclusive Tourism**
The Uttar Pradesh Tourism Development Corporation is working on improving access to the major Ghat (Khirkiya Ghat and Ravidas Ghat). The redevelopment work would consider the provision of ramps, chair lifts, accessible toilets and changing ramps, availability of trained assistance, accessible digital information, etc.

**7. Access to Education**
All school and college curriculum/syllabus to be made available in an accessible format. Efforts are being made to train the teachers and staff to understand the barriers faced by children with disabilities and provide the necessary support for their growth and learning.

**8. E-governance**
All public services, such as payment of bills, taxes, grievance redressals, etc. to be made available under one umbrella accessible platform. The city has already made an e-platform that allows the rickshaws and auto drivers to register for operating on certain routes which would further be extended for other routes in the city.

**9. Mobility Improvement**
There are several plans in the pipeline to improve the major streets and roads in the ABD region of the city. The intersections would be redesigned to curb traffic congestion and facilitate easy access for persons with disabilities and improve the pedestrian infrastructure.

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7https://economictimes.indiatimes.com/news/politics-and-nation/in-a-new-years-gift-to-pms-constituency-three-varanasi-ghats-to-be-made-wheelchair-accessible/articleshow/73094003.cms

The issue of air and noise pollution in Varanasi is also identified as a major issue. Hence, addressing the aforementioned issues is also one of the immediate priorities to improve the challenges faced by persons with hearing impairment especially.

Initiation of the happy street concept is one such initiative to improve walkability and reduce vehicular movement at a certain stretch of the road in the city. A particular street is closed for motorised vehicles for three to four hours and the stretch is open for the citizens to be involved in activities such as dancing, yoga, Zumba, cycling, painting, etc. This initiative also aims to create equal access to urban areas and to encourage equal participation of persons with disabilities in an urban environment.

## 10. Build Sensitisation and Improve Public participation
To improve public participation, especially by involving persons with disabilities in the planning and designing of the process, the city aims to hold workshops/consultations at frequent intervals. The city stakeholders have realised the importance to amplify the efforts on sensitising the citizens, policymakers, urban practitioners and city officials on disability inclusion and the challenges associated with them.

## 11. Public places
Improving access to major public spaces, ghats, heritage/tourist sites and building pedestrianised connectivity have been priority areas for improving urban spaces in the city. Kashi Vishwanath temple corridor would be one of the landmark projects in the city which would connect the major heritage sites and decongest the existing traffic movement, create space for pedestrianisation movement. Apart from the above, the development of two sensory parks is underway at Beniyabagh and Town Hall are of the city. Existing ponds/water bodies have been redeveloped in the city to create green/open space in the city.

# Qualitative Assessment of Disability Inclusion within the city

The study involved a series of the consultative processes (consultations with city stakeholders, interviews with Persons with Disabilities, participatory mapping exercises and stakeholders' consultation) along with the collection of qualitative and quantitative data. One of the key objectives of the research study was to qualitatively assess the accessible and inclusivity aspects of the urban environment in Varanasi. The GDI Hub led research case study aimed to understand the experiences of persons with disabilities living in Varanasi and their aspirations and the awareness, acceptance, application and experiences of inclusive and universal design in Varanasi. The study also intended to map the lived experience of persons with disabilities in the built environment which further assisted in identifying the key barriers and opportunities for creating a more inclusive urban environment in Varanasi. The GDI Hub and NIUA team were supported by a local delivery partner, Kiran Society, an NGO with expertise in disability inclusion in Varanasi.

## 6.1.  Key findings from interactive/participatory exercise

The qualitative assessment exercise was designed based on participatory and collaborative research.  It involved a series of interviews with persons with disabilities, led by a local NGO with experience in disability inclusion, (fifteen in nos.)  and engaging in discussion with diverse city stakeholders (including 11 city officials e.g., Government officials, decision-makers, urban practitioners, policymakers, etc.). A co-design workshop was also conducted to capture the experiences and everyday life of persons with disabilities living in Varanasi by engaging them in participatory design activities. The workshop also intended to map innovative ideas in improving the city from the perspective of accessibility, inclusivity and safety aspects.

The age group of the participants were between 18- 60 years.  The disabilities varied from mobility, vision, hearing, speech, multiple sclerosis, and cerebral palsy. The gender ratio of the participants was adequate with 8 female and 10 male participants.  With around 79% of the participants  representing physical impairments whereas the rest had a visual, hearing and cognitive impairments. Some of the participants had completed a tertiary level of education. The participants were mostly employed in informal sectors and few were involved in the teaching profession with an average monthly income of INR 5000/-.  Most of the participants have access to UID Cards which provided them with access to social security nets and financial aids.

Below are a few of the key barriers identified in the urban environment faced by persons with disabilities and as evident from the findings of interviews and mapping exercise:

- **Access to public transport**
Lack of accessible public transport is a major concern for Persons with Disabilities. Usually, they are dependent upon the support of family members for stepping out of the house or hire auto-rickshaw to commute every day. Moreover, the organic structure of the city, open drains along the road, dumping of municipal solid waste along the roadside, etc. significantly reduce the road width. Additionally, lack of streetlights, pedestrian infrastructure, and barrier-free design elements, narrow lanes connecting their localities to the major city roads/street network make the city inaccessible for Persons with Disabilities.

The participants also highlighted the movement of cattle alongside the roads/streets This act as an additional hindrance and a matter of safety to step out of the house or locality. The congested streets/narrow lanes create obstacles for the Assistive Technologies users (e.g., wheelchair, crutches and cane) to commute independently.

- **Access to WASH Infrastructure**

The participants highlighted the efforts of city stakeholders in creating accessible toilets, drinking water facilities, city information centres, etc. within prominent locations of the city. Although these utilities/infrastructures have been built across the city, they lack compliance with universal design standards and hence, becomes redundant in terms of functionality or accessibility. Steep slopes of the ramps which are not compliant with the minimum design standards and improper tactile paving further create barriers in accessing these utilities.

- **Access to Public and Private Buildings**

Majority of the government/public buildings in the city lack accessible elements or barrier-free infrastructure. The common issues identified are high plinth level, inappropriately designed ramps, lifts, toilets, and inaccessible information centres.

Most of the police stations, post offices, banks, and ATM facilities, etc. also do not consider the needs of persons with disabilities and hence fail to meet the minimum accessibility standards. Participants recognized that a few shopping malls and cinema halls did try to improve their accessibility but often such efforts turn out to be ineffective from users' perspective. The participants also highlighted the everyday challenges they face in their working environment or even inside their homes.

- **Access to Heritage/Religious sites**

The major religious sites within the city such as Kashi Vishwanath Temple, Kal Bhairav Temple, etc. were considered as inaccessible by persons with disabilities. The temple authorities often deny access to persons with disabilities with a wheelchair, crutches or prosthetics. The existence of social stigma or attitudinal barriers makes it more difficult to recognise their existence or consider the requirement of special needs or assistance.

However, some heritage sites such as Sankat Mochan Temple and Sarnath Complex have integrated barrier-free infrastructure e.g., provision for wheelchairs, ramps and support for special assistance within their premises to meet the accessibility standards. These efforts can be used to set good examples for the city to adopt and replicate in the other parts of the city heritage structures.

- **Access to Ghat areas**

Most of the participants highlighted the challenges they face while accessing the Ghat area which is one of the iconic, historical and cultural legacy of the city. Being a resident of the city and not being able to visit these heritage sites has a significant impact on the lives of persons with disabilities. The oldest part of the city also lacks basic infrastructure such as accessible public toilets, water drinking booths, lack of signages, dedicated pedestrian infrastructure, to name a few.

- **Institutional Barriers**

Few of the participants also highlighted the insensitivity of city officials in understanding the specific needs and assistance required for accessing the government services and related digital information (websites, online payments and forms). Persons with disabilities face difficulty in accessing basic services e.g., filling of online forms, applying for birth/death certificates, and filing municipal taxes. Lack of empathy by the administrative authorities creates hurdles to get admission to a desired school or college. Sometimes, disability restricts the selection during an interview process. The participants highlighted certain examples from the city where huge investments are being made to facilitate the visit of VIPs in the city but very little has been done to improve the accessibility aspects for persons with disabilities.

- **Attitudinal Barriers**

There is a lack of awareness and sensitization in society about the challenges faced by persons with disabilities in an urban environment. Disability is generally stigmatised and considered a burden to the family. Lack of trained and sensitized school teachers creates further challenges for children with disabilities to build confidence and take active participation in the learning and growth process. Participants had various perspectives on whether urban or village life was more inclusive, some found the city to be better in terms of stigma attached towards persons with disabilities, others found it to be worse.

- **Access to Financial Aids**

Although the government has facilitated the provision of financial aids and pensions, the amount is not sufficient to meet their diverse needs. The distribution system to avail assistive technologies has also been exclusionary in the sense that motorised tricycles are only provided to people with more than 80% disability and does not reflect people's actual needs. This excludes a major chunk of people who do not meet the criteria and only a handful could avail it. In addition, the participants expressed difficulty to get a driving drivers' licence although they are fully capable of driving.

- **Access to education**

Most of the schools and colleges in the city lack integration of barrier-free design features within the existing infrastructure. Lack of sanitised teachers and staff even make the situation difficult for children with disabilities to attain the basic level of education. The participants emphasised on adopting digital teaching modules, adaptive learning process, audio-video mode of the syllabus to solve the inaccessibility issues. Training of teachers would play a very important role in the early development and improving learning skills for children with disabilities.

- **Access to Assistive technologies**

Assistive tools such as wheelchairs, callipers, crutches, tri-cycle, three-wheeler scooters have primarily been used by persons with physical impairments. White canes are being used by persons with visual impairment. Callipers, crutches and wheelchairs are used for moving around short distances, whereas tri-cycle and scooters are used for travelling long distances. Digital mediums such as cell phones and laptops are mainly used for the purpose of education, entertainment and staying connected with friends and families although some participants had very limited access to digital technologies and did not have a smartphone or computer. A few of them also used it for work purposes, ordering food, shopping and making online payments. However, affordability and availability still remain a major challenge for many of the users to avail the benefits of assistive tools and technologies. The eighty per cent benchmark of disability acts as hurdles for a majority of the beneficiaries to avail the government aids/schemes for purchasing assistive tools.

## 6.2.   Key Findings – Interviews with city stakeholders

In reference to the qualitative assessment component of the study, eleven city stakeholders (including the municipal commissioner, city officials across various dept. – Development Authority, tourism, health, education, traffic & transportation, public works department, urban practitioners – architects and urban planner, engineers, researchers from Banaras Hindu University, representatives from disabled people's organisation, etc.) were interviewed. The engaging discussion with the stakeholders has assisted in understanding the current legislation, policy and regulation associated with disability inclusion specific to Varanasi city. The discussion also assisted in mapping the acceptance, application, implementation and issues associated with the adoption of universal design features AT. The key findings have been categorised under the following sections:

- **Knowledge on the enactment of policies/laws and acts**

The city stakeholders are aware of the provisions made for universal design features in the National Building Code-2016, URDPFI Guidelines and CPWD barrier-free access guidelines. At a city level, there are also certain provisions being made within the UP-building bylaws, 2018. The provisions made under the RPwD Act, 2016 to ensure equal access to basic services and urban infrastructure for persons with disabilities have been a priority area for many policies and project level interventions. DEPwD is cognizant of the 21 types of disabilities and certain amendments have been made in the city-based policies and laws to identify and recognise the diverse barriers

associated with disabilities. The four per cent provision of employment for Persons with Disabilities needs to be enacted throughout the government and institutions bodies. The launch of the Accessible India Campaign has played an important role in building the narrative for making equal access to basic services and infrastructure for persons with disabilities. In addition, efforts have been made to renovate the major public and government buildings and integrating barrier-free elements e.g., ramps, grab rails, signage, lifts, etc. to ensure accessibility for persons with disabilities. Numerous plans and proposals have been prepared to improve the accessibility of the Ghats, and create provision for accessible WASH infrastructure. Due to restrain from the local stakeholders and political hindrance, the implementation of these projects has been delayed.

There is a strong need for governing law for bringing policy level interventions and advocating them for its adoption at the grass root level and to safeguard the rights and well-being of persons with disabilities. The schemes and provisions should aim to provide access to basic education, job opportunities, financial assistance for livelihood opportunities, affordable housing. Representation of Persons with Disabilities within the legislative/ institutional set-up would play an important role in the implementation of schemes and provisions and ensuring its efficacy for empowering the communities. Increasing the awareness and sensitization about the barriers and challenges associated with disability would be a crucial step towards advocating the need for bringing policy-level interventions.

- **Implementation and adherence to inclusive policies and provisions**
The city has a decentralised nature of the governing bodies with interlinked roles and responsibilities to ensure access to basic services and infrastructure for all. DPOs play an important role in the city to act as a mediator between the government bodies and the communities. They deal with the advocacy and implementation related roles which keep appraised of the grass-root level issues associated with disability. The individual departments ensure to integrate the provisions of barrier-free infrastructure within the development projects (e.g., streets, parks, housing, schools, hospitals, bus stands, public utilities, etc.) For example, in a community toilet for 240 users, at least one of the cubicles should have accessible facilities. However, due to a lack of knowledge on the technical aspects of universal design features, the efficacy and usability of such projects remain detached from real-time challenges faced by persons with disabilities. There is a need for setting up a review and monitoring committee for the overall supervision and implementation of the project.

Few of the major implementation level issues highlighted by the city officials are as follows:
- Lack of participation from persons with disabilities at various stages of planning and policy formulation because of a lack of mechanisms for them to participate.
- Non-involvement of the Persons with Disabilities during the execution of the infrastructure project results in poorly installed universal design feature which might not be efficient from the users' perspective.
- Due to a lack of technical knowledge on universal design features, efforts are only limited to the installation of ramps, grab rails, etc. The location and even the slope of the ramp are sometimes inadequate for wheelchair user to access the ramp without manual assistance. Public toilets have access through a ramp but the walkway leading to the ramp is missing. Therefore, there is a lack of a holistic approach to plan, design and execute inclusive infrastructure projects.
- There is a need for setting up of strong governance mechanism to take accountability and monitor the disbursement of funds to ensure the provision of equal access to services and infrastructure for all.

- **Challenges in implementing inclusive infrastructure:**
There is a need to understand the entire chain of disability inclusion in order to map the challenges associated with adherence and implementation. Usually, the architects, designers and engineers try to integrate the necessary technical standards and guidelines for designing the inclusive infrastructure but adherence to the appropriate technical specification has not been properly carried out by the on-ground executing agency.

The following challenges have been identified during the implementation process:
- Although, there exists a comprehensive policy framework to protect the rights of persons with disabilities, there is a dire need for a stringent governing law to regulate, monitor the adaptation and its compliance at the grass root level.
- There needs to be budget ring-fenced for accessibility and there must be accountability in how it is spent. Ideally this should be done in consultation with persons with disabilities.
- There is a need to build sensitisation and awareness about inclusive infrastructure and the related technicalities amongst the decision-makers for prioritising and emphasising its implementation at the city level.

- Without a governing law, there is a lack of conscious efforts to ensure the adoption of the mandates highlighted in the relevant bye-laws and other guidelines within the policy and provisions.
- Lack of coordinated efforts of the city stakeholders leads to working in silos and poor coordination in implementing inclusive policy/project interventions.
- Being an old city with heritage values and unique urban characteristics as well as densely built urban areas and narrow lanes, there is a space constraint for implementing greenfield and retrofitting inclusive projects.
- Due to the presence of diverse local stakeholders, there are retrains on integrating new or additional infrastructure within the existing ghats, heritage and religious sites to improve the accessibility.

- **Perception of the barriers associated with persons with disabilities**

Broadly, the stakeholder's understandings of the barrier faced by persons with disabilities could be highlighted as follows:

**Table 6: Perception of barriers**

| | |
|---|---|
| **Livelihood** | • Lack of access to equal participation in the mainstream society.<br>• Lack of livelihood and employment opportunities and thus limiting the opportunity of live an independent life.<br>• Insufficient financial assistance from the government to meet the daily needs and requirements.<br>• Need for accessible and inclusive housing options. |
| **Mobility** | • The city' infrastructure and pattern of development do not support the independent movement of persons with disabilities.<br>• The public buses and another modes of public transport are not designed considering the diverse challenges faced by persons with disabilities.<br>• The city lacks auditory signals and proper signages which can be a major challenge for persons with disabilities, especially people with visual and hearing impairments while crossing the roads.<br>• The noise pollution in the street can also be a major disadvantage for persons with visual impairment to navigate through the streets as they are particularly dependent on audio navigations.<br>• The height of the footpath is at an inaccessible level, this can be a major challenge for persons with locomotor disabilities in particular. |
| **Lack of access to public spaces and social activities** | • Banks, ATM booths, government buildings, religious sites including the ghats and religious places are yet to be made accessible. PwDs faces barriers in accessing public services independently.<br>• During the election, even the voting areas are inaccessible which causes a barrier to exercising their rights to vote.<br>• Lack of accessible infrastructure also adversely affects participation in social activities and to lead an independent social life.<br>• Lack of barrier-free infrastructure hinders persons with disabilities to even witness Ganga Arti, take a boat ride or visit the ghat area which is a landmark icon for the city. |
| **Institutional Barriers** | • There is a reluctance in addressing and accommodating the needs of persons with disabilities, for example, failure to make classroom accessible or audio-visual teaching modules, availability of sensitised /trained staff. |
| **Information Barrier** | • Lack of information in accessible formats. The websites, apps, are non-compliant with the accessibility norms. |
| **Lack of empathy** | • Lack of awareness and technical understanding of barrier-free design features even amongst the government officials.<br>• This translates into poor planning, designing and implementation of an inclusive infrastructure projects. |

- **Knowledge of inclusive design or universal design features**

The concept of universal design is recent amongst the majority of the city stakeholders while a few of them have very limited knowledge on it. The stakeholder's knowledge of universal design could be rated between 1 to 3 on a scale of 5. For large scale projects, the elements of universal design are incorporated at the tendering stage.

Provisions are added in the tender documents (EoIs and RFPs) to include the specific accessibility requirement. For small scale projects, the accessibility requirement is assessed through an audit process to understand the challenges faced by persons with disabilities faced while accessing the infrastructure. The audit also assists in measuring the compliance of the project with the accessibility-related standards and guidelines. The universal design features are retrofitted at a later stage based on the requirement. Additionally, the DPRs are being reviewed to assess the compliance with accessibility requirements through the support of external consultants/ accessibility experts. Based on the recommendations, the designs and bill of quantities are altered to meet the inclusive mandates and objectives of the project.

- **Identification of least and most accessible city areas**

Although the city has as of yet done very minimal work to understand and mitigate the barriers faced by persons with disabilities, the stakeholders have realised the importance of creating provisions for inclusive and accessible infrastructure. The city stakeholders have an understanding of the least and most accessible places in the city which have scopes for improvement. The list could be highlighted as follows:

**Table 7: List of least and most accessible city areas**

| | |
|---|---|
| **Least Accessible Places** | • The major ghats and religious/heritage sites<br>• Old and dense part of the city ( e.g., Godowlia Chowk market)<br>• Varanasi Railway Station<br>• District Magistrate Office<br>• Educational Institutes<br>• Residential complexes/individual Homes |
| **Most Accessible Places** | • Sarnath Temple<br>• Tourist Facilitation Centre<br>• Rajghat<br>• Maduadih Railway station<br>• Commissioner's Office<br>• Disability Welfare Office<br>• Varunapur zone |

- **Knowledge about the built environment, disability and use of AT:**

The use of assistive technology would play an important role in improving the accessibility of an urban environment. The technologies would facilitate independent navigation of persons with disabilities whether to climb a staircase or use a lift in the building or cross a traffic intersection. However, lack of accessibility, eligibility, distribution, reachability and affordability act as the main barriers to integrating assistive technology within the planning and designing of urban infrastructure. Assistive technologies could be a piece of equipment or product used to increase, maintain or improve the functional capabilities of persons with disabilities. These can be low-vision devices, hearing aids, augmentative and alternative communication systems, walking frames, wheelchairs and prostheses such as artificial legs.

In addition to low-cost, simple products, a more advanced form of the solutions exists, such as screen-reading software, customized telephones and computer-assisted devices. Assistive technologies could benefit a wide range of people, including those with disabilities, age-related frailties, those affected by noncommunicable diseases, and those requiring rehabilitation. These technologies, therefore, have the potential to play a significant role in enabling large sectors of society to function and live independently. Contextualising the technological solutions would be crucial to improve the performance of such interventions and improve accessibility of persons with disabilities in an outdoor and indoor environment. The city stakeholders are not well acquainted with the usage of AT to improve the accessibility aspects of the built environment and there is scope for building knowledge of the stakeholders for appropriate use of AT and services.

## 6.3.  Co-design Workshop

The workshop (on 12th mar, 2021) was jointly organised and facilitated by GDI Hub and NIUA along with the support from Kiran Society (Varanasi based NGO) and Varanasi Smart City Ltd. It aimed to shed light on the state of inclusive design and accessible urban environment in the city of Varanasi in India. 17 city residents with varied abilities, age and gender had participated in the workshop. The disabilities varied from mobility, vision, hearing, speech, multiple sclerosis, and cerebral palsy. The gender ratio of the participants was adequate with 7 female and 10 male participants.

To ensure accessibility, the workshop had the provision of a sign language interpreter and information leaflets printed in braille. The workshop was conducted with strict adherence to data privacy and protection protocols as followed by the GDI Hub, NIUA and Kiran Society Team.

The key objectives and the session design could be illustrated as follows:
- **Session I:** To understand the individual experiences of living with a disability in Varanasi. Every participant introduced themselves giving a brief on their experiences of living with disabilities in Varanasi.
- **Session II:** To capture the barriers and challenges associated with everyday routines/ journeys of the participants made to school/college/workplace or running their daily errands (e.g., going to markets, parks, visiting friends, moving within the neighbourhood/locality etc.).
- **Session III:** Participatory mapping approach with participants in creating a collective picture of accessibility and inclusion related challenges faced in the city. The exercise also aimed at using a city map to demarcate the most and least accessible places within the city and identifying key areas for improvement.

The recommendations from the participants reflected the need for adopting an inclusive planning and design approach for urban development by the city stakeholders. This approach must engage persons with disabilities at all stages of policy and project development. The findings and suggestions highlighted the need to enforce the adoption of an inclusive design approach and accessibility standards within city planning and policy-level interventions. This would also play an important role in advocating the role of persons with disabilities amongst to mainstream and transform Varanasi into a more accessible, safe and inclusive city.  It also assisted the team in understanding the barriers and challenges faced by Persons with Disabilities to access basic infrastructure/ services while identifying the key priority areas of improvement and recommendations for city stakeholders. The workshop was designed to make the sessions interactive for the participants with hands-on activities in mapping the city and their experiences. The activities were divided into three sessions, each with defined objectives. The participants worked in 4 groups of 4 - 5 people with a facilitator to explain the objectives of the sessions. The session aimed to capture best practices that have been initiated by city stakeholders to make the heritage sites, public/government buildings are accessible for all and suggestions/recommendations for the stakeholders to prioritise the development of certain key areas of the city of utmost importance (heritage, touristic, cultural values) to make them accessible for all.

**Figure 22: Collaterals designed**



Most of the participants mentioned about the similar spatial, economic, cultural and attitudinal barriers they frequently face while accessing basic infrastructure and services in the city environment. This would include the following:
- Lack of barrier-free infrastructure within the home/workplace/institution/neighbourhood.
- Lack of access to government services and information.
- Lack of awareness and sensitization about the barriers and challenges related to disability.
- Existence of social stigma associated with disability in the society.

The participants described their day to day journeys and highlighted the key obstacles faced to reach their everyday destinations e.g., workplace, recreational places (malls, parks, ghat areas) and public services. The

journey from the house to the main street is inconvenient because of the narrow lanes, open drains, movement of cattle, etc.  Unavailability of accessible public transport facilities, traffic congestion, busy street junctions act as a major obstacle for the everyday commute.  The participant stressed the need of creating provisions for accessible bus stops/auto stands, accessible foot overbridges and the use of Assistive Technologies across the busy junctions to assist persons with disabilities to cross the roads. Provision for vertical parking can also be considered by the city stakeholders. Overbridges can be made accessible by connecting them with ramps or installing lifts at busy junctions.

**Figure 23: Participatory mapping exercise**



The participant also highlighted the inconvenience of using the public utilities. Most of the ATMs are at a high plinth level and lacks appropriate ramps to access the machine.  They can be made accessible by creating provision for voice over facilities, and braille friendly machines. Public toilets are installed in a few of the public spaces; however, they do not meet the accessibility-related compliances.  Most of the malls and shopping centres do not consider the need for special assistance required by persons with disabilities. However, few of the interventions by the mall authorities do consider the special needs and have created provisions for barrier-free infrastructure within their premises/buildings.  For recreation purposes, the participant usually uses the parks within their neighbourhood/locality.  The journey or route to reach the Ghat areas or the heritage sites located within the city is not accessible for the majority of the participants.

**Figure 24: Glimpses from the workshop**
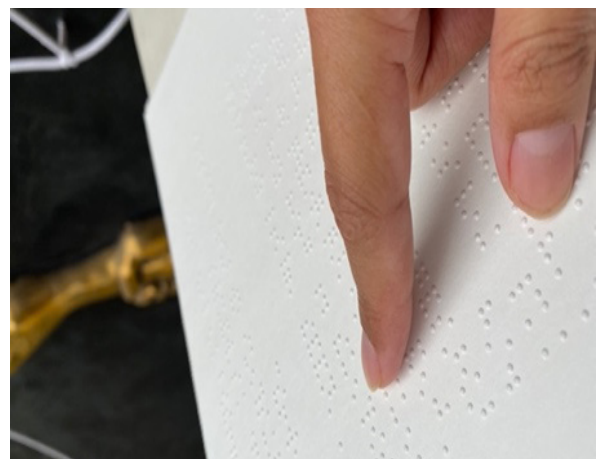
Below are a few of the key findings from the participatory mapping exercise. The participants have identified a few of the most and least accessible places/services in the city listed below:

- The campus of Banaras Hindu University is made accessible with provision for barrier-free infrastructure and services. However, access to the campus still remains a challenge due to the lack of pedestrian infrastructure, accessible modes of public transport, accessible bus stops, etc.

**Figure 25: Journey map prepared by a participant**



- Office of Department of Empowerment of Persons with Disabilities is accessible with features available as ramps, accessible toilets, sensitised staffs, etc. The officials are also aware of the specific need and support/assistance required by persons with disabilities to access the online/offline services. The railway station is not accessible for wheelchair users as there is no provision for ramps to connect the platforms, lifts are placed in limited locations and lack of provision for manual support/assistance required by persons with disabilities.
- The ghat areas are inaccessible due to a lack of ramps/lifts. The lack of accessible public utilities (e.g. information centres, toilets, drinking water facilities) makes it more difficult to access the historic ghats and attend the Ganga Aarti ceremony or access the boating facilities.
- Most of the old city area is mostly inaccessible due to the organic pattern of development, haphazard traffic movement, inefficient public transport, lack of access to basic utilities e.g., toilets, drinking facilities, etc.
- The participants also highlighted the difficulty in visiting the historic old temples and heritage sites. The premise of Kashi Vishwanath Temple is not accessible by wheelchair users or similar Assistive Technologies (crutches and prosthetics) because of the existing narrow lanes which connect the main temple to the streets/roads.
- Participants expressed their inability to visit the Ghats and watch Ganga Aarti or use the boating facilities due to a lack accessible infrastructure.
- The premise of Sarnath Temple is accessible from major rods/streets however, the main temple is inaccessible for wheelchair users.
- Big Bazar (shopping mall) at Sigra has accessible ramps, tactile paving, availability of assistance for special needs.

**Figure 26: Outcome of the participatory mapping exercise**
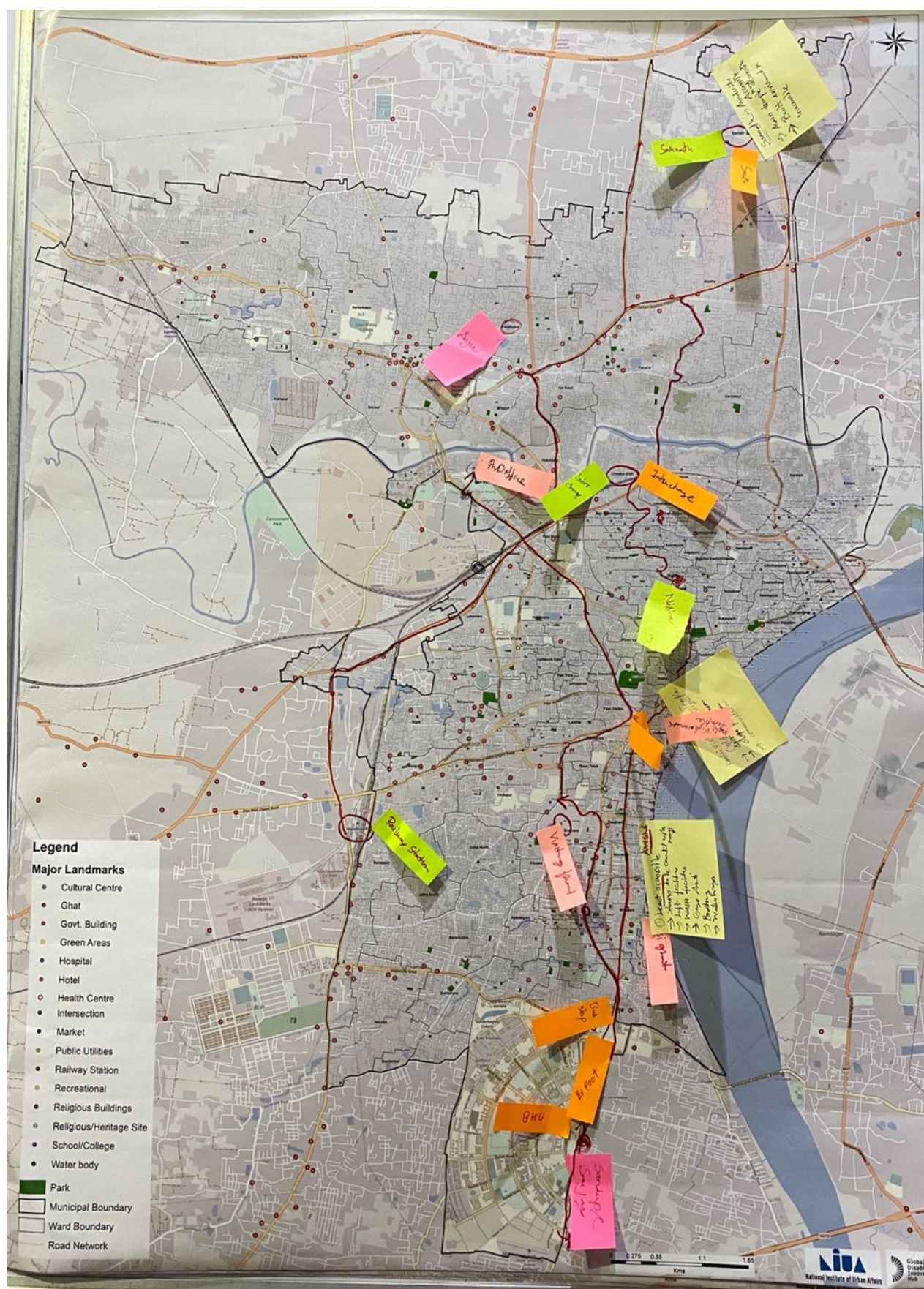
The participatory and interactive workshop had assisted in understanding the grass-root level issues related to inaccessibility in Varanasi City. The innovative and replicable solutions as insights from the workshop can give insights to the stakeholders to understand the challenges and barriers faced by Persons with Disabilities' (irrespective of age, ability and gender) in the city. The collaborative efforts of the city stakeholders to include persons with disabilities would play an important role in transforming the city as accessible, safe and inclusive for all. The participants shared a diverse range of recommendations for adoption and implementation by the city stakeholders which have been highlighted in the later section of the report.

## 6.4. Multi-stakeholders' Consultation

Under the study, a multi-stakeholder consultation was conducted in Varanasi (on 7th September 2021) to create a collaborative and participatory roadmap towards the vision of Sugamya Kashi (Inclusive Varanasi). The consultation was a joint endeavour of Varanasi Smart City Limited (VSCL) and the National Institute of Urban Affairs (NIUA), and its partner the Global Disability Innovation Hub (GDI Hub), London. It aimed to engage with the relevant local stakeholders and apprise them on the progress of the Building Accessible Safe Inclusive Indian Cities programme and ongoing city engagement activities being implemented in Varanasi.

The consultation had representation from various government bodies, academic institutes, non-Governmental organisations including persons with disabilities. The event was also graced by the presence of Shri Pranay Singh – CEO of, VSCL and Ms. Katy Budge - Minister Counsellor of the UK government.

The major objectives achieved during the consultation are as follows:
- Mainstreaming disability inclusion across various facets of urban development in the city.
- Creating a collaborative and participatory model of stakeholders' ecosystem.
- Integration of accessibility, inclusion and safety aspects across all spheres of urban development.
- Identification of key pilot projects in the city with special consideration for integration of universal design features.
- Identify sector-specific projects for facilitating technical assistance beyond the BASIIC programme.
- Path to establish a long-term engagement with the city to adopt the tenets of accessibility, inclusion and safety across all spheres of urban development, even beyond the programme timelines.
- Developing a roadmap based on the narrative of *Sugamya Kashi* (Inclusive Varanasi).

During the consultation, the key learnings from the city engagement was discussed. The outcomes and key findings from the city audit study were shared with the participants which would further lead to redefining the policy/ project initiatives focussed on participatory and data-driven approach. The discussion focussed on highlighting a few of the sector-specific recommendations would assist to improve the existing infrastructure with retrofitting initiatives and how to replicate the implementation of recommendations at the city level across the ABD region of the city. The city leadership focussed on the need for the adoption of a multidimensional approach towards inclusion - spatial, social, economic and digital. Under the mandate of Smart City Mission, the city intends to adopt innovative and contextualised solutions to solve the pressing urban issues and ensure access to basic urban services and infrastructure for all. VSCL intends to continue working with NIUA and leverage the technical support to plan, design and implement inclusive interventions in the city. A few of the key actions could be highlighted as follows:
- Adopt research-based initiatives on inclusive cities and create a knowledge base on the subject.
- Documentation of best practices from global/national examples.
- Adopting the learnings from the GDI Hub team on the successful delivery of inclusive sports venues on Queen Elizabeth Olympic Park.
- Building the capacities of the city officials to improve the technical knowledge and understanding of Universal design features.
- Regular consultation with persons with disabilities to understand the grass root level issues and adopt innovative measures to mitigate the spatial and socio- economic barriers associated with disabilities.
- Other city stakeholders to actively engage and collaborate with the BASIIC team for leveraging technical assistance for their inclusive interventions.
- Participatory and collaborative models to engage city officials, hands-on workshops, conducting exposure visits, etc. would be important to replicate the successful learnings from the engagement and carry the forward the endeavour.

Persons with disabilities shared the vision of the need for empowering the marginalised sections of the society to take active participation in the city and contribute towards economic development. Participants emphasized removing intangible barriers existing in the society, which include, attitudes and perceptions towards disability.

**Figure 27: Glimpses from the city stakeholder consultation**



There is a need to provide access to equal rights and opportunities for all in the city irrespective of gender, class or ability. The involvement of DPOs would be crucial to understand the grass root level issues and active engagement with the city stakeholders in making Kashi more inclusive for persons with disabilities. The city also has the vision of "Inclusion" which is multidimensional and encompasses demographic diversity including persons with disabilities, females, children, older persons LGBTQ+ community, urban poor, etc. into the future action plan for Varanasi city development.

# Key Findings from Pilot Audit

To qualitatively assess the urban infrastructure and services and measures its compliance with the accessibility standards, an audit framework has been designed as part of the audit research. The framework has been designed to assess the diverse urban characteristics- physical, social, economic, administrative and governance aspects.

The audit framework is structured based upon the four urban pillars and assess the diverse urban characteristics namely - i) Institution; ii) Economy; iii) Society & Culture; iv) Physical Infrastructure. To measure the performance of each urban pillar, key performance areas (KPAs) and a detailed list of assessment indicators (AIs) have been identified.

The four urban pillars are further divided into 14 categories. A total of 35 diverse Key Performance Areas (KPAs) have been identified under the identified categories. Further, the KPAs have been narrowed down to 104 Assessment Indicators (AIs). The selection of AIs has been done based on extensive research on a range of global and national indicator sets, service level benchmarks and consultation with urban policy, practitioners and data experts. The benchmarking for each AIs has been derived from relevant national or international standards/acts/byelaws.

**Table 8: Structure of the City Audit Framework (Source: Author)**

| Urban Pillars | Categories | Key Performance Areas | Assessment Indicators (AIs) |
|---|---|---|---|
| **I. Institutional** | • Policy & Schemes<br>• Standards & Guidelines<br>• Governance Mechanism | 11 KPAs | 25 AIs |
| **II. Economy** | • Livelihood<br>• Equal Employment Opportunities | 3 KPAs | 10 AIs |
| **III. Society & Culture** | • Safety & Security<br>• Health<br>• Education<br>• Tourism<br>• Public Services | 11 KPAs | 34 AIs |
| **IV. Physical Infrastructure** | • Built Environment<br>• Mobility<br>• WASH<br>• Open & Recreational Spaces<br>• ICT | 10 KPAs | 35 AIs |

**Please refer to Annexure I for further details of the City Audit Framework.**

The findings from the audit process have assisted in mapping the existing city infrastructure and services from the perspective of disability inclusion and measure the compliance of the urban services/ infrastructure with the disability inclusion standards/norms. The key findings reflect the social, economic, and spatial characteristics of the urban environment that support and improve the quality of life of persons with disabilities (including children, women and older persons) in an urban environment. Moreover, the key findings from the study also assisted to identify the key barriers and challenges associated with persons with disabilities living in the city. The findings have been used to develop a set of recommendations (as highlighted in the next section) to improve the existing infrastructure and services from the perspective of accessibility, inclusivity and safety. The framework has been piloted at two specific sites of the city.

## 7.1.   Methodology Adopted

The methodology adopted for the city audit study involved a series of secondary research, consultative discussion with city officials, data collection, collation and analysis. The broad steps of the study adopted to formalise its implementation at the city included the following broad steps:

**Figure 28: Approach adopted to conduct pilot audit**
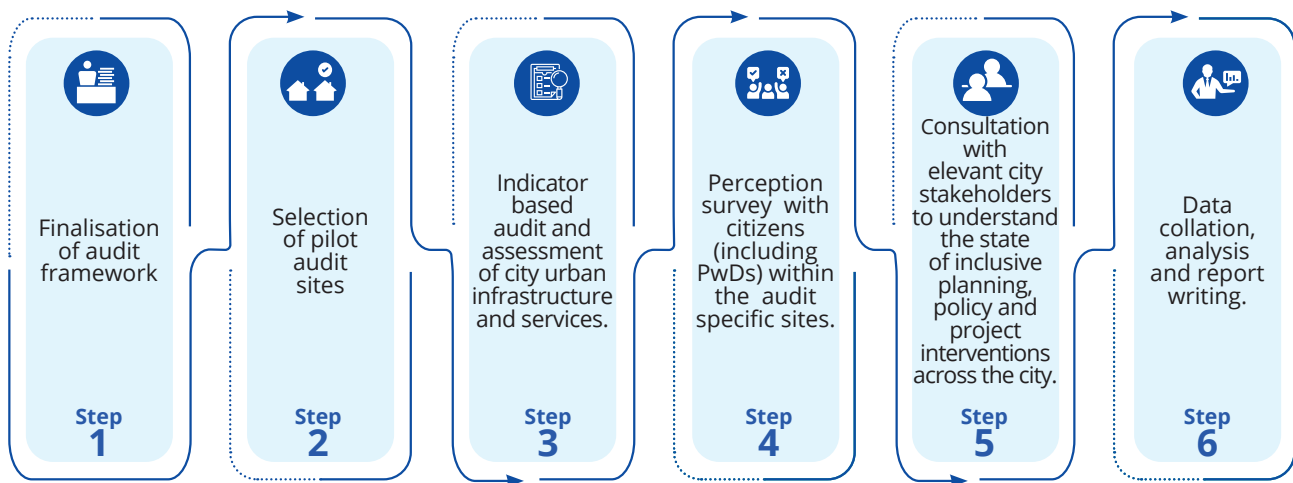
Site-specific pilot audits have been conducted within two sites in Varanasi to identify the gaps and barriers in the planning, design, and implementation process adopted for inclusive policy and projects in the city. The audit was piloted within two specific sites of the city. The sites were selected considering the unique urban characteristics of the Varanasi city and in consultation with the city stakeholders. The following criteria have been considered for the site selection:

• Building typology and
• Pattern of development
• Existing activities
• Land use
• Urban characteristics
• Density
• Tourism and heritage importance
• Ongoing projects related to urban development within the sites
• Proposed interventions for disabled-friendly structure
• Tourist footfall
• Location of major tourists' sites

**Figure 29: Location of Pilot audit sites**
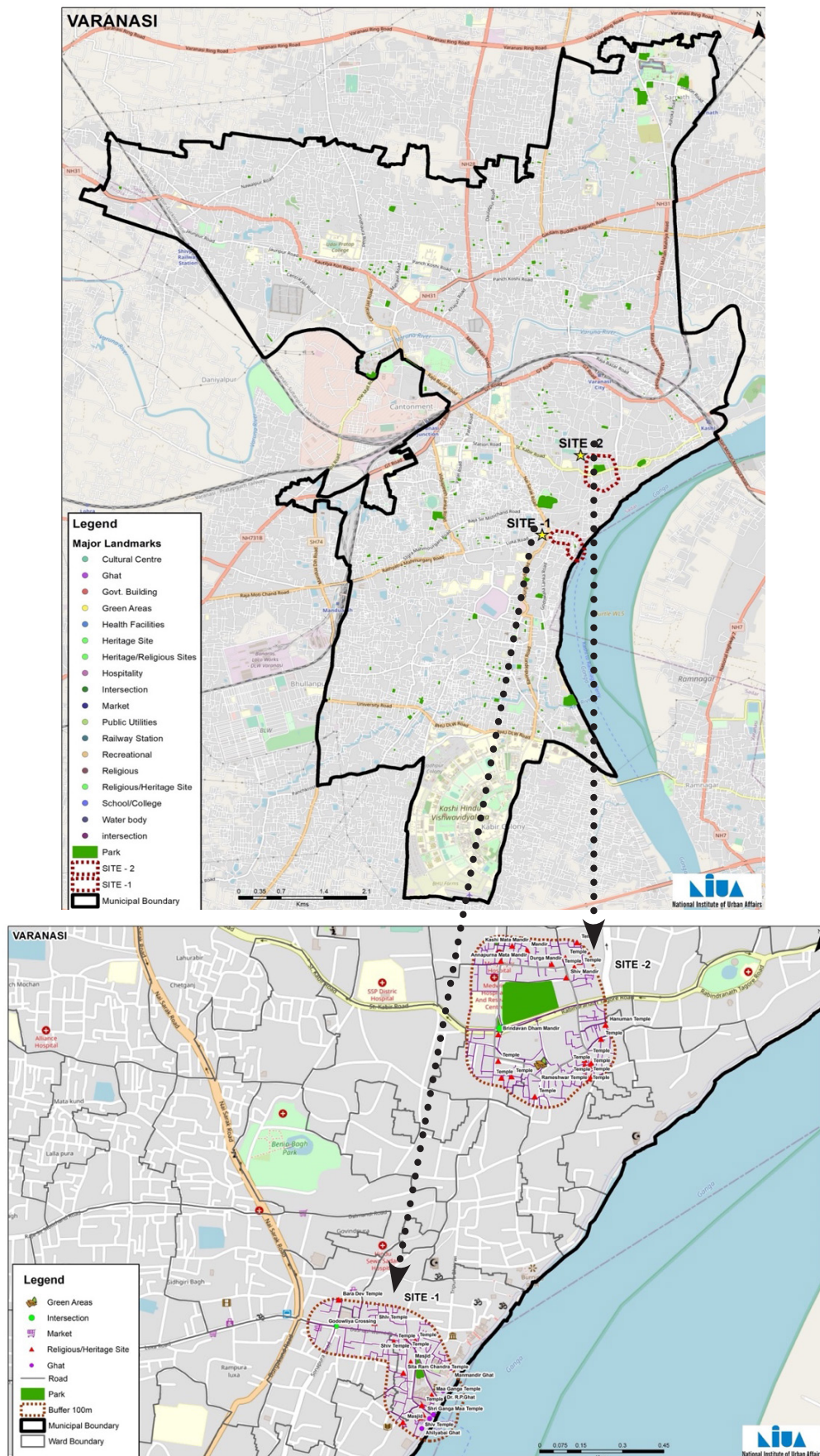
**Site 1- Godolia to Dashaswamedh Ghat:** The site stretches between Godowlia chowk to Dashaswamedh ghat with an offset of 0.5 - 1 km along both sides of the road. It comprises of historical monuments, museum, commercial and hospitality establishment, including major landmarks such as, Dashaswamedh Ghat, Kashi Vishwanath Temple. The route connects the Dashaswamedh Ghat (known for Gaga Aarti) and the famous Kashi Vishwanath temple. Major smart cities projects have been implemented on the site including pedestrianisation, multi-level car parking, public plaza, façade beautification, heritage signage, etc. The area also acts as a major commercial area and shopping hub for tourists.

**Site 2- Town Hall Centre along Maidagin Road:** The site covers the area surrounding the town hall and Maidagin crossing road. A few of the major landmarks of the sites include Town Hall, company garden, heritage structures, Kaal Bhairav temple, major city intersections, commercial areas, educational institutes, government buildings etc. The area holds importance as a city centre and includes places of historical and heritage value. The Townhall centre was built during the British era and is now being used as an administrative building. The surrounding park and water body have been redeveloped under the smart city mission. The site also hosts few of the major educational institutes.

**Figure 30: Description of Pilot audit sites**
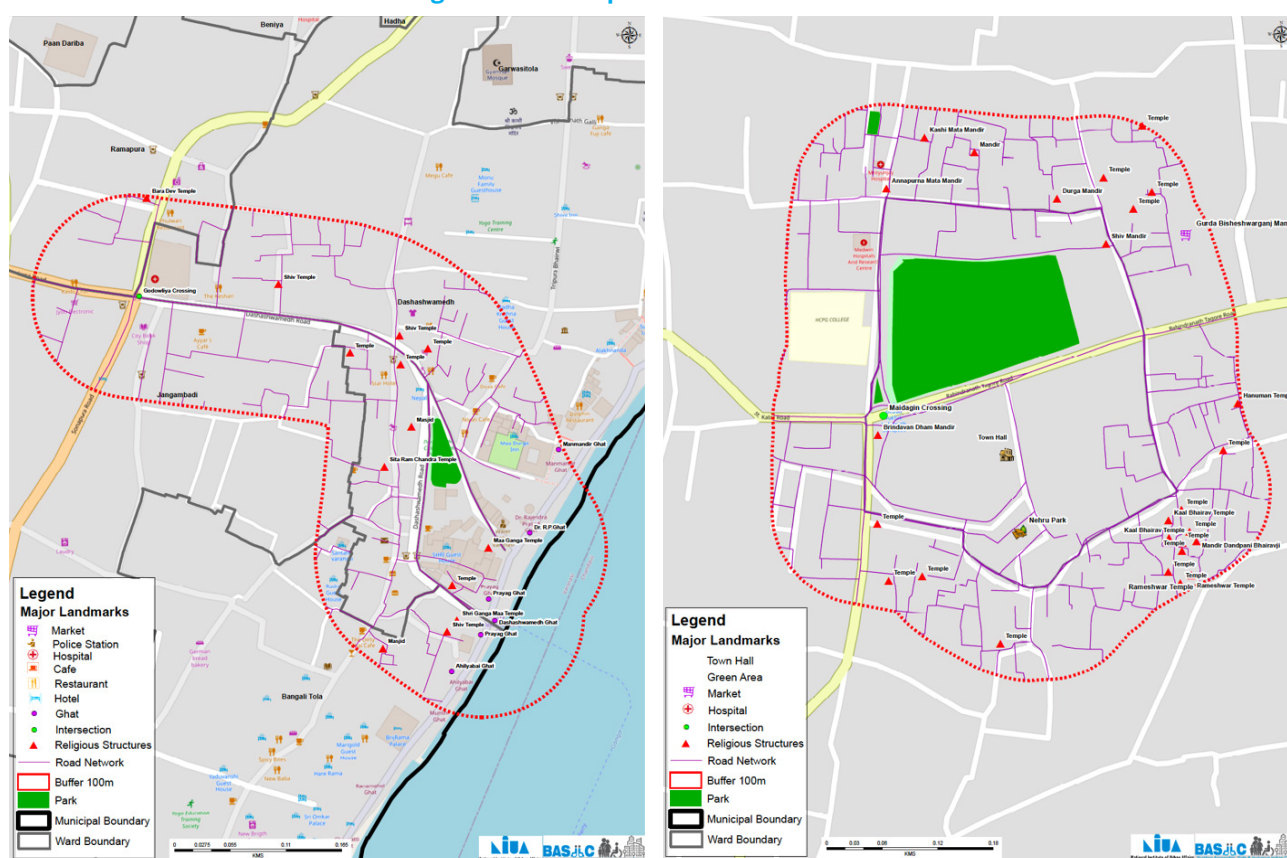


## 7.2.  Audit of the Urban Environment

The pilot audits within the selected sites aims to map the accessibility status of the urban environment and services available for persons with disabilities. It also successfully captures the performance of urban development initiatives with respect to accessibility benchmarks/standards and assess the compliance with policies/guidelines/development norms across urban pillars to promote DIAUD. The key findings from the audit lead to the framing of sector-specific recommendations for phase-wise implementation by city.

The following urban sectors and components were covered under the audit process:

**Table 9: Details of sectors and components covered during the audit**

| Sectors | Components audited |
|---|---|
| Mobility | • Parking<br>• Bus Stand<br>• Auto stands<br>• Streets<br>• Walkability aspects<br>• Street Furniture<br>• Public transport |
| WASH | • Toilets<br>• Drinking water Facilities |
| Built Environment (indoor and outdoor environment) | • Public and Govt Buildings<br>• Commercial Establishment<br>• Hospitality |
| Tourism | • Religious Places<br>• Heritage sites |
| Recreational Spaces | • Parks and recreational spaces |
| Public Services | • Police Booths<br>• Information centres<br>• Banks ATMs |
| Health Centres | • Health Centres |
| Educational Institutes | • Schools/Institutions |

## 7.3. Relevant Policy and Standards Adopted for Audit

From the perspective of the audit exercise, relevant policies, standards and guidelines have been reviewed. The mandates provided have been considered as benchmarks to assess the compliance and adherence to disability norms and standards.

Following is the list of policies and standards covered during the audit process

**Table 10: List of relevant policies/standards/acts**

| Policies/ Standards /Guidelines | Mandates |
|---|---|
| Sustainable Development Goal 11 | "Make cities and human settlements inclusive, safe, resilient and sustainable". It requires countries to the following achieve by 2030:<br>• Access to safe, affordable, accessible and sustainable transport systems for all.<br>• Universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.<br>• Ensure access to water and sanitation for all<br>• Universal and equitable access to safe and affordable drinking water for all.<br>• Access to adequate and equitable sanitation and hygiene for all, particularly women and girls and those in vulnerable situations.<br>• Tourism has been explicitly mentioned in Goals 8, 12 and 14 and the following targets have been set to be achieved by 2030.<br>• Sec 8.9: Devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products<br>• Sec 12. b: Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products.<br>• Sec 10.2: Empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.<br>• Sec 11.1: Ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.<br>• SDG 3: Ensure healthy lives and promote wellbeing for all at all ages<br>• SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all<br>• Universal access to sexual and reproductive healthcare services and Universal health coverage<br>• Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries.<br>• SDG Goal 4 aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. Disability is specifically mentioned in the Target '4 a' which states, "Build and upgrade educational facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all" |

| <br>**Policies/<br>Standards<br>/Guidelines** | **Mandates** |
|---|---|
| **RPWD Act 2016** | Under Section 41 (1), Government to take the following suitable measures:<br>• Facilities for persons with disabilities at bus stops, railway stations and airports conforming to the accessibility standards.<br>• Access to all modes of transport that conform to the design standards, including retrofitting old modes of transport.<br>• Accessible roads to address mobility necessary for persons with disabilities.<br>• Section 41 (2) requires the Government to develop schemes programmes to promote the personal mobility of persons with disabilities at affordable cost.<br>• Access to safe drinking water and appropriate accessible sanitation facilities especially in urban slums and rural areas. It also provides timelines to make all existing public buildings to be made accessible as per standards within five years (i.e., by June 2022).<br>• Promote and protect the rights of all persons with disabilities to have a cultural life and to participate in recreational activities equally with others.<br>• Section 46, requires that service providers, whether government or private, should provide services in accordance with accessibility standards within a time period of two years (i.e., by June 2019). It affirms that the right of PwDs to live in the community and the government should give access to community services and disability-specific support services.<br>• Section 16 (1) requires educational institutions to provide opportunities for sports and recreation activities equally with others;<br>• Section 29 mandates government to take measures to promote and protect the rights of all persons with disabilities to have a cultural life and to participate in recreational activities equally with others<br>• Section 30 requires the government to take measures to ensure effective participation in sporting activities of persons with disabilities.<br>• Section 25 of the RPWD to take measures to ensure access to health care and develop schemes to promote health care for people with disabilities.<br>• Under the act, sections 16-18, 31, 32, and 46 mandates the government to take measures to promote and facilitate education, including the appointment of education officers specifically for PwDs. It also requires all educational institutions to admit students with disabilities and take specific measures to ensure non-discrimination and individualised support of students with disabilities, |
| **Harmonised Guidelines (2016)** | • Chapter 5 highlights accessibility in the site planning process and includes provisions for walks and paths, tactile indicators, grooves and gratings, kerb ramps, lighting, parking etc.<br>• Chapter 10 is on the Alighting and Boarding area (car parks, taxi /auto stands, Bus stops, Piers and jetties, etc.)<br>• Chapter 11 is on Transport and Road Planning (footpaths, road intersection, traffic signal, subway, foot over bridge etc.)<br>• Chapter 8 specifies standards for unisex accessible toilets and cubicles and urinals for ambulant people with disabilities.<br>• Section 5.12.1 specifies standards for Drinking Water Fountain |
| **National Building Code** | • Annexure B, Part 3, Volume 1 specifies standards for Accessible Sanitation Facilities<br>• Recreational spaces should be designed for use by people of all abilities, including those using mobility aids (Clause 5.2.4). All possible efforts should be made to extend opportunities to children of all abilities and ages by providing access to a variety of play features and using features that appeal to all of the senses. (Clause 5.2.5 e) |
| **URDPFI Guidelines** | • Master Plans/City Development Plans/zonal or Ward Plans should have provisions for accessible recreational spaces, rehabilitation centres, special schools, etc.<br>• Section 1.7.6. introduces an inclusive planning approach to the development of Indian Cities and highlights the "Shelter-transport-livelihood" Link. It also highlights the importance of barrier-free environments in making PwDs, older persons and others move freely and safely in the city.<br>• Co-development of appropriate infrastructure is suggested in the same section.<br>• Section 2.1.5 highlights the importance of inclusive governance, access to healthcare and education, inclusive employment and regional growth, inclusion and participation in plan preparation, and accessible public spaces and facilities to achieve good quality of life for all.<br>• Section 8.8 refers to the access provisions for "Persons with disabilities" and suggests norms and standards for accessible residential development, Post offices, banks and financial institutions, shops, places of worship, food centres, community centres, halls, auditorium, public assembly, cinemas and theatres. |

| ![Policies icon](Policies/Standards/Guidelines) | |
|---|---|
| **Unified Traffic and Transportation Infrastructure (Planning & Engineering) Centre (UTTIPEC)** | • Developed Street Design Guidelines for Equitable Distribution of Road Space which has detailed standards including accessibility. |
| **Geometric Design Standards for Urban Roads and Streets - IRC:86-2018** | • Standards for footpaths, pedestrian crossings, intersections, pedestrian guardrails, bollards, landscaping, zebra crossings, NMV tracks, kerb ramps, medians, street lighting etc. |
| **Accessible Monuments under ASI (GAMASI)** | • It can be accessed at  Slide 1 (adoptaheritage.in) and highlights accessibility measures for the heritage sites. |
| **Accessible Tourism for all** | • Developed by the International Organization for Standardization (ISO). The international ISO standard for accessible tourism is in its final stages of development (une.org) |
| **National Education Policy** | • Children with disabilities will be enabled to fully participate in the regular schooling process from the foundational stage to higher education.  It requires schools to provide assistive support, sensitise staff and create an enabling environment for persons with disabilities. |

In addition to the above, specific guidelines and standards have been collated focussing on integrating barrier-free features with specific infrastructure as a part of the research study.  Please refer to the Annexure II  for further details on recommendations.

## 7.4.    Key Findings and Recommendations

Following are the sector-wise key findings and recommendations to improve accessibility aspects:

**1. Mobility**

The old city (specific to site 1) comprises narrow and congested streets with mixed land use and activities. The width of these lanes varies from one to two meters. The haphazard traffic movement, illegal parking, encroachment, presence of wholesale/retail markets and movement of stray animals add to the congestion and reduces the Right of Way of the streets. The streets/lanes also connect the major heritage sites and the Ghats with the old city. The width of the streets are wider, however, traffic congestion is a prevalent issue in the city.  There is a lack of an effective traffic management system in place and are generally maintained by the traffic police personnel.  The lack of an efficient public transportation system creates a heavy dependency on the use of private vehicles, thus adding to the congestion and parking issues in the city.  The use of autos/e-rickshaws (for longer distances) and cycle rickshaws (for small distances) are the common modes of transport used by people apart from private vehicles. Few authorized parking projects have been implemented in the city recently and few are in pipeline which would ease the parking issues in the city while also create space for the running of buses and  increase the scope for pedestrian infrastructure along the major streets.  The safety of the citizens is an important aspect of the city development and is currently maintained by the Varanasi Nagar Nigam.  The key findings of the site-specific audit of the mobility sector could be summarised as follows:

| Mobility | Observations | | Scope for Improvement |
|---|---|---|---|
| | **Site 1** | **Site 2** | |
| **Pedestrian Infrastructure** | • The width and surface of the walkways are inappropriate for pedestrians and wheelchair users.<br>• Poor maintenance of street furniture e.g., seating spaces, dustbins, etc.<br>• Accessibility features such as kerb ramps, directional signages, tactile indicators, etc partially compliant with the standards.<br>• Availability of a multilevel car parking space with accessibility features.<br>• Encroachment of pedestrian walkways by two-wheelers and street vendors.<br>• High level of noise and congestions in the streets. | • Lack of appropriate and designated walkways for pedestrians and wheelchair users.<br>• Existing walkways having narrow widths and uneven surfaces.<br>• Accessibility features such as kerb ramps, directional signages, tactile indicators, etc. are non-existent.<br>• Non-availability of designated parking spaces leading to the encroachment of RoW. | • Provision of designated walkways for pedestrian movement (to be segregated from vehicular movement).<br>• Existing street furniture and amenities such as seating spaces, street lighting, signages, accessible toilets, drinking water booth, information centres, etc., to be maintained/repaired.<br>• Kerb ramps to be constructed at crossings as per standards.<br>• Tactile indicators are to be installed all along the walkways for visually impaired persons.<br>• Streets with high pedestrian footfall to be designated as walkways.<br>• Restriction in the movement of two-three wheelers on pedestrian walkways.<br>• Strict enforcement of traffic rules<br>• 'No horn' zones to be enforced to control noise pollution.<br>• Provision for alighting and boarding points to be created along with reserved parking for Persons with Disabilities.<br>• Provision of battery-operated accessible vehicles to be made available from the parking area to the major heritage sites and Ghats.<br>• Provision of appropriate signages and wayfinding strategy to indicate the availability of assistive amenities. |
| **Safe Pedestrian Crossing** | • Poor traffic management and absence of traffic signals at major road crossings.<br>• Unavailability of voice announcement at the junction.<br>• Zebra crossing not properly maintained; markings were faded | • Absence of traffic signal and lack of traffic management at Maidagin crossing.<br>• Voice announcement not implemented as per the norms.<br>• Designated crossing for pedestrians missing. | • Accessible pedestrian signals are to be provided for persons with disabilities especially with visual impairment to help navigate independently.<br>• Audio signals to be at least 15 decibels louder than the ambient noise<br>• Acoustic devices to be installed on street poles at the point of origin of crossing to guide persons with visual impairment.<br>• Skywalks could be planned along busy stretches, particularly at crossings with provision for available lifts and escalators.<br>• Noise levels along both sites to be minimized by controlled movement of vehicles and making these 'no horn' zones. |
| **Signages** | • Lack of legible (text, font, colour, height, etc.) directional/wayfinding signages. However, existing signages are provided in bilingual format.<br>• Non-compliance with the standards of signages, such as lack of colour contrast, high placement of the signages, etc. | • Lack of directional/wayfinding signages. However, existing signages are provided in bilingual format.<br>• Non-compliance with the standards of signages, such as lack of colour contrast, high placement of the signages, etc.<br>• Unavailability of information signage | • Provision of signages/wayfinding plans that is uniform and consistent throughout the city<br>• Signages to be made visible, such that it is legible from the route, approach area, etc.<br>• The "International Symbol of Accessibility" is to be used to identify amenities, such as accessible parking, entrances, or washrooms.<br>• Assistive Technologies (e.g., beacons, voice-over facility, accessible navigation apps, etc.) to be used to make the streets accessible for persons with visual impairment. |

| Mobility | Observations | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| **Safety, security and support services** | • Streetlamp posts are available at every 15m along the newly constructed walkway. However, 60-70% of lamps are not in working condition.<br>• Presence of police booths and personnel along the stretch.<br>• Lack of trained/sensitise staff to assist persons with disabilities.<br>• Presence of CCTV camera in the crossing and at the site of Kashi Vishwanath Temple. | • Street lamp posted along the road at every 13-15m.<br>• Availability of police station and police booth in the area<br>• Presence of CCTV camera in Maidagin crossing and the entrance of Kaal Bhairav Mandir. | • Exterior lighting to be designed as per standards, in all public thoroughfares for safe access to persons with disabilities.<br>• Lighting levels of a minimum of 100 lux measured at the ground of all accessible pedestrian entrances are recommended. In case of level differences, lighting to be 200 lux.<br>• Appropriate lighting for wayfinding signage/accessible route maps.<br>• Accessible help desks to assist wheelchairs users.<br>• Provision for accessible lockers, resting places, etc. of important facilities along the stretch. |
| **Public Transport** | • Existing public transport is largely inaccessible due to a lack of anthropometric and appropriate design features, inaccessible height, non-compliant seating spaces, narrow aisles, etc.<br>• Lack of organised operation of auto/e-rickshaw stands and haphazard parking of vehicles.<br>• Insensitive behaviours of auto drivers towards the barriers faced Peoples on with Disabilities. | | • Accessible modes of public transport, such as buses, e-rickshaws, auto etc. to be made available specifically for Persons with Disabilities.<br>• Bus stands need to be designed considering the accessibility requirement of persons with disabilities.<br>• Availability of accessible buses to connect major streets/roads in the city.<br>• Smart kiosks and smart bus shelters/stops.<br>• Provision for digital-enabled smartcards to access the public transport system. |
| **Gender Inclusivity** | • Well-lit streets connecting to the Ghat.<br>• No separate queue for women in some of the religious and tourist places.<br>• A sense of safety is lacking amongst the tourists.<br>• Crowd management could be improved.<br>• Lady police stationed at various locations. | • Lack of street lights and CCTV cameras among the major streets/roads.<br>• Lack of sensitised staff and designated helpdesks to assist persons with disabilities.<br>• Lack of gender-friendly public amenities e.g., toilets, waiting spaces, bus stands, etc. | • Provision for signalized intersections to assist safe crossing for older persons, women, persons with disabilities, children, etc.<br>• Provision for trained and sensitised staff at designated helpdesks.<br>• CCTV cameras along the designated stretches to ensure the safety of the users. |

## Figure 31: Pictorial Demonstration- Mobility: Site1



Wide pedestrian path, conducive surface, no tactile indicators



Ramp with no kerb



Benches with backrest but no arm rest



Multi-level Car Parking under construction



Directional Signage for the Ghat. Poor colour contrast, small font size



Drain covers along the walkway
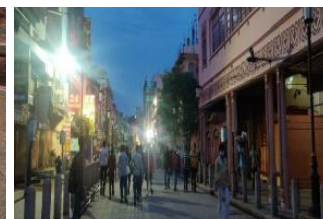


Lighting, some lamps not functioning



Uncontrolled traffic movement



CCTV at the Gate of Kashi Vishwanath Temple



E-Rickshaw Stand



Auto Rickshaw Stand



Narrow Footpath and no kerb ramps



Zebra crossing faded and ended at a median

**Figure 32: Recommendations for Accessible Streets**



| Reserved Parking For Persons | Accessible Public Toilets | Tactile marking along walkway | Segregated vending Zones |



**Well-designed traffic intersections**



| Accessible Walkway | Accessible cab | Pedestrian push button that communicates when to cross the street | Accessible battery operated vehicle |

## 2. WASH Infrastructure

There has been a considerable improvement in the access to water, sanitation and hygiene infrastructure in the city of Varanasi. The city has improved its ranking from 418th position in 2014 to 32nd position in the 'Swachh Survekshan-2017 and also bagged the award of best performing city in Uttar Pradesh State. During 2019-20, the city has also been nominated for the first position as "Cleanest Ganga Town in India"[1]. The city is also known for its first transgender toilet and more such toilets are to be built in the city to ensure accessible and inclusive wash amenities for all2. Varanasi Smart City Limited has also undertaken efforts to map the public sanitation facilities (including public toilets, community toilets, urinals, etc.) and identify the gaps to improve WASH infrastructure in the city3. There has been a conscious effort under the Swachh Bharat Mission and Smart City Mission to improve access to sanitation facilities. Under the Swachh Bharat mission, 56 (473 seats) community toilets and 182 (1426 seats) Public Toilets, 3 toilets (13 seats) pink toilets, 1 toilet (2 seats) for the transgender and 417 seats urinals have already been constructed. 4

Under the pilot audit exercise, a total of seven public toilets were audited. Two of them (in site 2 one in the post office and the other in the Company Garden) were found to be partially compliant with provisions indicated in the Harmonised Guidelines and meeting a few of the assessment indicators highlighted in the audit framework. Although there is an intent and an effort to build inclusive WASH facilities, appropriate accessibility standards have not been adopted while designing and implementing such infrastructure.

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[1]*Swachh Bharat survey: PM's constituency Varanasi the only UP city among top 100 | Hindustan Times*

[2]*https://www.timesnownews.com/india/article/up-first-public-toilet-for-transgenders-opens-in-varanasi-four-more-to-come-up-in-coming-days/721747*

[3]*Varanasi first city in UP to get toilets mapped on Google | Hindustan Times*

[4]*https://nnvns.org.in:449/nnvns/index.php?option=com_content&view=article&id=26&Itemid=141&lang=en*

The key audit findings of the WASH sector could be summarised as follows:

| WASH | Key Findings | | Scope for Improvement |
|------|--------------|--------------|------------------------|
| | **Site 1** | **Site 2** | |
| **Approach and pathways** | • Presence of interlocking paver blocks restricts wheelchair users<br>• Access to toilets blocked by two-wheeler users parked along the entrance.<br>• Walkways and ramps leading to the toilet blocked due to illegal parking of two-wheelers before the entry area.<br>• The approach road to the washroom has uneven surfaces.<br>• Ramps lack the provision of railings, anti-skid nosing strip and Tactile Ground Surface Indicator.<br>• Unavailability of appropriate landing space of the ramps. | | • Approach road to the toilets to be made smooth yet anti-skid.<br>• Well demarcated pedestrian walkways leading to the toilets.<br>• Appropriate signages to be placed to locate similar amenities.<br>• Entry points should be free of any blockage. |
| **Steps and Ramps** | • The majority of the toilets have provisions of ramps, however, the connectivity to the ramps from the streets/roads is not accessible for wheelchair users.<br>• Ineffective ramp in most places due to steep gradients, absence of landings, inappropriate surface, lack of railings etc. | | • Ramps to be modified with an appropriate gradient; preferably 1: 15<br>• Ramps to have railings along with the provision of sufficient landing space<br>• Steps to meet standards for railings, non-slip nosing strips and tactile indicators. |
| **Signage and wayfinding** | • Signages not installed to indicate the availability of barrier-free features and accessible amenities. | | • Appropriate signage, which is bilingual, to be installed along with pictorial representation<br>• The "International Symbol of Accessibility" is to be used to identify accessible amenities, such as accessible washrooms. |
| **Toilet cubicle and its accessories** | • Lack of provision of accessible cubicles considering the anthropometric requirement of wheelchair users.<br>• Entry door not wide enough to accommodate wheelchair users<br>• Non-availability of the accessible hand wash area<br>• No grab bars provided on either side of the W.C area<br>• Unavailability of visual alarm/ emergency pull cord alarm.<br>• Lack of sufficient manoeuvring space inside the toilet cubicle<br>• Washbasin, grab bars and visual alarm/pull cord are not provided<br>• Coat hook and shower control placed at an inaccessible height | | • Accessible toilet cubicle to be the size of 2000x2000 mm.<br>• Doors to be ensured that it opens outward.<br>• Soap dispensers, coat hooks and other accessories to be placed between 800-1000 mm from the floor.<br>• Colour contrast to be ensured between all walls floor and fixtures.<br>• Washbasin and adult diaper changing areas to be provided preferably inside the toilet cubicle.<br>• Renovation of existing toilets to integrate accessibility features. |
| **Drinking water facilities** | • Drinking water facilities, not in compliance with the accessibility standards<br>• Approach to these facilities was not accessible<br>• Signage for the drinking water facilities was installed in Hindi along with proper pictorial representation | • Drinking water facilities, not in compliance with the accessibility standards<br>• Approach to the facilities was not accessible<br>• Signage for the drinking water facilities was installed although not in Hindi<br>• The size of the signage is not legible from distance. | • Approach to the drinking water facilities to be made barrier-free along with the provision of appropriate signages.<br>• Provision for clear floor space in the front along with adequate knee and toe clearance spaces to reach the tap.<br>• Tap/faucet to be made easily operable with one hand.<br>• Signages to be installed at accessible heights.<br>• Directional signages which lead to the drinking water facilities to be placed at a legible distance. |

Drinking water tap at Girijaghar Crossing

Curved and steep ramp

Inadequate landing space at the door

Water cooler

Tap placed at an inaccessible height

**Figure 34: Pictorial Demonstration- WASH: Site 2**



Street toilet: Steep ramp, no accessible cubicle inside

Street toilet: Steep ramp with no accessible cubicle inside

Inside Park: Steep ramp, cubicle for persons with disabilities inside

Inadequate space inside

Latch not conducive



Steep and slatted ramp at toilet in Post Office

Drinking water outlet

Steps to the tap

Inaccessible tap height

**Figure 35: Recommendations for Accessible WASH Infrastructure**



Accessible outdoor environment of an accessible toilet - appropriate ramp, steps and signage

Accessible cubicle for toilet



Accessible drinking water facility

**3. Tourism**

Varanasi, also known as Kashi or Banaras, is renowned as India's "Cultural Capital" and "Heritage City." With a history reaching back to 1000BC, it is one of the world's oldest living cities. Kasi, "the luminous," is the Rigveda's name for the city, which is also known as the "city of temples." It is also regarded as a sacred and holy site by Hindus, Buddhists, Jains, and Muslims, and is thus one of the main reasons for the large stream of tourists from all over the world. Varanasi has rich tangible and intangible cultural resources. The tangible heritage includes the 84 ghats, more than 3500 temples and mosques including, Sarnath and Banaras Hindu University. The intangible heritage includes the rich natural landscapes, and the cultural heritage in the form of art & craft, handloom & textile, music, dancer, literature, etc. Varanasi is the 2nd most visited tourist city in the state of Uttar Pradesh.

Varanasi received about 64 lakh Indian tourists and 3,50,000 foreign tourists in the year 2019[5]. However, the city does not have a disaggregated data available on the number of tourists suffering from any form of disabilities, age or gender. In the recent past, there have been quite a few national and international tourists with disabilities who have visited the city, as per information provided by a travel agency that organises inclusive travel packages. Numerous initiatives have been undertaken in the city under the Smart City Mission and the Accessible India Campaign to promote inclusive tourism in the city. The initiatives aimed to improve access to major heritage/tourist sites, connectivity to the Ghats, improving pedestrianisation of the connecting streets, signage to highlight the heritage importance of the ghats, the safety of the visitor's, digital display of Ganga Aarti ceremony, facade improvement, accessible WASH amenities, redevelopment of parks and kunds, etc. Site 1 host some of the prominent heritage monuments and sites including Dashashwamedh Ghat, Kashi Vishwanath temple, Girijaghar, Harsundari Dharamshala, etc. Site2 is known for Kaal Bhairav Temple, including a few of the major hospitality centres.

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[5]*district-wise domestic and foreign tourist visits and ranking in Uttar Pradesh in year-2019  202003131111297750ranking-13march20.pdf (uptourism.gov.in)*

The key audit findings of the tourism infrastructure could be summarised as follows:

| Tourism | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| **Access to Ghat** | **Dashaswamedh Ghat:**<br>• Steep steps connecting the Ghat to the river Ganga.<br>• Lack of tactile along with the steps, indicators and nosing strips<br>• No provision of ramps along the ghat<br>• Handrails were installed along few stretches of the steps but in a discontinued manner.<br>• Hindrance from public and local stakeholders to retrofit the Ghats areas and integrating accessible components. | • NA | • Provision of continuous handrails along with the steps.<br>• Colour contrast strips on treads and tactile ground surface indicators on the landings to be installed.<br>• Platform lifts/chair lifts to be installed at strategic locations along the ghats.<br>• The lifts need to be placed strategically to address the changing level of the Ganga River.<br>• Connectivity to the Ghats can be improved with well-designed pedestrian infrastructure. |
| **Level differences in the ghat** | • Lack of ramps to access the ghats for persons with disabilities.<br>• Provisions of handrails were not consistent throughout the steps of the ghats. | • NA | • Permanent ramps to be built at certain locations with appropriate gradient height, landing a levelled surface.<br>• Connectivity through ramps to connect the ghats at several heights.<br>• Accessible platforms with guard rails and tactile indicators to reach out the edge of the river Ganga.<br>• Create appropriate resting spaces at the landing surfaces and appropriate viewing positions to watch the Ganga Aarti ceremony.<br>• Tactile indicators and colour strips to be installed along with the steps as per the standards.<br>• Platform lifts/chair lifts to be installed to address the level differences of the Ghats.<br>• Provision of ramps in Asi Ghat and Raj ghats to maintain connectivity with the Dashaswamedh ghat area. |
| **Changing rooms** | • Changing rooms are available at certain locations.<br>• However, they are ill-maintained and inaccessible for persons with disabilities.<br>• Inaccessible location and approach to the changing rooms.<br>• Entry, door size, cubicle size, the height of coat hangover, etc. non-compliant with the accessibility standards, etc. | • NA | • Size of the changing room to be at least 1800x 1800 mm.<br>• The strategic location of the changing room that is easily accessible for persons with disabilities.<br>• Directional signages to be set up to indicate the location of changing rooms<br>• Changing station/changing places and benches to be provided inside the changing rooms.<br>• Exteriors of changing rooms to have a standardized design for easy identification. |

| Tourism | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | **Site 1** | **Site 2** | |
| **Signages** | • Lack of directional signages<br>• Information board/ maps with historical information were installed<br>• Non-availability of tactile indicators that leads to guide persons with visual impairment towards the information board/maps<br>• Lack of braille signage | • Lack of appropriate signages with poor colour contrast, small font sizes, etc.<br>• No tactile indicators leading to the information boards/maps | • Existing information boards/maps can be improved in terms of colour contrast, font, placement at appropriate heights, etc.<br>• Tactile and audio maps to be installed for persons with visual impairments.<br>• Creation of signage and wayfinding plan for the heritage sites and monuments. |
| **Heritage/ Religious sites** | **Kashi Viswanath Temple:**<br>• Provision of wheelchairs near gate no. 4 of the Kashi Vishwanath Temple<br>• Volunteers from the temple's trust are available for assistance.<br>• Use of wheelchairs / clippers not allowed inside the main shrine.<br>• Persons with locomotor disabilities are physically carried inside.<br>• There are no separate entries for persons with disabilities, older persons.<br>• Narrow lanes connecting the temple shrine acts as a hindrance for the independent movement of persons with disabilities. | **Kaal Bhairav Temple:**<br>• The width of the street to the temple varies from 1000mm to 2500mm.<br>• There are drainage gratings with holes and with bars that act as a hindrance for persons using assistive devices, wheelchairs, etc.<br>• Level differences along the connecting pathways leading to the entrance of the temple.<br>• Persons with disabilities are physically carried/ escorted for Darshan.<br>• There are no volunteers / sevaks present for assistance.<br>• Inappropriate signages are located by the main temple. | •<br>• The temple complex of Kashi Viswanath Temple is being renovated under the "Kashi Vishwanath Corridor Project".<br>• Several buildings and amenities with accessible features are being developed as part of the redevelopment project.<br>• Connectivity to the temple has been improved after the pedestrianisation of the Godowlia Chowk Project.<br>• Need for sensitized and trained staff to assist persons with disabilities in visiting the temple.<br>• Provision for accessible lockers, amenities such as benches, toilets, etc.<br>• The access to Kaal Bhairav Temple could be improved with the provision of levelled entrance and smooth surface.<br>• Ramps with an appropriate gradient to be installed to improve connectivity to the temple.<br>• Budget allocation for Inclusive infrastructure and universal design elements in relevant urban development projects to be considered by the respective departments.<br>• Several heritage sites have been undertaken for retrofitting purposes e.g., Installation of ramp/ escalator in Rajghat, Ravidas ghat and railings in Khirkiya ghat |

| Tourism | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| **Ganga Aarti**[6] | • Inappropriate sitting arrangements for viewing the Ganga Aarti Ceremony.<br>• Few benches placed at sparse location lacks the accessibility standards.<br>• The use of boats to view the ceremony is only limited to able bodies.<br>• Many people view the Aarti from the boat which is inaccessible for persons with disabilities. | • NA | • Spectators viewing spaces to be made accessible for wheelchair users.<br>• Reserved seating spaces to be provided for Persons with Disabilities for viewing the Ganga Aarti ceremony.<br>• Provision of digital display, audio-visual format to view the ceremony from distance.<br>• Provision for hearing enhancement systems for persons with hearing impairment.<br>• Provision for accessible boats and viewing decks can be developed to view the ceremony from the riverside[7] . |
| **Boat ride**[8] | • Boat rides remain inaccessible for persons with disabilities due to steep steps connecting the boating deck.<br>• Access to boat rides can be improved through connecting platforms accessible from the ghats.<br>• Provision of ramps to be made to connect to these platforms.<br>• Lack of lifeguards/ assistance for using the boating facilities. | • NA | • Boat rides should be made accessible with accessible docks and gangways.<br>• Provision for customised boats considering the need for persons with disabilities, with adequate space to park a wheelchair, locking system, seats that have a backrest, seat belts etc.<br>• Within a boat/cruise ship/ferry, space should be set aside for securing a wheelchair in a position for comfortable integration with other passengers.<br>• Wheel stoppers and ring-strap or other appropriate safety grips should be provided for wheelchair users.<br>• Boarding points and boating docks for boats should be fully accessible and have simple boarding and disembarkation procedures.<br>• Safe and reliable lifejackets that are designed for people of all ages and PwDs to be compulsorily provided.<br>• Lifeguards to be stationed all along the Ghats.<br>• Appropriate use of signage and wayfinding strategy to locate these facilities along the ghats. |

[6]*Ganga Aarti is a ritual held every morning and evening on the banks of the river Ganga. The aarti is performed by the priests.*

[7]*This is the approach currently being taken by Planet Abled, a tourist agency that organises travel for people with disabilities. They travel 30 km from where people with disabilities can access the boat. They take a boat ride to get a good view of the ghats and ganga Aarti*

[8]*One of the attractions is the boat ride in the river Ganga. Many people view the Ganga Aarti from the boat*

| Tourism | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| **Information and help desks** | • Lack of public information on the Kashi Vishwanath's official website about the accessibility of the places and assistance available or PwDs.<br>• There are a few helpdesks for Kashi Vishwanath Temple run by the Temple Trust which are manned by volunteers[9].<br>• Volunteers based services and assistance are available for wheelchairs and assist persons having difficulty in walking.<br>• The helpdesk is not prominently visible at all the entries/nor there are any signages to indicate their availability.<br>• Information boards/ maps with historical facts at Dashaswamedh Ghat have been installed recently.<br>• The boars/maps are however not in accessible format i.e., in Braille, raised letters, audio formats etc.<br>• The board's font size and colour contrast are also not as per standards. | • NA | • Information kiosks/help desks to be located at strategic locations like railway stations, airports, bus terminals parking areas, etc.<br>• Entry points of heritage/tourist places, etc. can provide information on accessibility services and assistance available e.g., wheelchairs/ battery-operated vehicles, information in an accessible format, tour guides who know ISL etc.<br>• Information brochures /booklets to be made available in an accessible format (large print / Braille/audio etc.)<br>• The existing information boards/ maps can be improved in terms of colour contrast, font, etc.<br>• Accessible audio/video guides can be made available for museums and temple tours<br>• Tactile and audio maps are to be provided for people with visual disabilities and those who may not be able to read.<br>• Websites and apps to be made accessible for visually impaired persons. Tourism-related information to be made available on accessible and digital platforms. |
| **Hospitality** | **Site 1: Harsundari Dharamshala:**<br>• The approach from the road is levelled yet broken.<br>• There is no ramp connecting to enter the building, thus making it inaccessible.<br>• The steps don't have railings, anti-skid nosing strip and tactile indicators<br>• No attached toilets to the rooms<br>• Poorly maintained and inaccessible toilets.<br>• Lack of trained staff to assist persons with disabilities. | **Site 2: Hotel Tridev:**<br>• There is a kerb with no kerb ramp to merge the raised walkway with the road level.<br>• The handrail is installed on one side of the steps.<br>• The handrail doesn't extend beyond the first and last steps. | • Provision for accessible accommodation facilities in the city to be made available at affordable rates.<br>• Varanasi Official website to have information about these places (contact details, types of rooms available, accessibility, cost, etc.)<br>• Strict guidelines for hotel owners (including the mid and low range) to integrate universal design features within the facilities.<br>• Awareness to be created among the hoteliers regarding the business case, necessary mandates to ensure accessibility and standards.<br>• Government to develop a few lodges and guest houses that are fully accessible. These could be part of the tourism redevelopment plan.<br>• Tour operators/agencies need to be trained / sensitised to provide accessible tourism services at affordable rates. |

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[9]*https://shrikashivishwanath.org/contact/help_desk*

## Figure 36: Pictorial Demonstration- Tourism: Site1



**Step steps connecting the Ghat**



**Handrail provided on specific ghat**



**Signage Installation along the Ghats - non legible from distance**



**Inaccessible changing room**



**Inaccessible boat**
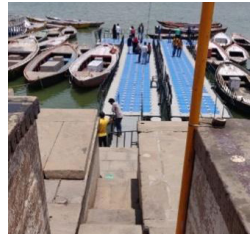


**Inaccessible reach to the boatride**



**Walkway leading to Kashi Vishwanath Temple**



**Steps leading to the Dharamshala**



**Entry to Kashi Vishwanath temple**



**Ill maintained furniture**

## Figure 37: Pictorial Demonstration- Tourism: Site 2



**Small font, no braille, audio**



**Step at the Kaal Bhairav Temple**



**Kaal Bhairav Temple entry**



**Kerb in front of the hotel entrance, no photos was allowed by the hotel**

## Figure 38: Recommendations for Inclusive Tourism Infrastructure
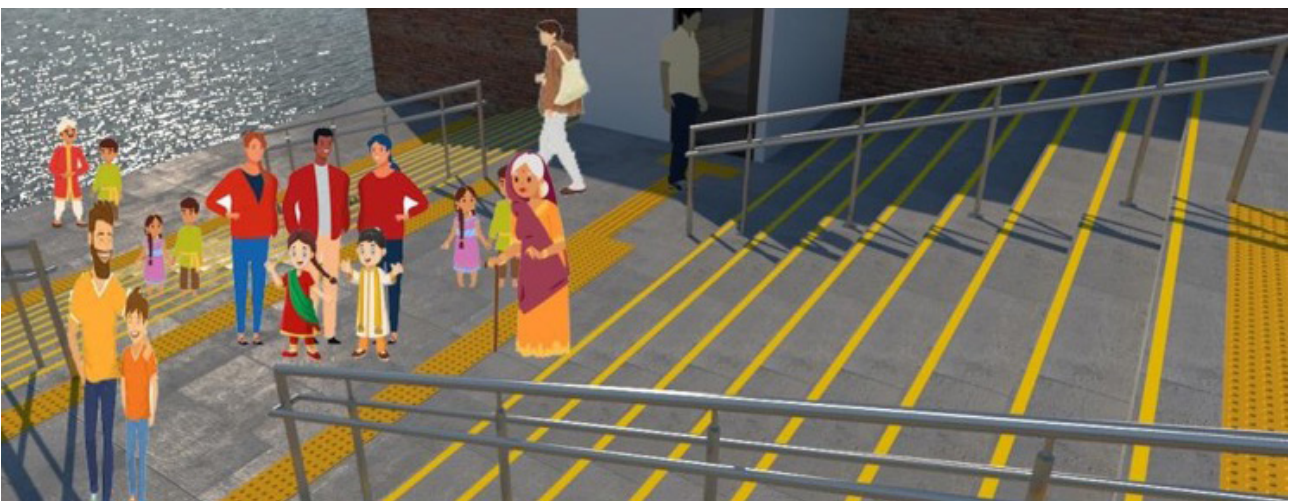


**Accessible Ghat Area**
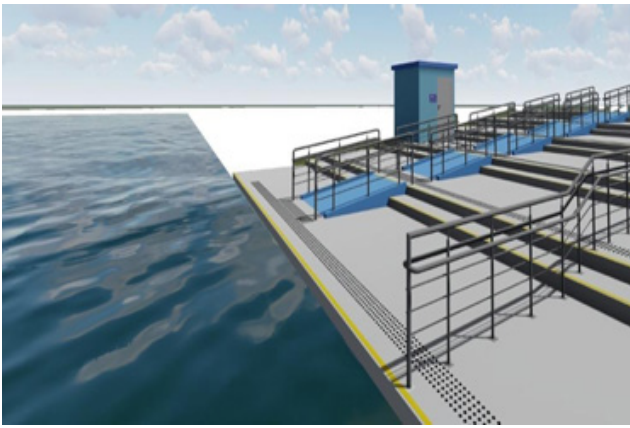
**Access the river and boat ride through connecting ramps**


**Accessible maps**


**Accessible steps and ramps along the ghats**


**Accessible boats**

## 4. Public Services

Public services include all forms of delivery of services to the public at large (Government or Private), including housing, shopping or marketing, banking, finance and insurance, communication, postal and information, access to justice, public utilities etc.  May efforts have been made under the Accessible India Campaign to make the public services online and on digital platforms. Under the smart city mission, VSCL has undertaken several initiatives e.g., Kashi GEO Portal hub to act as city database on urban development, ICCC as an integrated service platform, apps and websites to avail online services, managing Covid-19 through the launching of SAFE Kashi App, etc.

e-Samvad is another initiative that acts as an integrated system for setting up of grievance redressal mechanisms and to achieve the goal of good governance in the state of Uttar Pradesh. A citizen can freely and conveniently file a grievance, track the grievance lodged on service-related platforms and receive a response to his satisfaction both in terms of quality and time. Along with lodging of complaints, citizens can also interact with Government/ Departments/Offices in an easy and transparent manner. Complaints from all sources are made available on a single platform to all departments which will improve access to grievance redressal and monitoring mechanisms. Under the audit exercise, several public services have been audit including, police stations, railways stations, banks and ATMs, postal services, government offices.

The key audit findings for public services could be summarised as follows:

| Public Services | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| **Police Stations** | • Vehicles parked before the police station obstructs access to the police station.<br>• Police Chowkis have steps at the door entrance restricting the movement of wheelchair users.<br>• High, elevated helpdesks counters.<br>• Unavailability of dedicated parking space for persons with disabilities.<br>• Unavailability of accessible toilets, universal designed waiting spaces, etc.<br>• Unavailability of directional signage leading to locating the nearby police stations.<br>• No tactile indicators along the floor leading to the helpdesk.<br>• Lack of interpreters and translators for PwDs and foreigners.<br>• Lack of trained police officers to understand the challenges of persons with disabilities. | • The approach to the police station is not accessible due to steps at the plinth level.<br>• Provision of obstruction-free pathway connecting the entrance.<br>• Unavailability of directional signage leading to the police station.<br>• Lack of provision for induction loop to interact with persons with hearing/visual impairment.<br>• Lack of directional signage along the street leading to the station.<br>• No tactile indicators along the floor leading to the helpdesk.<br>• Lack of interpreters and translators for PwDs and foreigners. | • Pathways leading to the police stations to be cleared of all obstructions including the parking of vehicles in front of the entrances.<br>• Provision of a levelled entry at the door or a stable landing with a ramp in front of the door to be provided as per accessibility standards.<br>• A standardized system of wayfinding/signage to identify the police stations all along the city to be installed.<br>• The help desk counters should be partially lowered to be accessible for persons with disabilities.<br>• An induction loop system to be provided to assist those with hearing /visual aids to communicate.<br>• Police officers are to be trained to interact with people with disabilities.<br>• Helpline numbers to be made accessible for people with different disabilities. |
| **Postal Services** | • The approach to the post office has broken and connected with uneven walkways.<br>• Unavailability of reserved parking sites for persons with disabilities.<br>• Lack of provision of lift to access the different floors of a post office.<br>• Steep staircase with handrails only on one side<br>• TGSI and the anti-skid nosing strip has been provided at certain locations of the building<br>• No separate counters and assistive service for people with disabilities in the post office<br>• Service counters, form filling tables are at an inaccessible height | • Ramp available along the entrance of the building. However, a kerb ramp is missing to connect the entrance ramp.<br>• No provision of reserved parking space for Persons with Disabilities.<br>• The gradient of the ramps is slated and steep.<br>• Availability of ramps with railing at two levels<br>• Lack of provision of tactile indicators to indicate the presence of level difference at the landing of steps and ramps.<br>• No separate counters and assistive service for persons with disabilities in the post office<br>• Service counters, form filling tables are at an inaccessible height. | • Walkways and ramps to be smooth yet should have an anti-skid surface.<br>• Level of kerb ramps to merge with the road level.<br>• Reserved parking spaces to be provided with appropriate directional signages.<br>• Tactile warning strips are to be provided at the landings of steps and ramps.<br>• Provision of grab rails on both sides of the ramps and staircase.<br>• Colour contrast and anti-skid nosing strips to be provided at all treads.<br>• Counters, furniture and other gadgetry to be made accessible as per the standards<br>• Provision for priority services, sign language interpreters, induction loops, wheelchairs, assistance for filling forms etc.<br>• Information/Forms to be provided in accessible formats (large print/ Braille/audio). |

| Public Services | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| **Banking** | • The ATM at one of the crossings has no provision of ramps.<br>• ATM near the Ghat has no landing space.<br>• The height of the ATM and emergency alarm is at an inaccessible height. | • No provision of lifts to access the banks (if located on higher floors).<br>• Unavailability of TGSI and skid nosing strips.<br>• Most of the ATMs are at least at a height of 100-200 mm above the road level with no provision of ramps, handrails, anti-skid nosing strips.<br>• No provision of voice over facility in the ATM machine. | • Ramps to be constructed with gradients not less than 1:12 mm.<br>• The width of the ramp to be not less than 1200mm.<br>• Vertical platform lifts to be provided to cater to the level changes/floors of the building.<br>• Staircase to be modified with the provision of TGSI and anti-skid nosing strips.<br>• Level difference at the entries to be addressed by the construction of ramps with adequate landing space<br>• ATMs and emergency alarms are to be placed at a height that is accessible to wheelchair users.<br>• Talking ATM with voice over the facility with higher decibels to be installed. |
| **Railway Reservation Counter** | • NA | • Presence of vehicular obstruction at the entrance of the booking counter.<br>• Lack of dedicated parking space for PwDs<br>• Lack of proper signages to indicate the presence of the booking counter.<br>• Booking counters at an inaccessible height<br>• No separate queues for women, older persons or persons with disabilities. | • Entrance area to be kept free from the parking of vehicles.<br>• Kerb ramps to be installed at the entrance gate.<br>• Provision of Appropriate signages to locate the booking counter.<br>• An induction loop to be installed at the counter to aid people with hearing disabilities.<br>• At least one counter to be modified at an accessible height with the provision of knee space<br>• Provision for separate queues for persons requiring assistance to be provided. |
| **Municipal Corporation Office at Townhall** | • NA | • No signage was installed at the main gate.<br>• Lack of provision of ramps at the entrance of the building.<br>• Provision of reserved parking space not available for PwDs.<br>• Some of the signages are mounted high up and are in inaccessible format.<br>• Lack of sensitized/ trained staff to interact with persons with visual/ hearing impairments. | • Office location to be signposted with proper signages.<br>• At least one of the entries is to be made accessible with the provision of a ramp.<br>• TGSI and anti-skid nosing strips to be placed as per standards.<br>• Parking space for PwDs to be provided.<br>• Signages to be mounted at a place where it is visible and displayed in an accessible format.<br>• SOPs to be prepared for assisting people with different disabilities. |
| **Night shelter** | • The ramps' gradient is very steep and not provided with railings and anti-skid nosing strips.<br>• Switchboards mounted at an inappropriate height.<br>• No landing space provided at the door for wheelchair users. | • NA | • Ramps to be modified to ensure adequate gradient, landings with the provision of handrails.<br>• Steps to also be provided with railing, and tactile indicators.<br>• Switchboards to be provided at a wheelchair accessible height.<br>• Rooms to be designed with the provision of barrier-free design features. |

**Figure 39: Pictorial Demonstration - Public Services: Site1**


Police chowki


Police Booth


Post office on 1st Floor


Inappropriate handrail


Inaccessible ATM

**Figure 40: Pictorial Demonstration- Public Services: Site 2**


Police Station


Levelled entry to Police Station


Help Desk at the Police Station


Steep ramp, no landing space


High counters


Toilet with no grab bars


High table for form filling


Inappropriate ramp


Ramp at the one of the ATMs


Narrow width of the door

**Figure 41: Recommendations for Accessible Public Services Buildings**


Accessible Police Chowki


Accessible ATM


Accessible Parking Bay for PwDs


Accessible entrance to the post office


Accessible counter at Post Office


Approach, parking and entrance to railway reservation office


Segregated walkway with TGSI


Accessible height of bed with sufficient manoeuvring space


Accessible railway reservation counter

**5. Recreational Spaces**

Recreation, leisure and sports activities have many benefits such as, improving health and empowering individuals which includes those with disabilities. Recreational spaces include playgrounds, stadiums, sports complexes, parks & gardens, public open spaces, special recreational zones – restricted open spaces, multi-use open spaces. The city has numerous tourism/heritage sites, sports-related infrastructure, museums, parks, malls and entertainment centres that act as recreational spaces for the tourists/visitors. Under the smart city mission, VCSL has taken numerous initiatives to create inclusive recreational space in the city. Few of the efforts are, the redevelopment of parks and ponds, provision of sensory parks for children with disabilities, improving pedestrianisation infrastructure, improving connectivity to the ghats, redevelopment of the ghats, provision for accessible amenities e.g., toilets, sitting spaces, street lights, drinking water facilities, etc. Similar efforts are being made by the tourism dept, VDA, VNN and other city departments to improve access to green and spaces in the city and create a safe, healthy and inclusive urban environment for all. The key findings of the audit for this component could be summarised as follows:

| Recreational Spaces | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | **Site 1** | **Site 2** | |
| **Park: Entrances and walkways** | • NA | • There are no tactile indicators from the crossing, leading to the park entry/exit gates.<br>• Inaccessible entrance with a level difference at the entrance gate.<br>• Proper walkways are constructed inside the parks.<br>• indicator to aid in the navigation of persons with visual impairment.<br>• Change in the level differences in some parts of the walkways<br>• Lack of appropriate signages leading to the park. | • TGSI to be installed leading to the gates and further along the walkways in the parks. Provisionspns for obstruction-free entrance.<br>• Ramps to be constructed to address the level differences along the walkways.<br>• Walkways to have tactile indicators for easy navigation of people with visual impairments.<br>• Provision for battery-operated golf cart can be installed to assist navigation of persons with disabilities inside the park. |
| **Signages and wayfinding** | • NA | • Lack of appropriate signages/ location map indicating the amenities inside the park and to locate the park from nearby places.<br>• Existing signages are not accessible in terms of their format, colour contrast, and mounting heights. | • Provision of appropriate navigation and wayfinding strategy to locate the park.<br>• Accessible information board displaying available amenities/features inside the park.<br>• Available information could be made available in tactile format with good colour contrast, raised lettering and in braille format. |
| **Play Area** | • NA | • Provision for play area inside the park, however, it lacks inclusive and sensory design elements necessary for children with impairments. | • Play area to be designed consciously to promote inclusive play and considering the varied challenges associated with physical, visual, hearing and cognitive disorders.<br>• Equipments to be compliant with accessibility standards and to integrate universal design features for independent navigation of the users. |

| Recreational Spaces | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | **Site 1** | **Site 2** | |
| **Toilets** | | • Lack of directional signages leading to the toilets from the nearby places.<br>• Ramps are installed but they do not meet the accessibility standards<br>• Toilet cubicle does not meet the accessibility standards<br>• Lack of accessible amenities e.g., wall mounted basin, the height of WC, seating spaces, etc. | • Directional signage to be installed to indicate the availability of public toilets.<br>• Toilets to incorporate features of accessibility.<br>• Each toilet to consist of at least one accessible cubicle with provisions for all accessible amenities.<br>• Ensuring connectivity from the walkways through the provision of ramps. |
| **Pond/Kund** | | • Lack of appropriate seating spaces. | • Provision of accessible walkways.<br>• Provision of accessible seating and viewing spaces. |
| **Museum** | • Proper signages have been installed outside the gate.<br>• Inaccessible entrance due to presence of obstructions.<br>• Lack of provision of the appropriate ramp.<br>• No provision of audio-visual guides. | • NA | • Kerb ramps to be provided to improve connectivity to the museum building.<br>• Provision of obstruction-free entrances.<br>• Staircase to meet accessibility standards for TGSI, non-slip nosing strips and railings.<br>• Platform lifts to be installed to provide access to the museum.<br>• The exhibits, displays and collections to be placed at accessible heights with accessible labelling (colour/font/ Braille/ audio).<br>• Tactile exhibits could be added for the benefit of visitors with visual disabilities.<br>• Accessible audio-visual guide to be provided for persons with sensory disabilities. |

## Figure 42:  Pictorial Demonstration- Recreational Spaces: Site1



Museum Sign board



Locked museum; steep steps inside with no proper ramps installed



Sign Board
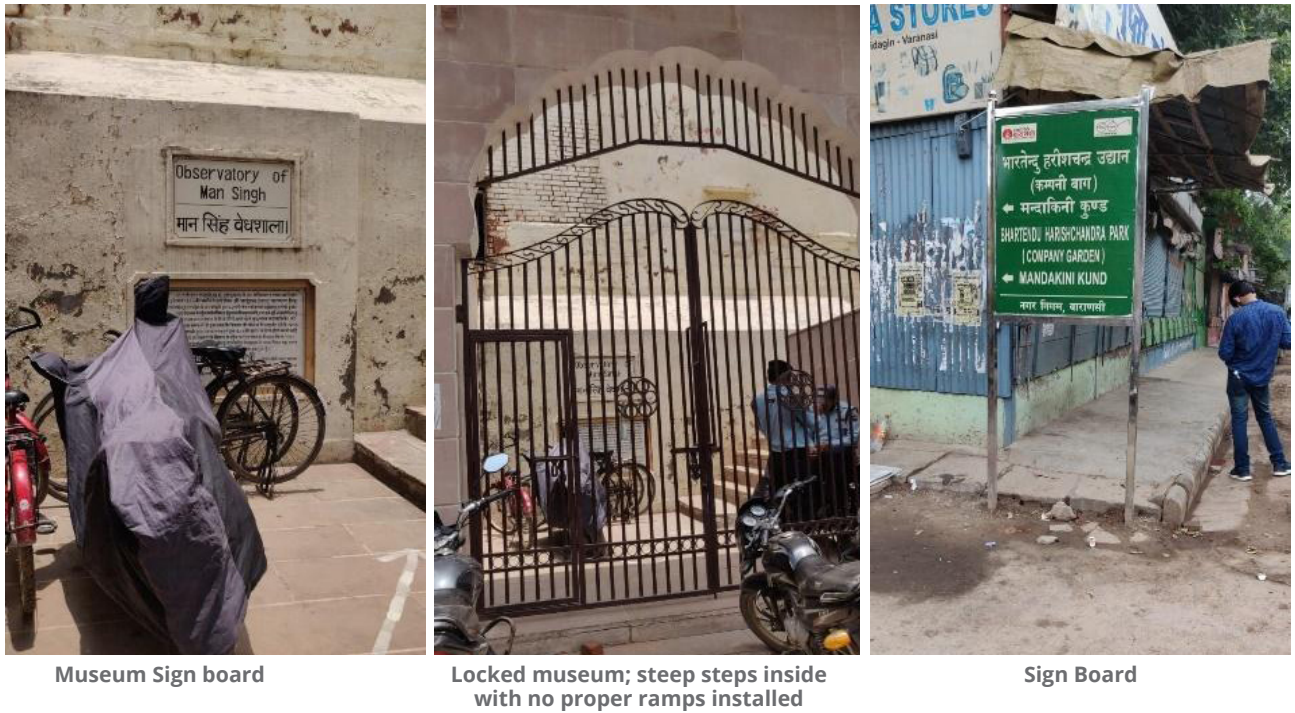
## Figure 43: Pictorial Demonstration- Recreational Spaces: Site 2



Museum Sign board



Steps at the shaded seating



Conducive pathway, no tactile



Play equipment



Non-conducive path at the seating area

## Figure 44: Recommendations for Inclusive Recreational Spaces



Tactile exhibits and guided tours



Tactile indicators in walkway



Accessible audio visuals



Exhibits at accessible height



Tactile Exhibits



Benches for viewing
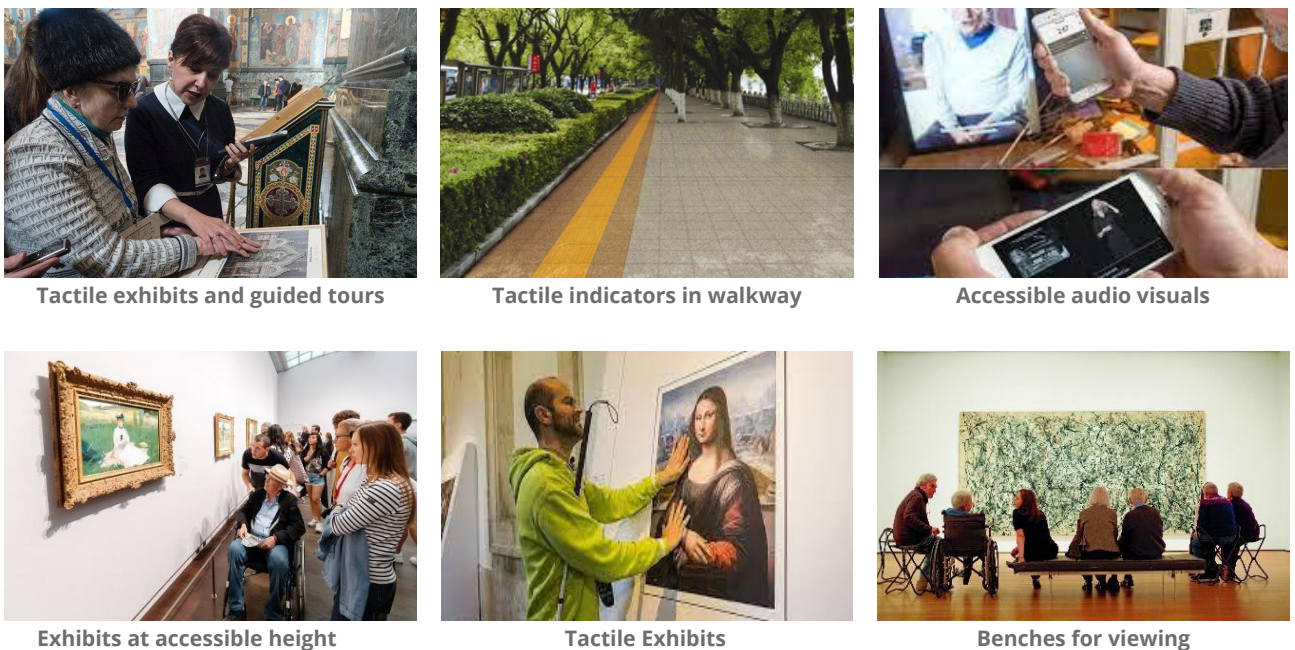
**Exhibits at accessible height**


**Tactile Exhibits**


**Benches for viewing**


**Accessible Labels**


**Accessible vehicle designed by Kickstart Services in Bengaluru**


**Inclusive Park in Bengaluru**


**Accessible play equipment**


**Inclusive Park in Santhome, Chennai**


**Elements of inclusive play**


**Park walkway with TGSI, accessible Golf cart**

**6. Education Sector**

For centuries, Varanasi, which is also known as "Sarva Vidya Ki Rajdhani" which means the capital of knowledge, is reputed as a great centre for education and learning. Since ancient times, people across the world have been coming to Varanasi to learn philosophy, Sanskrit, astrology, modern sciences, and social science. Annie Besant, with an intend to impart both modern and traditional education, in the last quarter of the 19th century established the Central Hindu School. The Central Hindu School is now what we know as the prestigious Banaras Hindu University, at present, it holds a position among the top universities across the world. Other renowned colleges and universities in Varanasi include Sampoornanand Sanskrit University, Mahatma Gandhi Kashi Vidyapeeth, Imania Arabic College, Central Institute of Higher Tibetan Studies (at Sarnath), Institute of Integrated Management and Technology (IIMT), Udai Pratap Autonomous College, Nav Sadhana Kala Kendra, Harischandra P.G. College, Agrasen Kanya P.G. College amongst others. The city also runs a few special schools and rehabilitation centres for students affected with disabilities. There have been several initiatives under the Accessible India Campaign and Smart City Mission to improve access to education services for all. The smart school at Machhodari is one of the biggest achievements to ensure access to quality and affordable education for all sections of society. The importance of reasonable accommodation and equal opportunity for all ( as indicated under the RPwD Act, 2016) has been well recognised by the government and private educational institutes and efforts have been taken to ensure its mandate across the state.

The key findings of the audit of a few of the major educational institutes within the two sites could be summarised as follows:

| Educational Institutes | Key Findings | | Scope for Improvement |
| --- | --- | --- | --- |
| | Site 1 | Site 2 | |
| **Entrance** | **Shri Kashi Viswanath Ved Vidyalaya:**<br>• Steps near the entrance do not have the provision of grab rails, antiskid nosing strips etc.<br>• No provision of a ramp along with the level differences in the entrance.<br><br>**Shri Vishwanath Sansthan Dharm Inter College:**<br>• Level difference along the entrance.<br>• Lacks provision of the ramp to connect the building with the road level.<br>• Parking of two-wheeler vehicles obstructs access to the entrance. | **Sri Agrasen Kanya Inter College:**<br>• Provision of a ramp to connect the entrance from the road level.<br>• The existing door acts as an obstruction for wheelchair users.<br>• Lack of tactile indicators along with the steps and the entrance.<br><br>**Gujrat Vidya Mandir Inter College:**<br>• The main gate has a 60mm high kerb at the gate.<br>• The landing space at the gate is 500mm.<br>• Provision of ramp exists. however, it is steep with a gradient of 1:4<br>• No provision of railing and tactile indicators along the ramp<br>• No provision for the railings, TGSI and anti-skid nosing strips along with the steps. | • Entrance to have the provision of ramps with appropriate gradient, width, handrail etc. as per standards<br>• In case of space constraint e.g., in Kashi Vishwanath Ved Vidyalaya, alternative venue/ programmatic changes could be considered for students with disabilities.<br>• The steps also need to be made accessible with handrails, TGSI, nosing strips, etc. on both sides and at height.<br>• Level differences at the entrance to be maintained with ramps.<br>• Provision of tactile indicators to guide students with visual impairments inside the building. |

| Educational Institutes | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| **Courtyard/ Stage/ Assembly spaces** | • NA | **Sri Agrasen Kanya Inter College, Townhall:**<br>• Access to the courtyard is maintained through the provision of a ramp.<br>• Access to the stage at the courtyard has the provision of ramps.<br>• The ramp surface is however steep with a slatted surface.<br><br>**Gujrat Vidya Mandir Inter College:**<br>• Provision of ramp and steps are available to access the stage.<br>• The ramp is a 940mm wide ramp, very steep with a gradient of 1:3 without the provision of railing and TGSI.<br>• The steps have unequal risers and the tread is 230mm with no provision of railing, TGSI and anti-skid nosing strip. | • Ramps and steps to meet accessibility standards for appropriate gradient, width, landings, railings, tactile indicators and nosing strips.<br>• Lighting arrangements to be done in a manner such that the light falls on the speaker's face to enable lip-reading for students with hearing impairments.<br>• Hearing enhancement aids can be installed in the assembly spaces. |
| **Classrooms** | | **Sri Agrasen Kanya Inter College, Townhall:**<br>• The classroom has levelled entry<br>• The blackboard has a raised platform that obstructs the reach of wheelchair users.<br>• Benches and tabled are fixed to the ground and are not ergonomically designed with disabled-friendly features.<br>• The upper floors of the building are accessed by staircase without provision of railings, nosing strips, tactile indicators, etc.<br><br>**Gujrat Vidya Mandir Inter College:**<br>• The classroom is on the first floor and can only be accessed through the staircase.<br>• The blackboard is mounted at 900mm from FFL.<br>• Benches and tabled are fixed to the ground and are not ergonomically designed with disabled-friendly features.<br>• The staircase ( width of 1160 mm) that connects the ground floor to the first floor does not have railings, nosing strips, tactile indicators etc. | • Obstructed view and access to the blackboard.<br>• Seating arrangements to meet the requirement of wheelchair users.<br>• Some of the fixed benches and tables can be replaced with one's that meet the accessibility standards.<br>• Few classrooms can be located on the ground floor on a need basis for students with disabilities.<br>• Hearing enhancement systems to be installed in some of the classrooms.<br>• Access to the first floor to be facilitated by installing an appropriate lift.<br>• All the common areas to be preferably be planned at ground floor level to cater to the staff, students and visitors with disabilities.<br>• Staircase to meet accessibility standards with railings, tactile markings on landings, anti-skid nosing strips and photoluminescent strips. |

| Educational Institutes | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | **Site 1** | **Site 2** | |
| **Toilets** | | **Sri Agrasen Kanya Inter College, Townhall:**<br>• Provision of separate toilets for boys and girls.<br>• The washrooms have Indian style WC only.<br>• No provision of accessible cubicles for persons with disabilities.<br><br>**Gujrat Vidya Mandir Inter College:**<br>• Provision of separate toilets for boys and girls.<br>•  The washrooms have Indian style WC only<br>• No provision of accessible cubicles  for persons with disabilities<br>• The access to the boys' toilet has both ramp and steps however it is steep.<br>• Availability of levelled entry to the girl's toilet. | • Provision of unisex accessible toilets to be available on each floor.<br>• Cubicles to be compliant with the accessibility standards for appropriate size, layout, fixtures, colour contrasts, door, signage, emergency pull cord alarms, visual strobes etc. |
| **Drinking water facility and vending machine** | | **Sri Agrasen Kanya Inter College, Townhall:**<br>• Inappropriate height (at 1000mm) with a raised platform in the drinking water area.<br>• The tap required circular movement of the wrist to operate which is not conducive for students with locomotor disabilities.<br>• Availability of a sanitary pad vending machine fixed at 1500 mm.<br>• The vending machine requires twisting and fine finger movement to operate.<br><br>**Gujrat vidya mandir inter college:**<br>• The width of the aisle space to access the drinking water facility is 810mm.<br>• The tap is mounted at a height of 1300mm from FFL.<br>• The horizontal reach is 170mm and the knee space underneath is 790mm.<br>• The tap required circular movement of the wrist to operate which is not conducive for students with physical disabilities.<br>• Lack of provision of a sanitary vending machine. | • Drinking water facilities to be made at levelled surface or should have provision.<br>• Adequate knee and toe height, width and depth to access the taps to be provided<br>• Easily operable taps to be installed.<br>• The aisle space to enter the facility to not be less than 900mm.<br>• The sanitary pad machine is to be installed at a height between 800-1000mm. |

**Figure 45: Pictorial Demonstration- Education: Site1**



| Entry to Shri Kashi Viswanath Ved Vidyalaya | No ramp at the entry at Ved Vidyalaya | Entry to Shri Vishwanath Sansthan Dharm Inter College | No accessible toilet |

**Figure 46: Pictorial Demonstration-Education: Site 2**



| Sign Board | Levelled entry | Levelled entry | Sanitary pad vending machine placed high and difficult to operate |



| Step at drinking water area | Kerb at the entry | Steep ramp | Only steps to 1st floor | First floor |
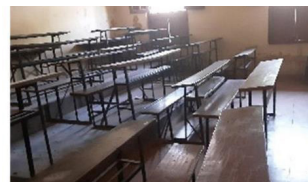
**Figure 47: Recommendations for Inclusive Education Infrastructure**



**Accessible Classroom**          **Accessible library**          **Assistive technology**



**Accessible Classroom Furniture**

**7. Health Sector**

Good physical and mental health is crucial for people to lead an active, productive and happy life. There are several barriers (physical, informational and attitudinal) for people with disabilities to access the health system. The public sector health services in Varanasi include facilities run by the Department of Medical Services, Health and Family Welfare and Varanasi Municipal Corporation, besides Central Government, ESI, railway and cantonment facilities. There are many private sector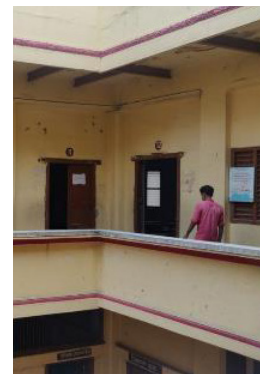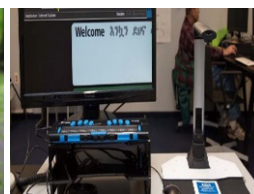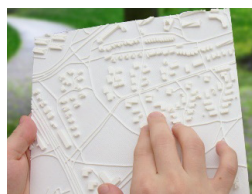 facilities (hospitals, nursing homes, and clinics). In addition, there are few charitable hospitals which provide subsidized health services to the people who need financial support. Under the audit study, a couple of private health care facilities located within the sites have been audited. The key findings of the audit exercise could be summarised as follows:

| Health Centres | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | **Site 1** | **Site 2** | |
| **Parking and entry gate** | • No provision for specific parking for persons with disabilities.<br>• Steps act as barriers at the entrance of the hospital.<br>• No provision of ramps to connect the building with the road level.<br>• The steps don't have railings, TGSI and anti-skid nosing strips.<br>• No tactile indicators present to aid in navigation<br>• Prevalence of drainage grating at the entry steps<br>• Steps are not provided with railings | • The dispensary is signposted by means of a banner and visual signage.<br>• Availability of seating spaces near the entrance.<br>• Level difference at the door to the dispensary.<br>• Availability of drinking water facility near the entrance which is inaccessible. | • Provision of kerb ramps to connect the building with the road level.<br>• Tactile indicators to be installed along the floor from the entry gate and within the hospital building.<br>• Steps to be provided with railings, TGSI and anti-skid nosing strips as per standards<br>• Wheelchair and crutches friendly draining grating to be installed along the pathways to provide obstruction-free pathways. |
| **Signage and wayfinding** | • Inadequate provision of directional signages to locate the hospital buildings. | • NA | • A wayfinding/signage strategy to be developed which is consistent throughout the complex with details of accessible floor directory, location map, directional signage leading to the building blocks and related facilities.<br>• The signages are to be made accessible with Braille and tactile indicators being provided as per the accessibility standards. |
| **Indoor Environment** | • The presence of channel rail at the entrance gate restricts the independent movement of persons with disabilities.<br>• Both registration and enquiry counters are at an inaccessible height for wheelchair users.<br>• The counters have no knee and toe space<br>• The induction loop is not installed<br>• There are no tactile indicators installed. | • NA | • Channel rail to be levelled with the adjoining floor level to provide unobstructed movement of persons with disabilities.<br>• Appropriate height of the counter to be maintained at 750mm-800mm.<br>• Dedicated counters could be created for PwDs<br>• Proper signages to be installed to indicate services and resources specifically available for PwDs<br>• Counters to be installed with the provision of an induction loop.<br>• TGIS to be installed in the corridors as per the standards. |

| Health Centres | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| **Ramps inside the building** | • The inappropriate width of the ramp and landing space is inappropriate.<br>• The ramp has a slatted surface with no provision of TGSI.<br>• Lack of appropriate signage about the available facilities the lift and ramp landings space. | • NA | • Ramp to build as per standards in terms of gradient, landing, surface and TGSI.<br>• Appropriate signage of the facilities to be made at the landing space of the ramp/ lifts. |
| **Lifts** | • There is no Lift jamb signage.<br>• The call button is installed at 1240mm, it doesn't have braille and raised letters.<br>• The control panel is at installed at 1200-1580mm, and doesn't have braille and raised letters.<br>• The railing in the lift is installed on all three sides at 900mm from FFL.<br>• There is no emergency-related information nor voice announcement available inside the lift car. | • NA | • Appropriate signage and floor numbers to be placed opposite the lift car.<br>• The call button and control panel are to be located between the height of 800-1100mm from FFL.<br>• The control panel is to be placed at a height of between 800 mm and 1000 mm from the floor level.<br>• Call button and control panel to have braille and raised letters in sharp contrast with the background to aid people with visual impairments<br>• Emergency related information to be installed at a vision zone of 900-1800mm in an accessible format.<br>• Voice announcement system to be installed to help visually impaired people. It should announce the floor number, door open/close, going up/down.<br>• A two-way communication system to be installed.<br>• Signages are to be located where they are visible. |
| **Staircase** | • The staircase has a railing on one side at a height of 900mm.<br>• The railing doesn't extend 300mm beyond the first step.<br>• There are no TGSI, anti-skid nosing strips and photoluminescent strips installed. | • NA | • The railing is to be mounted on both the side at two-level, 950-850 and lower level at 750-650mm.<br>• It should extend 300mm horizontally beyond the first and last step and should be continuous at landings. |

| Health Centres | Key Findings | | Scope for Improvement |
|---|---|---|---|
| | Site 1 | Site 2 | |
| Toilets | • Signages don't have raised letters and braille.<br>• The toilet door is 850mm wide and opens inside<br>• There is no horizontal pull bar on the door.<br>• The size of the toilet is 1500×3000mm.<br>• There is enough manoeuvring space on the side but it is restricted by the urinal.<br>• There is one horizontal grab bar mounted on the wall side.<br>• No provisions are made for a coat hook, mirror and other accessories in the toilet<br>• No proper colour contrast between wall and floor is made<br>• The visual strobe and emergency alarm are not installed in the toilet. | • NA | • Toilet to be made in compliance to the standards for unisex accessible toilets for size, layout, fixtures, colour contrasts, door, signage, emergency pull cord alarms, visual strobes etc.<br>• TGSI, photoluminescent strips and anti-skid nosing strips to be installed as per standards.<br>• There should be a colour contrast between landings, and the steps.<br>• Step edges must be in contrast colour. Contrast colour bands that are 50 mm wide to be provided on edge of the tread<br>• Warning blocks are to be installed at 300 mm before the beginning and 300 mm after the end of each flight of steps to aid people with visual impairments as per standards. |
| Drinking water facilities | • The water tap is mounted at an inaccessible height. | • NA | • Faucets and reach of the water tap to be modified as per the standards; at a reachable height with an easily operable tap. |
| Room Signage | • The room number signage is installed above the door.<br>• The doctors' nameplates are mounted at a height more than 1800mm from FFL.<br>• The signages have no braille and raised letters. | • NA | • Room signage to meet standards for colour contrasts, mounting heights, braille and raised letters.<br>• Appropriate directional signage to be installed within the buildings. |
| Pharmacy | • The counter is a single level at a height of 920mm. | • NA | • Counter to be lowered to 750mm-800 mm from the floor to meet accessibility standards. |

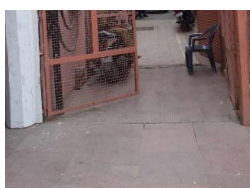**Figure48: Pictorial Demonstration- Health: Site1**



| Lack of Appropriate Signage | Steps at the entry | Levelled entry | Kerb at the levelled entry | Steps at the gate |

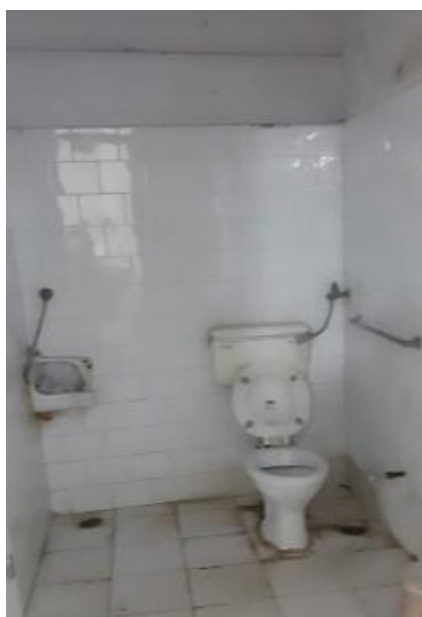**Figure 49:  Pictorial Demonstration- Health: Site 2**



| Banner as a signage | Railing on one side | High counters |



| Inaccessible washroom | Steep ramp with inadequate landing at the lift | Inaccessible drinking water facility |

**Wards with adjustable height beds**


**Corridors with railings and accessible room signage**


**Accessible weighing machine**


**Trained Medical Staff**


**Accessible counter**


**Accessible drinking water facility**

## 7.5.   Recommendations for Adoption and Implementation

The key findings and the recommended solutions from the study would assist the stakeholders in devising phase-wise action plans for adoption and implementation. The audit exercise has also assisted in measuring the accessibility of major infrastructure within the selected site in compliance with the accessibility standards and guidelines.  The exercise has led to the identification of certain scope for improvement or areas of opportunities for retrofitting or redevelopment of the existing site-specific infrastructure. The sector-wise recommendations could also serve as a roadmap for the city stakeholders to integrate the recommendations within the city infrastructure development plan.  The key findings from the study have assisted in assessing the city level efforts being undertaken across the identified urban sectors, understanding of legislative/policy and governance set upon reference to the adoption of an integrated approach for inclusive development especially focussing on the needs of Persons with Disabilities irrespective of age, ability and gender. This section highlights the key enablers for adopting the recommendations at the project or pan-city level. The section also emphasises on adopting the audit toolkit as a comprehensive framework to measure the performance of the existing city-level services and infrastructure.

Based on the findings, there is a need to bring institutional and policy level changes which would act as key enablers for the adoption and replication of the recommendations. The three-tier approach would be a crucial step to bring in a holistic approach to improve the overall functioning to improve the access to basic services and infrastructure in the city. The detailed recommendations are further elaborated into the following three categories:

• **Governance/Policy level interventions**

Form an Accessibility Advisory Panel/Access Board that provide guidance/advice to city departments on current accessibility issues and suggestive measures for improvement. The group should comprise of accessibility experts to support, inform and advise concerned departments to create a barrier-free design for persons of all ages and abilities.

The presence of accessible facilities like toilets, tourist places, lodges, parks etc. should be mapped online on various websites/portals/media/social media platforms. The information is to be made available through appropriate signage outside the buildings/facilities. It is recommended to follow a consistent design/standard for easy identification of such infrastructure.

Create an accessibility index tool, for the buildings/site level intervention. The template for the analysis could be developed with a five-point scale for assessment. Levels of accessibility could be achieved and improved to adhere to the accessibility standards. Incentivize accessible projects/buildings to encourage continuous improvement in the area.

There should be accessibility standards adopted for policymaking, strategy, infrastructure, products and services. The same should apply to all kinds of stakeholders including the public sector, tourism, public spaces, accommodation, tour operators and related services.

• **Infrastructural provisions and Services**

The built environment should comply with accessibility standards both within the external and internal environment. The recommendations have been further categorised as per the sectors identified under the audit framework.

| Sectors | Recommendations |
|---|---|
| **Mobility** | • Prepare an accessibility plan based on guidelines to ensure that the city is improving on the accessibility of its streets and sidewalks by meeting or exceeding the standards. The same should be adhered to for all redevelopment/proposed projects.<br>• Features/amenities/services along the streets like helpdesks, kiosks, police booths, street furniture, walkways, tactile markings, kerb ramps, crossings etc. should be designed and provided as per accessibility standards and to be made consistent across the city. There should be consistency in the design specifications to make these features appear to the users whether local residents or tourists.<br>• Public transport and intermediate transport should be made accessible by the provision of accessible autos, e-rickshaws, battery-operated vehicles, cabs, minibuses etc to suit different needs and budgets.<br>• Create designated parking slots and provide accessible parking slots for persons with disabilities. |
| **WASH** | • A manual with design specifications for public toilets and water ATMs/drinking water facilities could be prepared to keep in mind all the aspects (including gender inclusiveness, requirements for children etc.). This would make it easy to execute and bring inconsistency with the amenities. The consistency followed in design will also help people with visual disabilities to locate the accessible fixtures within a toilet or locate the amenities from a distance. The Jal Amrut Water ATMs had some consistent design features however, require design modification.<br>• Some of the toilets (along the Ghats in Site 1, Park and Post Office in Site 2) should be retrofitted to become fully compliant. Likewise drinking water facilities should undergo a pilot retrofitting exercise. These would serve as models to be replicated amongst other toilets being planned in the city.<br>• Any proposed WASH facilities in the pipeline should undergo rigorous design appraisal with experts and user groups to ensure that all accessibility standards are integrated. The project should be monitored from inception to the implementation stage. The manual being proposed should be utilized/developed while implementing these new projects. |

| Sectors | Recommendations |
|---|---|
| **Tourism** | • Tourism information offices, Tourist Helpdesks/Kiosks should be provided and made accessible for everyone, with features e.g., accessible door (the entrance and parking), signage, wayfinding, etc.<br>• Trained staff to be available within the heritage sites to interact with persons with visual/hearing impairments.<br>• Tourist offices should have the provision of accessible infrastructure, services and assist in getting the right services at affordable prices.<br>• Universal design amenities along the ghat area, such as accessible charging rooms, toilets, ramps, way-finding and signages plan, etc. needs to be incorporated<br>• For blind or visually-impaired travellers' access to information should be in braille, tactile and raised letters as per standards.<br>• Audio Visual tool to be provided for a person with visual and hearing impairment<br>• There should be a range of options available for people with disabilities to stay – Dharamshalas, low/mid-range /high-end.<br>• The Varanasi official website should have information (contact details, types of rooms available, accessibility, cost, etc.) about places that are accessible in the city.<br>• The Government could develop a few lodges and guest houses that are fully accessible and inclusive. |
| **Recreational Spaces** | • Develop detailed guidelines and standards for public parks, museums and other recreational spaces.<br>• For parks following should be considered :<br>• Entrance and exit gates, parking areas, paths and walkways in and within the park should be fully accessible to persons with disabilities.<br>• Play areas and recreational equipment, or related amenities should generally be designed to be made accessible and useable by children with varying abilities/ disabilities.<br>• Seating areas should be readily available for children and older persons. Benches and seating areas should be accessible to a variety of users.<br>• Where planting beds are provided, use of raised beds, fragrant planting materials, and Braille signage as an added value to persons who have visual limitations or for persons using mobility aids could be considered.<br>• Diversity of play components chosen carefully to engage multiple senses, develop skills and encourage social interaction.<br>• Inclusive play spaces/components could be linked with an accessible route within the playground. |
| **Education** | • Educational facilities serve a variety of age groups from pre-kindergarten to high schools. All such facilities should be able to meet the barriers of persons of all ages and with varying disabilities. Details of digital learnings techniques, trained and sensitised teachers, barrier-free infrastructure in schools to be made available for public information.<br>• Exterior areas, routes, playing fields, and other amenities, interior circulation, Classrooms and assembly areas, libraries, etc. should follow accessibility standards. |
| **Health** | • All facilities providing health care services should be fully accessible to seniors and persons with varying disabilities.<br>• All arrival and entrance areas should be fully and autonomously accessible to persons using mobility aids and to persons with visual limitations.<br>• All waiting, admission, diagnostic, consultation and treatment areas should be fully accessible to persons using mobility aids.<br>• All essential support areas that are available to the public or clients e.g., Information and Service Counters, Information Systems and Directories, should be accessible to persons with varying disabilities.<br>• All patient rooms for short or long-term accommodation, including any attached washrooms, clothing storage areas or lounges, should be accessible.<br>• Public health, out-patient, physiotherapists, clinics, doctor's offices, dental clinics, diagnostic and treatment settings should be designed to be fully accessible.<br>• All clinic, diagnostic, treatment or support areas, including offices, consultation and treatment cubicles, should be large enough to accommodate persons using wheelchairs with no internal aisle/ corridors less than 1200 mm wide and doorway less than 900 mm wide, between walls or door stops. |

| Sectors | Recommendations |
|---|---|
| **Public Services** | • All public services, educational institutions, health infrastructure and government buildings to be accessible for all.<br>• Help desk to be set up at the police stations, railway booking counters, etc. along with at least one translator/ interpreter.<br>• Training and sensitization of police and government officials.<br>• Strict compliance measures to be enforced across all service provider offices.<br>• External environment comprising of walkways, ramps, building entry, steps, parking and Internal environment comprising Counters, Signage, seating, toilets and ATMs should meet accessibility standards. |

• **Maintenance and Monitoring Mechanism**

**Monitoring:** Periodic third-party access audits could be mandated and budgeted for confirm adherence to the accessibility standards and maintenance of features already incorporated in buildings. Users with disabilities should be involved in such audits for feedback. Walkability/mobility audits should be conducted periodically to improve the accessibility of streets, walkways and transportation.

**Maintenance:** Caretakers for the streets, parks, ghat areas, traffic management, museums, schools/colleges, public community toilets, etc. should be sensitized and made aware of all the provisions in the design to ensure a better day to day maintenance.

**Penal action against those vandalizing public property:** There should be strict penal action taken against those vandalizing public property like street furniture, etc and violating rules like pedestrian walkways.

There is a need to gain a sense of ownership amongst the city governments to bring reformative changes and direct the responsible agents accordingly (i.e., land/building owners/contractors/implementors). The accessibility standards need to be more descriptive in terms of design, standards and specifications for integrating universal design features with the greenfield/brownfield development projects. Under the BASIIC programme, certain policy initiatives have been undertaken to review the existing national accessibility in partnership with IIT Roorkee and IIT Kharagpur. The policy initiatives would aim to revise and unify the existing standards (Harmonised Guidelines and Urban & Reginal Development Plan Formulation Guidelines) pertaining to universal access and inclusive design in India. In support of NIUA, the eminent academic institutes have conducted numerous consultative and participatory workshops involving diverse groups of stakeholders for the revision process.

As an extended part of the audit research, a need-based action plan for each of the site-specific infrastructure will be developed for phase-wise implementation of the recommendations and the prioritised list of remedial measures. The action plan would also highlight the time frame for implementation and safeguarding funding/ resource allocation either from convergence mechanism from state/centre government fund. Although there are provisions for national standards for accessibility, the existing infrastructure seems non-compliant or adhering to the accessibility mandates. Therefore, retrofitting should be an overarching action and recommendation for site-specific improvement of access to services and infrastructure. The indicator-based assessment and the findings from the audit would assist the city in addressing the disaggregated data gaps related to the socio-economic profile of Persons with Disabilities and enforce the adoption of evidence-based and informed decision-making processes. The findings would guide the city decision-makers to prioritise, take actions for the right and appropriate interventions and allocate resources to strategies the inclusive development activities. The city-based audit would also act as a potential tool for other cities to replicate the learnings while identifying the sector-specific gaps and taking appropriate actions for improvement. A collaborative, integrated and participatory approach to urban development would be a key aspect to improve the service delivery and governance mechanism system in the cities. There is a need to prioritize the inclusive interventions, as mandatory, recommended or optional, that best matches the financial and available human resources of the relevant stakeholders/city department.

# Road map for an inclusive and accessible Varanasi

- **Strengthening the Institutional Arrangements**

Bringing institutional, advocacy and policy level changes to ensure the implementation of the disability inclusion measures at the grassroots level. Adopting to inclusive reforms at policy and institutional levels, build capacities of the stakeholders, improving the existing regulatory framework would play a crucial role in mainstreaming disability inclusion across policy and project interventions. An Accessibility Advisory Panel/Forum could be formulated at the city level to provide technical support and guidance to plan, design and implement inclusive interventions. The forum could consist of accessibility experts, decision-makers, urban practitioners including a person with disabilities. The forum could set up strict adherence and maintenance mechanisms to monitor the outcomes of the inclusive efforts and ensure its sustenance in the long run. Formation of an Accessibility Advisory Panel/Access Board that assist the city's stakeholders to manage the current accessibility issues identified in the city

Adoption of the mandates of RPWD Act, 2016 within the existing institutional mechanism including employment of persons with disabilities, the appointment of a technical expert in the CLAF of Smart city SPV, appointment of Disability Chief Commissioner, etc. need to be ensured across administrative and institutional setup. Strict penal action needs to be enforced for non-adherence to the necessary mandates at the national/state/city level. Private industries to be involved in the adoption and adherence process. Stringent measures should be taken to ensure the rights of PwDs as per the RPwD act, 2016.

An interdepartmental coordination mechanism needs to be set up to ensure easy access to data and information by the city stakeholders. ICCC of VSCL is one such initiative where all the major services are being made available on one platform. Efforts need to be undertaken to bring all the related services to one platform to assess the accessibility and inclusivity requirement and assist stakeholders in taking evidence-based and informed decision-making processes for action-based efforts.

- **Policy Interventions**

There is a need for integrated urban policy to drive urban development agenda across different tiers of the government which would address the barriers related to disability inclusion and promote equality, empowerment and economic inclusion. The policy would highlight the mechanism to adhere to the existing Policies/Guidelines/Development norms on developing disability-inclusive infrastructure to tackle the physical, social and attitudinal barriers faced by persons with disabilities

Cities should focus on adopting a holistic approach towards inclusive development and championing the concept of inclusive design and planning principles from the beginning of an urban initiative rather than adopting the retrofitting approach. It would also explore the scope of convergence between ongoing missions for developing sustainable funding and cooperation-maintenance mechanism for the implementation of disabled-friendly, inclusive infrastructure. The convergence of aforementioned missions will not only promote an integrated planning approach across various programs and schemes but also augment the improvement of the overall urban environment. Disability-related laws and policies should be implemented at the national/state/city level.

The recommendations for adherence should be developed in consultation with PwDs, DPOs, Government entities with the requirements/mandates related to the proposed guidelines/standards.

- **Participatory planning Approach**

Collaboration with partners and stakeholders to ensure accessibility and the rights and needs of persons with disabilities are central to policy development, program development, implementation and delivery. Participatory mapping is a tool that facilitates discussion around priorities and can help identify geographic areas to target interventions. These exercises can transform city stakeholders' engagement with citizens from public consultation to participation and co-creation, which is an essential component of inclusive city development. The collaborative efforts of the city stakeholders would play an important role in transforming the city as accessible, safe and inclusive for all and the empowerment of all marginalized groups.

Involvement of persons with disabilities since the inception of the project are crucial to understand the diverse grass root level challenges and perception of persons with disabilities to access an urban environment. This would help to understand the perception of persons with disabilities, understand the spatial, socio-economic and attitudinal barriers associated with disability and integrate the universal design features within the existing infrastructure. This would also curb the multi-dimensional barriers associated with locomotor, audio-visual or cognitive disability.

Representation of persons with disabilities needs to be considered in the formulation of an effective policy framework to ensure access to basic rights and services including health, education, employment, social security and access to the right information. Regular consultation with persons with disabilities would assist to understand the grass-root level issues and focus on adopting innovative measures to mitigate the spatial and socio-economic barriers associated with disabilities. Collaborative model required to engage city officials, hands-on workshops, conducting of exposure visits, etc. would be important to replicate the successful learnings from the engagement. Similar workshops can be conducted to identify tangible actions to address those areas and allocate responsibilities and tasks between stakeholders. This can support addressing implementation barriers through establishing priorities, roles, responsibilities and inclusive design champion and create an enabling environment for knowledge sharing and learnings amongst Indian cities. Public awareness campaigns would be another action to increase understanding of accessibility, information about human rights, accessibility standards, and barriers associated with citizen participation.

- **Training and Capacity Building**

There is a need to improve the understanding, and build knowledge of the city officials on the technical aspects of universal design features for effective implementation and maintenance of disability-inclusive infrastructure. The implementation agency including on-ground contractors and engineers need to be trained about the specifications of universal design features and on-site training for effective execution of similar infrastructure. Cross learnings of best practices from global/national examples would enhance the knowledge base of the city stakeholders.

- There is a need to activate the entire city ecosystem, including contribution from academia for research initiatives. Identify scope for collaboration with research institutes for projects related to the rejuvenation of ghats and old city areas to ensure sustainability and inclusion. Focus to be made on developing training modules to create awareness amongst the students and integrate modules of disability inclusion within the academic curriculum.
- Practical and demonstrational workshops should be conducted to educate and sensitise officials and to eliminate the invisible barriers existing in the city by sensitisation of the larger group including citizens, contractors, vendors, etc.
- Sensitisation and awareness of citizens to understand the challenges associated with disabilities to reduce stigma and social barriers, and mitigate the attitudinal and behavioural barriers as faced by the persons with disabilities.
- Identifying champions of disability inclusion and recognise the efforts would be crucial to building public awareness around disability inclusion and inclusive design. Knowledge resources and training materials should be developed to support the public, private sector, and grass-root organizations to adhere and comply with the Accessibility Act.
- Resources and training to be provided to build capacities of the city stakeholders related to DIUAD.
- Partnership between academia, government and communities for accessibility research and knowledge translation to be established.

- **Provision of Accessibility Index Tool/Design Manual:**

The city should to adopt an accessibility index tool/ checklist to plan, design and implement similar interventions keeping in mind the special needs of persons with disabilities. This includes, provision for integrating universal design features such as ramps, accessible toilets, tactile paving, accessible indoor environment, etc. The manual could also include standards/recommendations for universal design features which would be relevant for the city stakeholders to plan, design, implement and monitor such infrastructure in adherence/compliance with the necessary standards/norms. The tool could also assist to measure the accessibility quotient of the projects and improve the performance of the infrastructure based on the mandates of mandates/accessibility/guidelines.

Designs should be standardised for basic amenities such as toilets, drinking water outlets, police chowkis, helpdesks etc. to support clear wayfinding and identification of essential services in the city. Accessible projects/ buildings can be incentivized to encourage continuous improvement at pilot or city scale alongside guidance to set financial goals by the city stakeholders to integrate universal design features within the infrastructure provisions. The manual would also be beneficial to support urban interventions which consider the widest possible range of end-users and recognise that often one size does not fit all.

- **Maintenance and Monitoring**

Maintenance of disability-inclusive infrastructure should be established through sensitisation and awareness of the caretakers. Periodic third-party access audits could be mandated to confirm adherence to the accessibility standards and maintenance of features already incorporated in buildings. Users with disabilities should be involved in such audits for feedback. Walkability/mobility audits should be conducted periodically to improve the accessibility of major public places, government buildings, recreational spaces and independent movement of a person with disabilities. Robust implementation, maintenance and monitoring measures need to be enforced by established a monitoring cell to ensure compliance with existing regulations related to accessibility norms/ guidelines/standards.

Compliance and enforcement mechanisms, including appointing of a Nodal Officer at the State/City level should be established to run regular inspections to monitor and ensure compliance with the Acts and standards. There is a need to work with partners/departments and develop implementation plans to demonstrate accountability and monitor progress towards the DIAUD strategy.

A robust evaluation processes should be in place in order to measure the efficacy and impact of accessibility initiatives.

A comprehensive review of the effectiveness of the Act and the accessibility standards should also be periodically carried out after at least every 5 years

- **Accessible Physical Infrastructure:**

There is a need for solutions and innovations that are contextual and tailor-made to match the characteristics of the city. The city requires innovative and contextualised solutions to solve the pressing urban issues and ensure access to basic urban services and infrastructure for all. The Department of Empowerment of Persons with Disabilities in Varanasi is actively involved in creating awareness about the diverse needs associated with different types of disabilities and are implementing projects to make the public buildings and ghat areas accessible to all. Varanasi Smart City Ltd and Varanasi Nagar Nigam are implementing various inclusive interventions, which would comply with the necessary accessibility standards thus creating an accessible, inclusive and safe urban environment for all.

Making the culture, tradition and experiences inclusive for all would be pivotal to create an inclusive urban environment for all. Improving physical access along with supplementing with digital and service-based solutions would be crucial to sustaining the efforts in the long run. As such, access to city infrastructure for persons with disabilities as well as overall urban environment and livings conditions for the citizens should be improved. The concept of "Inclusion", which is multidimensional that encompasses persons with disabilities, gender and demographic diversity should be integrated into the future action plan for Varanasi city development. Universal design elements, assistive technologies, inclusive planning and design principles need to be made an integral part of the urban Interventions which could address the diverse needs and abilities of the users.  There should be a focus on universalization of basic services including education, health and other public services, building the governance mechanism of the cities based on the principles of social cohesion and civic engagement.

Understanding of the standards and norms should be carefully considered by the designers before planning, designing and implementing similar infrastructure. Users with disabilities should be involved in such audits for feedback. The policies should support retrofitting of the existing infrastructure. The master plans/city development plans need to take account of the growing need for inclusion within the planning process and keep provisions for future growth and development keeping in mind the diverse demographic structure of the city and as per the provisions mandated in the national guidelines and standards.

- **Access to Recreational Spaces:** Inclusion to act as the focal point while conceptualizing the prospective related to Ghat redevelopment projects. Efforts to be undertaken to improve the health and mental well-being of the citizens. Provision for more inclusive green and open spaces in the city would minimise the diverse barriers faced by persons with disabilities irrespective of age, ability and gender. The city should work on ensuring equal access to recreation and related form of entertainment facilities for all.

- **Access to Heritage/Tourist sites:** Varanasi, popularly known as a tourist destination has the potential to be developed as the hub of inclusive tourism. Tourism is an important revenue generation driver for the city and there should be efforts to integrate accessibility and inclusive elements within the city endeavours e.g., rejuvenation of ghats, riverfronts, heritage sites, temples. There should be provision for the availability of special support/assistance for Persons with disabilities to access the major heritage sites. Making the ghat area accessible through installing lifts/ramps or creating an interconnected platform would be one of the key action areas. It may include creating dedicated special provisions for Persons with Disabilities to attend the Ganga Aarti, etc. Access for Wheelchair users and provision for personal assistance to be provided in popular temples like Kashi Vishwanath, and Kaal Bhairav Temple. Provision of accessible boarding platform to access the boating area, an interconnected platform for all ghats, and ramps or chair lifts along the ghat staircases. Accessible accommodation, providing inclusive services by tour operators, mapping the heritage walks accessible, availability of information on digital platforms, app-based services, etc, well-trained staff by the tourism department, would be a few of the key initiatives for adoption and implementation.

- **Access to Mobility:** The coverage of existing public transport is limited to only certain routes and the organic pattern of development, congested and narrow lanes restrict the independent movement of Persons with Disabilities within the city. Traffic departments should appoint special staff to assist persons with disabilities at all prominent road crossings. Accessibility in public transport should be looked at with a deeper focus on the design and specification of buses, cabs, autos, motorised tricycles, etc. Creating provision for accessible para-transit mode in pedestrianised and crowded streets/road networks. The pedestrianisation of Godowlia Chowk to Dashashwamedh Ghat area has set a good example for the rest of the city for improving the pedestrian infrastructure and walkability aspects. Potential to improve the para mode of public transport to meet the challenges of congested and narrow lanes. Shared cabs or taxis would be one criterion to focus on. The Kashi Ropeway project is one such example to ease the traffic congestion and connect prominent locations of the city through connecting cable cars. Creating accessible boat rides would be a crucial initiative to provide inclusive experiences to persons with disabilities and witness the rich culture and tradition of the city along its magnificent ghats and riverfront. The city stakeholders should ensure the availability of accessible modes of public and explore new and enhance existing public transportation models that would support equitable access to inclusive, accessible, affordable transportation options for all.

- **Access to Public Utilities and Services:** Essential services and infrastructure should mainstream inclusion to protect the well-being of the citizens. Public sanitation facilities should be designed in a manner that is inclusive of the needs of persons with disabilities, women, children, older persons including the transgender/ LGBTQ community and should be built across prominent city locations.

- Banks and related services should be made accessible to all. ATMs need to be designed which considers the challenges faced by visually/hearing impaired users. Integration of universal design features in similar public buildings would be crucial to mitigating the grass-root issues associated with disability.

- **Access to major private and public buildings:** Under the Accessible India Campaign, the city stakeholders have made tremendous efforts to solve the issues of an inaccessible urban environment. Few of the government and public buildings have integrated barrier-free infrastructure e.g., ramps, lifts, tactile paving, accessible digital information, etc. Provision for separate lifts for the older and persons with disabilities has been made in some of the government buildings, and hospitals.

- **Social Infrastructure**

There is a need for empowering the marginalised sections of the society to take active participation in the city and contribute towards the economic development of the city. Participants emphasized on removing intangible barriers including attitudes and perceptions towards disability that are prominent in the society. Disabled People Organizations (DPOs) and Subject Matter Experts (SMEs) should be involved for advocacy as well as to address the lack of empathy and build sensitisation towards the barriers and challenges faced by persons with disabilities.

Doorstep delivery of services for persons with disabilities and elderlies should be initiated, such as, provision of an accessible shelter home in the city for the purpose of education, getting treatments, etc. Running an awareness and sensitization drive through social media platforms or news channels would play a crucial role in understanding the diverse needs and challenges associated with disability. Steps should be taken to reduce the social stigma and related barriers associated with disability amongst the citizens and the stakeholders. Displaying digital and audio messages across city intersections, public places are some of the few ways through which awareness drives on disability can be carried out amongst city service providers.

- **Access to Employment/Livelihood:** The amount of disability pension should be increased to at least INR 3000/- from INR 500/-. Provision of reasonable accommodation and equal opportunity cell to be made an integral part of education/employment sector which would ensure equal access to employment for persons with disabilities. The city should conduct a regular assessment of the existing programs that provide support for the hiring, training, accommodation, and advancement of persons with disabilities in the workplace, and identify opportunities to improve the access to basic services.

- **Access to Education:** Improving access to education for children with disabilities would require bringing changes in the curriculum, sensitisation of teachers and staff, making the school infrastructure inclusive, adhering to adaptive learning modules, audio-visual mode of teaching, and policies that support its implementation at the grass-root level. It is pertinent to integration of information about disability rights and accessibility requirements into relevant school curriculum/higher education courses areas as they are renewed and developed.

- **Access to Health Infrastructure:** Adapting the learnings from the Covid-19, health infrastructure needs to be made inclusive for all. Telemedicine, availability of primary health care centres, sensitization amongst the health care staff and creating provisions for affordable services would matter in the long run.

- **Access to Public Services**

  Numerous initiatives have been undertaken to make the public services (banking, municipal services – tax, water bills, online building approval system, etc.) available on digital platforms which are compliant with the accessibility norms and standards. This would be necessary to support the independent living of persons with disabilities and empowerment/upliftment in society. Provisions should be considered for those who don't have the financials means to access digital services.
  There is a need to ensure equal access to information, communication and technology.
  Create provision for accessible digital information (e.g., braille, audio-video tools, etc.) accessible websites and technologies for communicating with persons with disabilities.
  Ways on how service providers interact with and trained to serve persons with disabilities needs to be addressed. This may include how persons with disabilities access goods and services, and the use of assistive devices.

- **Access to Right Information**

The presence of disability-inclusive infrastructure such as tourist places, offices, lodges, parks, public amenities etc. should be mapped online on various websites/portals/media/social media platforms for easy access to Persons with Disabilities. Advertisement to be considered to create awareness on the availability of such infrastructure in the city or through appropriate signage outside the buildings/facilities. Once a project has been implemented, announce the presence of accessibility features through posters, mailers and media to inform the public about their presence and usage. It is recommended to follow a consistent design standard for this for easy identification. Outreach initiatives for an on-site announcement of the city-based initiatives on the accessibility feature through signage, posters, mailers and media to inform the public about their presence and usage. A telecast of recordings from similar workshops, stakeholders' consultations, or special interviews with persons with disabilities across popular news channels or social media platforms can be made to build sensitivity among the stakeholders. Creating provision for "Divyang Complaint Centre" and appointment of "Divyang Mitra" across various parts of

the city would play an important role in establishing an efficient grievance redressal mechanism for Persons with disabilities.

The city should provide information on the accessibility of its public services and infrastructure and consider creating an accessibility map of the city. This would support persons with disabilities by giving them the information they need to make informed decisions about where they can and cannot go in the city and help identify priority areas for improvement.

- **Financial Cost**

As per ILO research, the cost of excluding persons with disabilities could lead to a loss of up to 7 per cent of national GDP. Research evidences have emphasised on integrating the inclusive or "universal design" principles at the initial stages of the planning and design process, which could bear almost no or only 1 per cent of the additional cost. The cost of not incorporating universal design could also be significant and would lead to the loss of human capital and economies stand to lose a great deal more when significant groups of the populations (e.g., persons with disabilities) are excluded from participation. Budgetary provisions for universal design features need to be a part of the planning and designing process and not be an outcome of the afterthought process.

- **Digital Infrastructure**

Building accessible technology-driven solutions would play a significant part in the effective delivery of urban services and access to disability-inclusive infrastructure. Improving information around accessible service provision can have huge impacts on enabling users to make informed decisions when choosing services, and advocating for better service provisions. Appropriate and disaggregated baseline data is critical to determine actual challenges faced by persons with disabilities. The launching of the Safe Kashi App by Varanasi Smart city limited is one such initiative to make the services accessible for the citizens during the peak of the Covid-19 pandemic. It is essential to make digital interventions accessible to reduce the digital divide.

- **Technology, Data and Information**

With a growing digital interface for urban services and infrastructure, there is a need to make technology interventions within reach. Specific focus to promote digital inclusion for all capturing appropriate data specific to the demographic structure (the type of disabilities, age-group, employment and livelihood opportunities, etc.) also needs to be made, along with focus on the evidence-based planning process. This would be a useful initiative to understand the economic and social loss incurred by non-participation of such communities across the decision making and planning processes of development. Dashboard on city-based data/information related to disability inclusion needs to be created. This can also be used to create spatial database on the inclusive efforts of the city. While technology can help improve life in cities, there is a risk that without adequate oversight and appropriate mechanism, it could widen inequality and the digital divide. Creating more inclusive digital communities is essential for reducing this divide - by not only boosting affordability and public access but also by increasing digital skills and awareness. Greater digital inclusion can also improve access to public services and enhance public participation. The development of a robust urban-data information system, to adopt an evidence-based planning approach and to monitor and evaluate the outcomes of this process would be crucial.

- **Assistive technology**

There is a need to develop and adopt assistive technologies to solve accessibility-related issues around the urban context. Development of  community-wide solutions to automate city services that are accessible to all can also be considered. Few of the reference examples can be in the form of Accessible Street Map for Wheel Chair Users, New Beacon based Navigation system for visually impaired people, interactive signages, city sensors and monitors that measure data metrics to drive better decision-making process for city planning aspects by the city stakeholders, etc. Focus on affordability, awareness and accessibility of ATs would be crucial to widening its applications within the urban interventions.

Easing of procurement policies is an important aspect that should be looked into so as to enable city decisions makers/leaders to adopt innovative and smart solutions for building Disability-Inclusive infrastructure.  An accessible built environment must support assistive technology use in a seamless way an inaccessible built environment can limit assistive technology use. Participants view assistive technology as empowering and an enabler to participation which should be supported and celebrated within an inclusive city. Hence, assessment and harmonization of existing government programmes that provide access to assistive devices, assistive technology, interpreting services, and identify opportunities should be carried out to improve them.

- **Adaptive and Resilient Infrastructure**

The city has faced tremendous challenges in terms of unplanned urbanisation, a high percentage of persons with disabilities, multiplied by the Covid-19 crisis, climatic disasters such as urban floods. The disaster risk reduction strategy needs to consider all the current challenges and develop infrastructure which is adaptive, resilient and inclusive in nature.

# Key Learnings

There is a need to diversify and adopting a holistic and multidimensional approach for inclusive development in the city to achieve spatial social, economic and digital inclusion. The key learnings from the pilot audit exercise have assisted in evaluating the major lacunas in the city planning and development process and have identified certain action areas or opportunities for improvement. The study has also assisted in mapping the inclusive efforts of the city and how it can be replicated across different parts of the city and within the region. The audit study has been a key initiative to understand the city from the lens of disability inclusion and developing the process as an audit toolkit. The key learnings would also encourage the ecosystem of stakeholders established in the city and replicating the audit process to larger contexts and projects for wider acceptance and application of the audit toolkit. It will also lead to the creation of a collaborative platform, and adoption of a phase-wise implementation plan to resolve issues specific to inaccessibility in the city through audit studies.

The toolkit would facilitate stepwise guidance to the 100 smart cities. The study can also be replicated at the pan-city level to mainstream the narrative of disability inclusion based on the policy, peoples and practice approach. The collaborative and participatory approach for development would be crucial for the effective and efficient delivery of the inclusive planning process. There is a need for focussed investment on inclusive projects. Learnings from global and national examples would be a path-breaking and learning exercise for the city. Involvement of DPOs, communities and citizens would be crucial at the planning and designing process of inclusive interventions and while emphasising on collaborative and shared learning from each other including to mainstream the topic of "Inclusion" within the urban development agenda of the city. Running of design and innovation challenges to source innovative solutions would be one of the key focus areas for future engagements and to bring in transformative changes for Sugamya Kashi.

The broad efforts in support from the BASIIC team have assisted in establishing an active engagement with stakeholders, knowledge exchange based on global/national best practices, adapting to inclusive reforms at policy and institutional levels and building capacities of the stakeholders.

To build upon the narrative of policy, people and practice, the partnership of the UK government and India have played a crucial role in promoting accessibility and the engagement further aims to renew its commitment towards disability inclusion and mobilized global action based on the learnings from the Global Disability Summit, hosted by the UK in 2018. We also need to appreciate the efforts of efforts undertaken by the Accessible India Campaign in contributing towards the welfare of divyangjan and build the narratives from the ongoing missions of GoI.

The engagement with VSCL and the city stakeholders have assisted to understand the grass root related issues associated with disability in the city and there is a need to undertake more focussed research on the subjects. A few of them could be listed as below:

- Building a digital and data-based dashboard on demographics of persons with disabilities.
- Mapping of challenges associated with accessibility in peri-urban areas/rural areas.
- Adopting a holistic and multidimensional approach for inclusive development to include – urban poor, LGBQT+ community, women children, older persons and persons with disabilities.
- Building resilient, adaptive and inclusive infrastructure based on the learnings from Covid-19.
- Inclusive strategy for city development.
- Understanding of intersectionality between AT and the urban environment.
- Mapping of inclusive efforts of the city stakeholders
- Ensuring evidence and informed decision making proves for implementing inclusive policy and planning related initiatives

- Understanding of the intersectionality between socio-cultural factors and physical barriers associated with disability.
- Inclusive strategy for key urban sectors - inclusive green/open & public spaces, accessible public transport system, etc.
- Monitoring and evaluation framework to sustain the efforts in the long run.

As a next step to disseminate the learnings across cities and partners, the findings of this report will be shared with both international and local audiences through a range of activities including directly engaging stakeholders, identifying key actions areas for research and implementation. GDI Hub will continue to support NIUA's activities in Varanasi and India through the BASIIC programme. Some of the next steps could be highlighted as follows:

- Dissemination of the key learnings from Varanasi to other Indian Cities
- Documentation of best practices, case studies and dissemination with the 100 smart cities for larger outreach of the vision.
- Replication of city audit exercise at project/site or pan-city level.
- Dissemination of audit toolkit with 100 smart cities.
- Advocacy efforts for adoption of the revised Harmonised guidelines and URDPFI guidelines at the city level.

The engagement has envisaged to establish a long-term collaboration with the city to resonate the tenets of accessibility, inclusion and safety across all spheres of urban development, even beyond the programme timelines. Developing a roadmap based on the narrative of 'Sugmaya Kashi '(Inclusive Varanasi) with Identification of key pilot projects in the city with special consideration for integration of universal design features would act as one of the actions areas. The city being the Prime Minister's constituency and having a rich historical and heritage value has optimum potential to be developed as a landmark city and set some of the best examples for other cities to adopt and replicate the inclusive strategy. The efforts could create a provision of a comprehensive understanding of inclusion and activation of the entire network of the quadruple helix to mainstream the agenda of disability inclusion within the city's urban development plan.

# Annexure

## 10.1. Annexure I: City Audit Framework

| Urban Pillars 1 | Categories | Key Performance Areas | Assessment Indicators (AIs) |
|---|---|---|---|
| **Institutional** | Policy & Schemes | • Schemes/Programmes for PwDs | • Number of inclusive schemes/programmes adopted at city level |
| | | • Adoption/ implementation of the necessary mandates/ measures for barrier free provisions | • Inclusion of barrier free provisions within the schemes/ policies<br>• Involvement of DPOs/PwDs in the policy/decision making process<br>• Budget allocation for barrier free infrastructure/services under urban development/employment, education and relevant sectors. |
| | | | • Adoption of Accessible voting procedures |
| | | • Reservations for PwDs within the policies/ schemes | • Reservation for PwDs in Social Protection Initiatives |
| | | • Issuance of UIDs Cards for PwDs | • Number of Disability certificates issued annually Available urban services/facilities linked with UIDs |
| **Institutional** | Urban Planning Norms and Guidelines | • Provision of universal design norms and standards in the city/ state bye-laws | • Incorporation of Universal design standards as per Harmonised Guidelines into the city/ state bye-laws and related development control norms for all types of building typologies.<br>• Integration of provision for Inclusive infrastructure in the city developmental plans/masterplans/zonal plans |
| | | • Adoption of Universal design norms and standards for urban infrastructure projects | • Participation of PwDs in scoping, planning and design stage of project<br>• Adhering to universal design standards/norms<br>• Incorporation of accessibility elements within the tendering process<br>Measures for Compliance Assurance |
| | | • Convergence between urban mission/ schemes | • Percentage of allocated budget under missions/schemes available for developing disabled friendly infrastructure |
| | | • Provision of inclusive infrastructure/special provision into the developmental plans | • Incorporation of special provisions in Master Plan/ LAP /Special Purpose Plan (CDP, CMP, CSP, DMP, SRP, TMP, HMP)<br>  - No of retirement homes<br>  - No. for Vocational training centres for PwDs<br>  - No of Day-care Centres for the children<br>  - Special Infrastructure Provisions for PwDs e.g. ; All-ability Parks/Sensory Parks, special need schools, rehabilitation centres, etc.<br>• Incorporation of inclusive guideline and standards as specified in the URDPFI Guidelines. |

| Urban Pillars 1 | Categories | Key Performance Areas | Assessment Indicators (AIs) |
|---|---|---|---|
| **Institutional** | Governance & Administrative set up | • Provision of appointment for Disability Rights Officer in Government bodies | • Appointment of State Disability - Appointment of District Disability officer at the Department of Social Welfare and empowerment at city level<br>• Involvement of DPOs, PwDs in decision making of urban policies and programmes |
| | | • Involvement of Technical Expert on Disability Inclusion | • Appointment of Nodal Officer in CLAF of Smart city SPV<br>• Involvement of Disability Experts for planning, designing of inclusive infrastructure projects<br>• Appointment of persons trained in sign language |
| | | • Representation of PwDs<br>• Availability of disaggregated data on Disability and affected population | • Representation of PwDs and DPOs in the urban decision making committees/councils and advisory groups.<br><br>• Availability of Database on PwDs demographic structure<br>• Listing of registered Local DPOs and NGOs working across various facets of disability |

| Urban Pillars 2 | Categories | Key Performance Areas | Assessment Indicators (AIs) |
|---|---|---|---|
| **Economy** | Livelihood & Employment Opportunities | Vocational training | • No. of Institutes running vocational/skill courses for PwDs<br>• Percentage of PwD population in relevant age group enrolled for vocational training courses<br>• Availability of financial assistance to pursue vocational/skill development courses for PwDs. |
| | | Skill development | |
| | | Employment Opportunities | • Availability of inclusive employment opportunities in formal/informal sectors<br>• Implementation of employment rehabilitation programmes/disability employment development for PwDs<br>• Provision for accessible working environment in govt/ private sector<br>• Provision to access employment related services and information<br>• Provision for trained staff to understand the diverse need of PwDs in workplace<br>• Provison for reasonable accommodation provided at work place<br>• Data (age, group, type of disability) on employment of PwDs Population in primary/secondary/tertiary sector |

## 10.2.  Annexure II:  Recommendations for Pilot Audit Components (as per Harmonised Guidelines)

### 1. Mobility

| Components Audited | Recommendations |
|---|---|
| **Parking** | • At least 1 in 50 up to a total number of 100 beyond which 1 per 200 parking spaces<br>• Bay Size 3600 mm (including 1200 for wheelchair assistive devices like rollators, etc. circulation) x 5000 mm<br>• Accessible Bays located within 30 M of accessible/ main entrances<br>• Designated parking space for Adapted scooters / tricycles<br>• Non-Slippery Surface Material (no loose material like sand/gravel etc) |
| **Bus-stop** | • Double-line of tactile warning tiles before the boarding area<br>• Provision of Seating at a distance of 900 mm from the railing<br>• Kerb Ramps with<br>• Slope with gradient to be 1:10<br>• Flared edges to be maximum 1:10<br>• Strip of warning tactile blocks at the beginning and end of ramp<br>• Multiple modes of information dissemination including audio-visual and tactile methods |
| **Auto stands** | • Clear demarcation through visual signs (floor and standing) for drop off or alighting areas<br>• Provision of Kerb ramp (900 mm) in Passenger boarding area<br>• Provision of Parking aisle (1500mm wide and 5000 mm long) with required turning angle<br>• Provision of Tactile warning tile at 300 mm offset from the kerb stone<br>• Provision of Kerb stones in high contrast to the flooring material |
| **Streets** | • Provision of  accessible pedestrian signals<br>• Installation of acoustic devices on a pole at the point of origin of crossing. Audible pedestrian signals to be loud enough to be heard clearly above the ambient noise(i.e.: at least 15 decibels louder than ambient noise)<br>• Provision of audible and visual cues as to when traffic lights change |
| **Walkability** | • Free from any obstructions<br>• Smooth, hard and levelled floor surface<br>• 1500-1800 mm width (for two-way movement)<br>• 5% or =< 1:20 gradient<br>• Provision of appropriate resting place at 30m intervals for walks more than 60m<br>• Landscape elements (natural and built) to be integrated for shade in walkways<br>• Manhole covers to be surrounded by tactile warning tiles<br>• Provision of adequate and uniform illumination with high colour contrast between level surfaces and avoiding glare<br>• Design of Tactile Guiding system at intersection as per Harmonised Guidelines<br>• High contrast color to denote any change in level<br>• Only gentle slopes should be maintained or provided with handrails on sides<br>• Crossings<br>  • Provision of kerb ramps or raised islands at crossings<br>  • Tactile warning tiles at least of two rows to be marked at the beginning and end of traffic island<br>  • Provision of pelican signals for pedestrians especially those with blindness (Recommended)<br>  • Provision of pedestrian symbols along with disability symbol painted before the zebra crossing lines<br>• Kerb Ramps<br>• Slope with gradient to be 1:10<br>• Flared edges to be maximum 1:10<br>• Strip of warning tactile blocks at the beginning and end of ramp |
| **Street Furniture** | • Provisions of adequate shaded seating/resting spaces<br>• Provisions of Seats with height 450-500 mm and a backrest & hand rest at 700 mm height<br>• Provision of appropriate/sheltered resting place at 30 m intervals for walks more than 60 m<br>• Seating areas to be well illuminated and with clear hard paved surface in contrasting colour<br>• Provision of Litter bins, lighting poles etc - away from the tactile pathway |
| **Public Transport** | • Accessibility to be achieved across the mobility system<br>• Vehicle design should be accessible |

## 2. Wash

| Components Audited | Recommendations |
|---|---|
| **Toilets** | • Visibility of Public toilets from a distance with multiple signs showing male / female and accessibility<br>• Provision of access Ramps (1:12 or 1:14 slope gradient) with both side handrails (with non-slip surface)<br>• Provision of multiple unit choices of toilets (including Indian squat and European WC type fixtures)<br>• Cubicle with min. 900mm clear door width<br>• Provision of Grab Rails at both sides of the cubicle (with 680mm clear width)<br>• Provision of Family toilet (with diaper changing area and adequate accessories)<br>• Provision of at least one step free Urinal in male toilets and at least one urinal at low height with grab rails<br>• Provision of Washbasin at accessible height<br>• Provision of easy door closing mechanisms (simple lever type attachment)<br>• Provision of Panic alarm buttons and an alarm signal outside with flash sign light for emergency situations<br>• Provision of Inclusive Signs for Public Toilet (signs for Female, Male, Transgender, Family and Babies) |
| **Drinking Water** | • Provision of drinking facility basin at a height of 800-900 mm and 480 mm wide.<br>Provision of tap above 100 mm from the basin<br>• Provision of warning tactile tile below the basin<br>• Provision of lever types taps |

| Urban Pillars 3 | Categories | Key Performance Areas | Assessment Indicators (AIs) |
|---|---|---|---|
| **Society and Culture** | Safety and Security | Coverage of CCTV cameras | • No. of CCTV cameras installed per unit of road length<br>Provision of surveillance & monitoring aspects for major city locations, streets, public places, intersections/junctions |
| | | Street Lighting | • Available/Coverage of street lights per 1km stretch of streets/roads<br>Provision for conducting user perception survey on safety aspects |
| | | Complaint Redressal System | • Provision for complaint redressal system in the city |
| | | Accidents/cases reported | • Available data base on crime related issues in city |
| | Health | Availability of hospitals with disabled friendly infrastructure | • No. of primary health care centres with all universal design features<br>Number of hospitals with interactive communication systems for persons with all types of disabilities<br>• Available data base on of PwDs using the city based health infrastructure<br>• Availability of health care helplines for persons with disabilities<br>• Provision for training/sensitisation of health care staffs on special needs for PwDs<br>• Average response time in cases of health emergencies of PwDs |

| Urban Pillars 3 | Categories | Key Performance Areas | Assessment Indicators (AIs) |
|---|---|---|---|
| Society and Culture | Education | Skill development and training centres | • Available Special Schools/ Rehab centres/ Vocational training centres in the city<br>• Available school with barrier free facilities for children with disabilities<br>• Available assistance services (e.g., pedagogues, personal assistance, educated teachers etc.)<br>• Available funding scheme to promote inclusive education system. |
| | | Digitally inclusive and smart school infrastructure | • Available schools with access to digital education<br>• Provisions for disabled friendly infrastructure - digital learning tools, e-learning and teaching techniques, Available adapted literature, inclusive playgrounds, accessible sports facilities, ergonomically designed classrooms, trained teachers, etc<br>• Available data base on differently abled children enrolled in schools<br>• Percentage of differently abled students completing primary and secondary education<br>• Provision of education aid related scheme/programmes for differently abled children. |
| | Tourism | Accessible heritage sites/ monuments/heritage walks | • Access to all heritage sites/monuments ( indoor and outdoor environment) .<br>• Accessible heritage walks with provision for universal design features within the sites<br>• Provision of universal design features - ramps, staircase, washrooms, information centres, parking, resting area, app based audio/video guidance, trained staffs, etc.<br>• Provision of innovative methods for promoting inclusive tourism<br>• Accessible cultural, artistic and heritage programmes/events (related services, information and facilities, Audio support and large captions for visually impaired, Sign language Interpreter, etc.) |
| | | Provision for inclusive hospitality services | • Accessible accommodation facilities for PwDs |
| | | ICT enabled, app based audio/video guidance | • Accessible and interactive information and communication system |
| | Public Services | Accessible public services (Banking Postal, telephone, police, Electoral Booths) | • Provision of Accessible ATMs<br>• Provision of Banks integrated with disabled friendly infrastructure<br>• Accessible Post office, police stations, public service buildings<br>• Provision for accessible online public services portals, websites, apps, etc.<br>• Availability of user data base on PwDs for accessing the online public services<br>• Accessible online grievance redressal mechanism |

| Urban Pillars 4 | Categories | Key Performance Areas | Assessment Indicators (AIs) |
|---|---|---|---|
| **Physical Infrastructure** | Built Environment | Incorporation of Universal design features within outdoor and indoor built environment (all type of building typologies) | • Outdoor Environment<br>Parking; Access Routes/Walkways ; Levels, Edges and Grooves; Steps and Grab Rails; External Signage/Wayfinding;  Pick up and Drop off points; Entrance and Exit; Tactile Guiding Surface Indicators , Kerb Ramps, External Ramps, Entrance Spaces, Drinking Water,  Public Sanitation Facilities, Street Furniture; Outdoor Seating, Subways and Foot over Bridges, Ticket Counters, Materials and Surface Finishes.<br><br>• Indoor Environment<br>Entrance Doors; Reception Counters; Waiting Areas; Corridors/Walkways; Staircases, Internal Ramps/Elevators; Internal Doors & Fixtures; Drinking Water, Sanitary Facilities; Guest Rooms; Eating Spaces; Changing Rooms;  Storage Shelves, ATMs, utilities, Evacuation & Emergency Controls. |
| | | | • Availability of accessible and affordable  dwelling units  for PwDs |
| | Mobility | Accessible Footpaths/Pedestrian walkways | •  Presence and coverage  of accessible footpath along major  city streets/roads<br>(Appropriate Height, Width,  length, surface, level, slope of footpath ramps, obstruction free, pathways  for wheelchair users, signage, tactile pavers, barrier free furniture, utilities, street lights, appropriate lighting and shading,  sensory elements, etc.) |
| | | Accessible pedestrian crossing design | • Pedestrian crossings are sufficient in number and safe for people with different  types of disability, with provision for  nonslip markings, visual & audio cues, adequate crossing times, etc. |
| | | Accessible  mode of Public Transport /Non-Motorised Transport | • Accessible means of  public transportation (bus, train, tram, metro, taxi, city centre vehicles, special bicycles, adaptive cars, etc.)<br>• Provision for accessible and affordable bus transport system - bus stop , foot over bridge, subway, etc. Reserved accessible parking for PwDs in public parking's Provision of accessible boarding/ unboarding platforms for semi-public transport<br>• Universally accessible metro stations, terminals and multi-modal hubs or interchanges.<br>• Accessible Information on available  public transport: nearest bus stops, taxi stands, other means of public transport, etc<br>• Accessible communication and wayfinding systems Availability of ridership database on  PwDs (age, ability, gender), etc. |

| Urban Pillars 4 | Categories | Key Performance Areas | Assessment Indicators (AIs) |
|---|---|---|---|
| **Physical Infrastructure** | WASH | Accessible sanitation facilities | • Availability of accessible sanitation facilities in public spaces, public buildings, institutions, etc. Provision for universal designed features in Public/ community toilets<br>• Accessible Features could include -considering the optimum door width, seat height, grab rail, flooring, location of wash basin, clear knee spaces, visual alarm, etc.<br>• Availability of PwDs user database for such facilities. |
| | | Access to drinking water facilities | • Universally designed drinking water coolers<br>• Provision for location and wayfinding for Public Water ATMs/sanitation facilities<br>• Access to drinking water facilities in formal/informal residential units |
| | Open & Recreational Spaces | Universally designed open/green spaces | • No. of accessible Parks in a neighbourhood/ward/zone<br>• Available Green areas allocation (ward/zone wise) per person in the city<br>• Provision for universal design features (entrance/exit, walkability factor, circulation, safety elements, sensory elements, different vehicular and pedestrian movement, seating arrangement, inclusive play areas, accessible toilets/utilities, etc.)<br>• Availability of PwDs user database for such facilities. |
| | | Accessible Recreational facilities | • Accessible Museums/Art Exhibitions/Cinema Halls/ Libraries/ malls/public plaza<br>• Accessible art and cultural events/workshops/ trade fairs |
| | | Accessible Sports facilities | • Provision for barrier free sports facilities/ stadium/ playgrounds including<br>• Adequate space to be allocated for persons using mobility devices, e.g. wheelchairs, crutches and walkers, as well as those walking with the assistance of other persons.<br>• Accessible parking bays, drop and pick up points<br>• At least one changing room and shower room to be provided for designated sports<br>• Spectators seating areas for wheelchair users Provision for funding sports facilities for PwDs |
| | ICT | Availability of ICT enabled services to access basic city services (websites/ online portals/apps) | • No of accessible city based websites/online portals/ apps<br>• Provision of accessible ICT features - fonts, voice over facilities, colour contrast, etc.<br>• Percentage of services integrated through Command Centre<br>• Availability of user database of PwDs on accessing city based websites/online portals/apps |

## 3. Built Environment

| Components Audited | Recommendations |
|---|---|
| **Public Building** | • Accessible access route:<br>  • Accessible car parking bays towards the entrance/exit.<br>  • Provision of features such as gentle gradients and resting areas<br>  • Enable easy navigation, integrating wayfinding within the landscape and building forms to aid independent movement.<br>  • Provide way-marking features that are prominent and legible from the point of arrival.<br>  • Provisions for accessible street and pedestrian infrastructure within surroundings.<br>  • Safe and accessible traffic crossing and intersection<br>  • Integration with the public transportation system<br><br>• Adequate number of accessible Parking:<br>  • Bay Size 3600 mm (including 1200 for wheelchair assistive devices like rollators, etc. circulation) x 5000 mm<br>  • Bay located within 30 M of accessible/ main entrances<br>  • Designated parking space for Adapted scooters / tricycles<br>  • Accessible route from parking bay to accessible entrance<br><br>• Accessible Entrance:<br>  • Provision of well-defined and covered (for weather protection) for entrances of public spaces along with designated signage<br>  • Step free entrance<br>  • Provision of faculty wheelchair<br>  • Entrance door with clear width of minimum 1000 mm<br><br>• Accessible staircase:<br>  • Clear width of at least 1200 mm<br>  • Uniform steps of min width 300 of tread and 150 mm height of the riser<br><br>• Doors:<br>  • Doors with at least clear width of 900mm<br>  • Bright coloured motif at eye-level for glass door<br><br>• Provision of accessible lifts with:<br>  • Size of the lift to be minimum 1500mm x 1500mm<br>  • Control panel to be placed between 800-1000mm from the floor of the lift<br>  • Horizontal control panel for multi storey buildings<br>  • Mirror at the back of the lift<br>  • Manoeuvring space in the lift lobby<br><br>• Signages and Way finding:<br>  • Directional signages<br>  • Appropriate signage for designated spaces/rooms<br>  • Colours of the signage should be distinguishable and fonts should be legible<br>  • Wall mounted signs to be placed between 900-1800<br>  • Emergency exits should be clearly marked<br><br>• Corridor Spaces:<br>  • Accessible common areas including waiting rooms, lift lobbies etc.<br>  • Minimum 1500mm width of the corridors<br><br>• Grab rails along the corridors |
| **Commercial Establishments** | • Provision of obstruction free entry<br>• Provision of lifts<br>• Provision of accessible changing rooms<br>• Cash and service counter below 800 mm<br>• Clear circulation path of 900 mm |

| Components Audited | Recommendations |
|---|---|
| **Hospitality** | • Cafes/ restaurants:<br>　· Cash and service counter below 800mm<br>　· Clear circulation path of 900mm<br>　· Accessible drinking water fountain/taps<br>　· Accessible design of vending machines and kiosks<br>　· Avoid use of stool or high seating<br>　· Low tables to be provided as well<br>　· Food shelves should be mouted at max height of 1200 mm and space of min 900 mm to be provided<br>　· Visitability in Hotels should be enhanced<br>　· Atleast one accessible guest room on ground floor to be provided<br>　· Common utilities to be designed with universal design considerations |

## 4. Tourism

| Components Audited | Recommendations |
|---|---|
| **Religious Buildings** | • Provisions of seating benches<br>• Provision of accessible cloak room<br>• Provision of accessible prasad shops<br>• Provision/ permitting wheelchair in temple premises<br>• Access to prasad counters/ langar areas<br>• Access to offering areas/ sanctum sanctorum / deity visual access<br>• Accessible Toilets<br>• Accessible changing rooms<br>• Signages and wayfinding systems |
| **Heritage Sites** | • Ramps for level differences<br>• Accessible Toilets<br>• Hard surface with tactile path<br>• Appropriate way finding system |

## 5. Recreational Spaces

| Components Audited | Recommendations |
|---|---|
| **Parks and recreational spaces** | • Green areas:<br>　· Provision of Smooth, hard and levelled surface walkway for comfortable movement of wheelchair/strollers/crutches etc<br>　· Provision of Tactile (TGSIs) Tiles in the centre of the hard paved walkway<br>　· Regular cleaning of leaf litter from the hard paved walkway<br>　· Provision of Inclusive components like Play Equipment for children with disabilities, Senior Citizen corner etc.<br>　· No landscapes (like tree branches and other elements) in the walkway to pose obstruction to persons with vision impairments<br>　· Provisions of plantation scheme with minimum littering<br><br>• Water Bodies<br>　· Provision of Safety rails (800 mm high) at required places including landscape features like water elements etc. |

# 6. Public Services

| Components Audited | Recommendations |
|---|---|
| **Information centres** | • Information available in local & prominent vernaculars, audio visual and tactile formats<br>• Basic knowledge of sign language<br>• Easily locatable<br>• At least a part of the counter height should be at 800mm<br>• Appropriate Illumination of the counter<br>• Provisions like access card reader or other security sensors to be mounted at 1200 mm height. |

# 7. Educational Institutes

| Components Audited | Recommendations |
|---|---|
| **Schools/ Institutes** | • Accessible parking:<br>  • Corridor spaces<br>  • Accessible common areas including waiting rooms, lift lobbies etc.<br>  • Minimum 1500mm width of the corridors<br>  • Grab rails along the corridors<br><br>• Accessible Toilets:<br>  • At least one unisex accessible washroom on all floors with child friendly sanitation fixtures<br>  • Minimum size of cubicle to be 2.2x2 m.<br>  • Sufficient wheel chair maneuvering space inside the cubicle.<br><br>• Classrooms:<br>  • Acoustically sound design<br>  • Well illuminated rooms<br>  • Glare free windows<br>  • Accessible sockets and switches for IT based education<br>  • Flexible furniture layout<br>  • Detachable seats<br><br>• Play spaces and open spaces:<br>  • Accessible and usable playground space<br>  • Facilitate easy access and movement<br>  • Accessible by wheelchair and crutch users<br>  • Design the space based on the varying need of age and ability.<br>  • Equipment to stimulate the sensory systems (auditory, tactile, visual, etc.)<br>  • Social Space to interact and socialise<br>  • Inclusive Play zones |

# Glossary

**Accessibility audit** is an important tool to identify barriers and can help to improve accessibility for people with disabilities, and "provides the basis for an access improvement plan or strategy" (NDA, 2014).

**Anti-skid nosing strip** is a material that is used in staircases and ramps to prevent people from slipping or falling off[1].

**Assistive Technology (AT)** is defined as "any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customised, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities" (RESNA, 2014).

**Braille** is a system used by people with complete or partial visual impairments for the purpose of reading physical texts. Braille is not a language but is a code with raised dots through which many texts of different languages maybe written or read[2].

**Built and open spaces** are private and public buildings, including (but not limited to) homes, schools, health clinics, banks, post offices, police stations, courts, gardens, parks and recreational centres.

**Compliance** is the state of or the process of complying with a certain guidelines, establishment or instructions.

**Disaggregated Database** are data and information that is broken down into detailed sub-categories. This is useful to provide an in-depth analysis of different sub-groups.

**Impairment** is a reduced physical or mental faculty. It becomes 'disabling' when the individual is prevented from participating fully in society because of environmental and social barriers.

**Information and Communications Technology (ICT)** covers communications devices or applications, encompassing: radio, television, cellular phones, computers and network hardware and software, websites, satellite systems, and various services and applications associated with them, such as videoconferencing and distance learning.

**Infrastructure** is the basic physical and organisational structure needed for the operation of a society or enterprise (OD, 2015), or the services and facilities necessary for a society to function (Sullivan & Sheffrin, 2003, p474). The term typically refers to the technical, organisational and service structures that support a society, such as roads, bridges, tunnels, water supply, sewers, energy supply, telecommunications, transport systems, health, education and social support systems etc.

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[1]*https://classic-arch.com/wp-content/uploads/2019/06/Product-Application-Guide_Stair-Nosing_Web.pdf*

[2]*https://www.afb.org/blindness-and-low-vision/braille/what-braille*

**Intersectional approach** is an approach which takes into account the different context such as socio, political, economic, historical, etc. to understand an experience especially that of marginalisation and discrimination. This approach also emphasises and acknowledges that an individual's experiences are unique and different owing to the context and situation being multifaceted[3].

**Kerb** is a raised edge that separates the pavement from the road. It is usually used to segregate vehicles and pedestrians.

**Locomotor Disability** is a disability of the bones, joints or muscle which leads to the restrictions of limbs' movement[4].

**Monitoring Mechanism** is a medium through which it monitors the effective implementation of rules, regulations, policies, etc.

**Multidimensional** indicates have two or multiple dimensions. A multidimensional object/thing has diverse characteristics/perspective/categories.

**Person with reduced mobility (PRM)** is a term to describe a person whose mobility when using transport is reduced due to any permanent or temporary impairment (physical, sensory or cognitive), (IATA, 2007).

**Railings** are barrier made of rails to prevent objects from falling off and act as a safety barrier. It is also a means of providing support when climbing stairs or steep surfaces.

**Reasonable accommodation** denotes adjustments in employment terms, conditions and the environment, including work design and facilities, to accommodate the needs of people with disabilities, pregnant employees with disabilities, and employees with disabilities with family responsibilities without undue hardship to the employer.

**Resilient** is a quality of an object or person that is strong and not easily damageable. Even in a situation of damage, objects/people with this quality tend to recover quickly from the damage.

**Signages** are the use of signs and infographics to indicate a product or give directions to help people navigate through.

**Social cohesion** is a concept of social cohesion accommodates multiculturalism and the coexistence of difference; this does not imply that social inclusion is the only solution to social exclusion (Beall & Piron, 2005).

**Social exclusion** is a process and state that prevents individuals or groups from full participation in social, economic and political life, and from asserting their rights. It derives from exclusionary relationships based on power. This may result from their social identity (e.g., race, gender, ethnicity, caste or religion) or social location (e.g., in remote areas, stigmatised or suffering from war or conflict) (Beall & Piron, 2005).

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[3]*http://www.ohrc.on.ca/en/intersectional-approach-discrimination-addressing-multiple-grounds-human-rights-claims/introduction-intersectional-approach*

[4]*https://www.pacer.org/international/India/disabilities/definitions/locomotor.asp#:~:text=Legal%20Definition,any%20form%20of%20cerebral%20palsy.*

**Stigma** is when someone is defined by a particular characteristic (skin colour, disability, cultural; background etc,.) and not by who they are as an individual or person. It is often associated with lack of knowledge and leads to discrimination because of preconceived judgements.

**Tactile Indicator** is a set of raised stud or bar that assist people with complete or low visual impairment to navigate through the environment. It is mostly used to help identify and guide people to public facilities, and are often used at public transport facilities5.

**Tactile paving is a r**aised paving to alert people who are blind or have a visual impairment at e.g., a pedestrian crossing.

**Universal accessibility** provides for ease of independent approach, entry, evacuation and/or use of services and facilities by all potential users regardless of disability, age or gender with an assurance of individual health, safety and welfare during those activities (International Standards Organisation, 2011). It emphasises an inclusive environment that accommodates the diverse needs of 'all individuals' and not just people with disabilities.

**Universal design** is the design of products and environments to be usable by all people to the greatest extent possible without the need for adaptation or specialised design (Mace, 2008). The universal design intends to simplify life for people of all ages and abilities by making products, communications, and the built environment more usable for as many people as possible at little or no extra cost.

**Usability** is a measure of how easy it is for a user to complete a task

**Vertical Circulation** is a **m**ovement through a building via stairs, escalators, lifts and ramps.

**WASH** refers to Water, Sanitation and Hygiene.

**Wayfinding** is the ability of a person to find his or her way to a given destination.

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5*https://www.mobilityresearch.co.nz/tactileindicators*

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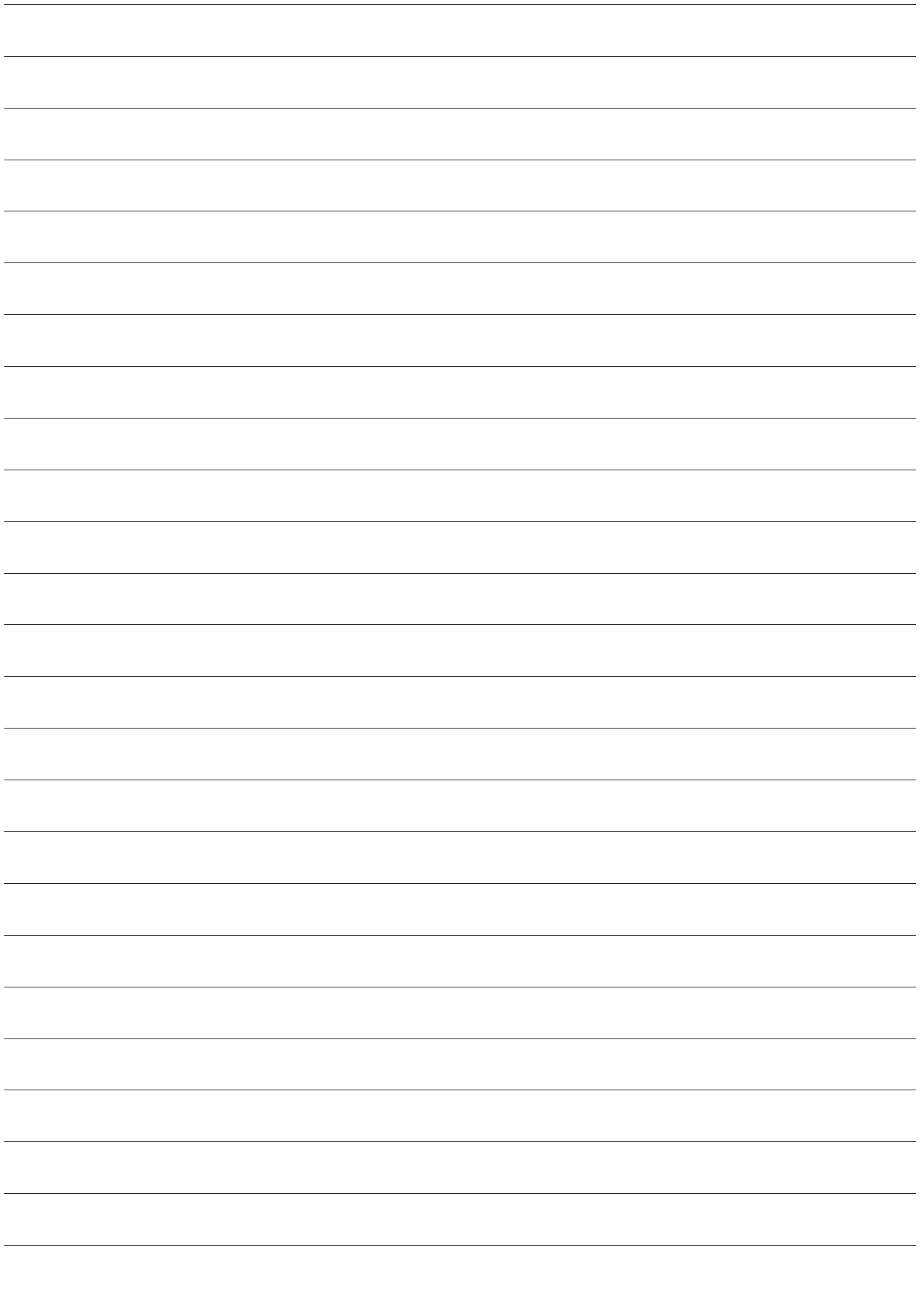
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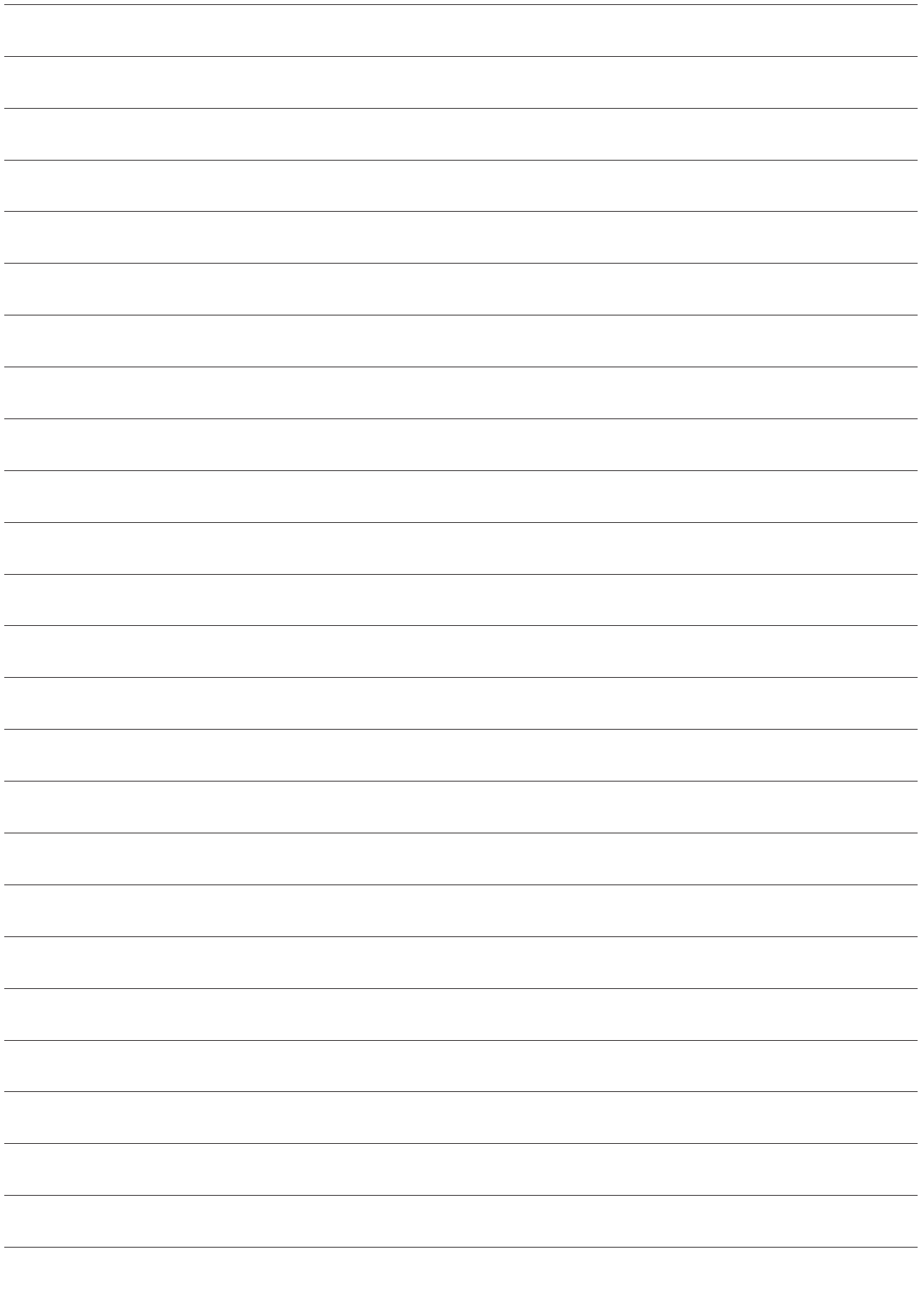
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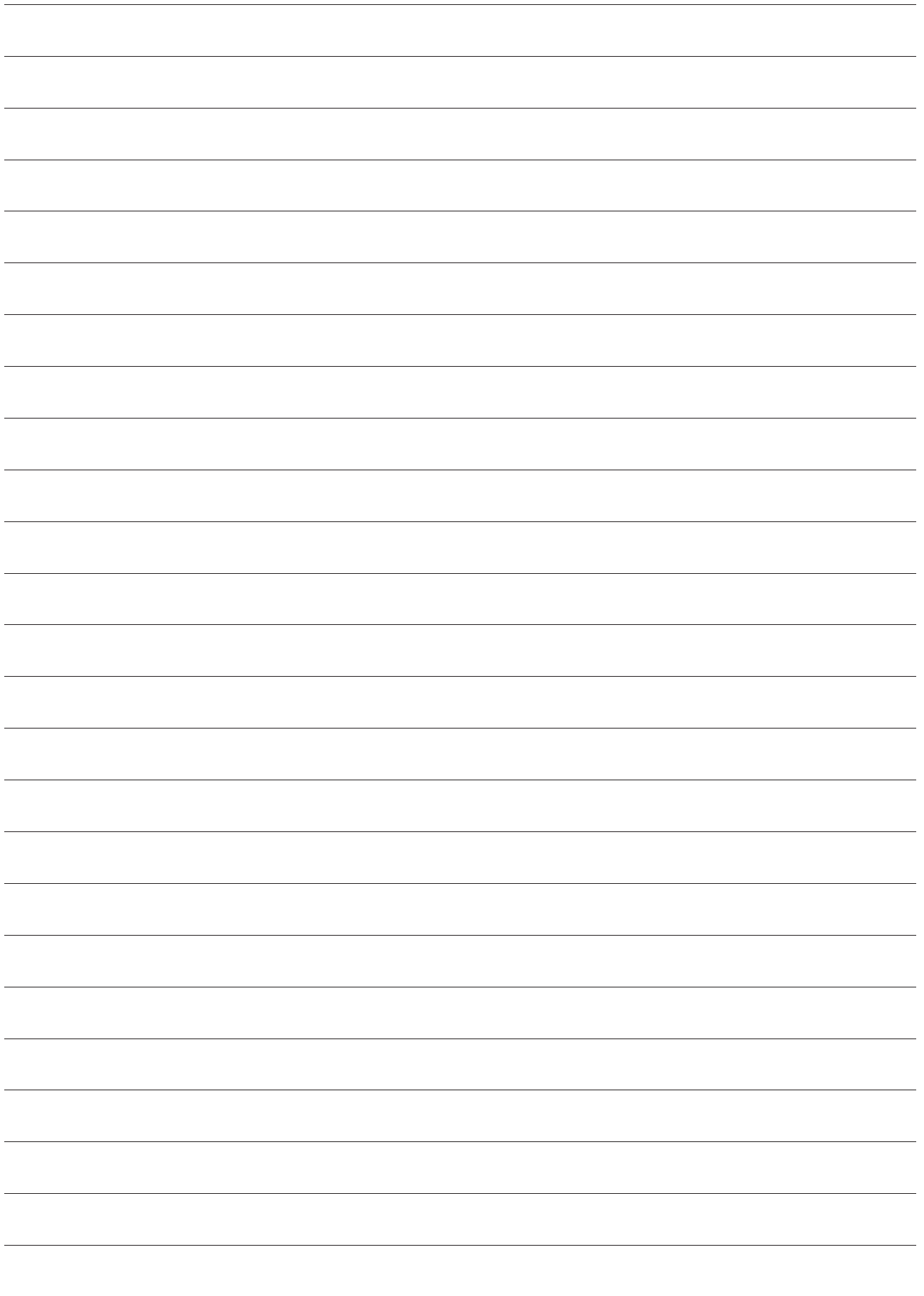
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**UK Government**

The Foreign, Commonwealth & Development Office pursues the national interests of the UK and projects the UK as a force for good in the world. FCDO promotes the interests of British citizens, safeguards the UK's security, defends the UK's values, works to reduce poverty and tackle global challenges with international partners.

**National Institute of Urban Affairs**

Established in 1976, National Institute of Urban Affairs (NIUA) was tasked to bridge the gap between research and practice on issues related to urbanization, and suggest ways and mechanisms to address these urban challenges of the country. For more than 40 years now, NIUA has been the vanguard for contributing to, and at times, building the urban narrative for a fast-evolving urban India. The Institution has been actively working towards bringing forth key areas of concern for urban India in order to build the urban discourse at various scales.

It has utilized its competencies in research, knowledge management, policy advocacy and capacity building to address the urban challenges, and continuously strive to develop sustainable, inclusive, and productive urban ecosystems in India. It has emerged as a thought leader and knowledge hub for urban development in India, and is sought out by both Indian and International organizations for collaborations and partnerships for India's urban transforming journey. NIUA is committed towards aligning its efforts towards achieving the Sustainable Development Goals (SDGs) through all its initiatives and programs.

# Empower through inclusivity

#BASIIC_NIUA
#inclusionmatters
#AccessibleCities
#InclusiveCities
#CitiesforAll
#EmpowerthroughInclusivity

CITY AUDIT ASSESSMENT STUDY - UNDERSTANDING  VARANASI CITY FROM THE LENS OF DISABILITY INCLUSION