

# Developing an Inclusive Approach to Disaster Risk Reduction

Including Persons with disabilities in creating more resilient cities



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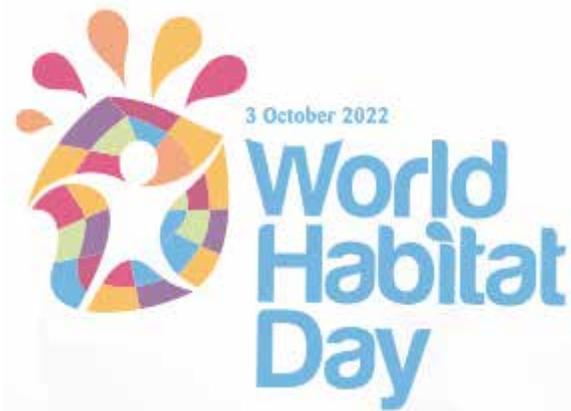


A Report on

# Developing an Inclusive Approach to Disaster Risk Reduction

Including Persons with disabilities in creating more resilient cities

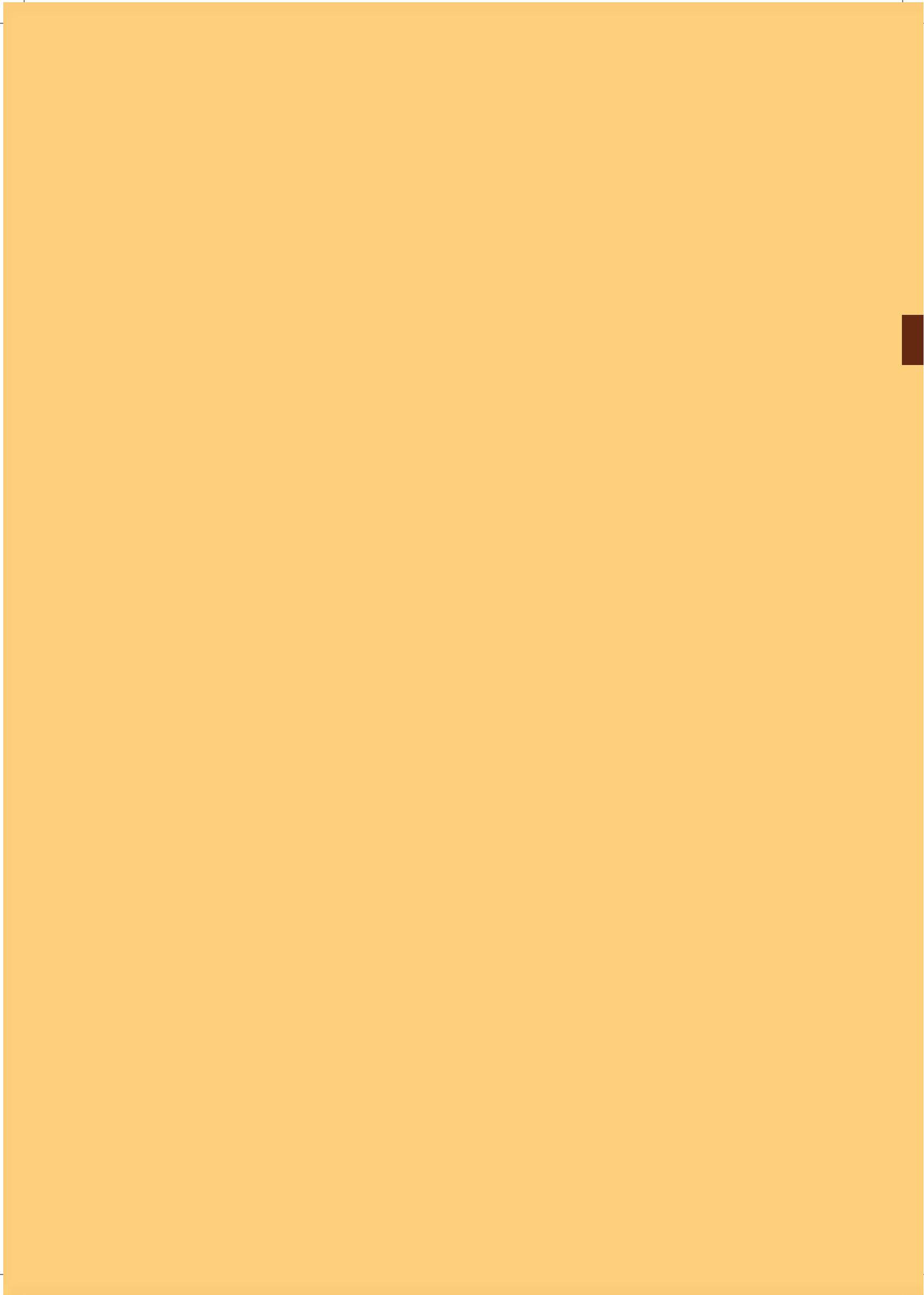
October 2022



**Mind the gap: Leave no one  
and no place behind**

#WorldHabitatDay



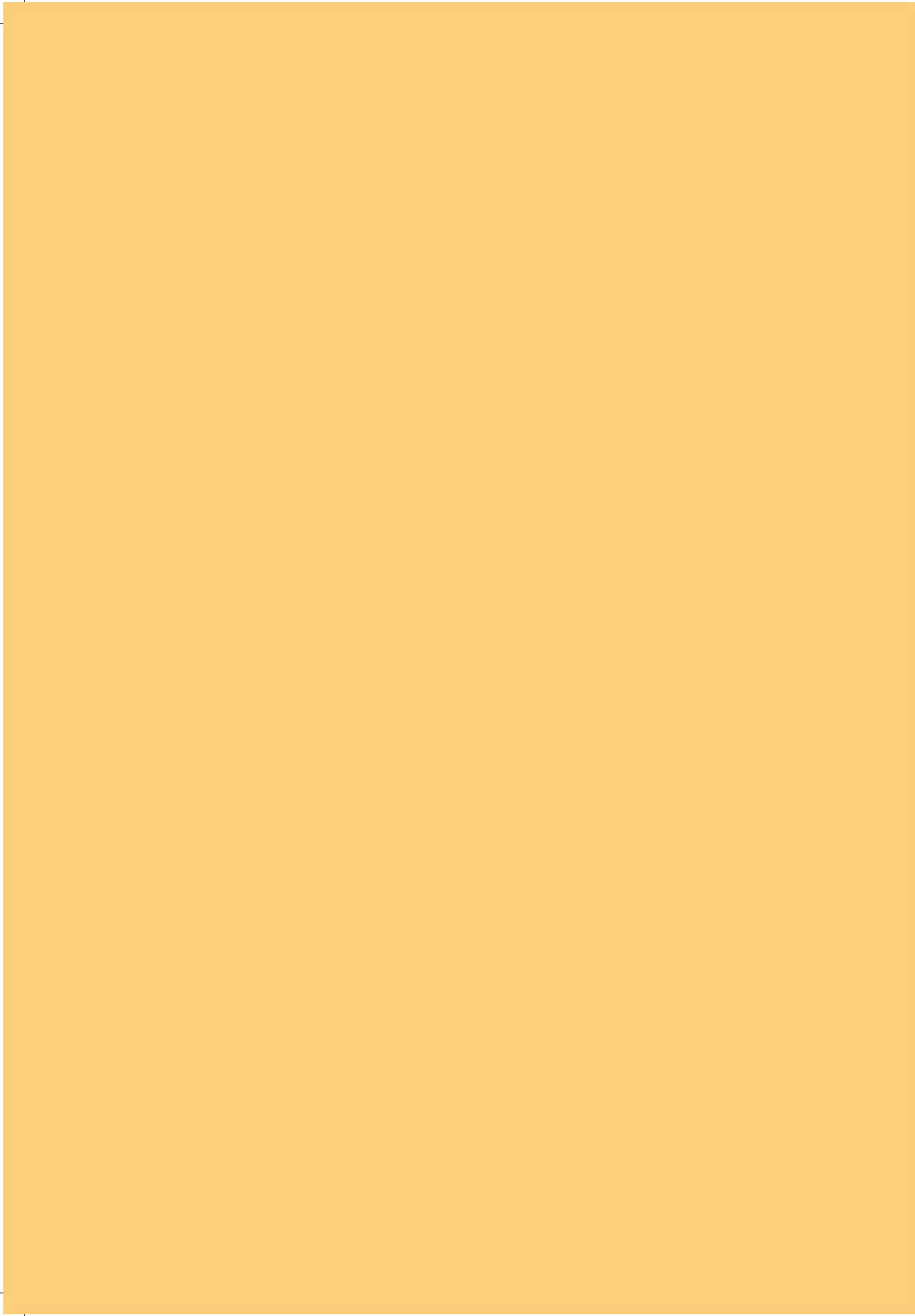




**Shri Hardeep Singh Puri**  
Smart Solutions Challenge and  
Inclusive City Awards, 2022

“ *Sensitivity to disability is the fundamental anchor on which the change will come.*

*India was one of early adopters of the UN Convention for Rights of Persons with Disabilities , 2006. In line with the principles of ‘Sarvodaya through Antyodaya’ our government led by Hon’ble Prime Minister Sh. Narendra Modi further strengthened India’s commitment towards accessibility by promulgating Rights of PwD Act 2016. ”*





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Dated: 27.09.2022

## FOREWORD

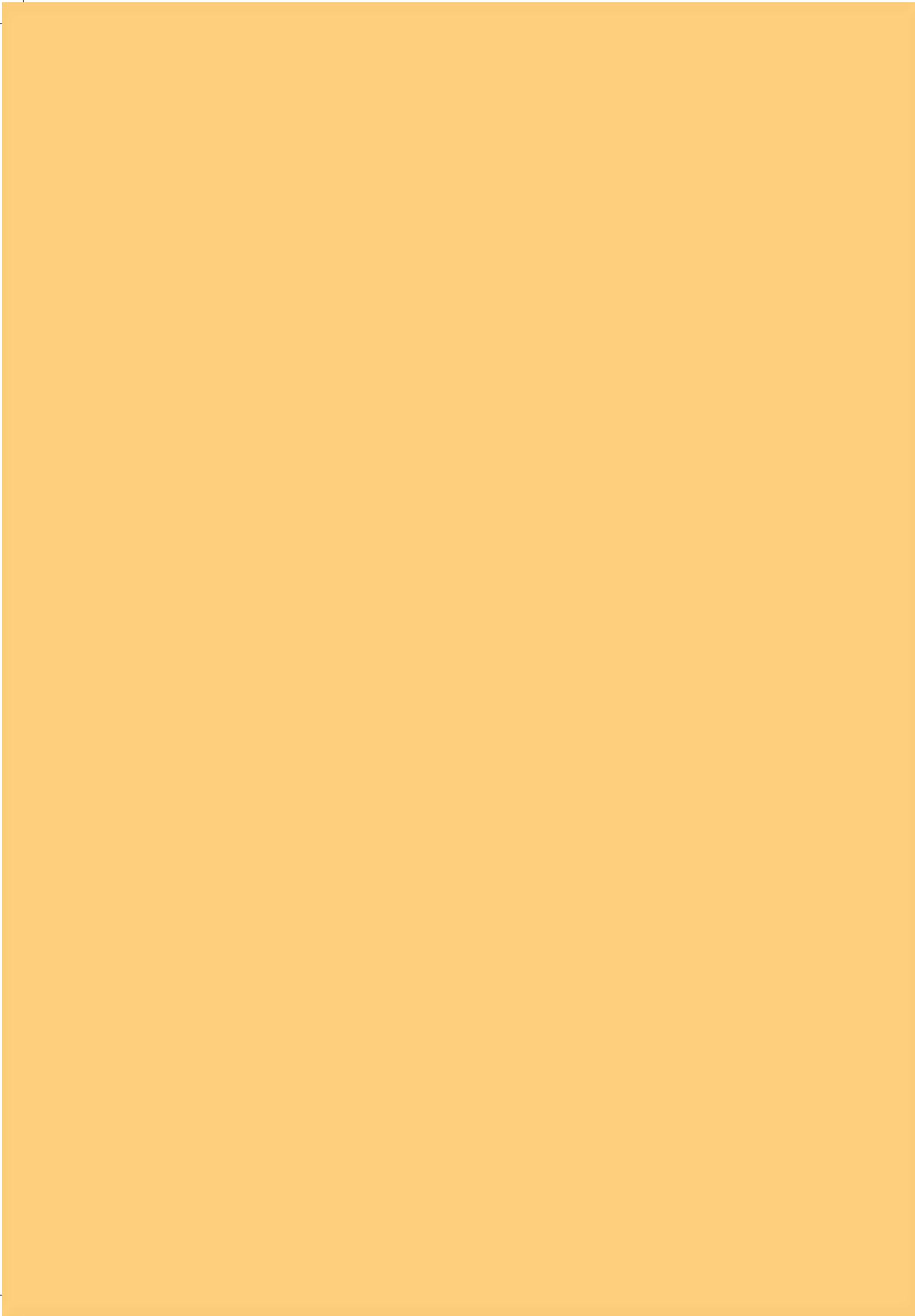
Greetings from NDMA!

India is among the world's most disaster-prone countries where almost whole country is exposed to recurrent natural hazards. The recent report of the Intergovernmental Panel on Climate Change (IPCC) emphasizes an increase in extreme weather events in India in the coming years. Changing climate patterns is increasing the complexities of urban living, which in turn, is increasing the intensity and impact of disasters. India experiences many disasters that create massive destruction to cities and its citizens. The existing inequities further exponentially increase the impacts on the marginalized groups of urban poor, persons with disabilities, women, the elderly and children. I am glad that the National Institute of Urban Affairs (NIUA) has taken the initiative of studying these pressing concerns around disaster management in urban areas and persistent intersectionality within the diverse marginalized groups through the report on "Developing an Inclusive Approach to Disaster Risk Reduction - Including Persons with disabilities in creating more resilient cities".

The concepts and interesting approaches identified to mainstream inclusion in the Disaster Risk Reduction will be useful in devising inclusive strategies to combat the effects of disasters and climate change. I particularly appreciate the seven-step approach suggested in the report which could come in handy to develop more equitable and inclusive strategies during the preparation of disaster recovery and response systems. I am certain that the report will support the National Disaster Management Guidelines for Disability Inclusive Disaster Risk Reduction, prepared by the National Disaster Management Authority. It will be helpful in incorporating disability inclusion in the Disaster Management Plans at national, state and local levels, thereby reinforcing fast track implementation of the ten point agenda of Hon'ble Prime Minister on Disaster Risk Reduction.

I would like to congratulate the team at NIUA for its exploratory research on such a niche yet pertinent topic. The report is the first step in the direction to inclusive disaster management and climate resilience which will suffix the gap of mainstreaming policy formation and actions in combating disasters. I hope it attracts the deserved attention in the areas of intervention translating meaningful actions on ground by the concerned disaster management authorities and collaborating when need arises for collective actions. The learning from the report shall help in effective utilization of resources and to integrate inclusion in the climate change resilience and disaster management strategies, making our infrastructure inclusive for all. We should move together towards a preemptive approach and support post-disaster recovery through strategic advice, need assessments, programme development. Let's mainstream policies to orient towards building inclusive disaster risk reduction strategies to safeguard lives in need.

(Kamal Kishore)



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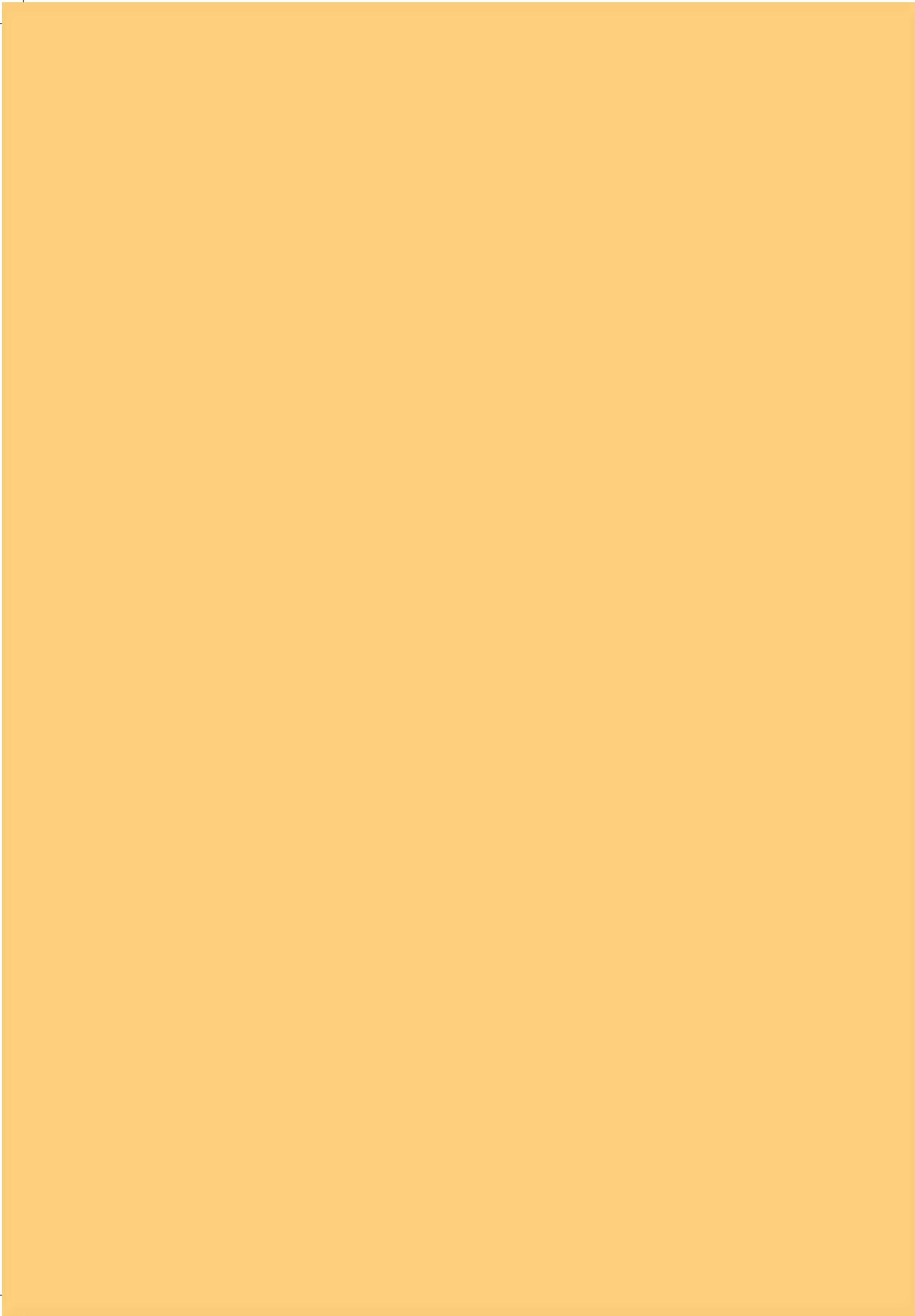
### Message

India is undergoing a massive wave of urbanization. This has led to the heightened need to fix urban infrastructure and services in a way that investments therein are holistic, inclusive, adaptive and resilient. It involves availability, accessibility and affordability of urban services to all citizens. While Indian cities face the increasing impacts of climate change, vulnerability is higher among the marginalised groups of persons with disabilities, women, children, and the elderly. It is, therefore, imperative to bring in the lens of inclusion in the area of climate change adaptation and mitigation.

I congratulate National Institute of Urban Affairs for deliberating on the critical topic of "Inclusive Disaster Risk Reduction and Climate Resilience". In times of changing climate scenario and associated disasters, it is important to be cognizant of the issues faced by the marginalised communities, specifically persons with disabilities. There is a pressing need to bring inclusion as a cross-cutting aspect across the design of buildings, infrastructure and services as well as in policies, mandates and guidelines. The report will complement our urban development endeavours in reducing the physical, attitudinal, economic and social barriers faced by persons with disabilities during events of disasters and emergencies, and build resilience for all.

I am certain that the report will pave the way for making our cities more inclusive and resilient. I urge all the urban local bodies, municipal corporations, urban development authorities and smart city SPVs to make best use of the report.

(Kunal Kumar)



# Foreword



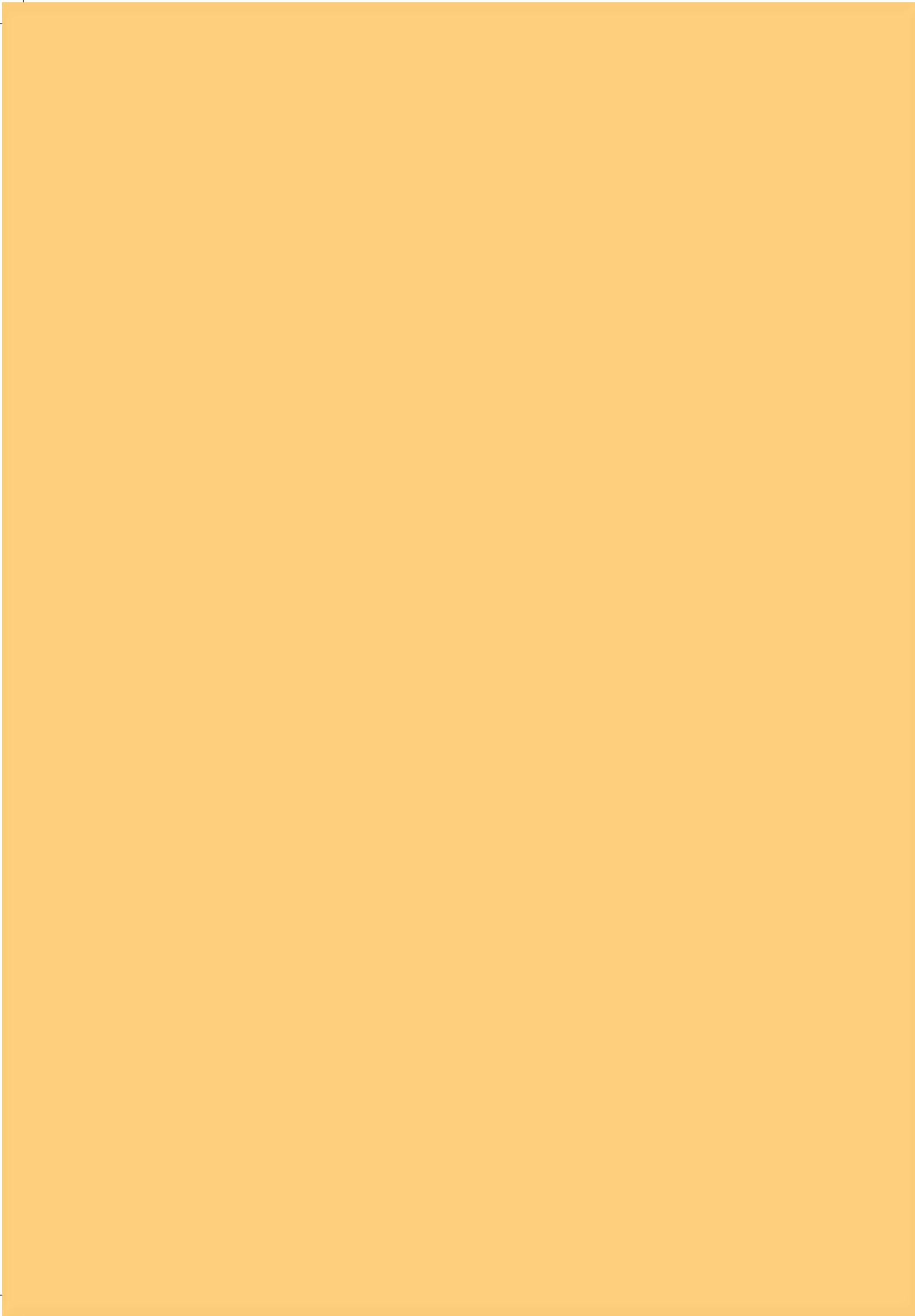
“Climate Change” and “Existing inequalities” are the two most pressing issues in the present Indian cities. The “Sustainable Development Goals” aim to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. It advocates a 360-degree adoption of inclusion of all marginalised groups including persons with disabilities, women, the elderly and children across all sectors and development activities. The report becomes even more critical with the growing instances of emergencies and disasters.

The globe is moving towards adopting “Equitable Resilience” -building in development and disaster risk management. It recognises subjectivities, working toward inclusion and representation, working across scales and promoting transformative change. I am delighted that the report on “Developing an Inclusive Approach to Disaster Risk Reduction- Including persons with disabilities in creating more resilient cities” investigates the key issues and suggests adopting the principles of equitable resilience. The report deep dives into the tangible impacts of climate-induced disasters on persons with disabilities and other marginalised groups, in comparison to the effects caused by other disparities. It proposes a seven-step approach for the preparation of inclusive strategies for climate resilience and stresses on opening channels of engagement and consultation at every step of the development of resilience strategies.

There is a pressing need to strengthen the research, build knowledge and timely translate the same into impactful actions. It is important to embrace existing diversities and adopt Universal Accessibility as an inherent aspect of the design and delivery of urban facilities and services, emergency response and recovery systems and information delivery mechanisms.

National Institute of Urban Affairs envisions working towards augmenting the capacities building of communities and concerned authorities by making more cognizant of the diverse needs during emergencies and disaster response. My sincere compliments to the team of the Building Accessible, Safe and Inclusive Indian Cities (BASIIIC) Programme at NIUA, particularly Ms Abhishika Das, Ms Monica Thakur and Ms Kanika Bansal, for their splendid efforts in preparation of this much-needed report. I am positive that the report will open more avenues to deliberate further into the topic at hand and contribute actively to the inclusive climate resilience initiatives in India’s urban realm.

Mr. Hitesh Vaidya  
Director  
National Institute of Urban Affairs



# Executive Summary

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As the human activities responsible for the soaring carbon footprint are increasing, the pace of climate change is also growing. This phenomenon of climate change has been responsible for rising land and water temperatures which is leading to various irregular and either prolonged or short-lived but intense occurrences of disasters. It includes floods, droughts, heatwaves, cold waves, cyclones and tsunamis, etc. The Intergovernmental Panel for Climate Change (IPCC) defines climate change as “a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer”. In simple terms, “Climate change is a long-term shift in global or regional climate patterns.” As the frequency of these disasters increases, the possibility of a large number of population being affected by these disasters significantly also increases. Among the people caught amidst climate-induced emergencies, the vulnerable populations, depending upon their physical, social and economic characteristics, are more exposed to exponential impacts of these disasters.

In this context, the report ‘Developing an Inclusive Approach to Disaster Risk Reduction - Including persons with disabilities in creating more resilient cities, prepared by the Building Accessible, Safe and Inclusive Indian Cities (BASIIIC) Programme at the National Institute of Urban Affairs (NIUA), throws considering the vulnerable groups, particularly persons with disabilities, while strategizing climate adaptation and resilience plan. It attempts to highlight the special needs of persons with disabilities being affected by climate-induced disasters both directly and indirectly, its effects on the quality of life and how it is aggravated due to the existing social-economic biases w.r.t. marginalized groups. The report establishes the strong need of adopting approach an Inclusive Disaster Risk Reduction and climate resilience.

The report examines the concepts of disaster risk reduction and climate resilience and measures the scope to bring the lens of inclusion. The report highlights the magnified impacts of climate change and disasters on human beings, particularly persons with disabilities (PwDs), and the policy landscape and the gaps in it. It identifies how the cyclic relationship among urban complexities and impacts of climate change as well as disasters compound to adverse impacts on human population. It establishes that certain vulnerable groups, including persons with disabilities with intersections of gender, economic status, social class and age are at the forefront of climate-induced disasters. Limited availability of basic resources, accessibility of services and systems and universally designed infrastructures further deteriorates their capacity and quality of life amidst disasters and climate change induced emergencies.

The pressing need to be empower these vulnerable groups to become resilient against the re-occurring disasters have been reiterated in various national and international frameworks. Many best practices and case examples from Bangladesh, Srilanka, the United States and Nepal have adopted these strategies to make disaster

management inclusive for all. The report, further, assesses the existing global and national policy landscape, as well various approaches towards Inclusive Disaster Risk Reduction. The report identifies 'Twin-Track Approach' that advocate 'specialist disability initiatives' designed to include and empower persons with disabilities and the 'mainstreaming' of disability inclusion into all policies, strategies and activities and the popular 'Right based approach', as most impactful in mainstreaming inclusion into DRR and climate resilience strategies.

Drawing from the inference from various practices and popular frameworks, the report advocates the adoption of the combination of the twin-track and rights-based approach for incorporating inclusion into disaster management, climate adaptation and climate resilience strategies. The report propagates a combination of rights-based approach along with a twin-track approach to avoid/ minimise the impacts of disaster and other climate change emergencies. It recommends a seven step approach to develop strategies which could become critical for an Integrated Approach in Decision-making.

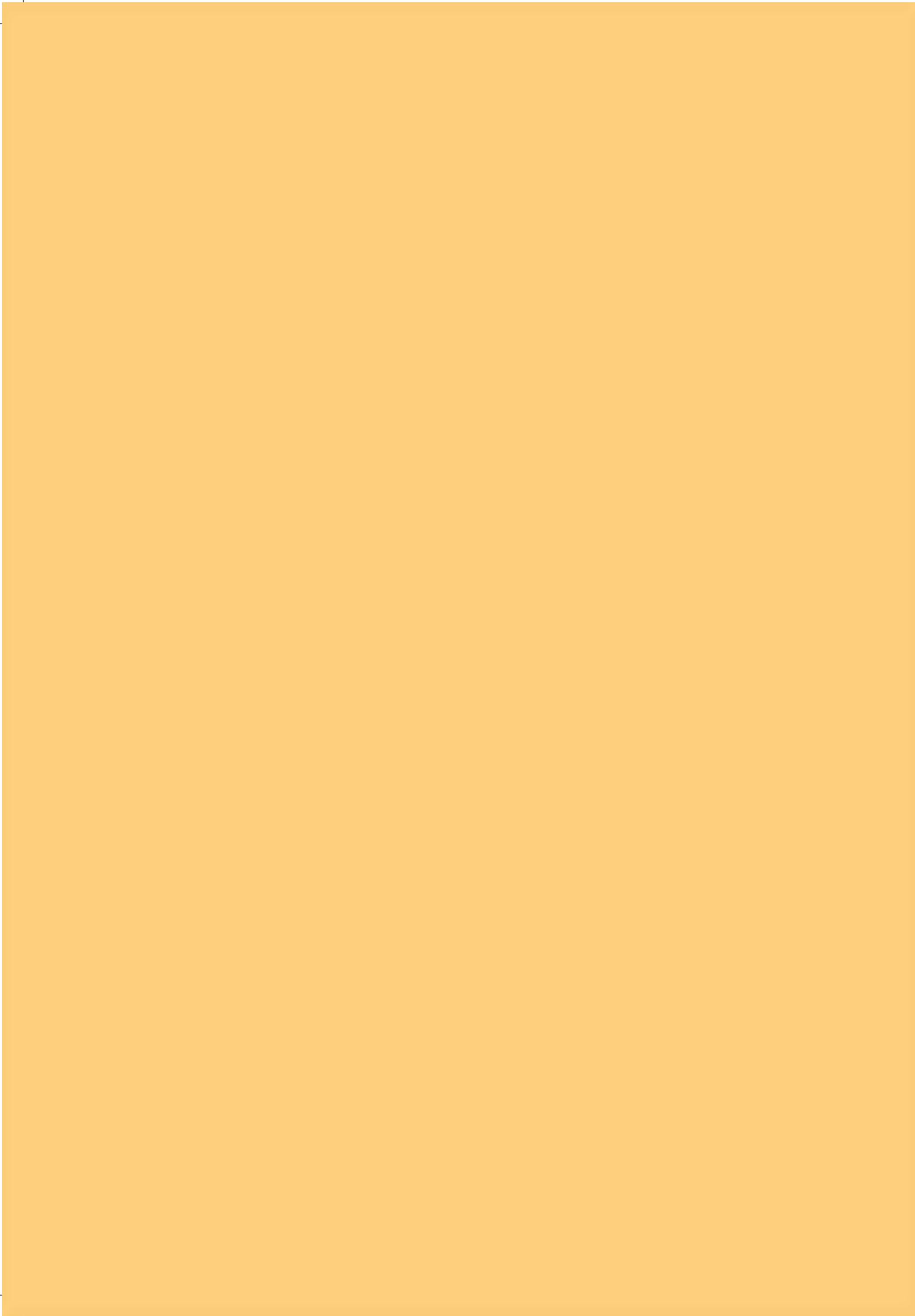
Aligned the popular philosophy that every human is in the fold of exercising their right to be a part of climate mitigation and adaptation strategies, a participatory approach is recommended, whereby persons with disabilities are involved in strategizing the disaster management and climate resilience approaches. The report also emphasis on evidence-based planning that involves creating a robust database about the vulnerable population, which would equip the urban practitioners to incorporate their diverse needs into policy guidelines, advisories and systems as well as an inclusive design of policy frameworks and guidelines. Additionally, it emphasizes the need for universally accessible built environments, inclusive disaster management practices, capacity building of all stakeholders and adoption of good practices to develop inclusive DRR and resilience strategies.





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# Introduction

'Climate Change' is a global phenomenon that is causing changes in Earth's weather patterns and temperatures. Though Earth's climate has always been changing, since the middle of 20th century the change has become much more fast-paced than ever before. The Intergovernmental Panel for **Climate Change** (IPCC) defines climate change as "a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer". In simple terms, "**Climate change is a long-term shift in global or regional climate patterns.**"

The effects of climate change include an increase in the average temperature, growing temperature variations leading to hot and cold waves, rising sea levels, increased frequency of meteorological disasters like cyclones and storms as well as more instances of forest fires. This accompanied by changing rainfall patterns, leading to an increase in the incidents of floods and droughts. This has resulted in the displacement of millions of people across the globe from their homes by floods, storms, droughts, and other climate-change induced disasters. As the adverse effects of global climate change induce more extreme weather and rising sea levels, the number is expected to rise. This phenomenon is likely to amplify tremendously with the increased frequency of climate-change induced disasters like urban flooding, coupled with, growing food insecurity, loss of livelihoods and harsh living conditions. Taking inference from the experiences of the COVID-19 pandemic, it indicates growing possibilities of pandemics, epidemics and endemics.

The **Intergovernmental Panel on Climate Change (IPCC)** reports mention the impact that human activities have on the climate and how it is fuels disasters worldwide. Along with this, the reports predicted that India will soon have increased occurrences of droughts and a heavy-intensity, but decreased, mean rainfall. Given the fact that India has a coastline of 7,500 km, it is also prone to cyclonic storms and floods. In the last 50 years, India has faced more than 117 cyclones<sup>1</sup>, and over 10 cyclones in the past year itself. The IPCC report stated, "the dominant cause of the observed decrease of south and southeast Asian monsoon precipitation since the mid-20th century is anthropogenic aerosol forcing".

Cities already face multitude of challenges that are inherently multidisciplinary, complex and interdependent in nature. The complexities of urban living and climate change particularly have a proven circular relationship. Example, as the urban population increases and our urban areas become dense, stress on the resources in a city increases; as resources are affected, their value chain is disturbed which leads to their shortages and unavailability. This coupled with increasing climate change leads to making of a disaster, such as water scarcity, floods, heatwaves, etc. as urban areas are already stressed in terms of resources, shielding themselves from disasters becomes difficult, which ultimately affects the social, economic and political dynamics of an urban area.

<sup>1</sup>[https://www.business-standard.com/article/current-affairs/india-faced-117-cyclones-from-1970-2019-over-40-000-lives-lost-study-121052700951\\_1.html](https://www.business-standard.com/article/current-affairs/india-faced-117-cyclones-from-1970-2019-over-40-000-lives-lost-study-121052700951_1.html)

The densely populated in India constitute about 34% of the total population of the country. Given that the climate change might impact at regional level, the measure of its impacts on urban areas is restricted and necessitates a more localised approach to evaluate its severity of its impacts. This would require developing a .... reduction to complement the social, economic as well as demographic diversities.

Climate change coupled with extensively changing land use has contributed to tremendous increase in the impact of disasters. These climate-related disasters not only destroy ecosystems but also affect the accessibility to basic and essential services such as housing, livelihood, water and food, and healthcare services, etc. The micro and macro level disruptions can be observed from individual house to city level. At macro.... in city lifelines... portable water and safe places. Along..... damage including destruction of housing and office buildings are critical problems. The IPCC report highlights that the vulnerable groups will face the worst effects of these disasters due to adverse health impacts, loss of livelihood and income, hunger, climate change-induced displacement and lack of adequate resources to migrate out of the disaster-hit zones.

The IPCC states, "People who are socially, economically, culturally, politically, institutionally, or otherwise marginalized are especially vulnerable to climate change and also to some adaptation and mitigation responses (medium evidence, high evidence). This heightened vulnerability is the intersection of social processes that result in inequalities in socio-economic status and income, as well as in exposure. Such social processes include, for example, discrimination on the basis of gender, class, caste, ethnicity, age, and disability.

The marginalized groups of persons with disabilities and the elderly are, in fact, the most vulnerable to floods, hurricanes, or landslides, amongst other climate change induced impacts, since many of them live with compromised health conditions and limited mobility. Low or no education and unemployment, often also leading to poverty, social stigmas and hindrances in carrying out tasks due to physical and mental disabilities, are expected to amplify the impacts of climate change on persons with disabilities. Although, the impacts of climate change, amplified or otherwise, on marginalized groups on the basis of disability, gender, age, or any other demographic-social minorities, have not been recorded. The existing inequalities among urban ecosystems are further exaggerated due to the absence of an inclusive approach to climate change mitigation and emergency response systems.

The need for Inclusive and effective interventions through Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) plans become imperative, otherwise, those who are already disadvantaged (including persons with disabilities, the elderly, children) will experience the negative impacts of climate change exponentially more than their less-disadvantaged counterparts.

### **1.1. Building Disaster and climate resilience**

The IPCC defines **Climate Resilience** as "the capacity of social, economic and environmental systems to cope with a hazardous event or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation<sup>2</sup>". Climate resilience is defined as the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate. It involves assessment of how climate change will create new, or alter current, climate-related risks, and taking steps to cope with these risks more efficiently.<sup>3</sup>

<sup>2</sup>[IPCC (2014a), *Climate Change 2014: Synthesis Report, Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R K Pachauri and L A Meyer (editors)], Geneva, page 127.]

<sup>3</sup><https://www.c2es.org/content/climate-resilience-overview/>

A resilient city, in principle, assesses, plans and acts to prepare for and respond to all hazards – sudden and slow-onset, expected and unexpected.” The IPCC suggests ‘a climate-resilient pathway for development is a continuing process for managing changes in the climate and other driving forces affecting development, combining flexibility, innovativeness, and participative approach in problem-solving with effectiveness in mitigating and adapting to climate change.’

United Nations Development Programme defines **Climate Change Adaptation** as a “process by which strategies to moderate, cope with and take advantage of the consequences of climatic events are enhanced, developed, and implemented.” It is important to note the difference between climate change “adaptation” and climate change “mitigation.” Adaptation consists of efforts to ensure that people and communities survive and thrive in spite of the climate changes that are currently occurring and are anticipated to occur for many generations. Mitigation, in the context of climate change, is an attempt to slow down or reverse the current climate change trends (i.e., reducing carbon dioxide emissions in order to slow down global temperature increases).

Improving disaster prevention strategies along with early warning systems, education and training of the community are required to be planned and enabled for a comprehensive inclusive climate-resilient planning. It will strengthen the capacity of marginalized communities to withstand the impacts of and adapt to climate change to minimize the consequence on their physical, social and economic well-being. Decisions undertaken for pursuing adaptation have tangible impacts on entire communities. Hence, the pursuit of climate change adaptation efforts without considering its disproportionate impact on people with disabilities will continuously fall short. An inclusive climate resilient plan can be achieved by:

- Ensuring Climate Change Adaptation (CCA) strategies pursue disability-inclusive practices as a way to address the disproportionate impact of climate-related hazards on persons with disabilities and;
- Incorporating climate change patterns as well as the inclusion of marginalized groups into all Disaster Risk Reduction (DRR) efforts is critical to achieving successful DRR

## 1.2. Aim and objectives

The report aims to suggest an inclusive resilience strategy for disaster and climate change concerning the marginalized groups.

The objectives of the report include:

1. Understand the impact of disasters on marginalized groups particularly persons with disabilities.
2. Understand the existing policy landscape and action plan, and highlight the existing gaps.
3. Learn from the national and international approaches and best practices.
4. Suggest a strategy to develop inclusive approach to Disaster risk reduction and climate resilience.

## 1.3. Scope of the Report

Although Inclusive Disaster Risk Reduction and Climate Resilience is an overarching term, the report is focused on the marginalized demographics of Persons with Disabilities (primarily), the elderly, children and women. The report also restricts itself from assessing the impact and strategies for climate change-induced disasters.

## 1.4. Structure of the Report

The report presents the explanation of the concepts of climate change, changes occurring in the natural ecosystems of the earth, the disasters and climate resilience in terms of mitigation and adaptation. It describes the impacts that these environmental changes have on basic necessities and the value chain of public delivery systems across the globe. The report also attempts diagnostics of these impacts on vulnerable groups such as persons with disabilities (primarily), the elderly, children and women.

The report cites international and national practices in terms of policies and frameworks adopted to tackle the effects of climate-induced disasters and the narrative of inclusivity in it. Indian efforts towards incorporating an inclusive disaster risk reduction approach for communities to tackle the frequently occurring natural disasters.

## 3.5. Estimating the Extent of climate induced disasters in India

Climate change is a global phenomenon, yet its scale and impact vary considerably across countries, regions, communities and even at an individual level. India along with other South Asian Countries is located in the regions predicted to be most affected by climate change-induced disasters. India is a country with varied geographies and is prone to witness a varied number of climate change impacts including, irregular and prolonged occurrences of heat waves, cold waves, droughts, and meteorological disasters including floods, cyclonic storms, and hurricanes, etc. In the last decade, Indian states face recurring coastal floods, flash floods and riverine floods every year due to an increase in storms and cyclonic activities in the Arabian Sea and Bay of Bengal.

The latest report from the Intergovernmental Panel on Climate change, **Climate change 2022: Impacts, Adaptation and Vulnerability, highlights-**

- **3.3 - 3.6 billion** people across the globe live in settings that are “highly vulnerable” to climate change
- **44%** of all disaster events since the 1970s have been related to flooding
- **4 or 5** times direct damages from flooding would increase if there are 4 degrees of warming compared to 1.5 degree
- **15** times floods, droughts and storms killed people in poor coastal countries versus rich coastal countries in the last decade
- **50%** of the human population may be exposed to life-threatening climatic conditions arising from impacts of extreme heat and humidity by 2100 in a low emission scenario
- **70 per cent** of cities globally are already dealing with the effects of climate change, and nearly all are at risk - for instance, over 90 per cent of urban areas lies in coastal area, which puts most cities across the globe at risk of flooding from sea-level rise and powerful storms (UCCRN 2018)
- The global need for urban infrastructure investment amounts to over \$4.5 trillion per year, of which an estimated premium of 9%-27% is required to make this infrastructure low-emissions and climate-resilient (World Bank)

Similar concerns have been identified by the National Sample Survey Office of India, in 2017-2019. It highlights the repeated frequency of incidents of cold waves, dust storms, floods, gales, heat waves, lightning, snowfall and thunderstorms in the Indian States. It also indicates that given India's 7,500 km long coastline, most of the Indian states remain affected by instances of floods, thunderstorms and lightning, rising sea levels and rising high temperatures. States like Kerala, Maharashtra, Odisha, Jharkhand, West Bengal, etc. have high vulnerability than

others. The melting glaciers rivers like Ganga, Brahmaputra, etc. pose a threat of riverine floods in Uttar Pradesh, Bihar and northeastern states. There is also the threat of snowfall, gales, heat waves and cold waves. These disasters have resulted in high losses majorly in terms of human lives, agriculture, housing and infrastructure and medium losses in terms of fishing and livestock-related infrastructure. Annexure 1 gives details of the states affected by different disasters.

The Uttarakhand Floods in 2013 were a result of the breaking of the Chorabari glacier due to heavy rainfall and the eruption of flash floods in the Mandakini river. The entire village of Gauri Kund and Ram Bada market town were wiped out, with Sonprayag town market being severely affected. The calamity led to the death of more than 5,000 people including residents and tourists with 70,000 reported missing. The heavy rainfall had caused massive flash floods and landslides resulting in deaths as well as extensive property damage. As per the ecologist Chandra Prakash Kala “the approximate cost of damaged bridges and roads was \$285 million, dam projects worth \$30 million and loss to state tourism worth \$195 million.” Since then, many other major floods have hit India incessantly like the Kerala floods of 2018, Assam floods of 2020, Chamoli Disaster of 2021, etc. In the last decade, Indian states kept on facing recurring coastal floods, flash floods and riverine floods every year due to an increase in storms and cyclonic activities in the Arabian Sea and Bay of Bengal.

As climate change impacts regions at different scales, the impacts on all sectors and human lives are also at varying scales and are interrelated with each other. For instance, droughts and floods can both harm food production, thereby affecting human health. In addition, flooding can also lead to disease spread and damage to ecosystems, housing and infrastructure, again affecting human health. In turn, as human health gets affected, it leads to issues like increased mortality rate, lower worker productivity, inconsistent food availability, etc. Globally, the displacement of people due to the impacts of disasters and climate change is now at a record high. In 2020, nearly 31 million people were displaced within their own countries because of disasters, at least a third of which resulted from government-led evacuations.<sup>4</sup> Already, close to 90% of the world’s refugees come from countries that are the most affected by climate change – and the least able to adapt.<sup>2</sup>

The impact is particularly evident among the marginalized groups, who are often the worst hit and least prepared. This makes them also the most vulnerable owing to long-standing socio-economic inequality. The 2015 heatwave was the fifth deadliest in world history<sup>5</sup>. It swept the Indian subcontinent and killed at least 2,300 people in India and affected the most vulnerable groups - the elderly and the children. As the temperature crossed 45°C, the homeless and the poor immediately became the victims since they did not have any safe shelter or resources to shield themselves. Most of these deaths were reported to be from the south-eastern states of Andhra Pradesh and Telangana, which together accounted for 1,345 casualties.

<sup>4</sup><https://www.usnews.com/news/best-countries/articles/2021-10-20/millions-of-people-displaced-another-cost-of-climate-change>

<sup>5</sup>EM-DAT, the International Disaster Database

# 2

## Vulnerable Population & Impacts of climate induced disasters

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**D**efining **vulnerable population** - “Persons or population groups who, because of their health or social condition may find themselves unable to satisfy their fundamental needs, are particularly exposed to risks and therefore require specific measures to be put in place. The Intergovernmental Panel on Climate Change defines vulnerability as “the propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt.” It indicates that people are made vulnerable by age, gender or temporary impairment, and notably includes destitute and marginalized groups. These vulnerabilities will increase due to several intersecting factors that are usually socially constructed: “underlying drivers of social vulnerability such as gender, social status, age, race and ethnicity, and wealth”. Another definition, by UNISDR, is the related vulnerability of an individual with the conditions determined by the physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards.

According to the UNCRPD<sup>1</sup>, “**persons with disabilities** include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others”. Climate change affects multiple aspects, including water & sanitation, transportation, housing, health & medical facilities, livelihood and communication and all of these are interconnected and co-dependent. A combination of attitudinal, financial, physical and communication barriers increase the vulnerabilities of marginalized demographics including persons with disabilities, the elderly and children. Since a number of persons with disabilities experience high rates of social risk factors that contribute to poor health, such as poverty, unemployment, and lower education, climate-induced disasters affect persons with disabilities more than others. For example, persons with disabilities are twice as likely to be unemployed than those without disabilities. It has been highlighted in numerous studies that the presence of disability often indicates lower social status, less wealth, and fewer years of education attained.

Climate change may seriously compromise human health in the absence of risk mitigation and adaptation, particularly among vulnerable demographics including children, the elderly and persons with disabilities. Higher temperatures, extreme weather events, and higher climate variability (further compounded by the heat island effect) have been associated with an elevated risk of heat strokes, cardiovascular and neurological diseases, and stress-related disorders. Warmer and higher moisture conditions, on average, lead to the spread of vector-borne diseases such as malaria and dengue fever. In addition, a decrease in the availability or affordability of food and potable water caused by climate change may lead to reduced nutritional intake, particularly among economically weaker sections. It is well established that climate change and its related disasters would have a decremental impact on the vulnerable groups and probably increase the number and types of disabilities and conditions.

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<sup>1</sup>United Nations Convention for Persons with Disabilities



**Persons with disabilities are more vulnerable to emergencies and disasters:**

- Persons with disabilities may have lesser means to escape from hazards and disasters. During disasters, they may lose essential medications or assistive devices such as spectacles/hearing/mobility aids, or can be left behind when a community is forced to evacuate. For instance, in an occurrence of floods where people with disabilities may not be able to escape to higher ground on their own, or during cyclones where people with disabilities may not be able to access the shelter site
- Persons with disabilities may also face greater difficulty in accessing basic needs such as food, water, shelter, washrooms and healthcare services. The prevailing inaccessibility in the emergency warning and response systems and services majorly contributes to their increased vulnerability.
- During disasters, persons with disabilities are often the last to be included in the emergency registration systems and disaster management efforts. Similar exclusion has been observed during the ongoing pandemic where they have been amongst the last to be covered by the relief measures as well as the treatment and vaccination campaigns. Social barriers faced by persons with disabilities have an impact on their safety and mental health.
- The lack of inclusive awareness campaigns and disaster preparedness initiatives limits the capacity of persons with disabilities to observe safety instructions and evacuation plans. Many of them consider that their participation will not be effective, or even that their participation could prejudicially affect them. Consequently, emotional distress and trauma, often unnoticed by emergency services, are caused by a crisis and have long term consequences, especially for persons with disabilities and other vulnerable groups.
- Persons with disabilities may face economic losses similar to the rest of their community. They, however, tend to have much more difficulty in securing additional resources or recovering from the loss. This is due to their (relatively and generally) poor economic conditions and fewer avenues to search for economic alternatives.
- Persons with disabilities are likely to experience health complications that are unique to their disability. In addition to this, they often face difficulty in accessing necessary medical care and first aid services during the response phase, presumably due to their inability to access medical service sites. The difficulty or non-existence in accessing both standard and specialized medical care can have a long-term impact on persons with disabilities.
- The assistive devices (**to hear better, see better, achieve mobility/ enhance physical function in other ways**) used by persons with disabilities are often lost or damaged, leaving them with no adaptive assistance when they may need it most. Moreover, adaptive assistive devices are not typically included in the relief materials and are often less of a priority for the agencies.
- People with disabilities will have an especially difficult time managing mass displacement and migration. Among other things, they may lack access to reliable and accessible transportation and face difficulty finding accessible and appropriate housing. The disconnect from personal or social support networks further impacts their coping capacities.
- Persons with disabilities also experience difficulty enrolling in social services/protection or maintaining healthcare, and/or being unable or not allowed to cross geographical borders because of their disability.
- Persons with disabilities are not a homogeneous group. They have different capacities and needs and contribute in different ways to their communities. When displaced, their disabilities amplify the often-severe challenges posed by forced displacement.
- Persons with disabilities are at heightened risk of violence, including sexual and domestic abuse; exploitation by family and community members; face discrimination; and, exclusion from access to humanitarian assistance, education, livelihoods, health care, nationality, and other services. The risks of post-traumatic stress disorder (PTSD) are observed to be high among persons with disabilities.
- Representation and participation are absent of persons with disabilities or their organizations in the formulation of DRR and CCA strategies. Further, these issues are never highlighted to the authorities to be addressed and integrated into the aforementioned strategies.

# 3

## International Commitments

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It is established that Climate Change is fueling extreme weather and devastating disasters throughout the world, including India, with spiraling impacts on economies and societies. The severity and frequency of disasters have made tremendous alterations, resulting in humanitarian crises and having disproportionate impacts on certain groups in our society who face and experience risks differently. Children, senior age groups, women, and persons with disabilities are affected by climate change in different magnitudes including accessibility, dissemination of information, shelters, food security, livelihoods, health security inter alia.

In this regard, a prompt responsible approach becomes a necessity for the sustainability of people and ecology as climate change affects at different levels. **Germanwatch**, based in Bonn and Berlin (Germany), an independent development and environmental organization, is one such initiative that works for sustainable global development with focus on law and the root causes of poverty. It advocates a rights-based approach (RBA) as a new transformative potential for development.

Though climate change can be majorly tackled at a larger scale, contextual and inclusive on-ground measures are required to be included in disaster preparedness plans. Persons with disabilities are amongst the groups most at risk of climate-related hazards and disasters, yet they continue to be neglected in policies, planning and coordination across preparedness, response and recovery. They are largely excluded from climate adaptation and mitigation decision making and efforts which can help build individual and community resilience. Moreover, key stakeholders responsible for emergency response systems are generally unaware of the heightened vulnerability and requirements of persons with disabilities.

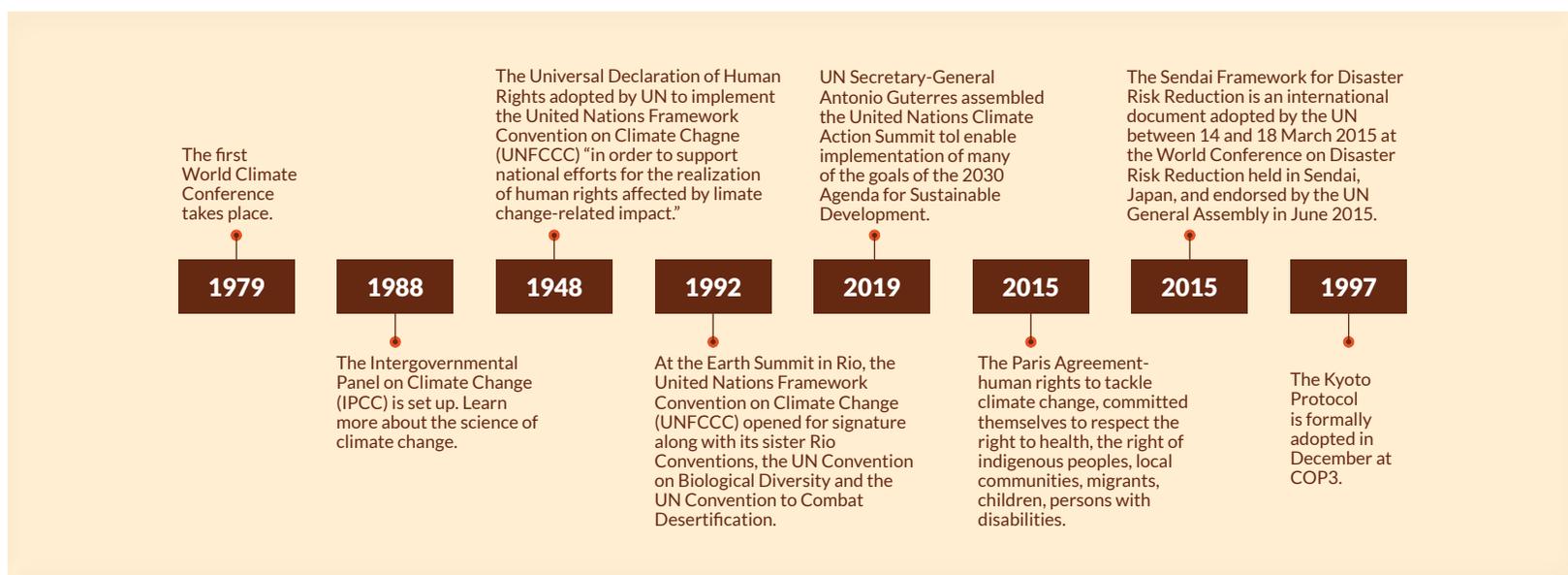
This situation calls for an **Integrated Approach and Decision-making** as a means to promote **Inclusive Disaster Risk Reduction (DRR)** to help Persons with Disabilities achieve and not deny their rights to accessibility, safety and security, social protection and relief, migration, and thereby, develop climate resilience. While estimating the prolonged effects of Climate Change, it is imperative to take into account the accelerated impacts on marginalized groups, aspects of intersectionality and other socio-cultural factors. Many ramifications and commitments exist at international, national, and state levels that are also aimed at mitigating and minimizing the impacts of climate change on people and ecology.

An increase in the occurrences and extent of the impact of natural disasters is leading to the rise in the number of people affected and the ecology destroyed. As this amplification of destruction affects people at both micro and macro levels across the globe, a prompt attempt to address these disasters through Climate Change Mitigation and Adaptation at the regional and global levels has been made. While mitigation refers to the actions taken in the direction of working to deal with the causes of climate change, adaptation is efforts taken to reduce its impacts by reducing vulnerability through sustainable or technological means.

This need of seeking alternatives for urban resilience where climate change safety and risk management are viewed inclusively is reiterated in the New Urban Agenda. The New Urban Agenda was adopted at the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) in Quito, Ecuador, on 20th October 2016. It is an action-oriented document that mobilizes member states and other key stakeholders to drive sustainable urban development at the local level. Mitigation and adaptation actions for climate change are undertaken in the form of disaster risk reduction plans identified in international initiatives such as the Paris Agreement 2015 and Sustainable Development Goals (SDGs). SDGs, under its target 11. b states, 'By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the **Sendai Framework for Disaster Risk Reduction 2015-2030**, holistic disaster risk management at all levels.'

It contributes to the localization of the 2030 Agenda for Sustainable Development in an integrated manner and, in the achievement of the Sustainable Development Goals and Targets, including Goal 11 of making cities and human settlements inclusive, safe, resilient and sustainable.

**Figure 1. Incheon Strategy to “Make the Right Real” for Persons with Disabilities in Asia and the Pacific**



 <p>Aims to accelerate disability-inclusive development and CRPD rectification and implementation.</p>	 <p>Derived from 20 years of experience: Asian and Pacific decades of disabled persons. 1993-2000 2003-2012</p>	 <p>Key features: time bound and measurable incheon targets and goals.</p>
 <p>Based on CRPD Principles</p>	 <p>Time frames for achieving goals Asian and Pacific Decades of Persons with Disabilities, 2012-2022</p>	 <p>For a disability inclusive Asia-Pacific Partnership should be forged: Multi-sectoral Multi-stakeholders multi-levels</p>

Some of the international frameworks and conventions are discussed below in special response to inclusivity in DRR:

Frameworks	Year	Purpose	Inclusion
UN Economic and Social Commission for Asia and the Pacific	1947	UN (ESCAP) is the most inclusive intergovernmental platform in the Asia-Pacific region promoting cooperation among its 53 member states and 9 associate members in pursuit of solutions to sustainable development challenges.	UN-ESCAP is one of the five regional commissions of the United Nations supporting inclusive, resilient and sustainable development in the region by generating action-oriented knowledge, and by providing technical assistance and capacity-building services in support of national development objectives, regional agreements and the implementation of the 2030 Agenda for Sustainable Development.
UNFCCC	1994	UNFCCC is the primary multilateral treaty governing actions to combat climate change through adaptation and mitigation efforts directed at controlling of emission of Green House Gasses (GHGs) that cause global warming. UNFCCC bodies have affirmed the importance of taking into account the needs of persons with disabilities and ensuring their engagement concerning capacity building, education, awareness, adaptation and action for climate empowerment.	This engagement will uphold the obligation of States to guarantee the rights of persons with disabilities while also improving state responses to climate change, as persons with disabilities are extremely knowledgeable and resourceful in designing adaptive solutions to complex problems.
Biwako Millennium Framework for Action and Biwako Plus Five towards an Inclusive, Barrier-free and Rights-based Society	2007	The framework is adopted to undertake action toward an inclusive, barrier-free and rights-based society for persons with disabilities in Asia and the Pacific. The framework identified seven priority areas for action, namely self-help organizations for persons with disabilities and related family and parent associations; women with disabilities; early detection, early intervention and education; training and employment, including self-employment	Access to build environments and public transport; access to information and communications, including information, communications and assistive technologies; and poverty alleviation through capacity building, social security and sustainable livelihood programmes.
UN Convention on the Rights of Persons with Disabilities	2008	UNCRPD aims to change attitudes and approaches to persons with disabilities. The Convention made a tremendous change in heightening a new movement from viewing persons with disabilities as 'objects' of charity, medical dependency and subjugation to social protection and dependency to viewing them as 'subjects' with equal rights, who have the capability and capacity to claim those rights and make decisions for their free and informed consent as well as being active members of the society.	The purpose of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) is to promote, protect and ensure the full and equal enjoyment of all human rights and fundamental freedoms by all persons with disabilities, and to promote respect for their inherent dignity.
Incheon Strategy	2012	At the regional level, the Incheon Strategy to "Make the Right Real" for Persons with Disabilities in Asia and the Pacific was launched to chart the new course of action for the Asian and Pacific Decade of PwDs.	Provides the first set of 10 regionally agreed disability-specific development goals, 27 targets and 62 indicators, enabling the region to track progress towards improving the quality of life, and the fulfilment of the rights of the region's PwDs, most of whom live in poverty.
Sendai Framework for Disaster Risk Reduction	2015	A development agenda provides the Member States with concrete action plans to protect development gains from the risk of disaster.	Limited action plans in regards to PwDs protection from Climate change/risk disaster

Frameworks	Year	Purpose	Inclusion
SDGs - Climate change-disaster preparedness and inclusive provisions	2015	Supports in taking urgent action to combat climate change and its impacts giving special reference to PwDs	Response to climate-related hazards and disasters, and mitigation of their impact, require cross-sector engagement. interventions beyond emergency response, to improve resilience and the active involvement of persons with disabilities to address existing barriers and avoid the creation of new ones. Furthermore, when recovering from disasters, the principle of building back better should guide the work, improving existing conditions without creating new barriers

### 3.1. Inference

Solutions exist at all levels of the disaster management cycle, from the preparedness to adaptation to the mitigation phases. Complementing this, the urban environment should also facilitate climate resilience for persons with disabilities along with other marginalized communities. This indicates the need to make the built environments universally accessible and inclusive. This should also be included in the by-laws, as it will ensure the provision of universal accessibility and inclusivity in the preliminary stage of making the building i.e., design instead of retrofitting it. Similarly, these modifications must be made immediately after the disaster hits with appropriate requirements as a part of the climate resilience and adaptation approach.

The frameworks also highlight the requirement of a participatory planning approach where stakeholders can be included to explore and validate feasible and credible options to manage climate risks and build resilience. This could be done by strengthening institutional and individual capacities to integrate disaster risk reduction and resilience in municipal planning and decision making<sup>1</sup>. This includes considering disaster prepared training, information on what to do in emergency situations, information on the disaster, information on evacuation shelters, evacuation materials accessibility, food distribution according to the necessity of requirements, medical needs, social activities, and legal assistance, of Persons with Disabilities.

The need for a more actionable approach has been identified to guide and create an ecosystem of behavioral and practitioner changes at individual and institutional levels across the globe. Thus, assisting institutions to work on providing an adaptive and preparedness response to impacts of climate change on PwDs. Accepting climate change as a human rights issue is indispensable and globally, countries supporting international frameworks must be part of the solution process. Identification of efficient strategies and solutions to address these challenges becomes an ethos to commitments and approaches to practice inclusive DRR resilience towards equal and non-discriminated ways of condemning disasters for all. Furthermore, evacuation rates are generally lower for households that include members with disabilities, compared to other households, and less than half of emergency and disaster relief sites are accessible for persons with disabilities. As a result, death rates during disasters may be higher among persons with disabilities.

<sup>1</sup> *Participatory planning for climate resilient and inclusive urban development in Dosquebradas, Santa Ana and Santa Tomé - Jorgelina Hardoy, Ebru Gencer, Manuel Winograd, 2019 (sagepub.com)*

# 4

## Inclusive Approaches to Disaster Risk Reduction and climate Resilience

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**T**he intensive impacts of climate change will not only have amplified impacts on persons with disabilities but could also result in an increase in the number of persons with disabilities. For example, causing someone to lose a limb, or their vision, or causing PTSD. In 2019, the United Nations Human Rights Council adopted a resolution on climate change and the rights of persons with disabilities. The resolution calls on the governments to adopt a disability-inclusive approach when taking action to address climate change. It calls on governments to “promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations.”

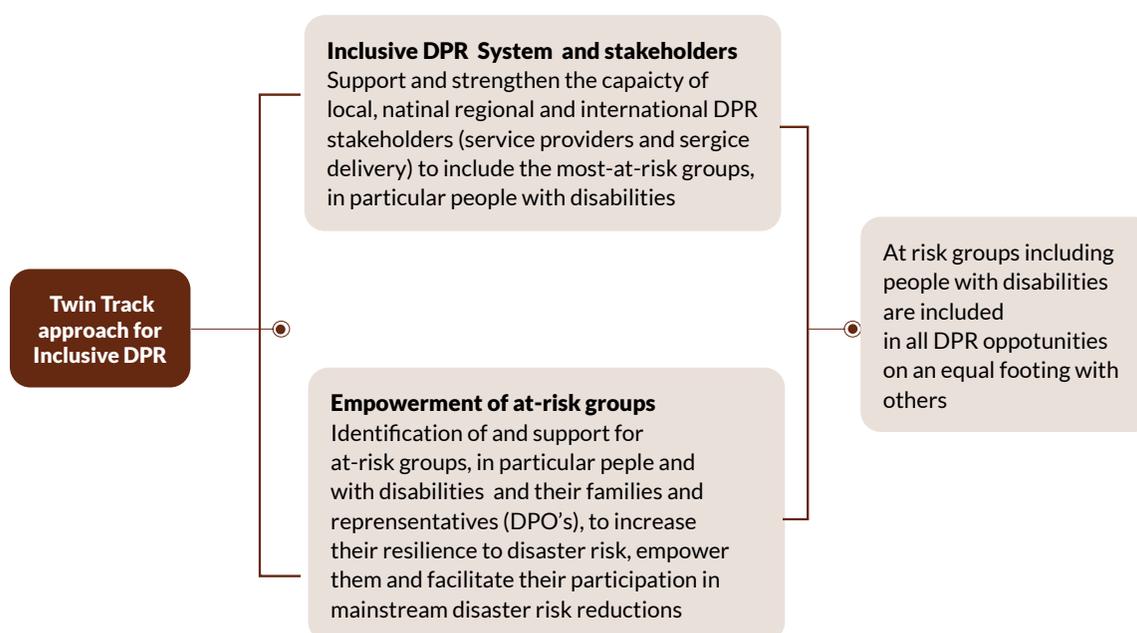
To achieve climate resilience, the **rights-based approach** is most adopted by world leaders and humanitarian institutions. This approach is central to effective and equitable interventions and implementation of climate change policy, addressing the unequal level of economic, social, environmental and human development created by the many different challenges posed by adaptation to climate change. **At the national level**, a rights-based approach requires decision-makers to incorporate human rights compliance mechanisms and procedures in all the new climate change policies upon identification of climate impacts on the most disadvantaged. The collection of disaggregated data on marginalized groups plays an important role. **At the international level**, a rights-based approach requires decision-makers to integrate human rights standards into their climate change policies to ensure that international cooperation does not infringe on human rights in developing countries when providing development cooperation. The UN Convention on the Rights of Persons with Disabilities (UNCRPD) recognizes that climate change impacts contribute to exacerbating inequality and vulnerability among persons with disabilities. **A disability-inclusive human rights-based approach** to climate change entails climate action that is inclusive of and accountable to persons with disabilities at all stages. Such integration can be achieved by ensuring that persons with disabilities and their diverse representative organizations are consulted in the development of climate action plans and included in humanitarian responses to the adverse effects of climate change. Persons with disabilities and their representative organizations must be allowed to participate meaningfully in climate action and decision-making, including in leadership positions.

The meaningful participation, inclusion and leadership of persons with disabilities and their representative organizations within disaster risk management and climate-related decision-making lies at the heart of an approach that is respectful of the rights of persons with disabilities. Disability covers a diverse array of impairments. It results from the interaction between persons with disabilities, environmental barriers and attitudinal barriers, such as stereotypes, stigma and prejudices.

When persons with disabilities are left out of decision-making, it deters them from contributing to the identification of risk reduction and adaptation measures that could be effective for them. Climate change can exacerbate existing health care inequalities faced by persons with disabilities/ The health impacts of climate change may be experienced more severely by persons with disabilities owing to the harmful impact of climate change on health systems. An effective twin-track approach that ensures that all practices are inclusive while providing targeted support to persons with disabilities where it is required is also crucial. Inclusive practices should build the resilience and adaptive capacity of persons with disabilities through effective empowerment. Resilience can be built through rights and capacities, which provide vulnerable people the agency to adopt. Persons with disabilities should play an active role in all stages of resilience-building programmes and policy cycles while social protection may offer opportunities to enhance climate resilience. The response should emphasize the key principle: the central role of persons with disabilities (and their caregivers in addition to the maternal and paternal linkages) in representing their own vulnerabilities, needs and solutions in their situations.

The **'Twin-track' Approach**, promotes both 'specialist disability accommodation initiatives' designed to include and empower persons with disabilities and the 'mainstreaming' of disability inclusion into all policies, strategies and activities.

**Figure 2. Twin Track Approach for Inclusive DRR to Climate-induced Disasters<sup>1</sup>**

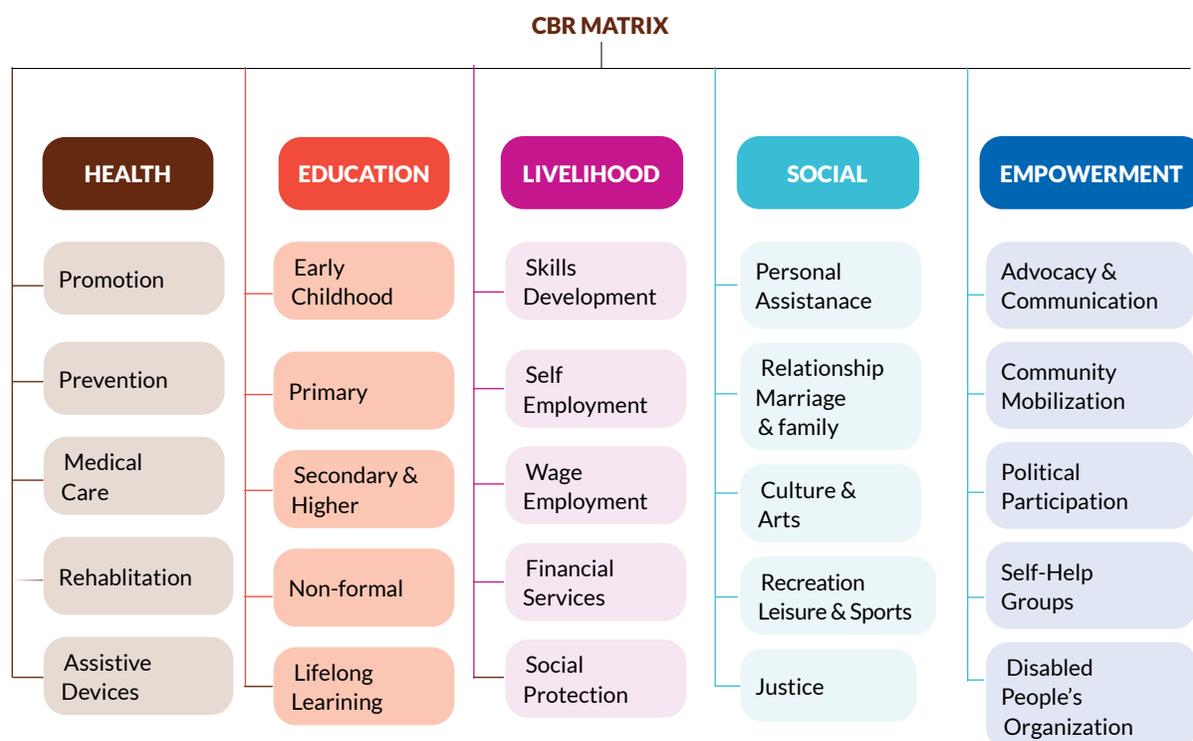


The 2030 Agenda for Sustainable Development and Sustainable Development Goals (SDGs), the Convention on the Rights of Persons with Disabilities (CRPD) and the Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework) guide governments toward disability-inclusive sustainable development support the twin-track approach.

One of the major changes in humanitarian response is the development and implementation of the cluster approach. The **cluster approach** strengthens coordination within and between sectors of humanitarian assistance (e.g., health, education, emergency shelter) by clearly defining their roles and responsibilities during a crisis. This approach aims to make the international humanitarian community more structured, accountable and professional so that it can be a better partner for governments, local authorities and local civil society.

<sup>1</sup>[https://www.ohchr.org/Documents/Issues/ClimateChange/Submissions/Disabilities/Humanity\\_and\\_Inclusion.pdf](https://www.ohchr.org/Documents/Issues/ClimateChange/Submissions/Disabilities/Humanity_and_Inclusion.pdf)

**Community-based rehabilitation (CBR)** has been advocated internationally for more than 20 years as the core strategy for the improvement of the quality of life of persons with disabilities.<sup>2</sup> World Health Organization (WHO) has also prepared a framework in form of the Community Based Rehabilitation (CBR) Matrix<sup>3</sup> that outlines the right of persons with disabilities to health, education, livelihood, social inclusion and empowerment; with the associated guiding principles of inclusion, participation, self-advocacy, accessibility and sustainability, use of disability data; opportunities for new technology; empowerment and enhanced resilience of persons with disabilities. Even though a common matrix now exists, each CBR programme will continue to demonstrate unique differences because it is influenced by a wide range of factors, e.g., physical, socioeconomic, cultural and political.



The need for an Inclusive Resilience approach has been realized to acknowledge the different needs, equally enable and support, ensuring no one is left behind in pre-post disaster response, recovery and rehabilitation and building resilient communities. This would require immediate information sharing, shelter, evacuation and relief systems. In a disaster situation, an appropriate rehabilitation programme should be implemented that could include an appropriate combination of Institute Based Rehabilitation (IBR) and Community Based Rehabilitation (CBR) components. It would also require a comprehensive team of psychiatrists, physiotherapists and occupational therapists to work together to reduce post-disaster trauma and mental health-related problems. Generally, in developing countries, such teams do not exist.

<sup>2</sup>Community-Based Rehabilitation as we have experienced i-voices of persons with disabilities by WHO (World Health Organization) & SHIA (Swedish Organizations of Disabled Persons International Aid Association) CBR-Part 1.PDF (who.int)

<sup>3</sup> <https://www.who.int/publications/i/item/9789241548052>

# India's Response to Disaster Management and Climate change

'There are both external and domestic dimensions to India's Climate Change policy which has been articulated through two key documents: National Action Plan on Climate Change (NAPCC) adopted on June 30, 2008, and India's Intended Nationally Determined Commitments (INDC) submitted to the UN Framework Convention on Climate Change (UNFCCC) on October 2, 2015. INDC links India's commitment to ecologically sustainable economic development with its age-old civilizational values of respecting nature, incorporating a sense of intergenerational equity and common humanity. These aspirations that India has voluntarily committed to are unprecedented for a developing country.

## 5.1. National Action Plan on Climate Change

The National Action Plan on Climate Change (NAPCC)<sup>1</sup> of India was adopted on June 30, 2008. Under the NAPCC, India has formulated the following national missions to combat climate change at the regional level:

- National Solar Mission
- National Mission for Enhanced Energy Efficiency
- National Mission on Sustainable Habitat
- National Water Mission
- National Mission for Sustaining the Himalayan Ecosystem
- National Mission for a Green India
- National Mission for Sustainable Agriculture
- National Mission on Strategic Knowledge for Climate Change

The national missions formulated are meant to work based on development with the use of new technologies. The mission objectives are planned to be implemented through appropriate institutional mechanisms including public-private partnerships and civil society action. The focus is on promoting the understanding of climate change and measures for adaptation and mitigation, energy efficiency and natural resource conservation. To achieve a sustainable development path that simultaneously advances economic and environmental objectives, the National Action Plan for Climate Change (NAPCC) is mandated to be guided by the following principles:

1. Protecting the poor and vulnerable sections of society through an inclusive and sustainable development strategy that is sensitive to climate change.
2. Achieving national growth objectives through a qualitative change in direction that enhances ecological sustainability, leading to further mitigation of greenhouse gas emissions.
3. Devising efficient and cost-effective strategies for end-use Demand Side Management.

<sup>1</sup>National Action Plan On Climate Change ([nicra-icar.in](http://nicra-icar.in))

4. Deploying appropriate technologies for both adaptation and mitigation of greenhouse gas emissions extensively as well as at an accelerated pace.
5. Engineering new and innovative forms of market, and regulatory mechanisms to promote sustainable development.
6. Affecting implementation of programmes through unique linkages, including with civil society and local government institutions and public-private partnerships.
7. Welcoming international cooperation for research, development, sharing and transfer of technologies enabled by additional funding and a global IPR regime that facilitates technology transfer to developing countries under the UNFCCC.

Another initiative adopted by India is the Intended Nationally Determined Commitments (INDC) submitted to the UN Framework Convention on Climate Change (UNFCCC) on October 2, 2015.<sup>2</sup>

### **5.2. Rights of Persons with Disabilities Act, 2016**

The Rights of Persons with Disabilities Act 2016 vide Article 8 (1) and (2), mandates the provision of equal protection and safety for PwDs in situations of disasters, conflict and emergencies. The Act further enjoins the National Disaster Management Authority (NDMA) and State Disaster Management Authorities (SDMAs) to ensure that PwDs are included in all activities listed in DM Act 2005. The District DM Authorities are entrusted to maintain a database of all PwDs for identification and targeting for DRR efforts.

### **5.3. National Disaster Management Plan, 2019**

The National Disaster Management Plan, 2019 of India, states, that 'A changing climate leads to changes in the frequency, intensity, spatial extent, duration, and timing of extreme weather and climate events, and can result in unprecedented extreme weather and climate events. Extreme and non-extreme weather or climate events affect vulnerability to future extreme events by modifying resilience, coping capacity, and adaptive capacity'. With regards to this, post the Paris Agreement in 2015, the formalization of SDGs, followed by IPCC's Fifth Assessment Report and various other reports from notable institutions, the Government of India, in addition to the existing five thematic areas, had included a new and sixth thematic area for disaster risk management. Hence, under the National Disaster Management Plan, 2019, the current Responsibility Framework for Centre and State consists of six thematic areas: Understanding Risk, Inter-Agency Coordination, Investing in DRR – Structural Measures, Investing in DRR – Non-structural Measures, Capacity Development and Disaster Risk Management. Taking into consideration the findings of a global survey by UNISDR50 in 2013 stating that 72.9% of PwDs have no personal preparedness plans, the National Disaster Management Authority as a part of Social Inclusion, also included guidelines for persons with disabilities, gender-based vulnerabilities, elderly, children and scheduled castes and scheduled tribes<sup>3</sup>.

### **5.4. National Disaster Management Policy, 2009**

The National Disaster Management Policy, 2009 was prepared with an aim to bring transparency and accountability in the process of disaster management through the involvement of community (community-based organization), NGOs, Panchayati Raj Institutions (PRIs), local bodies and civil society. In order to make

<sup>2</sup>INDIA INDC TO UNFCCC.pdf  
revised-PPT-Press-Conference-INDC-v5.pdf (moef.gov.in)

<sup>3</sup>National Disaster Management Plan, 2019

the disaster management process inclusive and holistic, it tries to address the concerns of disadvantaged groups including persons with disabilities, women, children and others. The policy contains measures for granting relief and rehabilitation of the affected persons due to disasters keeping in mind equity and inclusivity.

The objectives of the national policy on disaster management are:

- Promoting a culture of prevention, preparedness and resilience at all levels through knowledge, innovation and education.
- Encouraging mitigation measures based on technology, traditional wisdom and environmental sustainability.
- Mainstreaming disaster management into the developmental planning process.
- Establishing institutional and techno-legal frameworks to create an enabling regulatory environment and a compliance regime.
- Ensuring efficient mechanisms for identification, assessment and monitoring of disaster risks.
- Developing contemporary forecasting and early warning systems backed by responsive and failsafe communication with Information Technology (IT) support.
- Promoting a productive partnership with the media to create awareness and contribute towards capacity development.
- Ensuring efficient response and relief with a caring approach towards the needs of the vulnerable sections of society.
- Undertaking reconstruction as an opportunity to build disaster-resilient structures and habitats for ensuring safer living.
- Promoting productive and proactive partnership with the media in disaster management.

## **5.5. National Disaster Management Guidelines on Disability Inclusive Disaster Risk Reduction**

The National Disaster Management Guidelines on Disability Inclusive Disaster Risk Reduction, 2019 were formulated to support implementation mechanisms of DDR and Climate Change based on established and nationally accepted norms and practices with a focus on disability inclusion. The guidelines contribute to the knowledge base required for carrying out disability-inclusive actions in disaster mitigation, preparedness, response, and recovery efforts. As disaster risk reduction is a state and national responsibility, the document states in detail that both the national, parastatal, district and city level private and public organizations can facilitate the execution of such inclusive implementation policies<sup>4</sup>. The disability-inclusive actions identified to address the gaps are as listed:

1. Collection of comprehensive data disaggregated by age, gender, and type of disabilities and mapping of resources (Human, infrastructural and other services) for persons with disabilities in disaster preparedness
  - As such adequate data about persons with disabilities for search, rescue and evaluation should be ensured.
2. Inclusion of persons with disabilities as active contributors to policies, planning and strategies
3. Adoption of Universal Design Principles, facilitation of accessibility and access to Assistive Technology (AT)
4. Addressal of attitudinal, social and economic exclusion
5. Adoption of inclusive preparedness, and mitigation strategies including the national stock-taking of their requirements (medical as well as assistance).
6. Incorporation of accessible communication systems into the Early Warning systems
7. Provision of access to relief
8. Provision of accessible rehabilitation and reconstruction

<sup>4</sup>National Disaster Management Guidelines on Disability Inclusive Disaster Risk Reduction

## 5.6. Climate-Smart Cities Assessment Framework

The Climate Smart Cities Assessment Framework launched by NIUA provides the Indian Smart Cities with a framework that would enable cities to assess their city's condition as per the Climate Change based on the indicators provided to them under the framework. The parameters include; 1) Energy and Green Management Buildings 2) Urban Planning, Green Cover & Biodiversity 3) Mobility and Air Quality 4) Water Resource Management and 5) Waste Management. On the basis of the data provided under the indicators of these parameters, the Climate Centre for Cities at NIUA will support the cities to improve their service delivery if it gets hampered due to climate change in an adaptive and sustainable manner. However, the framework needs to adequately have inclusivity as a sub assessment framework to access PwDs involvement in all the indicators and parameters provided along with the implementation of adaptation measures and mitigation plans. Therefore, the needs of PwDs and other vulnerable communities should be absorbed for their needs to be specialized in each and every stage of interventions that supports institutional level integrations.

Figure 4. Climate-Smart City Assessment Framework



## Indian and International Best Practices

**T**he Convention on the Rights of Persons with Disabilities, and the Sendai Framework for Disaster Risk Reduction both layout expectations regarding the inclusion of the rights of persons with disabilities in situations of risk and humanitarian emergencies. Urban governments, thereby, need to take actions to reduce disaster risks and incorporate climate resilience into their development strategies and plans. Example, a project was undertaken in three small to medium-sized **Latin American cities: Dosquebradas, Colombia; Santa Ana, El Salvador; and Santo Tomé, Argentina**, where the overall goal was to bring in a resilience lens to assess current and planned urban development projects in each city and reach a consensus on feasible and inclusive resilience options for development. Local governments have very important roles in achieving equitable and resilient development where a specific focus is required on local decision-making processes that involve all stakeholders and strengthen governance for urban risk. The project developed a practical way to **integrate stakeholders into the decision-making process**; a process that not only empowers residents but also **facilitates the implementation of strategies** that contribute to resilient urban development.

On a practical level, the very real and heightened risks that Persons with Disabilities face during climate-change related disasters include, a greater risk of death, injury and displacement. In addition to this, persons with disabilities have been made more vulnerable to natural hazards through historical processes of exclusion and impoverishment. India's National Action Plan for Climate Change (NAPCC), 2008, and the National Disaster Management Plan (NDMP), 2016, detail out long, medium, and short-term action plans aligned with international frameworks for various stakeholders to achieve comprehensive risk reduction and sustainable development.

Although some countries have set the right examples by incorporating inclusive climate change adaptation and mitigation strategies towards inclusive resilience. Some examples are:

1. The **Hashemite Kingdom of Jordan** has initiated a positive path to the consideration of the rights of persons with disabilities. Jordan was among the first countries to comply with global developments in the field of disability, in the form of international agreements and treaties<sup>1</sup>. In Jordan, the Law on the Rights of Persons with Disabilities guarantees persons with disabilities a barrier-free legislative environment based on equal opportunity, equality and non-discrimination. At an international level, and according to the provisions of Article 35 of the agreement, Jordan is obliged to submit to the Committee on the Rights of Persons with Disabilities, a comprehensive report on its obligations and pledges to implement the provisions of the agreement after two years from ratifying the agreement and then submitting a report once every four years, and whenever the committee would request it.

<sup>1</sup>[The\\_Jordanian\\_Legal\\_Protection\\_of\\_Disabled\\_Persons.pdf](#)

2. **In Spain**, the Law on the National System for Civil Protection ensures an inclusive focus on persons with disabilities, including through specific references to universal access and accessible information.
3. **In Cuba**, the 2017 State plan for confronting climate change comprises five strategic actions and 11 tasks that all include persons with disabilities known as “Tarea Vida” (Life Task).

#### Five Strategic Actions



**SA1**  
Constructions  
in Coastal  
Areas



**SA2**  
Constructive  
Typology



**SA3 & SA4**  
Agricultural  
and cattle  
raising



**SA5**  
Urban-Coastal  
reordering

4. **The Gaibandha model in Bangladesh** aims to build disability-inclusive resilience in response to flooding, with interventions at the household, community and municipal level by the international development organization CBM, in collaboration with the local non-governmental organization Gaya Unnayan Kendra. The model encompasses both targeted employment support for persons with disabilities and inclusive governance mechanisms, to ensure that persons with disabilities are not bearing the brunt of climate change. The Gaibandha model suggests five interlinked interventions, all of which are needed to build resilient and inclusive communities<sup>2</sup>:
  - Strengthen people with disabilities and their representative groups,
  - Advocate with the local government for inclusive DRM,
  - Build accessible DRM infrastructure and capacity for inclusive DRM at the community level,
  - Strengthen household-level disaster risk awareness and preparedness, in collaboration with schools and
  - Promote and support sustainable, resilient livelihoods.
5. **New Earth Disability (NED)**, is the first major initiative aimed at addressing the intersection of climate change and disability worldwide. The process of shifting places can be difficult for anybody. Example, packing up furniture, clothes, and personal items, driving or flying to a new home, and re-establishing roots can take a lot of time and energy. This can be especially tough for people with disabilities, who need to locate a home that meets their needs (Example, with a ramp or elevator, if they use a wheelchair), secure transportation, and often rebuild personal support networks and sign up for government services in a new county, state, or even country. Unfortunately, in the future, a huge number of people will be required to shift because of the effects of climate change, which will impact people with disabilities in drastic ways. As such, NED helps countries with holistic research related to climate change and disability documentation including best functions and practices.
6. The **Access for All campaign** was launched immediately after the tsunami that devastated large parts of the coastal areas of **Sri Lanka** in December 2001. It was founded by Disability Organizations Joint Front (a national umbrella group of local disability organizations), Spinal Injuries Association, Motivation, CBM, John Grooms, Handicap International and the Ministry of Health (Youth Elderly Disabled and Displaced Persons Unit). Effective adaptation planning requires input from a wide spectrum of community members. Inclusive planning emphasizes the participation of all, especially those who are most impacted by climate hazards and those who have historically been left out of decision-making processes. The campaign aimed to promote the

<sup>2</sup>Saving lives and leaving no one behind; The Gaibandha Model for disability-inclusive disaster risk reduction by CBM

inclusion of all disabled people and their needs in the tsunami relief, reconstruction and rehabilitation work in Sri Lanka. In particular, it focusses on rebuilding an accessible Sri Lanka – ensuring that all public buildings, transport, places of employment, services and infrastructure are accessible to people with disabilities.

7. Following the **Gorkha Earthquake** (2015), a Post-emergency Response Implementation Plan (PERIP) was developed in **Nepal** to address the long-term needs of earthquake-affected communities. Low-income people, communities of color, elders, children and youth, immigrants, Indigenous people and persons with disabilities face enhanced climate risks and yet are often under-represented in community planning. The project focuses on five major areas 1) health and rehabilitation 2) livelihood 3) mental health and psycho-social support 4) education and 5) accessibility and inclusion. One of the main objectives of the PERIP project is to enhance the capacity of partner organizations, NGOs and governments on disability-inclusive development and disability-inclusive disaster risk reduction to increase access to locally available resources. Inclusive DRR plans and strategies to identify the barriers and prejudices and work towards reducing existing barriers in all settings, constructing accessible and resilient infrastructure and public spaces, disability-sensitive warning systems and evacuation routes and making information accessible for all<sup>3</sup>.
8. In **India**, the National Disaster Management Authority has included the requirement for a national disaster agency in their draft guidelines on disability and disaster. The agency is suggested to be dedicated to managing and monitoring the integration into, and in coordination with, the disaster risk management and climate change action plan for persons with disabilities.

All the above-mentioned moves and practices are a sign of awareness to have inclusivity in all steps of intervention-cum-policy practices. Some countries have already shown the strength of involving marginalized communities like women, persons with disabilities in **participatory planning and inclusive climate change resilience**. The approach is important as it makes it possible to absorb, adapt and mitigate w.r.t. climate change emergencies. **Inclusive Disaster Risk Reduction action plans and frameworks** should be helpful for PwDs in achieving their rights to accessibility, safety and security, social protection and relief, migration when needed as well as support in livelihoods. This should be a blanket protection given to persons with disabilities, as and when required, so that at times of emergencies and in terms of impacts of climate change they are not left behind. Participatory planning will guide institutions to focus on the persons with disabilities, giving reinforcement on the grounds of inclusivity. Inspiration should be taken from the other countries who have already paved the way toward these kinds of amendments in their existing frameworks. New windows of change should be reinstated for the betterment and development of persons with disabilities to manage risks from the impacts of climate change on persons with disabilities.

### **6.1. Indian Case Example - Odisha**

Odisha is a state that is frequently prone to natural disasters like cyclone storms, droughts, floods, and heatwaves. Between 1965-2009, it was repeatedly hit by various disasters such as cyclones (6), floods (17), droughts (19) and heatwaves. Climate change has increased the intensity and range of disasters and reportedly, more areas within the State have become vulnerable to disasters. Two pivotal interventions were selected for an assessment covering the spectrum of activities required for Climate Smart Disaster Risk Management (CSDRM). Odisha is the first state in India to produce a State Climate Change Action Plan (CCAP). This move is in response to the pressing issues in Odisha and also direction from national policy. The underlying rationale for the CCAP is to lead Odisha to move towards a carbon-conscious, climate-resilient development path. The National Disaster Management Act, 2016 is based on experience from Odisha State and its Disaster Management Authority. Odisha State Disaster Mitigation Authority (OSDMA) was set up by the Government of Odisha as an autonomous organization in the aftermath of the super-cyclone in 1999. The application of Information Communication

<sup>3</sup><https://www.cbm.org/news/news/news-2018/international-disaster-risk-reduction-day-in-nepal/>

Technology (ICT) in early warning systems, evacuation planning and execution, and rapid damage assessment has been promoted by OSDMA with satellite phones. A dedicated civil VHF network has been created and HAM radio systems deployed for the early warning systems in the disaster-prone area.

Various innovative programmes like “Integrating disability in community-based disaster risk reduction and response” have been taken by the authority. Further, detailed and continuous interactive electronic communication (IEC) activities has been designed to create awareness among people through dedicated radio and print media. In remote areas, NGO and traditional folk artists have been engaged to create awareness among the communities. OSDMA also shares information regularly with stakeholders in the form of books, documents and other IEC materials. At the district level, the District Disaster Management Committee monitors pre-and post-disaster management planning.

There has been no mention of persons with disabilities or grouping with socially vulnerable sections: Cyclone Impacts and Recovery-Needs in Odisha- Phailin, Amphan, Bulbul, Fani. Disasters associated with climate change and their aftermath have had a huge impact on persons with disabilities. When the emergency hits, they may have difficulty reaching safe areas, get separated from family and friends which is a key to survival and coping or have trouble accessing vital emergency information, and lose assistive devices such as wheelchairs, crutches, prostheses, white canes or hearing aids. In addition, persons with disabilities who also belong to other minority groups based on gender, race, religion or ethnicity may face added disadvantages in having their needs met. Inclusive practice in all relief operations is needed to ensure that response and service delivery is not fragmented but mindful of all sources of vulnerability.

A few of the aspects in relation to the inclusion of persons with disabilities where interventions are possible are as follows:

1. Strong advocacy by and with persons with disabilities to ensure disability inclusion as a key criterion in all emergency relief operations.
2. The evidence base concerning the vulnerability of persons with disabilities in weather-related emergencies and important factors, which create resilience need to be greatly strengthened with key messages disseminated.
3. Evaluations of both emergency and development programmes in areas affected by a changing climate need to include disability in their terms of reference.
4. Early warning systems need to ensure that warnings reach all members of the community, including persons with disabilities regardless of mobility or communication barriers.
5. In the reconstruction phase following severe weather and other emergencies, universal accessibility standards must be applied in all public buildings and spaces, water and sanitation points and the homes where people with mobility disabilities live.

## Summarization

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Climate Change disasters are, indeed a humanitarian issue, one that necessitates equality and justice. It is, therefore, imperative for the climate change resilience policies and strategies to be inclusive for all marginalized groups including persons with disabilities. Moreover, climate change induced disasters are increasing in frequency, disproportionately affecting the most vulnerable. With little access to insurance, low incomes, meagre assets and fragile health, persons with disabilities have to deal with climate change related shocks under highly constrained conditions. Climate change impacts have worsened the already precarious situation of persons with disabilities in India due to their high levels of vulnerability and social exclusion.

Climate change induced Disasters have a direct and measurable impact on the marginalized population including persons with disabilities. Persons with disabilities are often among those most adversely affected in an emergency, sustaining disproportionately higher rates of morbidity and mortality, and are among those least-able to access emergency support. Sudden-onset of natural disasters and long-term impacts of climate change can gravely affect the access of persons with disabilities to food and nutrition, safe drinking water and sanitation, health-care services and medicines, education and training, adequate housing, and access to decent work.

Preparations for disasters and emergencies invariably have not adequately considered disabled people. The key challenges they face are- limited access to the knowledge; resources and services needed to effectively respond to environmental change; greater vulnerability to extreme climate events, ecosystem services loss, and infectious diseases due to compromised health and difficulties during evacuations or migrations/displacements.

The following issues have been identified in the Study:

1. Unavailability of spatially disaggregated data on persons with various types of disabilities
2. Lack of understanding of diverse needs of the marginalized groups - the needs of persons with disabilities changes with the types of disability, gender, age and socioeconomic status.
  - The intersectionality between different marginalized groups further exaggerated the challenges faced during the climate change induced disasters.
3. Persons with disabilities face physical challenges associated with evacuations. This can worsen the health impacts, especially if local emergency response plans do not adequately anticipate and address their special needs.
4. Lack of 'Universal Accessibility' in the infrastructure development and emergency response systems further restricts the accessibility of persons with disabilities to avail services.
5. The absence of information in accessible formats and local vernaculars inhibits effective coverage of persons

with disabilities through advocacy campaigns on disaster response.

6. Persons with disabilities may have reduced ability to receive or act upon emergency information or instructions or to communicate their needs in an emergency or evacuation situation. Messages about extreme weather or other emergency information (such as a warning to boil contaminated water) are not always designed or delivered in a way that reaches persons with disabilities, like those who have hearing loss, low vision, or reduced mental capacity.

The Sustainable development Goals, UNCRPD, and UNFCCC among other international commitments have reiterated the need for an inclusive approach to climate resilience. UNCRPD advocates a **disability-inclusive human rights-based approach** to climate change that entails climate action that is inclusive of and accountable to persons with disabilities at all stages. The Rights of Persons with Disabilities Act, 2016, in India, also stipulates the inclusion of issues of persons with disabilities and their organizations in disaster risk reduction activities. The **Right based approach** as propagated in the UNCRPD and further in the Rights of Persons with Disabilities Act is applicable for effective and equitable interventions and implementation of climate change policy, addressing the unequal level of economic, social, environmental and human development created by the many, different challenges posed by adaptation to climate change. The **'Twin-Track' Approach** promotes both 'specialist disability initiatives' designed to include and empower persons with disabilities and the 'mainstreaming' of disability inclusion into all policies, strategies and activities. There are many successful examples across the globe whereby inclusive strategies have been included in planning/policy, legislation, relief, response and rehabilitation strategies.

Considerations of the negative risks of climate change and climate induced disasters on persons with disabilities must be included in climate action plans. Participation and representation of persons with disabilities would allow tailored climate action responses that address the specific concerns of persons with disabilities related to the adverse impacts of climate change. This again reiterates the need for the adoption of a human rights-based approach, to empower persons with disabilities as agents of change to address the harmful impacts of climate change in their day-to-day lives. Persons with disabilities, if left out of decision-making, alienates their contribution to identifying risk reduction and adaptation measures that could be effective for, and carried out by persons with disabilities. Persons with disabilities are a heterogeneous group with different requirements and the best practices of disability inclusion in risk reduction and adaptation measures may also be relevant for the population at large, helping to avert some of the worst impacts of climate change.

There is the need for contextualization, translation and scaling up these efforts into community-led activities to assist persons with mental and physical disabilities in the event of evacuation, relief distribution and other disaster management activities. Such activities would include: situating services and aid distribution points in locations that are accessible to persons with restricted mobility; making available the relief resources to households with persons with restricted mobility; provision of livelihood-diversification grants and training to persons with disabilities whose traditional livelihood activities are at risk from hazards and/or the effects of climate change; ensuring the physical protection (retrofitting) of health facilities and coordination with health personnel to sustain continuity of services for persons with disabilities during hazards; and, developing contingency plans with health facilities to ensure uninterrupted access to medicines during hazards and climate stresses for the vulnerable groups.

The "National Disaster Management Guidelines on Disability Inclusive Disaster Risk Reduction" prepared by the National Disaster Management Authority, Gol recommends most of these strategies through its disability-inclusive actions and respective guidelines.

## Recommendations

It is established that climate change has both direct and indirect impacts on the effective entitlement to a wide range of human rights, including the rights of persons with disabilities. An integrated disability-inclusive human rights-based approach should be adopted in Disaster Risk Reduction and Climate Change Action Plans. The five facilitators to achieve the same involve- better information systems, Improved access, Inclusive planning, Participation & equal opportunities and data collection & analysis.

Key principles of a disability-inclusive human rights-based approach<sup>1</sup> to climate disaster risk reduction and climate resilience resilience include:

1. The integration of principles and standards derived from international human rights law, especially the Universal Declaration of Human Rights, the Convention on the Rights of Persons with Disabilities and other core human rights treaties, and the Declaration on the Right to Development, in all policies and programmes relating to climate resilience;
2. Active, free, meaningful participation and inclusion of persons with disabilities and their diverse representative organizations at all levels of decision-making and action on climate resilience;
3. Increased capacity and empowerment of persons with disabilities and their representative organizations in DRR and CCA strategies;
4. Equality and non-discrimination of persons with disabilities in climate action;
5. Accessible and inclusive environments in addition to accessibility to information and communication;
6. Enhanced awareness of policymakers and the climate change impacts redressal and mitigation specialists of the requirements and capacities of persons with disabilities;
7. Evidence-based decision-making that takes into account the requirements of persons with disabilities;
8. International cooperation, including thorough mobilization of resources to support the advancement of a human rights-based and disability-inclusive approach to climate action.



<sup>1</sup><https://undocs.org/A/HRC/44/30>

Figure 2. Addressing the effects of Climate Change on PwDs



source:www.ohchr.org

## 8.9. The way forward

The disability-inclusive human rights-based approach to climate change entails a Disaster management and climate change action plan which is inclusive of and accountable to persons with disabilities at all stages. It advocates the engagement of persons with disabilities and their diverse representative organizations in the development of disaster risk reduction and climate action plans and is included in humanitarian responses to the adverse effects of Disasters and climate change. Persons with disabilities and their representative organizations must be allowed to participate meaningful in Disaster management and climate action and the decision-making process, including in leadership positions. A rights-based approach requires decision-makers to incorporate human rights compliance mechanisms and procedures in all-new climate change policies after identifying climate impacts on the most disadvantaged. This should be strengthened by integrating the ‘Twin-track’ Approach, which promotes both ‘specialist disability initiatives’ designed to include and empower persons with disabilities and the ‘mainstreaming’ of disability inclusion into all policies, strategies and activities.

For this purpose, a seven-step approach for an inclusive response to climate change induced disasters is recommended, as the way forward;

### 1. Plan based on the evidence

Considering the diverse needs of the vulnerable groups and their intersectionality, the climate resilience plan should understand and provide for the diverse needs of these groups. This would only be possible with the availability of disaggregated data on disability to make informed decisions. The various frameworks including the CSAF 2.0, framework developed by the UNFCCC should also include specific indicators to monitor and evaluate the provisions specific to persons with disabilities.

There is a strong need to accumulate comprehensive data disaggregated by gender, age and types of disabilities and its integration into the vulnerability and redressal frameworks, and the climate resilience plan at the community and city level. Additionally, data on numbers, locations and needs of persons with disabilities along with local and national resource mapping would be extremely useful in developing short-, medium- and long-term strategies for addressing impacts, and making effective and fast decisions in times of emergency.

## **2. Suffix the policy implementation gap**

To comply with the provisions of the Rights of Persons with Disabilities Act, the NDMA has prepared the National Disaster Management Guidelines for Disability Induced Disaster Risk Reduction as well as incorporated disability inclusion in the National Disaster Management Plan. There is an urgent need to identify the gaps in the implementation of these policies and address them at the local level.

## **3. Enhance Participation and representation**

The meaningful participation, inclusion and leadership of persons with disabilities and their representative organizations within disaster risk management and climate-related decision making at the local, national, regional and global levels, lies at the heart of an approach to climate action that is respectful of the rights of persons with disabilities.

Participation and representation should be ensured in the plan preparation, implementation and evaluation. Representation of persons with disabilities needs to be increased at institutions and among decision-makers to develop and strengthen the systems of response. A participatory approach to societal capacity building should be adopted wherein diverse groups are included in preparedness activity and awareness generation to avert exaggerated repercussions on them from the onset of disasters. This should be done by empowering the local communities. Family members, caregivers, non-disabled peers of persons with disabilities should take extra care for food, treatment, shelter and other adaptations. They must be given proper respect, treated as a member of our society with the same rights, and included in all facets of social functioning. States have legal obligations, including under international human rights laws, to implement disability-inclusive climate change policies that empower persons with disabilities by ensuring their full and effective participation in climate action at all levels. The creation of neighborhood support units and community safety nets are some of the strategies to implement the same.

## **4. Learn lessons from local and global good practices**

There are a lot of scopes to learn from the innovative practices adopted across the globe which can be contextualized to the Indian ground situation. Specifically, the innovative practices to activate the local players and strengthen the capacity and sensitivity of the community to address the needs of persons with disabilities, before, during and after the disasters, as adopted by the neighboring countries of Sri Lanka, Bangladesh and Nepal are easy to replicate. Additionally, progressive states like Odisha should be encouraged to holistically adopt the Disability Inclusive Disaster Response Guidelines and act as role models and handhold the sister states to include inclusion as an imperative part of the respective Climate Action Plans.

## **5. Integrating Universal access in all infrastructure and services**

Universal design and accessibility of infrastructure is the most critical aspect in building resilience within vulnerable groups of persons with disabilities. Universally accessible urban environments and information systems would empower persons with disabilities and should be propagated in all the guidelines and approaches. The same needs to be integrated into the emergency warning systems, accessible rehabilitation and emergency structures, accessibility in reconstruction structures etc.

## **6. Significance of Intersectionality**

The adverse impacts of Disasters and climate change on individuals with multiple vulnerability factors, including women and girls with disabilities, require adequate measures that take into account their specific requirements. In addition to their deprivation as persons with disabilities, access to resources are even more poor for those belong to other marginalized groups- Example, age, gender, social and economic status, etc. Their participation must be ensured in disaster response planning for emergencies and evacuations, humanitarian emergency response and healthcare services.

The acknowledgement of intersectionality should be brought in at two levels: in understanding the problem and in advancing the solution.

## **7. Augment the capacities of stakeholders**

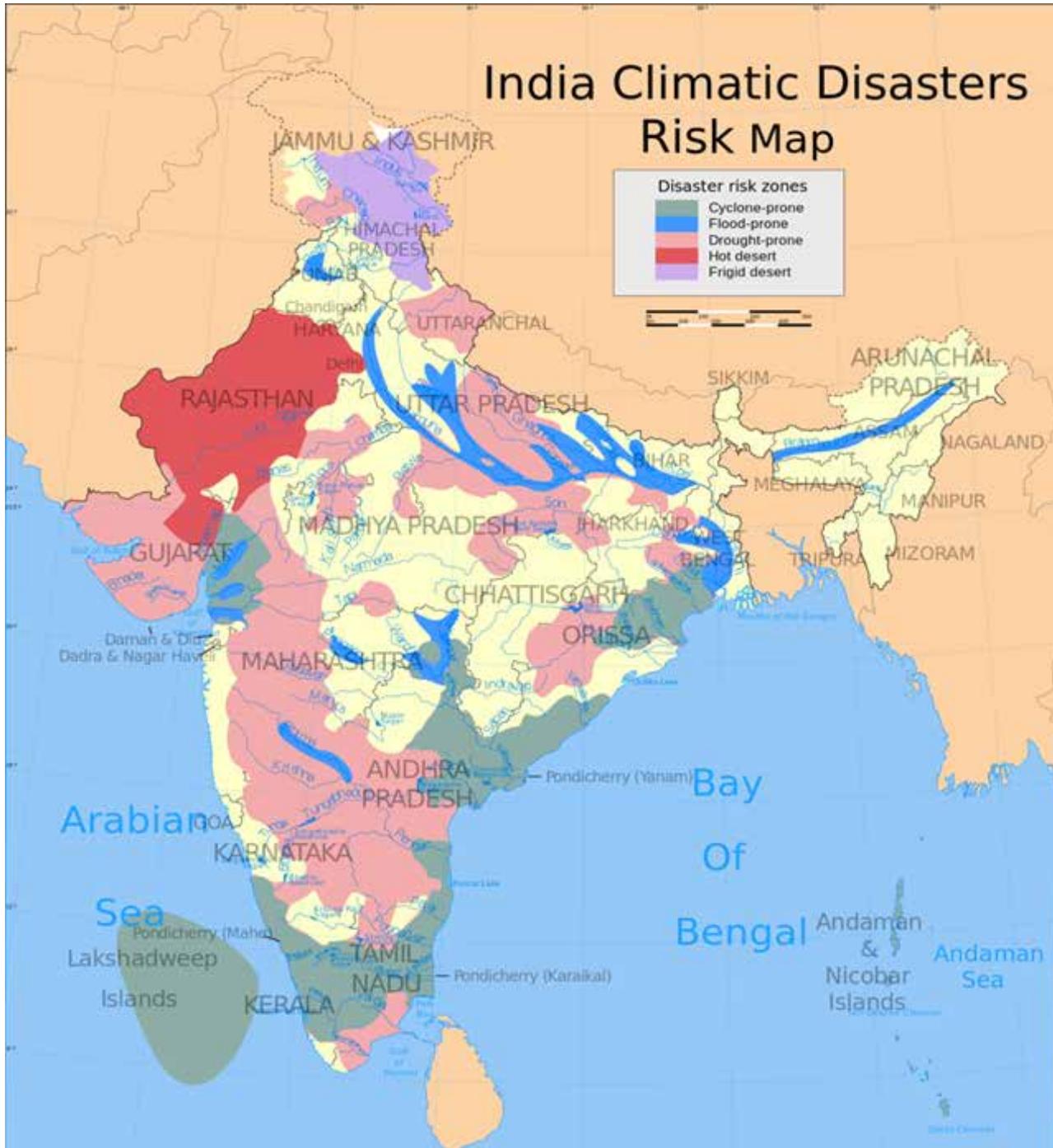
The response to Disasters and climate change, including both including, management and resilience, involves multiple stakeholders, ranging from institutional, societal, organizational, community and individual. It is essential to address capacity development at all these levels. The capacities of institutions at various levels, national, state and local must be increased by divulging necessary information, strengthening finance mechanisms and financial risk management, as well as training the human resource for emergency deployment. Societal, community and individual capacity need to be gauged to realize the lengths of efforts required for developing coping mechanisms and widely disseminating information. Governments must engage private stakeholders to augment the capacity of their preparedness activities and relief work

## Annexures

### 9.1. Annexures-1

Disasters	Total Number of Occurrences	Affected Indian States	Recurring States	Total number of Affected Indian States
Heat Waves	45	Andhra Pradesh, Jharkhand, Maharashtra, Orisha, Telangana, West Bengal, Uttar Pradesh, Maharashtra, Kerala, Chattisgarh	Maharashtra, Jharkhand	10
Cold Waves	30	Himachal Pradesh, Madhya Pradesh, Rajasthan, Bihar, Uttar Pradesh, Maharashtra, Jharkhand	Madhya Pradesh, Rajasthan, Maharashtra	7
Snowfalls	66	Jammu & Kashmir, Uttarakhand, Uttar Pradesh, Maharashtra, Madhya Pradesh, Rajasthan, Kerala, Chattisgarh, West Bengal, Karnataka, Odisha	Jammu & Kashmir	11
Thunderstorms and Squalls	236	Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Karnataka, Odisha, Tamil Nadu, Telangana, Uttar Pradesh, West Bengal, Bihar, Maharashtra, Rajasthan, Kerala, Madhya Pradesh	Uttar Pradesh, Jharkhand, West Bengal, Karnataka, Assam, Chattisgarh, Bihar	17
Floods	225	Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Manipur, Meghalaya, Nagaland, Odisha, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttar Pradesh, Uttarakhand, West Bengal, Madhya Pradesh, Andhra Pradesh, Mizoram, Punjab	Jammu & Kashmir, Rajasthan, West Bengal, Karnataka, Odisha, Assam, Arunachal Pradesh, Uttar Pradesh, Manipur, Maharashtra, Tamil Nadu, Uttarakhand, Gujarat	26
Gales	40	Arunachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Tamil Nadu, Maharashtra, Bihar, Rajasthan	Jammu & Kashmir, Karnataka, Kerala	8
Dust Storms	12	Rajasthan, Uttar Pradesh, Madhya Pradesh	Rajasthan	3

9.2. Annexure 2



Source: <https://commons.wikimedia.org>













**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.



The Building, Safe, Accessible and Inclusive Indian Cities (BASiIC) programme of the National Institute of Urban Affairs (NIUA) was formulated in September 2019. The programme aims to support Indian cities towards ensuring universal access and strengthening the institutional capacities to be sensitive to the needs of persons with disabilities and other marginalised groups. It endeavours to promulgate the tenets of accessibility, inclusion, and safety in the ethos of urban planning and design. The programme is being implemented with support from the Ministry of Housing and Urban Affairs (MoHUA).

# Empower through inclusivity

#BASiIC\_NIUA  
#inclusionmatters  
#AccessibleCities  
#InclusiveCities  
#CitiesforAll  
#EmpowerthroughInclusivity