Child Friendly Smart Cities as Urban Play-Lab for Children

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Abstract: *This paper describes the features that make a city "child friendly", and the measures needed to underpin them. It explains how the concept of child friendly cities developed, and its key role in ensuring the implementation of the Convention on the Rights of the Child in each city. India as a brief case study. "A Good City" is one in which children can grow and develop to the extent of their powers; where they can build their confidence and become actively engaged in the world; yet be autonomous and capable of managing their own affairs." Kevin Lynch, Growing Up in Cities, 1977 "Children are not only our future, they are our present and we need to start taking their voices very seriously." Carol Bellamy, Executive Director of UNICEF. "One common measure of how clean a mountain stream is to look for trout. If you find the trout, the habitat is healthy. It's the same way with children in a city. Children are a kind of indicator species. If we can build a successful city for children, we will have a successful city for all people." Enrique Penalosa, Mayor of Bogota (1994-1998)*

Keywords: Child Friendly Cities, Smart Cities, UNICEF, India, Urban95

1. Introduction

Research shows that children's early experiences have effects that last a lifetime. Increasing evidence from the fields of public health, neuroscience, and economics proves that investing in early childhood development can translate to better health, greater ability to learn and work with others, and higher incomes in adulthood. Such investments lay a crucial foundation by ensuring that pregnant women, babies, and toddlers have access to proper nutrition and healthcare, protecting young children from neglect and violence, and giving babies and toddlers ample opportunities for early stimulation, care, and learning. Cities play an critical role in these early experiences. They can be wonderful places to grow up in, rich with opportunities for learning and growth. Yet urban environments can also pose challenges for young children and their caregivers, and especially for the most vulnerable among these. To make urban neighborhoods work for young children and their families, reliable and comprehensive data is paramount.

There are two points of view on the relationship between children and the urban neighborhood, whether one considers the position of children in urban public space or the position of this environment in children's socialization. Leaving aside abstract images of the ideal neighborhood for children, urban public space should also be considered as a co-educator. But it has much to do with planning. The consequences on children's lives of not planning for the future are clear. If cities do not address ways of growing in sustainable ways, and provide adequate infrastructure to support population growth, the impact will be the continuance or exacerbation of large-scale poverty and urban slums. It is for these reasons that action based on the principles of sustainable development and children's rights has been launched by the United Nations. It is, for these facts, with time, the mass participation is often laid stress upon. Promoting the participation of children and young people in decision-making and development and as active contributors to everyday family and community life has become a central part of policy and program initiatives in both majority and minority worlds.

In an inclusive, transparent, responsive system of governance, all citizens are given due consideration, regardless of age, ethnic origin, income, gender or ability. The concept of "child friendly cities" has been developed to ensure that city governments consistently make decisions in the best interests of children, and that cities are places where children's rights to a healthy, caring, protective, educative, stimulating, non discriminating, inclusive, culturally rich environment are addressed. A child friendly city has a system of governance committed to the full implementation of the UN Convention on the Rights of the Child. It falls on city governments to translate the commitments made at the national level by states ratifying the Convention on the Rights of the Child into action at the city level – and thus also to form a key component of national plans of action for children. It has particular relevance to the follow-up to the UN Special Session on Children (New York, 8–10 May 2002), whose document, *A World Fit for Children*, explicitly commits member nations to develop child friendly communities and cities, and to involve mayors and municipal authorities as primary partners in achieving the new goals set for children. Children are recognized as citizens who have a right to express their opinions and have their views given due consideration. This requires most cities to make institutional, legal and budgetary reforms and to develop a strategy to transform the living environments of children at the family, neighborhood and city levels. The concept of a child friendly city is not based on an ideal end state or a standard model. It is a framework to assist any city to become more child friendly in all aspects of its environment, governance and services. UNICEF set up the Child Friendly Cities Secretariat at its Innocenti Research Centre in Florence in September 2000, to support city authorities in developing such frameworks and to support the many people working in different cities to change practices unfriendly to children into systems where children matter. Thus, the Secretariat is partly in the business of the possible: dealing

with what cities in all regions of the world can do to make their living environment more fit for children. But it also joins hands with partners seeking an ideal of democracy, justice and peace, where children can fulfill their rights as citizens. Between a present made of innovative efforts (often battling against formidable obstacles) and a future where all articles in the Convention on the Rights of the Child are fully realized, the concept of child friendly cities is being developed by a growing movement of adult and child citizens. Planners, philosophers and community organizations the world over have long sought to develop better cities – but this is a task for children as well. A child friendly city is not only a good city for children but also a good city according to and by children

2. Why Child Friendly Cities?

The call for child friendly cities is rooted in the recognition that cities are home to an increasing proportion of the world's children. Yet, most cities are largely unfriendly to children and have governments that take few steps to address children's needs and assess children's priorities. By 2002, close to half the world's children lived in urban centres, most of them in low- and middle-income nations. Although poverty is commonly perceived as predominantly a rural phenomenon, a large and growing proportion of the world's poorest and most deprived groups live in urban areas. Despite the growing proportion of the world's children living in urban areas, most city authorities remain ill-equipped to make their cities more child friendly. In low- and middle-income nations, many city children live with their whole families in one-room tenements or shacks, often without the most basic services or supports. Many are threatened by traffic, violence and pollution. Children in wealthier communities often live in a world rigidly organized by adults with little opportunity for playing and socializing freely with their peers. Young citizens usually lack opportunities for expressing their very special needs and aspirations and for proposing alternatives from a child perspective.

2.1 The mechanism of a Child Friendly City

It is an attempt to define literature and interconnect it with real life contexts. It has most of the important parameters concerning children including safety and security, health, education, mobility, etc. Their participation and perspective is also taken into account. The need and importance of Child Friendly Cities is highlighted through the following heads.
- Transformative and empowering inclusiveness
- City planning policies
- Planning practice
- The Media
- Implementation
- Transportation and Safety
- Public and Play Spaces
- Children Perspective

2.2 Transformative and Empowering Inclusiveness

Transformative and empowering involvement of children in planning and decision making processes could enable development of capacities of children in respect of awareness building, critical thinking and collective problem solving. Children could be made compulsory and collaborative stakeholders in decision making processes concerning their welfare and development. Governments need to make adequate resource commitments and budget provisions for children. Setting of indicators, benchmarks and baselines would help turning advocacy to action. Equitable distribution of civic amenities including a focus on underprivileged children is equally important. All of this is possible through interventions in the form of policies.

2.3 City Planning Policies

Planning policies emanate from diverse sources and have multiple impacts on children as on youth and elders. Making cities children friendly must integrate issues facing children in city planning policies. While participatory processes can only allow engagement of children at local levels in order to understand their needs, post occupancy evaluation of living environments, particularly by involving children in such evaluations, is crucial for sustaining these gains. Urban planning has a direct impact on children and their role in urban prosperity and development.

2.4 Planning Practice

Involvement of children in planning practice could be achieved through a three dimensional approach. First, research on earlier process is important. Second, the need of advocacy and training cannot be denied. Third, it is important to create the type of change that we need. It will not only create Child Friendly Cities for the present, but also ensure livability (points towards sustaining the Child Friendly Cities) of generations to come. Child friendly planning practices are required to be located at the center of urban agenda. Partnerships with organizations working for children could help in successful fulfillment of. Investment in early childhood care and development is also essential.

2.5 The Media

Media could play a crucial link between children and decision making bodies. It can be used as an important tool to report issues relating to living conditions of children, especially correlation with their health and well-being. It induces safety and security through awareness. Technological advancements and educational integration may bring about many socio-economic changes. Approach of media is generally a solution-oriented approach. Forums for children to take their perspectives can be created. Sanitizing programs, children summits play an important role in child's safety.

2.6 Implementation

Implementation is actualization of policy intents on ground. It induces a relationship between accessibility, sustainability and adaptability. Providing physical and social infrastructure is not enough; making self-sustaining communities is important. It has long term impacts. Community based planning is important. It is not just limited to caste, gender,

race or religion, age also plays a significant role. The implementation of plans has got a relation with age integrity. Including children in plan formulation and after implementation, gaining feedbacks from them is important.

2.7 Transportation and Safety

Child friendly infrastructure footbridges, subways, traffic signals, street lights, signals, designated non-motorized lanes, proper road markings, route maps etc. and inclusive transportation system plays important role in Child Friendly Cities. Inclusion of child safety is necessary in development plans. Accessibility for physically disabled children is another topic of concern. Children should be identified as one of the significant user groups. Creation of accessible amenities for children is important. Mobility of female children is greatly important.

2.8 Public and Play Spaces

Public sphere generally and public spaces particularly play important role in promoting children's well-being, safety, learning and social development. Lack of spaces, traffic levels large use of motorized vehicles and also neglect of traffic rules, concerns about safety has reduced opportunities for children. Creation of imaginative, innovative, stimulating, accessible, safe and secure spaces for children is a topic of concern -because it is difficult: to gain a common consensus and ultimately create a space that achieves the said objectives. The prevailing notion that land is precious and hence cannot be dispensed for children has led to a lack of usable space in urban areas. Auditing of spaces is important. Some spaces are meant and registered to serve a particular task, for example a park, but are used as something else, for example parking. So some level of auditing and recovery of land that serve the needs of children is needed. Distinction between open spaces and play spaces plays a pivotal role in overall development of children. Identification of unused spaces can help in augmenting land stock of open spaces for children. Access and safety issues need to be considered while designing such spaces.

2.9 Children Perspective

Children being a distinct stakeholder group (Such indication being technically right), their needs for water and sanitation, nutrition, housing, early childhood care, safety and security, infrastructure for education, health and overall development are crucial to their well-being. Many of the important aspects cannot be quantified but in reality, play a significant role in creating better environment for children. Bridging the gap between institutions and real life by linking the infrastructure and amenities meant for children is a small step towards desired outcome. The following table illustrates the indicators of the local environment through a child's eyes. Various aspects have been taken care of and are included. Environmental changes, communal disputes, crimes, cultural adaptations are significant events that play an important role in development of young minds. Care and support enables children to contribute positively towards development.

Table 1: Indicators of Local Environment

Source: child friendly cities by Aakriti

	Social Qualities	Physical Qualities
Positive	Social integration	Green Areas
	Safety and security	Basic services
	Community identity	Gathering places
	Sense of solidarity	Freedom of movement
	Opportunities	No physical dangers
Negative	Social exclusion	Unclean spaces
	Political powerlessness	Inadequate essential services
	Racial tension	Heavy traffic
	Fear of harassment and crime	Geographic isolation
	Boredom	No activity setting

To note, though the above mentioned indicators are defined by adults, not children. Of course, we may argue that adults do not act in bad faith or wish of any ill for children. This is an example of a paternalistic approach to children that predominates in urban planning. According to Eliana Riggio, "Behind this paternalism is a fairly simplistic perspective of childhood and some very widely held beliefs – for example, the notion that adults have the right and the responsibility to make decisions for children, to decide in their stead. We justify this thinking by referring to the lack of experience and the limited perspective young people may have with respect to urban issues."

3. The child friendly cities initiative

Over the past decade, a Child Friendly City initiative has developed to provide an alternative to how cities have been conceived and built by and for adults. In 1992, the Mayors Defenders of Children initiative was launched in Dakar, Senegal, as a way of involving municipal authorities in implementing child rights. In the context of the decentralization processes underway in many countries, Mayors Defenders of Children mobilized child-focused activities at the local and national levels, generating models for implementing child-rights-oriented programmes by municipal governments. In 1996, the UN Conference on Human Settlements, Habitat II, in Istanbul stressed that the well-being of children is the ultimate indicator of a healthy society and that child friendly cities are also cities that are better for all age groups. The notion of a child friendly city evolved from the meeting as a system of governance committed to fulfilling the rights of children. Since then, a network of child friendly municipalities has continued to grow, with many cities and even some countries undertaking initiatives. Since Habitat II, the child friendly cities partners have come together in Accra, Ghana in 1977 for the international workshop *Towards African Child Friendly Cities* and for four major international child friendly city fora in Italy from 1997 to 2000. These events helped to build a network of people and institutions interested in child friendly cities and to spread information on innovations taking place in support of urban children. In September 2000, the International Secretariat for Child Friendly Cities (CFC Secretariat) was set up to support this evolving network and to provide a common point of reference. Besides UNICEF, the founding partners were the Italian Committee for UNICEF, UN HABITAT, the Italian government and the Istituto degli Innocenti (a partner organization of the government of Italy in the Child Friendly Cities programme.)

Another critical set of partners were the local authorities and mayors who had participated in Mayors as Defenders of Children programmes.

The CFC Secretariat provides a common framework for child friendly cities and supports the growing network of city authorities and other groups involved in child friendly initiatives. Prior to 2000, networking had been informal, with no one agency responsible for maintaining the links over time. The Secretariat's mandate is to support networks of child friendly mayors and municipalities and to gather information, carry out research and distil lessons about child friendly cities worldwide, making these available to policy makers and other partners. Since its formation in September 2000, the CFC Secretariat has:

- Carried out field research on innovations generated by local governance systems committed to fulfilling child rights;
- Developed a specialized web-based child friendly city database;
- Established operational links and shared know-how with local child friendly city initiatives and regional networks and other critical players;
- Built contacts with hundreds of interested parties;
- Supported the development of technical and advocacy publications; and
- Promoted child friendly cities in local and international for a, including the UN Special Session on Children where participating child friendly mayors called for a strengthened child friendly city movement worldwide.

Documentation on existing innovations helps to inspire other local players. A conceptual framework is also emerging from the analysis of field level experimentation which helps to focus on specific child-rights-oriented activities and methods. Data on child participation are available in particular to children who contact the CFC Secretariat information system seeking ideas on how they can contribute to improving their living environments. In selected cases, the CFC Secretariat is involved directly with local processes leading to child friendly policy and programme development. It maintains relationships with many child friendly city initiatives and data are collected as these evolve. The Secretariat also helps document and publicize successful action by cities, ensuring a platform for experience sharing. Inspired policy makers and successful implementers are involved by the Secretariat in meetings and exchange visits to help with the cross-fertilization of ideas and methods. More generally, the Secretariat seeks to influence the debate on governance by bringing a child's perspective to influential regional and international fora.

In the wake of the U.N. General Assembly's adoption of the Convention on the Rights of the Child (CRC) in 1989 and its subsequent ratification by nearly all nations, a rights-based approach to creating child-friendly cities gained ascendancy, stimulated by a UNICEF-led initiative that suggested a framework of nine building blocks (see Table 1). Rights-based approaches shift the policy focus away from problems and deficits and instead treat children and youth as capable participants and partners in decision-making. In this

perspective, found most often in the context of urban planning and design, children's rights extend to both their access to urban resources that affect their life chances (rights *in* the city) and to opportunities for meaningful participation in urban development (rights *to* the city).

Table 2: CFC Building Blocks and their Block Name Definition

Children's Participation
Promoting children's active involvement in issues that affect them; listening to their views and taking them into consideration in decision-making Processes
A Child Friendly Legal Framework
Ensuring legislation, regulatory frameworks and procedures which consistently promote and protect the rights of all children
A City-wide Children's Right Strategy
Developing a detailed, comprehensive strategy or agenda for building a Child Friendly City, based on the Convention
A Children's Rights Unit or Coordinating Mechanism
Developing permanent structures in localgovernment to ensure priority consideration of children's perspective
Child Impact Assessment and Evaluation
Ensuring that there is a systematic process to assess the impact of law, policy and practice on children – in advance, during and after implementation
A Children's Budget
Ensuring adequate resource commitment and budget analysis for children
A Regular State of the City's Children Report
Ensuring sufficient monitoring and data collection on the state of children and their rights
Making Children's Rights Known
Ensuring awareness of children's rights among adults and children
Independent Advocacy for Children
Supporting non-governmental organizations and developing independent human rights institutions – children's ombuds people or commissioners for children – to promote children's rights

Source: UNICEF (2004)

4. What is a child friendly city?

Cities have a greater potential for services and opportunities than rural areas. Resource mobilization is easier, information is readily available, and high population densities increase the opportunity for efficiency and economies of scale in service delivery. But this huge potential needs to be harnessed by an effective governance system. In a child friendly city, good governance entails giving visibility to the child in the city development agenda and granting children an opportunity to participate in the decision-making process. From the perspective of the Convention on the Rights of the Child, a child friendly city pursues its obligation to realize the whole range of human rights for all of its children.

According to UNICEF (2001a) a child friendly city requires basic elements that ensure it is able to fulfill the principles of the Convention on the Rights of the Child. According to Newell, "The aim is to improve the lives of children by recognizing and realizing their rights and hence transform for the better urban societies today and for the future.

Building child friendly city is a practical, not theoretical, process which must engage actively with children and their real lives.

4.1 Characteristics of a child friendly city according to the UNICEF report

- Good access for all children to affordable, quality basic health services, clean water, adequate sanitation and solid waste removal;
- Local authorities to ensure that policies, resources allocations and governance actions are made in a manner that is in the best interests of the children and their constituencies;
- Safe environments and conditions that nurture the development of children with opportunities for recreation, social interaction, psychological development and cultural expression;
- A sustainable future under equitable social and economic conditions, and protection from the effects of environmental hazards and natural disasters;
- Children have the right to participate in making decisions that affect their lives
- Special attention is given to disadvantaged children, such as those who are living or working on the streets, sexually exploited, living with disabilities or without adequate family support;
- Non-discrimination based on gender, ethnic background or social or economic status

The characteristics of child friendly cities further point out need of providing basic rights to children. A Child friendly city is a platform to take forward the agenda of the child rights in both the developing world and the industrialist world. According to the CFCI, "A Child friendly City is a local system of good governance committed to fulfilling children's rights". It does this by being actively engaged in fulfilling the right of every young person to:
- Influence decisions about their city
- Express their opinion on the city they want
- Participate in family, community and social life
- Receive basic services such as health care, education and shelter
- Drink safe water and have access to proper sanitation
- Be protected from exploitation, violence and abuse
- Walk safely in the streets on their own
- Meet friends and play
- Have green spaces for plants and animals
- Live in an unpolluted environment
- Participate in cultural and social events
- Be an equal citizen of their city with access to every service, regardless of ethnic origin, religion, income, gender or disability

In practical situation, children's right can be reflected in policies, plans and everything beyond. In a Child Friendly City, considering an ideal situation, children are the active agents in any form of decision making process. Their voices and opinions are considered and they have the power to influence major decisions which have an ultimate impact on them. Worldwide, the CFCI is adapted to suit different

cultures and contexts. Various recurrent themes have emerged internationally. These include:
- Child-friendly urban design
- Natural environment
- Independent mobility
- Health and well-being
- Open spaces and recreation
- Children's participation
- Educational outcomes

CFCI provides cities and other systems of local governance (such as rural administrative structures) with practical guidance in applying child rights as a key component of their goals, policies, programmes and structures. CFCI was launched globally in 1996, building on an earlier Unicef programme from 1992 known as the Mayors Defenders of Children Initiative. CFCI design can be an opportunity to respond to particular national or local child rights concerns such as those reflected in the Concluding Observations of the Committee on the Rights of the Child on States Parties' Reports or on child rights situation analyses.

5. Child Friendly Smart Cities in Indian Scenario

5.1. Children in Indian context

India is home to 472 million children (0–18 years) comprising 39 per cent of the country's total population. The Constitution of India accords a special status to children as deserving of special provisions and protections to secure and safeguard the entitlements of 'those of tender age'2. As many as 128.5 million Indian children reside in urban areas. Children constitute 34 per cent of the urban population. Every fourth child in India (27.4 percent of total children) lives in urban areas. Also, in comparison to 2001, the number of children (0-6) in urban areas has increased by 10.3 percent while in rural areas it has decreased by 7 percent. This makes urban children and youth a very important segment, deserving focused attention.

The Forgotten Voices: the world of urban children in India report compiled by PwC India and Save the Children does a reality check on the situation of urban children as varying patterns of migration to cities across India make them increasingly vulnerable to a variety of risks.There is also a need to replicate child-friendly programmes through child participation and redesigning of long term urban development plans through a child's lens. Urban governance: For inclusive cities, a child-led planning process is essential since it allows children to provide solutions to the challenges that they encounter .The vision of Smart Cities is driving the urban development policy of the government. A city can never be 'smart' if the residing children do not feel safe and secure. Inclusive growth calls for a collaboration between the perspectives of children and adults. Citizenship should not be limited to adults, it must include the voices and aspirations of young children as well. The 2011 Census of India suggests that 66 percent of all statutory towns in India have slums. The harsh realities of urban life impact children and particularly, the urban poor in several ways. These

include poor behaviour and academic outcomes, high risk of diseases, chronic malnourishment, impaired physical development and skills, deprivation of parental care etc. Early exposure to such harsh experiences affects young children adversely.

5.2 Child friendly smart cities initiatives in India

The National Institute of Urban Affairs (NIUA) is undertaking a programme on building Child-Friendly Smart Cities (CFSC) to promote policies and practices to make Indian cities child friendly within the urban agenda of building smart cities. NIUA has partnered with the Bernard van Leer Foundation, a Dutch grant-making organisation, to develop a programme of activities over the next three years, focused on interventions and advocacy regarding urban planning and management in India addressing the needs of children. It is the first time an initiative like this, which looks at children's needs in a comprehensive manner through the lens of urban planning and design across four key theme areas (Public Health, Safety and Security, Transportation/ Mobility and Living Conditions) is being taken up in the country. Under their Urban 95 initiative to build Child Friendly Smart Cities (CFSC) in India within the urban agenda of building smart cities. The goal of this initiative is to mainstream the needs of children in the urban policy and planning framework of Indian cities..

Independent studies conducted by Bernard van Leer Foundation (BvLF) report is part of the National Institute of Urban Affairs' (NIUA) Child Friendly Smart Cities (CSFC) programme to include the needs of children in the urban policy and planning framework of Indian cities. It has shown that young children are the most vulnerable section and need immense nurturing for their development. The study shows that, "A child's brain doubles in size in the first year of life, and a young child's brain makes 700 new neural connections every second. As children grow older, these neural connections are 'pruned' to make brain circuits more efficient" .Hence, it is imperative for young children to grow up in surroundings that acts as a catalyst to live a healthy and secure city life. In light of the global trend of increasing urbanisation, these Smart Cities need to emerge as spaces that cater to and nurture the varied needs and aspirations of diverse categories of people living in them--including children, differently-abled persons and others. Children living in cities are imperilled to different spaces in their childhood. Inimitable and distinctive needs of children such as easy access to reach taps and switches, community toilets that are not in secluded areas or simply grass on play grounds and open spaces are few parameters that need to be stressed upon.

Guidelines and suggested measures like provisions for all-weather, disaster-proof, well ventilated and spacious housing must be taken into account. These houses should have adjustable and multi-purpose common areas for stimulating a child's need for exploration, belonging and identity. Provisions for roads to have child-friendly footpaths, cycle tracks, sidewalks etc. are ways to foster smarter ways to use the city's visible resources. Innovative measures like maps, frequency of service information at public transport stands,

improving access to public transport systems by setting bus stops in close proximity of a slum can be taken up by statutory government bodies. While designing 'open play spaces' for children, access and safety of children has to be part of the policy framework. Smart Cities must also be pliable to include and promote effective early childhood services by making early learning centres in every neighbourhood with accreditation and quality standards, parent support programmes etc, especially in poor neighborhoods.

Merely providing these facilities would not suffice; children should play a compulsory and collaborative part in urban planning and decision making, city master plans, smart cities programmes and other urban development programmes should have children-centric components. The choices city leaders make now will have a direct and undeviating impact on how the process of child development unfolds and what contribution they make for the country. Propelling action to bring holistic difference in the lives of 41.2 million children who thrive in urban areas in India can prevent the risk of stifling their aspiration to build world class urban centres. Cities in India are ripe for policies, design interventions, and services that seek to improve early experiences and opportunities for their youngest residents. We hope that the momentum generated through these studies and the CFSC initiative will continue to advance healthy, prosperous, and vibrant Indian cities where babies, toddlers, young children, and their families can thrive—ensuring our youngest citizens a good and fair start in life.

Though India has a robust legislative and policy framework for securing child rights and fostering development of children, there hasn't been significant improvement in the living condition of children in urban areas. This is mainly due to the fact that the existing policies and legislative framework primarily focus on child rights and social aspects of children's development like health and education but have not given much significance to the living conditions and urban environments in which the children live. Children are among the most vulnerable members of any community and they disproportionately suffer the negative impacts of poor urban planning as they are still in a growing stage. In spite of this, the policy and legislative frameworks for children don't give adequate significance to improving their living condition and have rarely been the focus of any urban development policies and programmes.

Currently, India does not have an established model of Child-friendly Cities (CFC) that relates urban planning and urban development to outcomes in children's development. In light of this absence, an exhaustive list has been conceived as a starting point to develop indicators that can be used to assess the impact of urban development on children. Through a literature review, the document explores linkages between various aspects of urban living and their impact on children. Based on these linkages, the research attempts to draw attention to key indicators that can point to gaps in urban planning and consequently decision-makers can find ways to fill those gaps. It further provides scenarios on how some of these indicators could help in measuring impacts of

urban planning and other local development practices for achieving child-friendly outcomes.

Though the current state of development of Indian cities clearly shows that urban life can be harsh towards the most sensitive and vulnerable inhabitants i.e. children, it need not continue to be the same. The current urban development agenda in the country provides a great opportunity for creation of better cities for children. Child –friendly city planning is not just a munificent concept but is actually feasible and pragmatic. This has been proven by Bhubaneswar city which showcased a vision to become a child–friendly city and thereby won the national 'Smart Cities Challenge', topping the list of 20 Smart Cities under the Smart City Mission of Ministry of Urban Development, Government of India. Another city Pune, which is also part of the top 20 selected Smart Cities has envisioned the creation of a safe city for children in its Smart City proposal. Cities like these have highlighted the fact that it's essential to put children at the heart of the planning and decision–making framework to develop more liveable cities. Urban areas offer great potential and opportunities to secure children's rights and accelerate progress towards the Sustainable Development Goals (SDGs). Cities need to look beyond the broad statistical averages and address the specific needs of children belonging to different age groups or strata—the differently-abled, homeless, children living in slums, migrant children etc. to improve living conditions for all children. Stakeholders from all walks of urban life need to make collective efforts and pool resources and energies to create better cities for children—ultimately making cities better for everyone.

6. India's First Child Friendly Smart City- Bhubaneswar

When India's "smart cities" mission announced its ranking of applicants for support in 2016, Bhubaneswar – the capital of the Indian state of Odisha – topped the list. Bhubaneshwar was later named a finalist in the World Smart City Awards. The Foundation has been working with the city government and India's National Institute of Urban Affairs to build the capacity of urban planners to reflect young children's needs as the city regenerates and grows

6.1 Growing up in an urban India

According to the 2011 census, 75,237 children aged under 6 lived in Bhubaneswar – but the city is growing quickly, like many in India, leading to chaotic growth concentrated on informal, slum settlements with inadequate infrastructure.
Problems faced by young children in the city of Bhubaneswar include open defecation; parks not being accessible; lack of footpaths, streetlights, and safe places to cross roads; and children in some neighbourhoods needing to use public transport, which is not child-friendly, to get to the nearest school.

6.2 Planning to make better cities for kids

Bhubaneswar in India is aiming to be the country's first official 'child-friendly city' within the fast-growing Urban95 global network. This east coast city wants to be part of a movement which poses a bold but simple question to city planners: 'If you could experience a city from 95 centimetres high – the height of a three-year-old. Bhubaneswar became in 2016 one of the first partner cities for the Foundation's Urban95 initiative.In 2017 the city completed the mapping of neighbourhoods in 57 out of its 67 wards, gathering data on the number of children in each ward and the services available to them, such as anganwadis, schools, hospitals, health facilities, parks and access to public transport. It initiated the construction of six new parks, scheduled for completion in 2018, and the redesign of four informal settlements.

BvLF India representatives introduced the foundation and explained how it supports child-friendly initiatives across the world including the Bhubaneswar Smart City project, in which pilot and cost-effective innovations would be included in public space, mobility, data-driven decision making and parent coaching. There were also discussions on suggested changes to landscapes and interventions in parks to make them more child-friendly, interactive, participatory and adaptive. This included concepts like incorporating open library at public spaces, splash pool, natural mounds, tree stumps and clay modelling and how to introduce them to different open spaces and parks.The Child-Friendly Smart City Centre is now giving technical and building support to urban planners and other city workers, helping to draw up guidelines, regulations and examples of best practice. Projects include 'retro-fitting' city parks to be more child-focused, mapping where children and families live in Bhubaneswar and what is available to them, and exploring how to improve traffic management around schools.

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stumps and clay modelling and how to introduce them to different open spaces and parks.The Child-Friendly Smart City Centre is now giving technical and building support to urban planners and other city workers, helping to draw up guidelines, regulations and examples of best practice. Projects include 'retro-fitting' city parks to be more child-focused, mapping where children and families live in Bhubaneswar and what is available to them, and exploring how to improve traffic management around schools.

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7. India towards child friendly smart cities from 95 centimeters high

The main aim is to look at children's needs in a comprehensive manner through the lens of urban planning and design. The idea is to examine and analyze existing information on children in urban India across the following thematic areas: (as defined in "Status of Children in Urban India" GOI-2016)

- Demography
- Health, education and nourishment status
- Living conditions
- Mobility, safety and security
- Legal provisions for child development

To fight for creating child-friendly practices, it becomes imperative to look at issues such as children's participation in decision making, child-friendly urban planning frameworks, and safety standards for children, guidelines on quality of built and spatial environment and provision of equal opportunities for the differently-abled. So it implies that for moving towards the positive side, the negative side must be identified. Key areas of concern have been identified for determining future areas of intervention for creating child friendly cities. Also an attempt to establish the relevance between children's needs and urban development by addressing specific questions has been made, these questions include:

- How has the lack of infrastructure and basic services affected the development of children in India?
- What are the factors affecting children due to poor planning practices?
- How inadequate open areas and lack of opportunities in education affecting children?
- Do the children feel safe and secure in their natural environment?
- What obstacles need to be cleared to make Indian cities friendly for children?
- What are the key aspects regarding which interventions can be made for creating cities for children?

Keeping in mind children' perspective and the arising implication, the further study tries to elaborate the issues that hampering the growth of children and posing as barriers in creating child friendly cities. Further some of the arguments are also raised which highlight the implications of the whole scenario. A comprehensive approach is adopted for achieving the objectives. The sections below define the basic issues of children and try to identify the most vulnerable group of children. There is a separate section that defines the issues with respect to study on concerned focus groups too.

Though there is enough of legislative and policy framework for securing child rights and fostering development of children, there hasn't been significant improvement in the living condition of children in urban areas. This is mainly due to the fact that the existing policies and legislative framework primarily focus on child rights and social aspects of children's development like health and education but have not given much significance to the living conditions and urban environments in which the children live. Moreover, it happens many-a-times that even though policies and provisions address the issues of children, they fail to involve children in formulating them, owing to the paternalistic approach.

If only adults were as optimistic as children: "The children's view of the city is optimistic and full of life, open to the future while firmly rooted in the present. A sense of the future that boldly demands to be listened to and dialogued with. A tenacious feeling of optimism that claims the right to be part of the dialogue in giving shape and identity to the city." (Davoli and Fari 2000: 18)Children are the citizens of tomorrow. They are the future of our nation. And like if the vision of an efficient city can be a necessary condition for making smart cities, then it is imperative to state that child-

friendly planning and governance should also be a condition for making smart cities

References

[1] Child Friendly Smart Cities. https://cfsc.niua.org/content/articles

[2] Child friendly cities article by Aakriti.https://planningtank.com/city-insight/child-friendly-city-international-initiatives

[3] Child Friendly Cities and Communities ,UNICEF,UK. https://www.unicef.org.uk/child-friendly-cities/new-creating-child-friendly-cities-communities/

[4] https://www.dnaindia.com/analysis/standpoint-will-the-100-smart-cities-also-be-child-friendly-2084088

[5] https://www.childinthecity.org/2016/07/04/india-explores-the-city-as-urban-play-lab-for-children/

[6] https://www.childinthecity.org/

[7] https://www.childinthecity.org/2018/05/31/bhubaneswar-joins-urban95-child-friendly-city-movement/

[8] Child-Friendly Cities in a Globalizing World: Different Approaches and a Typology of Children's Roles, Author(s): Willem van Vliet— and Lia Karsten

[9] Child friendly cities: good governance in the best interests of the child by Eliana Riggio,*Environment and Urbanization* 2002

[10] Status Of Children In Urban India, Baseline study – 2018,second edition

[11] Status Of Children In Urban India, Baseline study – 2016

[12] Bernard van Leer Foundation | Annual Report 2017

[13] L. Chan, E. Erlings, S. Mizunoya and H. Zaw. (2016). *A City Fit for Children: Mapping and Analysis of Child Friendly Cities Initiatives*. The Chinese University of Hong Kong, Centre for Rights and Justice Occasional Paper Series, Paper No. 5

[14] Indicators for CHIld friendly Local Development (I - CHILD)

[15] COMPENDIUM OF BEST PRACTICES OF CHILD FRIENDLY CITIES, 2017

[16] UNICEF Child Friendly Cities and Communities Handbook,April 2018

[17] https://bernardvanleer.org/cases/indias-first-smart-and-child-friendly-city/

[18] https://www.savethechildren.in/news/building-child-friendly-cities

[19] https://www.archdaily.com/789211/urban95-challenge-designing-cities-that-support-healthy-child-development

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