

Design for All: Employing Local Standards to Empower the Disabled People in the City Spaces of Abu-Nuwas Garden, Baghdad, Iraq

Abstract

Nowadays, cities are faced with the challenge of making their urban environments safe, equitable and inclusive for all. Design for all as a concept has emerged as a key solution to this challenge. It incorporates principles of universal design, accessibility and usability as approaches to ensure that people of different ages and abilities can access, use and enjoy city spaces safely and comfortably. By creating an inclusive urban environment through design for all, cities can ensure that everyone has access to the same opportunities regardless of their background or physical ability. Design for all (DFA) creates and improves participation of disabled people in urban public spaces by employing solutions that offer dignity, while responding to their abilities, needs and expectations.

One way to implement DFA is to establish a local standard for accessibility and inclusion within the spaces of a city. This could be developed through a participatory process that involves inputs from people with disabilities, disability rights organizations, urban planners, architects, and other stakeholders.

This paper examines this issue by employingas a research methodology.

It concludes that.....

The local standard would serve as a guide for the urban planners and architects in designing accessible and inclusive urban spaces. It would also provide a framework for evaluating the accessibility and inclusiveness of existing urban spaces, and for identifying areas where improvements are needed.

By establishing a local standard for accessibility and inclusion, cities can promote the empowerment of disabled people by ensuring that their needs and perspectives are considered in the design of urban environments. This can lead to greater social inclusion, economic empowerment, and improved quality of life for people with disabilities, as well as a more accessible and inclusive city for everyone.

Keywords: inclusive city planning, urban infrastructure for disabled people, urban empowerment for people with disabilities, disability friendly cities, urban design for disabled people, accessibility in cities.

Introduction

In recent years, inclusive city planning has become a priority for cities looking to empower their disabled citizens. Through urban infrastructure designed to support accessibility, people with disabilities can access public spaces and services on an equal footing with the rest of the population. Such design strategies are crucial in enabling people with disabilities to gain the same level of autonomy and independence they would have without any disabilities. The

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7. Conclusions are just concluding remarks constituted of personal opinions. They are not conclusions derived from research substantiated by data and evidence. Again, produce conclusions specific to the case study. No general statements of what standards can do, but what it did in this garden.
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9. Most significantly, although the title says 'local standards' not a single standard has been meaningfully articulated. In keeping with this title, the conclusions must have these standards listed as 1, 2, 3 and point out how they have 'empowered' the disabled, as discovered from this research.

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aim should be an urban landscape that naturally incorporates and considers the needs of the disabled individuals, allowing them to feel empowered by their presence in society. From improved wheelchair ramps and access points to braille signs – all of these can make an immense difference in providing equal access for disabled citizens in our towns and cities.

Following is an example of inclusive city planning design. Inclusive urban design strategies include a range of features, such as improved wheelchair ramps and access points, braille signs, accessible public spaces and services, and more. These strategies can help people with disabilities feel empowered by their presence in the society. Inclusive city planning has become a priority for cities looking to empower their disabled citizens.

According to the report of the World Health Organization (WHO) and the World Bank, the proportion of “Disabled People” is estimated at one billion, or approximately 15% of the world’s population (WHO, 2011). The World Health Organization has also indicated that the number of people with special needs is on the rise. This is due to demographic changes, in addition to other factors and causes. Thus, people with disabilities face widespread lack of accessibility to build environments, from roads and housing, to public buildings and spaces and to basic urban services such as sanitation and water, health, education, transportation, and emergency response and resilience programs. Barriers to information and communications, including relevant technologies and cultural attitudes including negative stereotyping and stigma also contribute to the exclusion and marginalization of persons with disabilities in urban environments (Melillo *et al.*, 2019).

Disability is an umbrella term covering impairments (of bodily function), activity limitations (difficulties in carrying out a task), and participation restrictions which curtail a person’s involvement in society (WHO, 2002). In the Iraqi context, neither the Central nor the State Governments have reliable data on people with disabilities. Iraq is one of the countries in which people with special needs are increasing most, due to the wars it waged since 1980 to the present day, in addition to war remnants, sectarian conflicts, violence, terrorist organizations and other factors (Al-azzawi, 2018). The Iraqi Central Statistical Organization (CSO) has estimated that the number of people with special needs for the year 2016 is more than 1,357,063 million people. Among them the number of males is 776,721, or 5.2% of the population, and the females are 580,342, or 5.9% of the total population for 13 governorates, except for the governorates of the region of Kurdistan, Nineveh and Anbar. According to the numbers, 28,561,946 people out of 36,169,123 for the year 2016, or 5% of the total number of people are with special needs. As for the governorate level, the prevalence rate of people with special needs ranges from the highest rate in the Karbala governorate at 8.7% to the lowest rate in the Maysan governorate at 3.6% (Central statistics Organisation, 2020).

Majority of the disabled people fall within the age group of 15-65 years. With regard to the types of disability, movement disabilities, comprehension and perception, sight, and hearing are the most prevalent at rates of 42.4%, 21%, 14.8%, and 9.2%, respectively. Communication and self-care are the least common types of special needs, with their rates standing at 6.8% and 5.8%, respectively.

The situation of disabled people in Iraq, as is the case in most developing countries is dire. They are considered a marginalized population and face many problems in terms of health, education and work, as a result of social, economic and cultural biases (Ingstad, & Grut, 2007). They are excluded from the administrative, military and service professions as they are economically dependent and unable to work without the presence of those who direct them. The integration of people with special needs into wholesale and retail trade, vehicle repair and personal goods does not happen. Moreover, their ability to engage in normal life is restricted due to the difficulty of access and movement within the urban environments (Al-azzawi, 2018).

The concept of empowerment is directly related to the people with disability in an attempt to integrate them with society and the environment and achieve well-being for them. The United Nations Convention on the Rights of Person with Disability (UNCRPD) has called for the empowerment of people with disability (Gowda *et al.*, 2019), where empowerment is an important measure. It is an attempt to remove the barriers and obstacles that disabled people suffer from and prevent them from participating in their lives (Devandas, 2013). Moreover,

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people with disabilities rights have not been taken advantage of to a sufficient extent in governance processes related to urban planning and city management.

It is the primary responsibility of local authorities to consider the differences between citizens and to design services and structures so that all can use them. They must promote opportunities for the disadvantaged by organizing the provision of accessible spaces, thus addressing their social exclusion and promoting equality. In doing so, they are encouraged to create participatory mechanisms whereby multiple actors, including people with disabilities as well, are given the opportunity to shape the local services. In addition, they have the right to equal opportunity as recognized citizens in a pluralistic society that respects the difference and diversity of the individuals who make them up. In addition, they have the right to participate in the social affairs of their community without restrictions and enjoy the welfare that the development that community may generate in the Çankaya Municipality.

In this context, this study aim examine local standards in order to empower people with disabilities and revitalize the city spaces through the concept of design for all. It assesses the extent to which the local standards in Iraq are activated to design inclusive cities that include disabled people.

Its objectives are as follows.

- 1.
- 2.

Theoretical Basis

People with Disabilities

The World Health Organization (WHO) states that the concept of People with Disabilities is "complex, dynamic, multidimensional and contested", as it is linked to two aspects: one medical and the other social. There is a balance of different aspects that surround this group such as health, context, environment and personal conditions (Melillo *et al.*, 2019). United Nations Convention on people with disabilities has also recognized that it is an evolving concept and affirms that special needs are the result of interaction between people of this category and the behavioral and environmental barriers to participation and interaction in society in a way that guarantees their right to equality" (UN-Habitat, 2007). For example, it is possible to improve social participation by addressing the barriers that hinder people with special needs in their daily lives, a decision "meaning that special needs are not a characteristic of a person" (Melillo *et al.*, 2019). Social participation can be achieved by addressing barriers, not only physical barriers, but also behavioral and social barriers (Wolbring, 2006).

Exclusion of disabled people

The term exclusion is defined as a set of dynamic, multi-dimensional processes that are driven by relationships of unequal dimensional forces that interact across four main dimensions: economic, political, social and cultural, and at different levels including the individual, the family, the group, the community, the country and the global levels. It leads to a continuum of inclusion/exclusion characterized by unequal access to resources, capabilities and rights leading to health disparities (Popay, 2010). The concept of social exclusion defines a complex and multi-dimensional process. It involves a lack of resources, rights, goods and services, and the inability to participate in the normal relationships and activities available to the majority of people in a society, whether in the economic, social, cultural or political spheres. It affects the quality of life of individuals and the justice and cohesion of society as a whole (Lloyd and Patsios, 2007). Alternatively, what can happen when people or areas suffer from a combination of interrelated problems such as unemployment, poor skills, low income, poor housing, high crime, poor health, and family breakdown (Bradshaw and Bennett, 2005).

Social exclusion describes a process by which certain groups are systematically disadvantaged because of discrimination against them on the basis of race, ethnicity, religion, sexual orientation, caste, ancestry, gender, or age disability, HIV status, immigrant status, or where they live. Discrimination occurs in public institutions, such as the legal system or education and health services, as well as the social institutions such as the family (DFID, 2005).

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Such social exclusion challenges are great. People are excluded from many spheres of life – social, economic, political, civic and spatial – and the prominence of each sphere depends greatly on the country and local contexts as well as on the stage of a person's life trajectory.

This means concepts of social inclusion and social exclusion are multidimensional and context dependent.

Inclusion of disabled people

The concept of social inclusion has been defined by the World Bank as “the process of improving the conditions for participation of individuals and groups in society” and “the process of improving the ability, opportunities and dignity of people who are disadvantaged on the basis of their identity, to participate in society” (Cuesta and Niño-zarazúa, 2022: [page number](#)).

Social inclusion is a broad concept that encompasses differences between people including, but not limited to, language, birthplace, ancestry, ethnicity, cultural traditions, societal structures, and religion. The [commission](#) advocates inclusion and promotes understanding of human rights and discrimination law, as well as being a public authority with its own human rights obligations particularly the right to equality (Social Inclusion Plan, 2019).

Collins (2022) defines social inclusion as a process with four interlocking dimensions in which everyone feels valued and has the opportunity to participate; for example, through performances, programmes or events, whether or not they have a disability, to understanding barriers to social inclusion from the social model framework [access](#), participation, representation and empowerment [referred to as](#) APRE (Collins *et al.*, 2022).

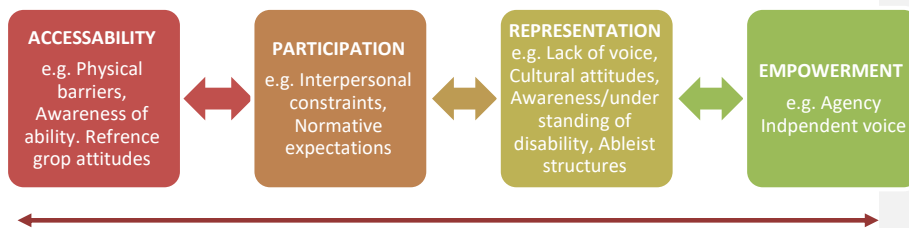


Fig. 1: Access, participation, representation and empowerment (APRE) framework to understanding barriers to social inclusion.

Source: Collins, A. *et al.* 2022

Urban Empowerment within the City

The phrase “urban empowerment” has many different interpretations. For some, it’s about empowering poor communities by building both public participation and sustainability from the ground up. For others, it’s about inclusive urban planning and broad grassroots efforts. However, the urban empowerment has more to do with co-opting such efforts to policies to “revitalize” or “fix” “distressed” urban areas, it required developing strategic plans according to three key programmatic principles: (a) community partnerships; (b) economic opportunities; and (c) sustainable community development (Oakley, 2019).

Empowerment is considered a force that can release energy when residents are seen as one of the essential players in the governance processes meant to develop the city (Mistral Urban Futures). Empowerment is a process where the inhabitants of the city become co-actors in urban governance and development, i.e. that they become producers rather than only consumers of the urban fabric (Stenberg and Fryk, 2012). Urban empowerment focuses on socially participatory environments to support people with special needs, reshaping routines and behavioral patterns in dense urban areas, intelligent sensing of the outdoors to change modes of mobility, and promoting environmentally friendly behaviors through social norms. Cities are places that provide opportunities for society, in terms of housing, employment, living, and means of luxury. They are attractive places to obtain those opportunities and services.

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Therefore, it is important that these opportunities are available and distributed in a socially just manner, so that everyone can reach their fullest potential (Al-Suleiman, year). Empowerment architecture is not only limited to improving existing urban conditions, but also plays a vital role in creating new settlements (Serageldin, 1997).

Design for All: An Approach for Empowerment Disabled People

Cities for All refers to the equal use and enjoyment of cities and human settlements and seeks to promote inclusivity and ensure that all city dwellers, present and future generations, without discrimination of any kind, are able to live and produce in fair, safe, healthy and accessible cities and human settlements affordable, resilient and sustainable resources to enhance prosperity and quality of life for all (UN-Habitat, 2018). Cities that work for all—that is, cities that are built to enable physical access to public spaces and services for all people—are often met with resistance as unrealistic and requiring justification. Under arguments of cost savings or impractical building requirements, cities ignore existing legal obligations to support universal access.

It is clear that accessibility and inclusion in cities affects a large proportion of the population. However, everywhere in our cities, we encounter spaces that can only be accessed by climbing stairs or walking through narrow passages, systems that can only be remote mobility. By reading written instructions, or by buses and metros that cannot be wheelchair or stroller accessible and mostly catered to office-functioning commuters. Since these urban practices are so ubiquitous, they have come to define the expectations of what can and cannot be accommodated in spaces. The Age-Friendly Cities Framework, Sustainable Development Goals, New Urban Agenda and Sendai Framework for Disaster Risk Reduction all point to leaving no one behind. In addition, the Inter-American Development Bank's Housing and Urban Development Sector Framework and Diversity Action Plan call for more inclusive urban systems and public spaces. This normative background provides a strong mandate for cities to shape a more inclusive and accessible urban future for all (Disabilities, 2021).

There are many experience about designing cities for all which can be explained as shown in the Fig. 2

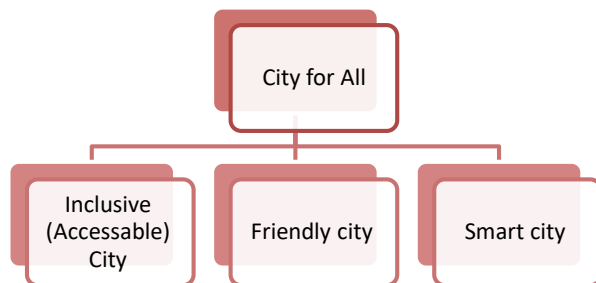


Fig. 2: Design for all experiences for Empowerment Disabled People within city design Source: Author

1. Inclusive (Accessible) city

“Accessible, inclusive cities allow everyone to participate equally. Cities often burden people who have difficulties walking, hearing, seeing or remembering, [and prevent them] from participating equally in public life. The problem is not with the person, but with the way the environment is designed. Planners must engage with a diverse set of people with disabilities – and there should be a strong commitment to universal design as well as robust enforcement and monitoring mechanisms.” (Kamuzhanje, 2021: page number). An inclusive city has been defined by the UN-Habitat as one that promotes growth with equity, It is defined as a place where everyone, regardless of their economic means, gender, race, ethnicity, or religion, is

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empowered to participate fully in the social, economic, and political opportunities that cities provide. Participatory planning and decision making are at the heart of the inclusive city (United Nations Human Settlements Programme., 2002). The Asian Development Bank publication “Enabling Inclusive Cities: Inclusive Urban Development Toolkit” (2017) defines an inclusive city as “a safe and livable environment with affordable and equitable access to urban services, social services and livelihood opportunities for all city residents and other city users to promote optimal development human capital and ensuring respect for human dignity and equality” (ADB, 2022:page Number). In fact it has adopted the slogan “Livable cities are inclusive cities” (ADB, 2017).

“Inclusive cities” are a major policy focus to achieve Goal-10-9-311 of the Sustainable Development Goals (Agenda SDGs, 2030). Inclusive cities support urban residents by creating more welcoming and intuitive places that help increase the quality of life and create a more meaningful experience. Positive for the built environment and public spaces for all. This is particularly important in supporting a vibrant tourism industry, as inclusive cities meet the needs of people with disabilities and ensure equal access to all the urban services. Developing Asian Development Bank member countries (DMCs) should be increasingly aware of the needs of persons with disabilities and older persons. The comprehensive metropolitan area guidelines will help create a barrier-free, accessible and inclusive city with a better quality of life for all its residents, including people with disabilities, the elderly, women and the children. Broader DMCs are moving towards creating inclusive cities by adopting and implementing inclusive design practices (ADB, 2022). An inclusive and accessible city is a place where everyone, regardless of their economic means, gender, race, disability, age, gender identity, immigration status, or religion, is enabled and empowered to participate fully in the social, economic, cultural, and political opportunities that cities offer.

By breaking down unnecessary barriers and adopting comprehensive urban development policies, investments, and programs, cities can improve social and economic outcomes for all people. Some of the initiatives that cities can adopt are policies that promote accessibility, inclusive design and improved access in urban areas, affordable housing and transportation, improved mobility, safe public spaces, and social inclusion programs that include minorities and welcome newcomers. Access to it informal address; gender equality; the right to the city and sustainable urban development (UCLG, 2019). Improving accessibility for the elderly and people with disabilities makes getting around easier and safer for many others, too, including families with young children, people carrying heavy loads and those with temporary injuries. For example, applying universal design principles or improved route designation results in built environments that are more usable by all, not just those with a mobility impairment (‘Official Community Plans’, no date). greater with the social protection strategy through lack of access to investments and a barrier-free environment, gender-inclusive programs, and capacity development of community organizations that enable poor urban communities to implement community development projects. The critical areas for investment to address environmental poverty are through targeted investments in sectors Major: water and sanitation, solid waste management, energy, transportation, land management, and housing. Not only necessary for creating inclusive cities but also effective in creating green cities that are competitive, resilient and sustainable (ADB, 2017) .

2. Friendly city

The age-friendly/disability-friendly city concept has been initiated for the first time in Sri Lanka, where it is in line with the WHO concept of age-friendly primary health care as well as WHO age-friendly cities. The age-friendly city encourages aging to improve opportunities for health, participation and security in order to improve quality of life as people get older. In practice, the age-friendly city adapts its structures and services to be accessible to the elderly and people with different needs and abilities, as the relationship between aging and special need is increasingly being explored, especially in relation to the implementation of the Convention on the Rights of Persons with Disabilities. This is something being emphasized globally, especially in relation to the post-2015 development agenda. An age-friendly society must also

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be disability-friendly which will ultimately lead to a person-centered atmosphere where activities are carried out in order to respond to the needs of [the](#) individuals (Cuesta and Niño-zarazúa, 2022).

Friendly cities improve opportunities for health, participation and security to improve quality of life as people age. The Age Friendly Cities Framework assesses eight evidence-based areas, including: outdoor spaces and buildings; Transportation; housing; social sharing; respect and social inclusion; civic engagement and employment; contact and information; Community support and health services ([Cuesta and Niño-zarazúa, 2022](#)). Friendly cities contribute to the safety, wellness, and empowerment of older people and people with disabilities (DeLange [et.al.](#), 2020). Following are the most important principles to make the city friendly to the elderly and people with special needs to achieve accessible and inclusive societies as much as possible according to [the](#) 'Official Community Plans' (no date), [as](#) shown in [the](#) Fig. 3.



Fig. 3: Explains the main principles to make the city friendly to the elderly and disabled people
Source: Ministry of Community, Sport & Cultural Development & Responsible for Translink

Disability-friendly and elderly-friendly cities represent making the city accessible and easy to use. "Inclusive design features" that focus on disability-friendly standards in products and spaces designed within the built environment affect the independence of the elderly/disabled people to a large extent. In addition, city-wide barrier-free "exclusive" mobility options (such as ramps and Braille signs) improve the quality of life for the elderly/disabled. Goldsmith (2000) proposes a model called the "holistic design pyramid" which is based on a bottom-up approach. The "holistic design pyramid" indicates that inclusive design helps both able-bodied and disabled people, as the implementation of inclusive design

depends on National or regional scale on the pattern in which UX-based inputs are implemented.

Similarly, Universal Design solutions are socially and financially rewarding because they make spaces easier to use for everyone. Inclusive design standards focus on a set of guidelines and criteria for designing barrier-free built environments for people with special needs and the elderly (Mahapatra, Mori and Nomura, 2021). Main principles mentioned to make the city friendly to people with special needs include: accessible public infrastructure, regular support services, improving service quality, access to institutions, and accessible public transportation. Smart city concepts work to provide initiatives to reduce the information technology gap that currently exists among some groups of people with special needs. In fact, adopting a holistic approach helps to make the city accessible and inclusive for all (Europe, 2020). Improving accessibility in order to create more age-friendly and disability-sensitive communities often leads to improved livelihoods and overall sustainability, and vice versa. Many of the measures already promoted by the local and county governments, aiming to achieve living and sustainability goals such as climate action, smart planning, sustainable infrastructure and transportation options, integrated and compact communities are exactly the ones that facilitate access ('Official Community Plans', no date).

3. Smart city for all

Initial idea of a smart city is to improve the quality of the city to be innovative and scalable (Wibowo, *et al.*, 2020). Giffinger *et al.* (2008) define a smart city as a vision of the future that takes into account issues such as awareness, flexibility, addressability, synergy, uniqueness, and strategic behavior (Hernández *et al.*, 2018). A city can become "smart" when the investment being developed in the city focuses on modern transportation, information and communication technology, human capital aspects and social capital to create sustainable economic growth and quality - a high standard of living, with good management of natural resources through participatory governance and to achieve and increase participation Community and Social Inclusion. An approach that focuses on prioritizing soft infrastructure should be adopted before moving on to a complex infrastructure approach (Supriyanto *et al.*, 2022). This means that a smart and sustainable city is one that invests in people and social capital wisely, has citizens who participate in managing the city, and has traditional and modern infrastructure that supports economic growth and a high quality of life for its residents (Gracia and García, 2018).

The smart city focused on smart access creates an inclusive environment for people with disabilities, where they can integrate into society and enjoy their city's cultural, political, social and economic rights and entitlements. Therefore, smart cities are an integrated approach to ensure that people with special needs are not left alone, as the main characteristics of potential smart cities in the future are: smart citizens, smart energy, smart buildings, smart mobility, smart technology, smart healthcare, and smart infrastructure, smart governance, education, and finally smart security as basic pillars in achieving inclusion and participation of people with special needs within the city (Salha *et al.*, 2020).

Disability, the Law and the UNCRDP

1. The 2030 Agenda, SDGs and disability

The 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), adopted by all the Member States of the United Nations in September 2015, provide a visionary roadmap for all countries and actors to strive for a world of sustainable prosperity, social inclusion, and equality while at the same time, protecting the planet resources from inefficient and unfair usage to save them for the coming generations. The (SDGs-Sustainable Development Goals) aim as an action plan for the joint implementation of countries

to include disabled people, which organizations can use as a guiding tool to define their strategies and measure the impact of their activities related to **the** disabled people. Given the importance of the 2030 Agenda at the European and international level, linking the organization's activity related to disabled people with the Sustainable Development Goals could also be a way to enhance the value of the contribution, as the United Nations adopted the 2030 Agenda for Sustainable Development, "a global call to action for the eradication of poverty." protecting the planet and improving the lives and prospects of everyone, everywhere."

The 2030 Agenda represents a human rights-based approach. It is based on the guiding principles of the United Nations Charter, international law, including the Universal Declaration of Human Rights, and international human rights treaties such as the United Nations Convention on the Rights of Persons with Disabilities, the inclusion of disabled persons is at the heart of the 2030 Agenda with the demand and commitment to leave no one behind and to reach those left behind first. It is mentioned that the 2030 Agenda is an action plan "where people should be allowed to flourish, people should have a voice and people should have effective opportunities to shape the path of development," (page number) and therefore the 2030 Agenda and the Sustainable Development Goals are considered a milestone in the development of human rights.



Fig. 4: Five of the 17 Sustainable Development Goals specifically refer to disabled people.
Source: <https://sdgs.un.org/goals>

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While disabled people have been implicitly considered in many other goals and indicators, terms included in the Sustainable Development Goals such as "for all"; "weak"; "the most disadvantaged"; "non-discriminatory"; "equal opportunity"; and "universal access" mean that disability should not be forgotten in the measures developed to achieve the SDGs.

The International Development Association (IDA) and IDDC, in consultation with **the** United Nations agencies have identified 32 critical indicators that must be disaggregated by disability in order to obtain data on the condition of people with disabilities around the world.

Indicators measure important characteristics of people and populations, such as the poverty rate in a given country. When we break down, for example, we find not only the total percentage of people living below the poverty line in a country but also the percentage of people

with disabilities who live below the poverty line to targets that implicitly referred to disabled people:

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Fig. 5: Four of the 17 Sustainable Development Goals that implicitly referred to disabled people
Source: <https://sdgs.un.org/goals>

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2. The Iraq Law for Disabled People Iraq Vision 2030

The Iraq Vision “empowered people in a safe country, a unified society with diversified economy, sustainable environment, justice, and good governance” is based on the sustainable development dimensions which meet our aspirations for empowered people in a safe and unified country, a society in which all have equal rights, an economic system with diversified social market orientation and highly stable macro-economic indicators creating a clean, safe and sustainable entertainment for the current and coming generations. The aim is to achieve sustainable improvement in the quality of life, ensure sustainable production and consumption patterns, reduce the repercussions of pollution and climate change and enhance the biodiversity protection through governmental institutions which guarantee the respect of political, civil and human rights of people to reach the required tracks and achieve equality for all the citizens.



Fig.6: The Iraq vision 2030 to empowerment people in secure county, a unified society with diversified economy, sustainable environment, justice, and good governance.
Source: First National Voluntary Review on SDGs, 2019.

The vision embraces a new social contract between the state and its citizens to enhance their trust in the government and provide opportunities for self-development, work and generating income. The state seeks to develop the economic activities and pave the way of reforms which tackle the past challenges and provide the needed development strategies and plans which are capable of solving the past and the present problems and the expected future risks in light of the national capacities while ensuring strong development mechanisms which positively impact the achievement percentage of the global SDGs. Iraq's promising success story will be translated on the ground during the coming decade supported by its strengths including resilience, determination, a strong will, and liveliness (Iraq Government, 2019).

The international community's interest in disabled people has increased in the last quarter of the twentieth century resulting in the Declaration of the Rights of the Mentally Retarded in 1971 AD, and the Declaration of the Rights of the Disabled in 1975 AD, followed by international declarations and covenants that included recognition of their rights and required their care. The international effort in this regard have ended with an agreement on Rights of Persons with Disabilities for the year 2006 and the Optional Protocol attached thereto. Iraq has taken steps towards integrating and empowering people with disabilities and their special needs and enhancing their participation in society, paying attention to people with special needs through its permanent constitution of 2005 AD. It joined the Convention on the Rights of the Disabled of 2006 AD and ratified it in 2012 AD. It enacted the Persons with Disabilities and Special Needs Law No. 38 of 2013 AD, as well as the scattered texts in the texts of other relevant laws (Mohammed, 2017).

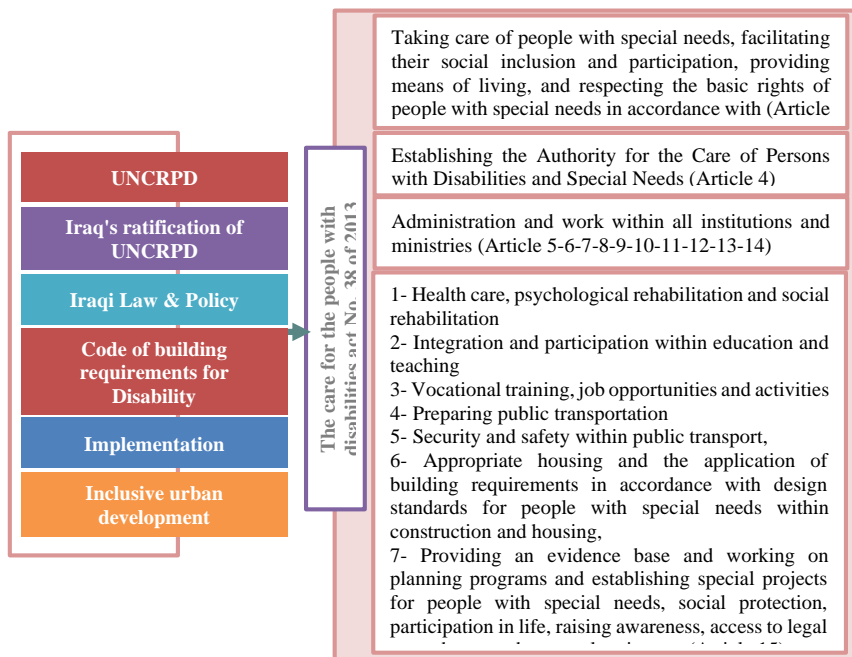


Fig. 7: Inclusive development approaches illustrated by international and national frameworks and legislation

Source: Author depend on Ministry of justice- Official gazette of Iraq People with Disability and Special needs Care Law No. (38) Of 2013

IOM Iraqi Strategies for Disabled People

IOM Iraq launched the IOM Iraq Disability Inclusion Strategy 2019-2021, which proposed recommendations for mapping and collaboration with organizations of persons with disabilities. It works to make IOM Community Centers available and develop contextual guidance for staff to implement comprehensive programs for the disabled people.

The goals of the International Organization for Migration (IOM) focus on:

- Identifying concrete actions to be taken by stakeholders such as the Government of Iraq, UN agencies, national and international NGOs.
- Addressing the barriers faced by people with disabilities by civil society organizations, including responses to the main challenges and priorities of the organizations that represent them.
- Promoting a rights-based approach to the provision of humanitarian and development assistance.
- Ensuring the participation of people with special needs in decision-making processes
- Ensuring equality with others (<https://iraq.un.org>).

Strategy Development

The general objective of this strategy is to contribute to removing barriers and supporting the capabilities of persons with disabilities to meet their needs and uphold their rights through the programs of the International Organization for Migration in Iraq. The strategy is designed to be implemented over two years and will focus on four key areas of action:

- (1) leadership,
 - (2) inclusive projects and programmers,
 - (3) consultation with persons with disabilities and
 - (4) capacity building of IOM staff in mainstreaming disability inclusion
- (Heera and Maini, 2018).

Review of Literature

Research Methodology

The Case Study

The Mayoralty of Baghdad has completed a project of developing and rehabilitating a distance of 2500 meters from the river edge of Abu-Nuwas Street in Baghdad, as part of the campaign 'Baghdad is more beautiful' launched by the Prime Minister to advance the service and aesthetic reality of the capital. The project for the development of Abu-Nuwas Gardens and the river edge, was presented by the staff of the center and its designs are affiliated with the Iraqi Ministry of Construction and Housing. The river edge and gardens benefit thousands of people living in the municipality, providing activities for different ages and for persons including disabled people. It is comprised of the following.

- A playground for children;
- Bikes and walk paths;
- A seating area and dancing fountain for families and communities to gather and socialize, including people with limited mobility.

The Ministry of Construction, Housing, Municipalities, and Public Works of Iraq. Was the implementing agency.

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Brief background:

The Abu-Nuwas Gardens and the river edge extend on the eastern bank of the Tigris River, specifically the area confined between the two bridges of the Republic in the Bab Al-Sharqi area and the Hanging Bridge on in the Eastern Al-Karada district.

Urban development took a longitudinal form along the riverbank ~~north-North~~ and ~~south~~ South of Old Rusafa. In 1929, Al-Saadoun Street was developed to be a commercial backbone for the Abu Nawas site, thus expanding the commercial area of the Baghdad city ~~center~~center. At that time, it was called the Abu Nawas Street in Darb Al-Shatt. ~~And in~~ In 1964, the Municipality of Baghdad divided the lands located on the shore of the Tigris River within the site of Abu Nawas in the form of squares, the area of one-piece (30 * 30) meters, to establish cafes on it on modern foundations.

In 1977, large areas of public gardens and landscaping were added, and a number of fish restaurants were established on the banks of the river. In 1982, the Abu Nawas Street gardens were developed, beautified, and gardened, in addition to rebuilding, planting, and improving the Corniche wall. In 2006, the Municipality of Baghdad developed the Abu Nawas site, by reorganizing gardens and green spaces, as well as paying attention to the cultural scenes within the site. The Municipality of Baghdad has added some services and entertainment and tourism activities to the site. The area was named after the Abbasid poet Abu Nawas. The Abu Nawas Parks are located along the Tigris River from the city of Baghdad, as it extends on the eastern bank of the river and is 3.5 km long (Jameel and Hussien, 2023).

Objectives of the project/program:

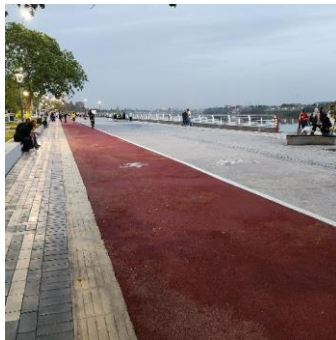


Fig. 8: Abu-Nuwas after Redevelopment
Source: Author

The objectives of the project are as follows.

1. Redevelopment the neglected lands of the river's edge through the construction of the Abu-Nuwas River's edge in Baghdad City.
2. Activities to promote recreation, culture, social interaction, and fun. The integration of users is sought through activities that define four areas that highlight and enhance a space with a contemporary design creating a friendly space for each activity:
 - Seating areas.
 - Plaza (a central square to host celebrations)
 - Increase vegetation by planting more perennial trees.
 - Construction of a 2.5 km river walkway with seating areas.
 - Create a path for bicycles and a track for jogging.
 - Complete cleaning and rehabilitation of the river bank.

- Establishing an integrated lighting system for the new river's edge and gardens.
- Rehabilitation and development of car parks.
- Secure children's play area with play components.



Fig. 9: **Title?** Source: Author



Fig. 10 **Title?** Source: Author



Fig. 11 **Title?** Source: Author

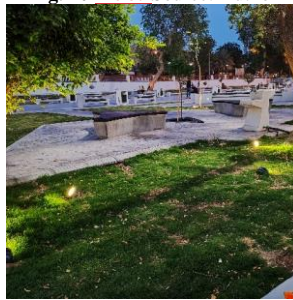


Fig. 12 **Title?**Source: Author

3. Visibility for safety: The Abu-Nuwas is designed in such a way that any standing point inside the park allows for full visibility of the surrounding space as shown in the Figs. 9 and 10. In addition, lighting was designed to fully illuminate the open space at night as shown in the Figs. 11 and 12.

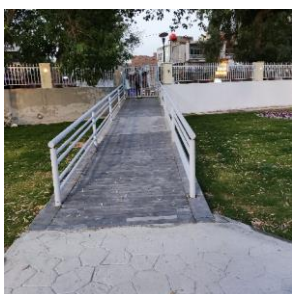


Fig. 13 **Title?** Source: Author

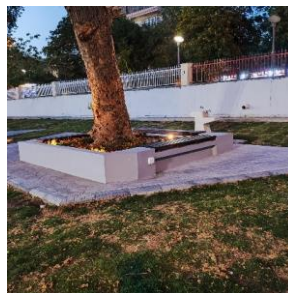


Fig. 14 **Title?**Source: Author.

4. Use of Code of building requirements for disability and the principle of universal design were used for the design of the built elements for the landscape features. For example, the pedestrian ramp into main entrances of the garden Fig. 13, has the

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tactile walking surface indicators as shown in Fig. 9. Visual contrast for different elements in size and color, and handrails have all been installed.

5. Environmental sustainability: trees have been planted in green areas to increase vegetation. An automatic irrigation system has been installed to provide watering to the green areas of the garden with minimal use of water as shown in the Fig.14.
6. The concept of participation was not supported in the community needs in the process of rehabilitation of the gardens and waterfront. Since the beginning of the process, it was suggested that the waterfront should be inclusive to all people and that a program should be established considering the different community needs in one space.

Changes achieved: The project has achieved the following outcomes:

1. Awareness was raised among different stakeholders that making inclusive spaces is in the best interest of everyone.
2. Spending money on accessibility features benefitted different users, and that this experience may inspire others in future projects to be inclusive. The urban and landscape designers became familiar with the universal design principles and gained knowledge of the local products and materials available for accessibility features.

Deficiencies and persistent challenges identified in the implementation of the project

1. Tactile-visual maps were not used for orientation or guidelines and signs inside the park.
2. The walkway surface tactile indicator has not been used in the TOP landing and bottom landing of the ramps as shown in the Fig. 13, or near the steps. Also, The treads and risers should be in different colors. The non-slippery border should be put on the end of the tread in 2.5 cm width, coating material must be plane with the surface of the tread in order to prevent tripping for warning disabled people with visual disabilities as shown in the Fig.15.
3. There are the two different levels in the river's edge in many cases. So Thus, a ramp should be used. However, the existing structures are difficult to be used by wheelchairs (Fig. 15).



Fig. 15: There is no tactile surface to warning visually disabled people about the step, or a ramp to make connections between the different levels.

Source: Author

4. The Draining channel should be covered by a grating to keep the disabled people safe. The grating cover used in the plant should be designed according to the standard to ensure that the grater opening does not allow passage of an object that has a diameter greater than 13 mm (Fig.16)

- The ramp to WC. must be indicated with a contrast strip line at the beginning of the ramp and the end and the indicator surface must be on the top and bottom landings of the ramp (Fig. 17).



Fig. 16: Grating covering the planet with openings more than 13 mm
Source: Author



Fig. 17: The ramp to the WC.
Source: Author

Conclusions

Designing cities for everyone has become an important urban planning strategy. This includes those with specific physical, cognitive, visual and hearing impairments. It is important to ensure that people with disabilities have the same level of access to urban infrastructure as everyone else. The Iraqi law defines the measures to be taken to eliminate all forms of discrimination against the disabled people. The purpose of the law is to eliminate all forms of discrimination due to disability or special need, respect for disability and accept disability as part of human diversity and human nature, and to guarantee equal rights for them under the provisions of Iraqi law, by providing care Achieving integration for people with special needs, providing work for people with disabilities and special needs, and achieving decent livelihoods, regardless of race, skin color, language, gender, age, citizenship, origin, place of birth or residence, property or social status, religion or belief, national origin. Or ethnic, social, or other characteristics

In addition, the Iraqi law for people with special needs have focused on the importance of providing care by providing comprehensive services for people with special needs, rehabilitating them to help those people and empowering them within the urban and social environment through social interaction - integration - public participation - social protection - security and safety in transportation. Design standards for people with special needs. The strategy of urban empowerment for disabled people depend on four dimensions: empowerment of individuals, community empowerment, sustainable empowerment, and the economics of opportunities. Urban empowerment for disabled people aims at providing them with safe, convenient and accessible environments that support their autonomy and enable them to participate in society fully, this approach offers a set of guidelines and regulations, which aim at providing safe, convenient and quality access for people with disabilities within available public spaces. It also addresses issues such as ramps, railings, pathways, signage, elevators and other elements needed for accessibility purposes. This set of standards helps create a more inclusive urban environment, which promotes independence among those affected by disability.

Finally, the local standard for empowering disabled people within a city's spaces can provide both technical solutions and political decisions that will make it easier for those with disabilities to access services, transportation and other amenities. This approach can help create an inclusive environment where those with disabilities are not treated as second-class citizens. By allowing for greater participation in the local economy and providing tailored support, the local standard provides a framework to foster more equitable treatment of disabled people. The

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development of this approach has as a central goal the accessibility of not only physical spaces, but above all its facilitation of rights recognition, economic participation, education and cultural inclusion.

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