



Urban Social Engagement

Social Benefits of Green Infrastructure

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DEFINITIONS

Infrastructure Defined as a “substructure or underlying foundation on which the continuance and growth of a community or state depends” (Benedict & McMahon, 2006, p.1).

Green Infrastructure (GI) and Urban Green Infrastructure (UGI) First Definition GI is, “a strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services. It incorporates green spaces (or blue if aquatic ecosystems are concerned) and other physical features in terrestrial (including coastal) and marine areas. On land, GI is present in rural and urban settings” (European Commission, 2013, p.3).

Second Definition In urban settings, “UGI planning, based on certain principles, has emerged as a way to conceptualize connected greenspace in urbanized environments. This is achieved through the application of processes and approaches linked to policy themes. Taken together the processes, approaches and policy themes constitute the principles of UGI, which when adopted can promote, maintain and enhance quality of life in resource-efficient, compact and climate-resilient cities” (Davies et al., 2017, p.93).

Cimate Change is a terminology used to describe, “any systematic alteration or statistically significant variation in either the average state of the climate elements such as precipitation, temperature, winds, or pressure; or in its variability, sustained over a finite time period (decades or longer). It can be referred to as the long-term change in global weather patterns, associated especially with increases in temperature, precipitation, and storm activity” (Philander, 2012, p. 210).

Resilience

Is defined as, “The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation” (IPCC, 2014, p. 127).

is defined as, “the capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation” (IPCC, 2014, p. 127).

Climate Adaptation

is concerned with, “the process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities” (IPCC, 2014, p. 118).

Mitigation

(of climate change) Relates to any “human intervention to reduce the sources or enhance the sinks of greenhouse gases (GHGs)” (IPCC, 2014, p. 125).

DEFINITIONS

Urban Heat Islands include “urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun’s heat more than natural landscapes such as forests and water bodies. Urban areas, where these structures are highly concentrated and greenery is limited, become “islands” of higher temperatures relative to outlying areas” (US EPA, 2014).

Participatory Planning involves “an approach which emphasizes community involvement in the strategic and management processes of planning and makes use of its stakeholders’ knowledge, resources, and commitment” (Istenič & Kozina, 2019, p. 32).

Vulnerable Populations described as “groups who undergo hardships and may encounter prejudice, discrimination, and stigma due to their socio-economic status, race/ethnicity, gender, age, cognitive and/or physical ability, etc. These difficulties can be made worse by trauma in the form of natural disasters and their consequences.” (Benevolenza & DeRigne, 2019, p. 268).

A B B R E V I A T I O N S

CBI	Community-based Initiative
CBO	Community-based Organization
CSBE	Center for the Study of Built Environment
CSO	Civic Society Organization
FES	Friedrich Ebert Stiftung
LQC	Lighter Quicker Cheaper
LNOB	Leave No One Behind
NGO	Non-governmental Organization
SDG	Sustainable Development Goal
UHI	Urban Heat Island
UGI	Urban Green Infrastructure

ABOUT THIS PUBLICATION

This publication is an output of the project ‘Improving Living Conditions in disadvantaged areas in Amman’ (ILCA) executed by GIZ in partnership with the Jordanian Ministry of Environment and Greater Amman Municipality, highlighting the social benefits of Urban Green Infrastructure (UGI).

The Social Benefits of Green Infrastructure publication is intended for use of city planners, municipalities, and any entities involved in the creation of public open spaces, as a reference to enhance social officers’ capacity in the pre- and post-implementation phases of UGI projects in public open spaces, while taking into consideration the community’s social fabric and social interests. It introduces the key social concepts of Urban Green Infrastructure development and includes details of each component, highlighting crosscutting themes and benefits of UGI (environmental, social, sustainability, decentralization, and decision making) on environmentally friendly infrastructure interventions in the urban setting.

Many social benefits can be realized from UGI interventions. Hence, we do not implement UGI projects away from the social context, and they are planned and implemented for environmental and social purposes. It is for the community and with the community.

Goals and expectations from this publication

This publication aims at:

- Raising awareness on social benefits achieved from implementing UGI among decision makers, municipalities officers, contractors, subcontractors, and the targeted community.
- Facilitating the design and implementation processes among community members, staff, as well other stakeholders and parties involved in the process.
- Being used as an awareness tool, or self-reading material and as a supportive implementation framework for UGI projects planned to be implemented by GAM and Jordanian municipalities.

The reader of this publication will expect to:

- Capture better understanding of UGI social benefits and context,
- Implement UGI projects with more participatory approach with the targeted community,
- Understand the importance of UGI in creating better lifestyles and livelihoods, and
- Engage the targeted community in all projects' phases.

I N T R O D U C T I O N

The rapid transformation of urban neighbourhoods coupled with changing living patterns have not only resulted in cities' need to mitigate climate stress but improve people's wellbeing. The shaping effects of the built environment and infrastructure on community and individuals' wellbeing have long been studied and remain to be further investigated in rapidly urbanizing contexts like Jordan. In Amman, the widescale 'changes in housing patterns from single-family houses to apartments, caused a remarkable recession and shrinkage in urban open space' (Farhan & Al-Shawamreh, 2019, p. 70). For example, from 1986 till 2017, built up and bare land areas in Amman increased by 36%, while irrigated agricultural lands, rangeland, and rain-fed farming decreased by the same amount (Farhan & Al-Shawamreh, 2019). From this, open and green spaces have been significantly reduced and emergent public spaces like malls and parks offered alternative outlets for people to socially interact away from their densely packed dwellings. Consequently, the need to introduce adequate Green Infrastructure (GI) back into the city has been gaining increased attention in the last few decades for their environmental, economic, and social benefits they can generate. GI has many definitions and a relatively encompassing description of GI is cited by the European Commission as:

"A strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services. It incorporates green spaces (or blue if aquatic ecosystems are concerned) and other physical features in terrestrial (including coastal) and marine areas. On land, GI is present in rural and urban settings." (European Commission, 2013, p. 3)

To contextualize GI for urban and not rural settings, the acronym UGI (short for urban green infrastructure) will be frequently used thereafter. While this publication does not explore the environmental benefits of UGI and focuses on the social benefits, it acknowledges the interlinked nature of these benefits which attests to the multifunctionality of UGI, that the 'Environmental Benefits' publication extensively explores.. So just as UGI has the capacity to introduce biodiversity and reduce flooding risks, they respectively enhance people's connection with nature and lessen economic stress and loss of livelihoods. In short, communities can become more resilient to climate change and its socioeconomic risks through implementation of UGI projects. However, to achieve sustainable UGI projects, it should not be perceived as an end-product but an inclusive process that intensively engages the community to envision the types and uses of these green spaces. This participatory approach to UGI is vital to achieve the social benefits in a more localized scale that responds to people's real needs.

Thus, the publication starts with chapter I that introduces a range of social benefits of UGI aiming to improve the quality of life of both communities and individuals. Chapter II addresses planning practices and argues for the social benefits brought about when communities are equal partners in the decision-making process, where tactical placemaking provides promising potential to achieve quick impacts. Three local cases are also presented showcasing how open spaces were utilized by the local communities in ways that departed from conventional top-down planning pathways. Finally, a list of recommendations is advanced based on experiences of local experts who designed and implemented UGI projects, directed at decision makers in municipalities.

C H A P T E R I

GREEN INFRASTRUCTURE SOCIAL BENEFITS

CHAPTER

GREEN INFRASTRUCTURE SOCIAL BENEFITS

This chapter explains the concept of social benefits and its impact. The social benefits of UGI entail improvements in the quality of life, health, and well-being of people. These benefits can be realized at individual and community levels.

1.1 AT INDIVIDUAL LEVEL

UGI has been shown to offer individuals many benefits to improve their living conditions and quality of life. These included physical well-being and health benefits, emotional, cognitive, and psychological benefits, utilizing time in a character-building manner by cultivating participatory attitudes and activities, volunteering, and making time for leisure and relaxation.

Physical Well-being and Health Benefits

UGI initiatives are shown to have a positive impact on both physical and mental health and can stimulate social cohesion and local economy. The health benefits of having green spaces in urban neighborhoods are numerous, although caution is needed, since ‘evidence is correlational in nature, and causal conclusions cannot be made...(but) evidence suggests that there generally is an association between natural settings and physical health’ (N. M. Wells & Rolling, 2012). Frequenting green spaces that are within 1-3 km of one’s residence was found to be associated with improved general health, especially for housewives, disadvantaged socioeconomic groups, and the elderly (de Vries et al., 2003). In fact, it was implied that access to green spaces

can be used as a tool to reduce health-based socioeconomic inequalities (Mitchell & Popham, 2008).

Physical activity has been shown to reduce stress and the risk of obesity, cardiovascular disease, hypertension, diabetes, stroke (Dalton & Jones, 2020), diminish vulnerability for bone fractures in women (Karlsson, 2004), and lead to improvements in mental health and overall health and well-being. People living in highly greened residential areas were three times more likely to be physically active and 40% less likely to be overweight than those living in green-poor areas (Ellaway et al., 2005). Thus, the availability of urban infrastructures like walkable sidewalks, green open spaces, and stairways is conducive to physical activity of wider forms like hiking, walking, running, and cycling. Additionally, these areas tend to be more inclusive to people with disabilities, allowing them to play an active role in community activities and to practice needed social and economic mobility.

Apart from effects on human health and wellbeing, this green or blue infrastructure also enhances biodiversity, stores water, has a cooling effect, and proven to ameliorate urban heat island (UHI) effect. The potential health risks associated with extreme climatic events like heatwaves would have adverse health effects, with vulnerable populations suffering the most (Arbuthnott & Hajat, 2017). Extreme weather events like droughts, heatwaves, and natural disasters are predicted to affect the vulnerable and marginalized people the most. Populations living near coastal areas are expected to be displaced from rising sea levels, people relying on agriculture will face loss of economic livelihoods due to droughts and floods, and the elderly and the sick are amongst the most

vulnerable to sickness and diseases brought about by heatwaves (IPCC, 2014). Considering Jordan's temperatures for 2085 are projected to rise by 5.1°C if business-as-usual scenario is followed (UNDP, 2014), adapting and mitigating climate change through intensified urban greening efforts is urgent. Implementing green infrastructure projects would not only lessen negative health effects and socioeconomic risks on the vulnerable but can reduce Jordan's energy dependence through regulating microclimates. The latter can be achieved by the natural green elements capacity to create thermally pleasant micro-climates and potentially reduce the need for mechanical methods of cooling such as air conditioners.

UGI is a valid and sustainable solution to ameliorate harsh climate conditions and has proven to reduce outdoor temperatures, provide humidity in dry weather, create a pleasant microclimate by natural cooling through shade or evapotranspiration from trees and plants; with effectiveness relying on geometry, size and spread of green cover (Gunawardena et al., 2017). Consequently, it is important to take note that the bigger the size of green spaces the better cooling effect they produce (Aram et al., 2019), whereas green spaces smaller than 0.05 km² seem to contribute the least (Doick & Hutchings, 2013). Moreover, UGI reduces noise pollution, enhances air quality and decreases particulate matter (Mueller et al., 2020), thus improving overall health. These spaces are considered the green lungs of highly urbanized cities and the larger they are the more effective they are in reducing UHI, as can be seen in Figure 1.



Figure 1: Champs de Mars green space in Paris.



Figure 2: Urban green space amidst residences in Amsterdam.

Emotional, Cognitive, and Psychological Benefits

Key to achieve emotional, cognitive and psychological benefits of UGI is to consider needs of diverse groups based on their race, ethnicity, age, gender, and residential location from the outset (Payne et al., 2002). Studies found that not only would visiting green spaces significantly improve health and happiness but also in providing views to greenery from one's home or from street level (Van Herzele & de Vries, 2012), which were found to be greatest for those suffering from stress and anxiety (Ulrich, 1981), as shown in Figure 2. Seeing and walking through urban green spaces have been found to improve people's cognitive abilities.

Better performance in reading, studying, concentrating, and recovering from fatigue resulted from exposure to natural settings (Kaplan & Kaplan, 1989). The restorative qualities of green spaces according to women ranged from psycho-physiological health, aesthetic, 'spiritual', and 'therapeutic' qualities (Krenichyn, 2006). Women from low-income backgrounds who had windows overlooking green areas had improved cognitive functions and were better able to navigate major life issues (Kuo, 2001). This indicates the multiplied positive health effects of UGI for anyone with physical and/or visual access, and more importantly realizing UGI's long-term benefits on reducing health inequalities among disadvantaged groups.

Furthermore, UGI stimulates children to play outside, and makes neighborhoods safer by providing opportunities for people to be present outside and keep a watchful eye. The theory behind this, coined by Jane Jacobs, is 'eyes on the street' (J. Jacobs, 1961). For Jacobs, one of the main characteristics of a thriving urban centre is that people feel safe and secure in public spaces, despite being

among complete strangers. The logic behind this is as follows: the more people present in the streets, “eyes” provide informal surveillance of the urban environment and the more this contributes to an atmosphere of comfort and safety. There are various elements that contribute to this safe environment, some of which include: ample room for walking, contact between buildings and the street, lighting, and connected people and places.

Safety through establishing stronger people-place relationships continues to be relevant today in informing designers and planners of making quality spaces that are more sustainable on the longer run. Reiterating the importance of surveillance, Pacheco contends with Jacobs that ‘urban security is not simply a matter of policing: it is directly related to the quality of public spaces and their ability to attract people onto the streets... (where) public spaces are connected to collective identity, everyday life, and the ways that we interact and meet one another’ (Pacheco, 2015). Creating these safe public spaces that are characterised with vibrant social interactions and parents’ monitoring is vital for enabling children to play safely. In addition to UGI spaces providing safe environments, the spatial quality of enabling contact with nature and greenery has many benefits for children’s development.

Under the UN Convention on the Rights of the Child, ‘children must be allowed to grow, learn, play, develop and flourish with dignity’ (UN, n.d.). Unfortunately, not many studies concerned with environmental inequalities or urban design for that matter pay attention to children’s behavioral development and their differential uses of outdoor spaces and exposures

to nature (Strife & Downey, 2009). The quality of urban life has limited children from freely playing outdoors or exploring nature, compared to older generations, and some designers are incorporating play potential in ordinary mundane spaces as shown in Figure 3 or encourage quiet play in a quaint neighborhood as illustrated by Figure 4. In any case, those who lived close to natural settings performed far better cognitively and behaviorally than those who did not. Children with vegetation near their home focused better (Nancy M. Wells, 2000) and girls studied better in apartments with views of trees (Taylor et al., 2002) compared to those living near or overlooking nature-deprived environments.



Figure 3: Tiled pattern to encourage children playing hopscotch in an open space in Amsterdam.

When exposed to nature, children with Attention Deficit Hyperactivity Disorder (ADHD) had reduced symptoms (Kuo & Faber Taylor, 2004) and those diagnosed within autism were provided with emotional and social benefits (Li et al., 2019). Improvements on attention and focus of autistic people were found in addition to boosted self-confidence. Open spaces and gardens can be considered as dynamic environments offering diverse opportunities for learning among autistic individuals, utilizing sensory information such as smell, sound, sight, and mobility. On the other hand, and assuming that people with physical disabilities have a great need for accessing green spaces, they were found to be seen less frequently in these areas due to various constraints related to accessibility (Stigsdotter et al., 2018).



Figure 4: Chess game in a residential urban garden in Amsterdam.



Figure 5: Sign to an urban park in San Francisco welcoming everyone anytime.



Figure 6: Photo of green park in Cambridge showing ramps along with stairs.

That is why careful attention needs to be given to facilitating easy and open access to green spaces for this marginalized group and others. Figure 5 shows a sign welcoming all community members, while Figure 6 shows simple strategies that allow facilitated movement for the physically challenged. Thus, in order to properly integrate UGI in service of a neighbourhood, one should first understand who composes the community and what their needs are.

Quality Time

Spending quality time can vary in meaning from one person to another and has changed historically. With the rising stress and anxiety disorders that have spread more in modern societies, mental health experts call for carving out a chunk of time to make life experiences more meaningful on personal and communal levels. Thus, green spaces can be key to overcome modern illnesses of loneliness, social isolation, and overwork-induced stress, by cultivating participatory attitudes and activities, volunteering, and making time for leisure and relaxation.

Participatory Attitudes and Activities

Attractive and accessible greenspaces can improve community identity and sense of place, improve aesthetics, and provide a place for gathering and social interaction that encourages participatory attitudes and activities. Integrating green landscaping into these public places can enhance the connection to nature which in turn forges social cohesion. Exposure to nature has also been proven to increase people's social interactions, empathy, trust, and cooperation (Zhang et al., 2014). Social connections and interactions may be fostered by natural settings that form the basis for community development (Elmendorf, 2008). Conversely, barren spaces have been shown to increase feelings of loneliness and social isolation (Maas et al., 2009).

Sense of belonging, familiarity with neighbors, and strong social support were shown to be more enhanced for residents close to nature than those without nearby green spaces (Kweon et al., 1998). Studies have found that the 'more vegetation in a common space, the stronger the neighborhood social ties near that space—compared to residents living adjacent to relatively barren

spaces, individuals living adjacent to greener common spaces had more social activities and more visitors, knew more of their neighbors, reported their neighbors were more concerned with helping and supporting one another, and had stronger feelings of belonging' (Kuo et al., 1998).

The social benefits obtained from the urban green space are not mutually exclusive. Contact with neighborhood and engagement in social activities brings great psychological satisfaction and dissipates unhappiness (McAuley et al., 2000). In the end, 'no matter how elegantly wrought a physical solution, no matter how efficiently designed a factory, no matter how safe and sanitary a building—unless people can, in some way, create, manage, change, or participate in activities that affect their lives, dissatisfaction, alienation, and even illness are likely outcomes' (Lindheim & Syme, 1983, p. 354).

Volunteering

It is essential when planning UGI projects to involve the community to participate in envisioning and designing the green space. Through UGI projects, opportunities open for people to interact socially, get to know their neighbours, and promise to raise altruistic values and place attachment within individuals to serve their community and care for their shared spaces (Razem, 2020). Thus, a community's enhanced social cohesion can enable individuals with altruistic values to volunteer to mobilize the community for participating in UGI projects' planning, design, implementation, and maintenance. In turn, the merits of volunteering not only benefit communities but extend to improve individuals' wellbeing greatly.

Volunteers' embeddedness within communities and organizations while living and working alongside individuals in the community and their colleagues, enable them to develop a shared understanding of each other and the challenges they face. Such intergroup membership has been shown to develop group identities that impacted positively on volunteers' feelings of belonging and satisfaction and contributed to their communities overall well-being (Gray & Stevenson, 2020). When this works effectively, it creates strong personal and group bonds which enable collaboration. 'These more informal relationships help to build trust, contribute to the generation of soft outcomes (such as increased confidence, agency and leadership skills) that enable solutions to be owned and sustained at local level and harness networks that enable things to get done' (IDS, 2015).

The notion of 'doing well by doing good' attests to the kind of happiness and self-gratification resulting from and through volunteering. Volunteering improves well-being and mental health through 'mattering' (Rosenberg & McCullough, 1981) and viewing oneself as a worthy individual through giving and aiding. It was shown that adolescents, youth, and kids who participate in voluntary activities can develop a deeper sense of social responsibility and improve their attitude towards their community through taking part in community activities and initiatives. It has been observed that teenagers who participated in volunteer activities were associated with fewer crimes and illegal behaviors compared to non-volunteers (Ranapurwala et al., 2016). These strong community-place connections that help adolescents' development set the ground to mobilize more community members.

The psychological benefits of volunteering are significant and in fact have been shown to bring different kind of happiness than simply doing hobbies or generally feeling good (Ryan & Deci, 2001). Volunteering was also found to mostly improve psychological well-being of the less socially integrated groups (M. A. Musick et al., 1999), and reduce depression for over-65 groups (Marc A Musick & Wilson, 2003). Moreover, volunteering 'for three or more types of organizations provided more benefit than working for two, which had more effect than working for one or none' (Piliavin & Siegl, 2007). Volunteering elderly and youth seemed to show better perceived health and predict greater life satisfaction (Van Willigen, 2000). In all of this, volunteering offers a channel of communication and human connection for those that feel socially alienated and UGI promises to open this channel.

Leisure Time

Modern life has its pressures and urban open green spaces can provide respite for urban dwellers. In the fast population growth and rapid urbanization, architects and planners became concerned with strategies to dampen city life stress by providing outlets for urbanites.



Figure 7: People playing football in Parc de La Villette in Paris.



Figure 8: People skating, cycling, and walking in a park in Berlin.



Figure 9: People playing in a green field in Berlin.

The Dutch architect Aldo Van Eyck, for example, designed hundreds of children playgrounds, between 1947 and 1978, that were innovative in their time for utilizing ‘in-between’ or leftover spaces. Not only was the idea of designing spaces to be discovered by children unique, where they have a right to the city, but it demonstrates the involvement of architects with vision in creating positive change and revitalizing the city. The modern city can be overwhelming, where there is too much going on at the same time and where one can feel lost. In that respect, Van Eyck was concerned with creating spaces that gave a ‘sense of place’ and more importantly including children as rightful city citizens to enjoy public spaces that embodied ‘a feeling of home’ (demerijn, 2013).

Similarly, the British-American architect Christopher Alexander proposed a design manifesto from the 1970s, to attach buildings with quiet ‘back’ spaces (Alexander et al., 1977, p. 59). Located behind the busy town, these quiet spaces allow people to pause and have a private talk where only natural sounds can be heard. From this, urban planners and designers are vital actors in envisioning such spaces and can bring these spaces to life with proper community participation.

During the design of UGI, attention should be given to enable people to take part in outdoor activities like frisbee, football, cycling, skating, exercising and many others. Figures 7, 8, and 9 illustrate a range of outdoor activities that can take place in green spaces. Such open spaces can allow people to practice different hobbies and share them with others, creating stronger social cohesion. On the other hand, some of these spaces can be an attempt to bring the wilderness back into the city in order to strengthen the connection between humans and nature. They allow for hobbies that are not always available in cities such as bird-watching. These spaces can provide some of the much-needed peace and tranquillity amidst busy city sounds and movements, which are effective in regulating people's emotions and calming them down (Kellert & Wilson, 1993).

1.2 AT COMMUNITY LEVEL

Many UGI social benefits can be achieved on community level. These include an enhanced sense of ownership and belonging, fostered sense of safety and economic prosperity, in addition to practicing good governance.

Sense of Ownership and Belonging

Building the sense of ownership and belonging needs to focus on the things, spaces, and public places that the community members share. Shared public open spaces increase the sense of community ownership and stewardship and can foster opportunities for community members to meet incidentally or intentionally for social interactions.. Considering the weak sense of ownership of spatial assets in local Jordanian communities, as demonstrated in section 2.3 of this publication, introducing social activities through creative leadership enables fostering a stronger connection to communal places and promises to

cultivate a sense of belonging. While several spaces have been successfully inclusive in attracting local communities, like King Hussein Park and the Hashemite Plaza near the Roman theater in Amman, more spaces are needed, and other spaces that are usually under-looked deserve closer attention.

Open spaces, stairs, parks, and routes are local areas that can be activated (i.e. being utilized by the community) to increase social networking and the sense of solidarity among community members and residents. In fact, many definitions of open spaces aim to capture a variety of qualities (e.g. ownership, boundaries, types of activities, physical characteristics, planned or unplanned) (Woolley, 2005), which attests to the need to acknowledge the social dimension of open spaces. Given the diverse nature of open spaces, in urban settings they can include streets, urban vacant lots, sidewalks, squares, spaces between buildings, in addition to informal or marginal spaces (UrbanRock Design, 2014).

One of the first people to study urban public spaces, from as early as the 1970s, was the American urbanist William Whyte who concluded that ‘what attracts people most, it would appear, is other people’ (PPS, 2010). It has been shown that spaces that are well maintained with building facades that have many openings increase feelings of trust and slow pedestrians to interact and socialize, while spaces with broken sidewalks, derelict infrastructure, and blank walls generate feelings of threat, antisociality and fast walking (Gehl et al., 2006). Further, qualities of adjacent open spaces like streets and sidewalks interlink to either inhibit or support socialization. In their comparative study of light-traffic streets and heavy-

traffic ones, it was found that people residing in blocks along light-traffic streets had three times more friends and double the acquaintances of people who lived in heavy-traffic streets (Appleyard & Lintell, 1972). 'Public life begins when we slow down' (Montgomery, 2013, p. 174), from which urban planners and designers are urged to accommodate pedestrians as end users of these spaces on a par with car drivers.

For example, Figure 10 shows a socially vibrant sidewalk. From this, observing how spaces are used can inform designs to foster pro-sociality and reduce isolation which lead to creating a sense of place and a sense of community. More importantly, for planners and designers to gain a nuanced understanding of the social life of spaces and what spatial uses people prefer, they may not be fully captured via observation and can only be gained through engaging and consulting the community.



Figure 10: Vibrant sidewalk with commercial activity in Barcelona.

Essentially a democratic process, initial community gatherings rely on unearthing community's attachments and associated meanings and uses of these spaces. These spaces may bear common meanings for different community members that deserve to be highlighted in the processes of participatory design. With these shared meanings emerges a sense of place that can be articulated to capture 'a lively awareness of the familiar environment, a ritual repetition, a sense of fellowship based on a shared experience' (Jackson, 1994).



Figure 11: Photo of an open space in Paris hosting stalls selling local crafts.

Through reflective identification and active cultivation of a sense of place that can draw on common meanings; be it social, cultural, aesthetic, historical, natural, or physical, a sense of community ownership and belonging can be enabled.

The local sense of place can be better captured through place-rooted and community-based participatory urban planning, which municipalities, city planners, and active organizations can facilitate throughout decision making, design, implementation, and follow-up phases. Enhancing the sense of ownership and belonging encourages community members to undertake specific initiatives including: communicating the vision and taking on the informal responsibility of protecting public spaces, parks, and other key landmarks. These initiatives can take on another form where community members are motivated to spearhead initiatives such as celebrations, festivals, carnivals, cultural activities, and shared interests, such as arts and sport, as shown in Figures 11, 12, and 13. Ultimately, studies have shown the multi-layered potential of placemaking and place attachment in revitalizing run-down urban infrastructures in disadvantaged neighborhoods (Saegert, 1989) (consisting of migrants, refugees, and underprivileged families) and empowering communities to realize their capacities for community leadership (Ellery & Ellery, 2019).



Figure 12: Open space in Berlin hosting Christmas market.

Moreover, places and individuals enter a recursive interaction where a 'sense of place is considered as a motivation for stewardship and actions to care for the environment' (Masterson et al., 2017) and 'encouraging an individual's connection to a natural setting facilitates the development of general ERB (environmentally responsible behavior)' (Vaske & Kobrin, 2001) and caring for place. Connection with nature aims to produce change on a deeper level. As Thackara points out: 'Change is more likely to happen when people reconnect _ with each other, and with the biosphere _ in rich, real-world contexts' (Thackara, 2015). Perceiving nature as an extension of the human world is necessary since it was suggested that disconnecting from nature can give rise to unsustainable exploitation of the environment and a sense of indifference to the suffering of non-human species (Crompton & Kasser, 2009).



Figure 13: Green space in San Francisco hosting artists.

Through UGI, biodiversity of flora and fauna can be means to nurture humans' re-discovery of their connection to nature that has long been excluded and distanced (Kellert, 2012).

All these studies highlight the importance of forging links between the community and their shared spaces (via greening/ activity hosting) through which more resilient, socially supportive, and environmentally minded groups of people can care for and maintain their neighborhood. Each place and community are different and that is why attending to the local community's needs and associations with places is vital. This is accrued from experience that a supposedly good practice in one place may not be transferable to another, but it may inspire an action that will work in another place. This way 'social sustainability is understood not simply as a requirement for the central government to change its mode of operation, but as a general injunction to incorporate a wider range of stakeholders in the delivery of urban processes' (Manzi et al., 2010).



Figure 14: Photo of High Line project in New York showing adjacent high-end developments.

Safety and Economic Prosperity

Green spaces are claimed to provide greater sense of safety (Groenewegen et al., 2006) and reduce levels of domestic violence (Sullivan & Kuo, 1996). Also, residents living near green spaces encounter less crime, violence, and incivilities (Kuo & Sullivan, 2001), such as harassments and other delinquent activities. This isn't to say that green spaces are a solution for all these problems. However, when combined with other criteria, they can play a role in creating a safer and more comfortable environment. Thus, safe residential neighbourhoods and secure districts can promote economic activity and increase retail sales, especially when street trees and UGI are aesthetically incorporated. For example, 'properties on tree-lined streets are valued at up to 30% more than those on streets without trees' (GDCI, n.d.). On a wider scale, UGI projects can significantly upgrade the neighbourhood, increase property values and attract investors, where municipalities-bank partnerships can form to incentivize sustainable economic development in the area. Safe neighbourhoods and roads that are well-lit encourage productivity and working for late hours, attract residents and investment opportunities, and indirectly benefit residents in reducing healthcare costs as they interact with and visit these spaces, leading to long-term increase in the levels of income at these neighbourhoods.

However, cost of living can increase, and real estate investors tend to raise property values when UGI projects are implemented, which might negatively lead to displacement of residents. In the acclaimed project of the New York High Line, shown in Figure 14 that rehabilitated an abandoned railway to become an attractive green infrastructure, real estate prices soared with high-end housing lining the project resulting in the gentrification of the neighbourhood's residents in the process (K. Jacobs, 2017). Thus, parks and UGI should involve communities from the outset and enact proper zoning legislations to reduce gentrification of especially low-income homeowners.

Green spaces and improved aesthetics also have the potential to reduce crime and violence in a community, although design and maintenance of the natural elements are critical to realizing those benefits. Residents in well-kept landscaped areas that included trees and grass reported feeling a greater sense of safety (Kuo et al., 1998). Natural areas promote liability and vitality of communities, where good air, water quality, and scenic beauty invite new residents, families, and tourists. Additionally, UGI projects are touted for reducing long-term costs in their localized treatments of water and flooding compared to grey infrastructure that describe hardscapes composed mainly of concrete and steel. While UGI incorporates plants and ecosystems, such spaces can be artificially constructed and serve to generate income for the community, in the form of public bazaars, neighbourhood edible gardens, or markets displaying diverse local produce and crafts.



Figure 15: Green roof on one of many Parisian buildings.



Figure 16: Collective garden in Parc de la Villette, Paris.

The potential of informal economic activities in shared green spaces can be capitalised by the community, which was exemplified in the local study of Nour al-Baraka NGO's activities in Princess Iman public garden, mentioned in section (2.3.3). An example of economically beneficial UGI are those spaces that employ urban agricultural practices for food production. These can be roof gardens, vertical green gardens, community gardens, and urban forests, examples of which are shown in Figures 15 and 16. Urban farming is becoming increasingly important for achieving sustainability on the city level. The environmental benefits of urban farming are closely intertwined with socioeconomic benefits in reducing food waste through localized composting, relying on rainwater and/or greywater reuse for irrigation, and reducing energy-intensive transportation of imported food.



Figure 17: View of an educational school garden in Cambridge.

Understanding geographies of food consumption, production, and distribution is a worthy endeavour for communities aiming to become more sustainable, which has been theoretically advanced and practically implemented in many parts of the world. Moreover, school programs and involving youth and children in gardening have been popularized around the world (Doyle & Krasney, 2003). An example is seen in Figures 17 and 18, where school gardens can be especially valuable for enabling environmental educational, reducing the disconnect between people and land/nature in urban settings (Louv, 2005) and achieving learning outcomes of where food comes from and how it affects our health (Blair, 2009).



Figure 18: Educational sign in Cambridge about users of the school garden that include educational staff, children, and families who learn about crop rotations to sow and grow fruits, vegetables, and flowers.

In any case, the suitability and economic feasibility of edible gardens varies from one context to another but the narrative of the benefits of replacing ornamental plants with those that are food bearing has been on the rise in designing sustainable landscapes and built environments. For example, permaculture experts have long advocated for the sustainable cultivation of food forests or ‘outdoor pantry’ (PA, n.d.) to be shared and accessed by local communities. Green rating systems like LEED grants an extra point under credit ‘Local food production’ for homes that dedicate ‘gardens or planters with vegetables and/or edible nut- and fruit-bearing plants appropriate to the site’ (USGBC, 2021).

Locally, urban agriculture in Jordan remains nascent and experimental at best with seemingly quite high economic capital costs, as was communicated in the local ‘Urban Agriculture Environmental Education Initiative for Schools’, elaborated in section (2.3.2). The difficulty of widescale adoption of urban farming in Jordan is especially compounded when water scarcity and long-term management of these gardens are taken in account. In any case, understanding urbanites’ relation with nature as a source of food is not alien to Jordanian culture and traditions; a link that deserves preserving in rapidly urbanized cities. With the majority of privately owned houses in Jordanian cities having grape vines and a variety of fruit trees, in addition to olive trees, these productive trees remain within private gardens serving their homeowners. From this, it might be worth pondering whether projects of urban farming, or conventional public gardening for that matter, may further this already instilled nature-food link to common spaces. A prominent example is the initiative ‘Zikra for popular learning’, led by

Rabee' Zureikat, that aims to revive lost knowledge in utilizing the agricultural potential of vacant lands. The initiative calls for an ideological shift to depart from relying on importing food and instead rediscover local capacities to reach socioeconomic food sovereignty. Having planted indigenous wheat seeds that were then harvested, milled, and sold and branded in Arabic as 'Khubz Bladna', translated to 'bread of our country', to the public proved not only its applicability but also its popularity, albeit on small scale.

Nonetheless, instead of mainly selecting decorative trees in public open spaces, productive trees familiar to Jordanians that are successfully utilized within private spaces merit their consideration to be cultivated in public spaces, to benefit especially those community members (like apartment dwellers) who lack access to private gardens.

Good Governance

Good governance is the ultimate goal for enhancing communities' capacity to grow appreciation and manage responsibly their common assets of public spaces. Greening projects provide the opportunity for community members to come together and draw on their social capital and skills. Besides the previously mentioned benefits of improving quality of life and indirectly nurturing environmental and social attitudes, the subject of inclusivity and utilizing communities' human resources is vital for good governance. How is good governance achieved and why does it matter?

'Good governance' matters in achieving sustainable development, since it 'ensures that corruption does not occur, voices of minority and vulnerable members of society are

accounted for, and that decision making is responsive to current and future needs of society' (Pomeranz & Stedman, 2020, based on UNDP principles). Consequently, ensuring democratic representation of all members of the community, reaching a consensus on decisions, and requiring transparency and accountability are all essential for good governance, keeping in mind that conflict of interests is bound to happen. The shift from top-down governance towards citizen participation does not mean the exclusion of governmental entities like municipalities. Instead, good governance allows communities to respond better to change and uncertainty as they form meaningful partnerships with stakeholders. UGI entails a great deal of cooperation amongst stakeholders through which processes of decision making amongst beneficiary communities can act as a platform to join efforts and govern these spaces.

Ensuring inclusivity aligns with SDGs 11 and 13, targets 11.7 and 13.b, respectively. Target 11.7 states: 'By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities', while target 13.b states: 'Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities'. In both targets, UGI represents outdoor respite spaces in addition to being a climate-change mitigation solution, for which equal access and diverse groups' representation should be ensured.

1.3 ACHIEVING UGI SOCIAL BENEFITS

As the previous sections unpacked what the social benefits are from UGI, this section aims to address how these social benefits can be achieved. Arguably, the social benefit of ‘good governance’ seems to be most important and time-intensive to mobilize community members and stakeholders for sustaining and utilizing direct and indirect social benefits from UGI.

Thus, it is important for planners and decision makers to shift away from patronage roles and instead consider themselves as invested facilitators, mediators, and co-partners with the beneficiary community and interested stakeholders. The framework of UGI concept adopts the participatory approach and community engagement at all levels and with all targeted community members. This is achieved through ensuring community participation during the various phases that include: needs assessment, co-design, and co-implementation. Assessing community needs is key in initial phases of the UGI projects, that include scoping the demographic composition of the community. Such information may include, but are not limited to: age, gender, income, employment, education, housing tenure status, duration of residency, etc. After getting to know the member of the community, they are invited to share their ideas and participate in design as part of a co-design process with architects and planners.

Once the design is finalized, the design team presents the project and explains how each need communicated through co-design sessions was met as agreed. When a consensus is reached, it is important to keep open the communication channels with targeted stakeholders to inform them about project starting dates, expected duration of implementation

and accomplishment date, obstructions to car and pedestrian movements during construction phase, delays when they occur, along with launching and opening for use dates. Such process promises to cultivate trust amongst community members and can aid in future upkeep of the spaces. For example, the community can be mobilized to form a committee that watches over the neighbourhood and communicates its needs. Moreover, with an empowered community, future visions and creative utilization of the space can be planned by local people, so that if they wanted to host an event or activity within this space, they can be openly discussed and shared with the municipality's team and partner with interested stakeholders.

Stakeholders in Jordan can include municipalities, ministries, local communities, donors' community and organizations, and private sector (engineering and construction associations and companies). Other stakeholders that are active in the community can also be part of UGI projects participatory planning such as community-based organizations (CBO), civic society organizations (CSO), and local and international non-governmental organizations (NGO). To optimize the process of community outreach and inclusive representation in addition to coordination amongst stakeholders, the chain of communication relies heavily on field presence of social mobilizers.

Social mobilizers are onsite officers who aim to mobilize the community to address their needs, seek ways to instigate change and improvements to their status quo, communicate to responsible authorities and coordinate, create awareness about intended projects, and motivate participation. These field officers can be assigned by any stakeholder. In all of this, their

role is key for communicating the local community's needs and sometimes extending to resolve conflict of interests when they arise. Sometimes seemingly unexpected partners in the project may prove to be valuable and influential stakeholders, so the previous list is by no means comprehensive, and one should be open to the particularities of social dynamics of each neighbourhood. Chapter III reflects on some of community resources that can be essential partners to include from the outset based on experience. These included imams and priests, police officers, Mukhtar figures, and family heads. Thus, a localized more nuanced planning approach is needed.

C H A P T E R I I

EXPLORING TRENDS IN PLANNING APPROACHES

CHAPTER

EXPLORING TRENDS IN PLANNING APPROACHES

This chapter briefly explores the trends of planning approaches that show a range of levels in engaging local communities. The chapter outlines variations between top-down and bottom-up approaches and highlights the dynamics of participatory planning as a bridging process between government-led and community-based planning. In focusing on spatial planning, placemaking is described to exemplify the diversity of approaches to activate people-place connections previously implied, with tactical placemaking elaborated more. The final section ends with showcasing three local UGI cases of community-based initiatives.

2.1 TOP-DOWN, BOTTOM-UP, OR BOTH?

In order to understand what the best pathway to plan open public spaces is, it is important to assess which of the planning approaches is more effective in producing 'successful' spaces. While success criteria for public spaces vary according to each stakeholder, history can be a great teacher to assess what constitutes a good open space. However, long-term reflection on planning and use of open spaces is scarce and rightfully needed in Arab countries and Jordan especially. On the other hand, it is rife in the West with examples that merit their examination. However, it is important to note that by no means what is considered 'successful' abroad can be replicated locally, and careful attention should be given to particular sociocultural and spatial conditions. Having stressed the need to find localized criteria for 'successful' Jordanian public spaces, it is worth

exploring global trends and looking into the learning curve that Western planning practices went through.

In recent planning literature, top-down planning approaches are criticized for many shortfalls, one of which is its minimal integration of citizens as equal partners in decision making. Conversely, bottom-up approaches advocate community-based participatory planning that follow a democratic process of inclusion, transparency, and accountability. It might seem reductive to categorize planning as existing along either of two extremes: top-down or bottom-up. In fact, a gradient of combined approaches seems to be more realistic, so that some form of citizen participation can still be part of top-down planning approaches, and majority of bottom-up approaches form co-partnerships with authority officials. While acknowledging hybrid forms exist, the two approaches can be clearly demarcated according to differences in objectives, involved people, and methods.

Government-led planning

Top-down planning is mainly characterised by ‘the initiating role and dominance of governmental actors in involving citizens in policy making or service delivery’ (van Meerkerk, 2019). For decades, master plans of cities and grand visions of spaces have been drawn up by planners, professionals, and experts to provide services and distribute resources for citizens. So a successful open green space might well achieve technical, aesthetic, urban, environmental, and economic benefits, but might miss out on achieving social and cultural benefits for the beneficiary community. In fact, with this type of planning, there is only input from above (city planners) with very little or no feedback from the ground (users).

Macro categorizations of perceiving cities ‘such as economic zones, neighborhoods, and social class, are not enough to capture the differential experience of urban dwellers or the dynamics of urban growth and development’ (Shami, 2003, p. 56). Too often, a bird’s eye view of the city misses ground-level micro realities, like: Who doesn’t have access to open spaces and infrastructures? What are the temporal rhythms of people’s everyday life when they move through and use open spaces? Thus, when planning for UGI, asking these questions demands zooming-in on the social life of open spaces that are particular to the targeted local community. With the escalating evidence for the need to address socio-spatial geographies to achieve just inclusion of the marginalized and more broadly strengthen communities to become sustainable and resilient, engaging the community in decision making is essential.

Because top-down planning is highly entrenched in many cities, integrating participatory planning with the community and stakeholders is urged where city planners begin to be mindful of the blind spots and pitfalls of top-down insular planning. Many pathways of involving citizen collaboration with the government can be followed like ‘citizen panels, citizen juries, citizen charters, and participatory planning’ (van Meerkerk, 2019). Participatory planning is considered one of the effective pathways to involve communities in decision making, but it entails a willingness to commit to a long-term cultivation of a relationship with the local community through the planning process. From this, as cities grow in scale and complexity, the comfort of certainty embedded in master plans as end-products should be resisted and replaced with a more realistic embrace of process; to accept

that design visions will keep changing in-flux as more time is spent on the ground with the people.

Participatory urban planning

Urban planning practices worldwide are increasingly recognizing the merit of participatory planning, joining efforts of stakeholders, and community empowerment in planning, designing and implementation of interventions as a form of decentralized governance that frames citizens as subjects and active participants rather than objects and passive recipients. It is a move away from the traditionally practiced norms of paternalist state role of provisioning of services for a receiving community and instead ‘participatory urban planning allows local knowledge to form the basis of planning solutions... allowing them (community) to become contributors and decisionmakers’ (Coghlan & Brydon-Miller, 2014, p. 611). However, city planners and municipalities aiming to adopt participatory planning should be mindful of power dynamics and that there are various levels of civic engagement.

The famous ladder of citizen participation posited by Arnstein (1969) was highly influential in revealing power hierarchies through various forms of participation. Her message was that calling a process as participatory may be deceptive if the community was not empowered. The ladder shown in Figure 19 illustrates levels of citizen participation with examples. Collaboration efforts between governments and citizens when instigated by officials were found to mostly lie within informing and consultation levels (Leach & Pelkey, 2001; Tatenhove et al., 2010), while citizen control was very difficult to achieve (Reed, 2008). Even though the ladder risks abstracting and

simplifying the understanding of participation, and in fact has been criticized for overlooking complex collaborative processes (Tritter & McCallum, 2006), it invites the question of how ‘meaningful’ interactions and citizen power can be achieved. In a way, Arnstein’s ladder can be used by local municipalities to assess current approaches to participatory planning and what level of engagement they have reached and aspire to achieve if legitimate community empowerment is a goal.

Consequently, for community empowerment to be meaningful, there is a need to learn when empowerment truly works, where ‘empowerment’ as a concept and practice is complex and contextually specific. According to Westphal (2003), during participatory planning meetings that can be mediated by authorities, it is useful to differentiate between ‘empowered’ and ‘empowering’ individuals (Zimmerman, 1995). Such differentiation can shed light on community’s social dynamics. So that once ‘people are empowered, they, themselves, show mastery of skills, control over aspects of their environment, and an ability to make changes that lead to a higher quality of life for themselves (and sometimes others)...(but) When people (are) empowering, they are able to foster empowerment In others, and then facilitate changes in another individual or group, thus achieve changes in their circumstance’ (Westphal, 2003, p. 139, italics as in original). An individual or organization might be empowered but not empowering and vice versa.

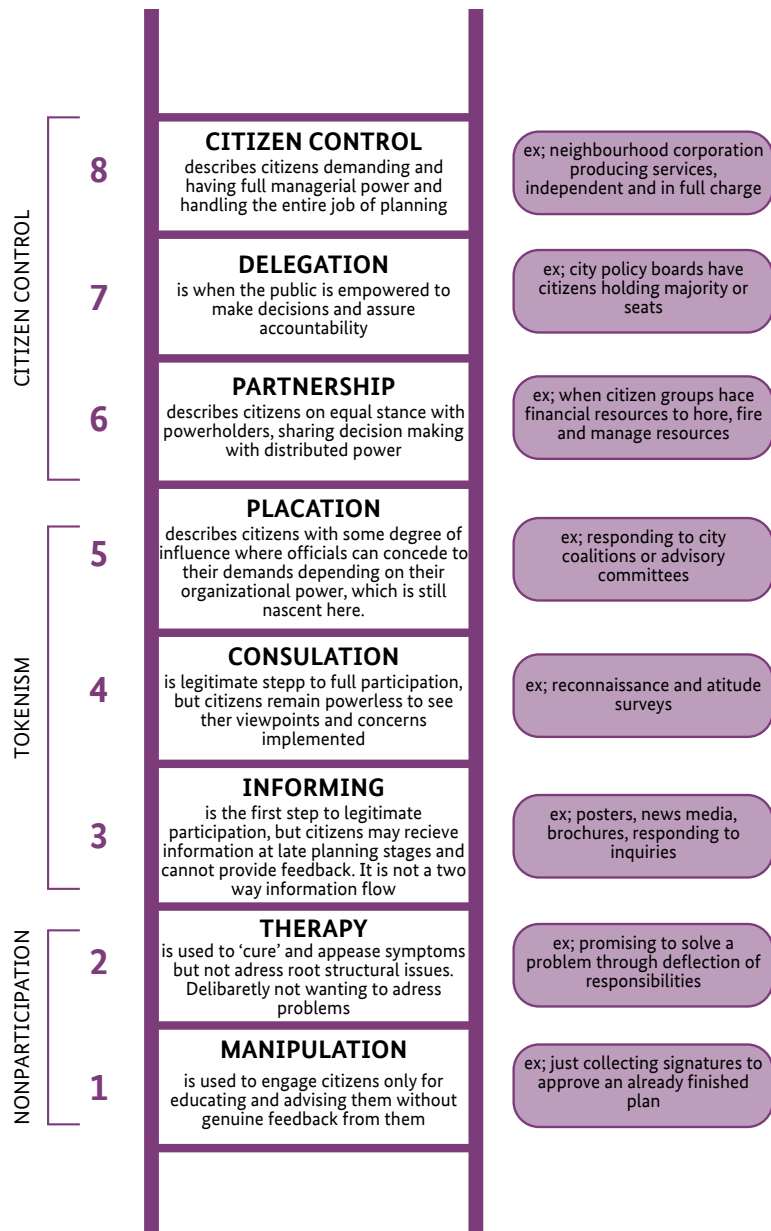


Figure 19: Illustration of Arnstein's Ladder of degrees of citizen participation (Adapted from Arnstein 1969)

In brief points, Westphal comments on empowerment dynamics:

- Organizers in UGI projects should be empowered and empowering.
- Foster an inclusive process during decision making, and if greening practitioners are not experienced in organizing, partner with experts.
- Authorities like municipalities can play a vital role to be empowering of communities undertaking greening projects. The community becomes empowered to then establish ties with other social networks like ‘school advocacy groups, public health groups, recreation groups, job training programs’ (Westphal, 2003, p. 144).
- In initial meetings, practitioners are urged to listen for the community’s needs that stem from their everyday life. ‘No one will say “we need to plant more trees to reduce stress and raise our cognitive functioning” But they might say “This place brings you down. We need more life here, more color!”’ (Westphal, 2003, p. 144).
- It is important to be aware of who has more power in the community and plan sessions to account for power imbalances, by asking: Who is this project benefiting? All community members, marginalized, some individuals or combinations of them?
- Be cautious of the empowered individuals in meetings who seem to dominate the process and drown other voices (i.e. not empowering other people).
- Practitioners evaluating the project after completion should be open to learn about the outcomes, when successful implementation might not have resulted in the anticipated social benefits for the community.

In sum, legitimate participation is not only useful for designing and planning better cities, but it can be a tool to empower citizens and communities. Through participatory planning, individuals can become more self-confident, gain knowledge in understanding sociopolitical systems and skills in decision making, offered opportunities to act and utilize resources, increase their impact, build trust and respect (Hassan et al., 2011). Through participation, more social cohesion, trust, learning to acknowledge others' opinions within the community, and a greater sense of ownership over results and process can be cultivated (Stringer et al., 2006).

While with these outcomes, communities are closer to become empowered to self-organize and mobilize, push for changes, and coordinate efforts, it is important to acknowledge there can be hurdles and unanticipated challenges. One of the main disadvantages associated with participatory planning is the lengthy and timely process it entails. Setting ambitious targets based on top-down planning experience 'simply does not allow enough time for comprehensive community transformative processes to take place' (Pogacar et al., 2019, p. 87). In addition, 'it is vital not to promise too much' and be adaptive by adjusting methods of engaging the public to prevent conflicts (Nared, 2019, p. 22). Aspiring for effective participation is always a good compass for planning approaches, but even on a less-aspirational goal, 'for some users, participation itself may be a goal' (Tritter & McCallum, 2006, p. 156).

Thus, for communities that are not familiar with the culture of stakeholder participation, they may seem incapable of understanding and contributing effectively to the process. Such mishaps indeed occur and can be frustrating, manifesting in seemingly irrational behaviors where during implementation people might counter what they previously agreed to during the participatory process.

Accepting these changes should be anticipated since it is what ‘makes participation a learning process that changes the mindsets of the public, politicians, planners and experts’ (Nared, 2019, p. 23), and can be ameliorated with raising awareness about the significance of the project in early sessions and having qualified facilitators that prevent conflicts at later stages. At the end, setting high goals of achieving a democratic participation should be supplemented with a deeper understanding of participants’ social relations, how they exercise power in their everyday life, and how they construct their identities (Hickey & Mohan, 2004). It is then that active citizenship can be approached as a more grounded manifestation on community level, instead of being treated as an abstract moral ambition to be achieved. In a way, enabling the expressions of community-based initiatives offers a channel to exercise what it means for community activists to be active citizens in their immediate neighborhood.

Community-based initiatives (CBI)

In contrast to top-down planning, 'bottom-up initiatives have a group or collective nature and are (often) initiated by groups of citizens in the local community' (van Meerkerk, 2019) that self-organize to manage their community's assets such as open spaces. Instead of being invited for collaboration with the government, citizens organize themselves to seek governmental partnership in projects, services, and ideas they deem beneficial to improve the status quo. They are agents of change who are locally oriented, attend to community needs, and mobilize volunteers. Many motivations drive community-based initiatives (CBI), which range from the need to administer public services in case of governmental austerity measures (Bailey, 2012) to providing public good (Van Eijk & Steen, 2016).

Just like government-led planning that relies on citizen participation, CBIs can also collaborate with government officials. Community-based initiated collaboration can be beneficial for planning authorities in two ways. First, CBIs can generate innovation and creativity in urban regeneration projects that is usually difficult to achieve by organizations known for their bureaucracy (Korosec & Berman, 2006). Second, CBIs contain a wealth of knowledge and skills about their locale that planners may find valuable. In planning research, there is a need to revisit the concept of 'resources' that is usually interpreted by planners as environmental services. 'Space, information, environment, kinship networks, good neighbours, and so on are all part of the resources that people mobilize and seek to access' (Shami, 2003, p. 79).

Thus, following the call for locally tailored urban solutions, CBIs are more qualified in understanding and utilizing micro-level resources.

So far, examples and urban planning trends seem to advocate for meaningful citizen participation that engages people in sharing their visions, shaping their cities, and activating their neighborhood spaces. Encompassing a range of urban planning approaches, placemaking as an urban tool to strengthen people-place connections, has been used ‘as a strategy for developing a host community’s sense of place’ (Ellery & Ellery, 2019, p. 237) and as a democratic process through which communities become empowered (Shibley et al., 2003).

2.2 PLACEMAKING

As part of spatial planning practices, placemaking can be defined as ‘the process of creating quality places where people want to live, work, play, shop, learn, and visit’ (Wyckoff et al., 2015). However, over the years placemaking has been shifting in meaning and actors involved. Placemaking changed ‘from being focused on physical (spatial) change of the environment (product oriented) created by designers (e.g. architects, spatial planners) towards placemaking as an enabling tool to be used by planners to facilitate the making of places by numerous people/role-players outside the planning

Profession’ (Wessel et al., 2018, p. 175). Aligning with the latter’s perspective, placemaking can be described as the joining of efforts of individuals who reside in the same neighbourhood to re-envision their surrounding setting and repurpose lived spaces to mould an identity unique to the place and community (Beza, 2016). Since ‘GI (green infrastructure), being a malleable

categorization of infrastructure’ (Parker & Zingoni de Baro, 2019, p. 4), any space that is public and shared collectively can qualify for UGI interventions through placemaking mechanisms. Greening and utilizing these urban spaces as common assets can be part of placemaking urban processes that produce many benefits (Wesener et al., 2020). Thus, in order to understand the value of placemaking in connection to achieving UGI benefits, one should examine what kinds of benefits emerge from varying types of placemaking.

According to Wyckoff et al., there are four types of placemaking, shown in Figure 20, where majority of ‘placemaking is of the “standard” variety, (but) three specialized types (are) designed to achieve narrower objectives’ (2015, p. 23). The variations between definitions of the four types are captured in Figure 21 based on City People initiative’s work and experience (Cohen, 2018) and Wyckoff et al. (Wyckoff et al., 2015, pp. 23–33).



Figure 20: Four types of placemaking, adapted from Wyckoff et al. (2015)

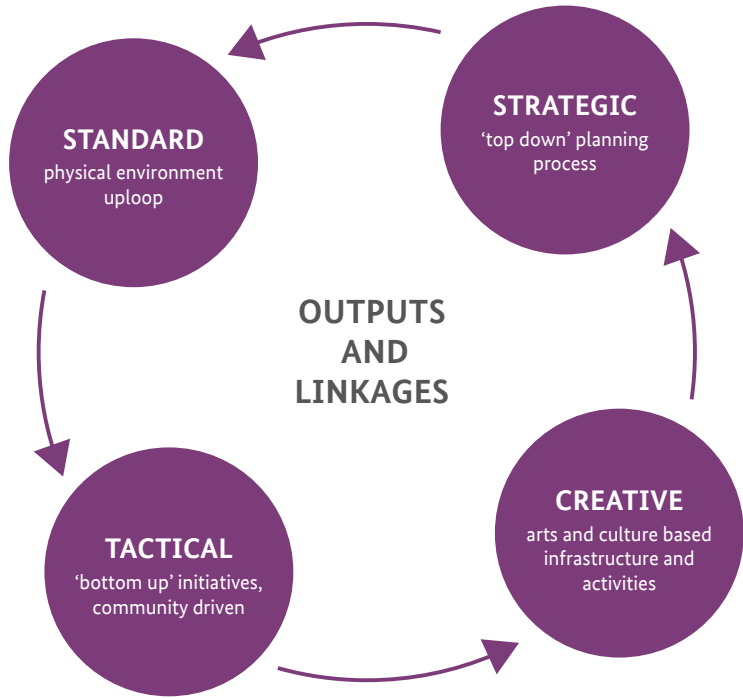


Figure 21: Variations between types of placemaking, adapted from City People initiative.



Figure 22: Photo of well-maintained infrastructure in Lisbon that provided typical urban elements for a good quality space such as walkable paths, roads, benches, lighting, and greenery.

Both standard and strategic placemaking follow top-down planning approaches and are characterized by taking up large-scale projects, while creative and tactical placemaking are mainly community-led and operate on multiple scales (Keleg, 2020). The definitions and examples include:

Standard Placemaking

is focused on physical upkeep and maintenance of the built environment. In addition to standard upkeep of physical structures, standard placemaking provides necessary services like street lighting, benches, and bike lanes for example, as shown in Figures 22 and 23.



Figure 23: Multi-lane roads incorporating paths for trams, bikes, cars, and crossroads for pedestrians in addition to integrating green infrastructure in Barcelona.

Strategic Placemaking

is focused on the creation of a new development on the scale of a neighbourhood or city through a top-down development approach with a significant level of investment, often from governments or private developers. It aims to improve the quality of the built environment and introduce multi-use facilities to attract talented workers and economic vitality, as shown in Figure 24.



2007



2016

Figure 24: Photos show Electricity Hangar in Amman on left before being rehabilitated and reused as a space for hosting multiple activities. The photo on right was captured during preparations for Amman Design Week during 2016 showing the positively impactful adaptive reuse of the hangar, in activating the open space in front of it

Creative Placemaking

is focused on the utilisation of the arts, to make a place more vibrant and interesting, be it through applications to the physical environment, the presence of arts related businesses, or the staging of programming and events. Activities and projects adding vitality to the space include a range of ideas that enable users of the space to stop and watch, 'such as movies in the park, chalk art projects, outdoor concerts, inclusion of children's ideas in planning projects by means of artwork' (Wyckoff et al., 2015, p. 29), and public art projects. Examples of creative placemaking are shown in Figures 25-30.



Figure 25: Views of painted staircases in Amman.



Figure 26: View of painted flags on street in London.



Figure 27: View of commissioned sculpture in Paris.



Figure 28: Entertainment performances in Cambridge downtown.

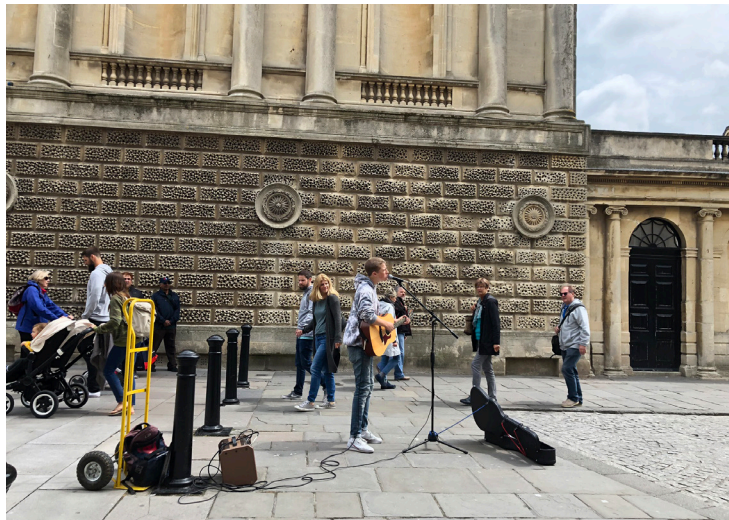


Figure 29: Music performance in Cambridge downtown.



Figure 30: Watching a film outdoors in Barcelona.

Tactical Placemaking

describes a 'bottom-up' approach led by community groups looking to test, change or improve aspects of their locale, and activate underused spaces. It is done often using cheap, temporary, low-technology interventions, where Figure 31 shows one example.

In line with the recent rising interest in placemaking as a grassroots process of being more impactful in promising to enhance people-places relationships, more attention will be dedicated to tactical placemaking as it agrees in principle with UGI objectives and process. According to Wyckoff et al., tactical placemaking combines ideas and approaches of two main prominent actors. The first is Street Plans Collaborative (www.street-plans.com) that were seminal in arguing for 'tactical urbanism' and showing its benefits. The second is the Project for Public Spaces (www.pps.org) that developed the 'Lighter, Quicker, Cheaper' (LQC) approach to tactically introduce a set of activities in spaces. Both actors' approaches are briefly described to showcase their ideology and examples.

- **Testing ideas quickly:** Tactical Urbanism enables citizens to reclaim spaces, provides developers with intelligence from the targeted community, and allows governments to put ideas into practice quickly.
- **Addressing a deficit:** There are two differences between DIY Urbanism (like yarnbombing or artistic installations) and Tactical Urbanism. First, the former is always instigated by individuals or small groups. The latter may also be instigated by individuals and small groups, but projects can also be facilitated by municipalities and nonprofit organizations to test ideas and their acceptance by the local community. Second, unlike Tactical Urbanism, DIY Urbanism ‘is not usually intended to instigate long-term change, such as revising an outdated policy or responding to a deficiency of infrastructure’ (Lydon et al., 2015, p. 8). See for example Figure 32 that shows an artistic intervention but does not seem to aim for change.



Figure 32: Yarnbombing DIY urbanism in Amsterdam.

- **Infusing creative visions:** Tactical ‘interventions were never anticipated by a master plan but provide a needed dose of whimsy and also help users and passersby not only envision a different future but experience it too’ (Lydon et al., 2015, p. 6). In a way, creativity and an entrepreneurial spirit can be infused in the process of creating change which is characteristic to bottom-up approaches.

Some of the examples of Tactical Urbanism that aim to transform underused open spaces to become laboratories for experimenting ideas, include:

- Road diets are quick and cheap interventions that aim to decrease road widths for traffic calming and reclaim some road space for community use. In tactical urbanism, road diets can be implemented using low-cost materials such as paint and traffic cones and planters, to cancel a lane and dedicate the reclaimed space for bikes or pedestrians, as shown in Figure 33



Figure 33: Low-cost interventions to repurpose some of the road space for community activities in Greensboro, North Carolina.

- Chair bombing entails positioning cheap chairs in unexpected spaces to test their public use and forge socialization amongst community members, as shown in Figure 34.
- Temporary installations like pop-up parks aim to activate usually car-dominated or underutilized spaces, as shown in Figure 35, by introducing pop-up stores, food trucks, greenery, and seating. They can also be an efficient quick way for authorities to test the social acceptance of ideas generated through participatory planning sessions, such as testing the idea of sidewalk urban farming shown in Figure 36.
- Do-it-yourself (DIY) interventions to facilitate mobility such as painting bike lanes and guerilla crosswalks, illustrated in Figure 37, and installing wayfinding signs which are executed by the community using cheap materials.



Figure 34: Chairs in pop up park beside the street in New York.

Similarly, Project for Public Spaces (PPS) that was founded in 1975 in the US, inspired by William Whyte's research on why public spaces matter, has developed its LQC approach to activate underused spaces for the purposes of making them comfortable and attractive to generate income to the community. LQC 'describes a local development strategy that has produced some of the world's most successful public spaces - one that is lower risk and lower cost, capitalizing on the creative energy of the community to efficiently generate new uses and revenue for places in transition' (PPS, 2012). It is light when interventions are not capital-heavy permanent changes, but there is always room for flexibility and doing something different if the idea was not accepted. It is quick because it is launched without being held back by time-consuming bureaucratic requirements for licensing and approvals.



Figure 35: Pop-up park and stalls in Berlin in a vacant parking lot.



Figure 36: Introducing urban gardening of onions to nearby residents in planted sidewalks of Berlin.

It is cheap by using low cost materials like a simple planter beautifying one's sidewalk in contrast to design-led projects and capital investments. Any activity can qualify to be part of LQC when it aims 'to activate space, and to attract people to engage in various activities, such as conversation, game playing, window shopping, coffee drinking, book reading, concert listening, street entertainment, etc.' (Wyckoff et al., 2015). For PPS, transforming a space to encourage return visitation is one of the goals and can utilize public art and interactive shows to do that (PPS, 2012). From this, LQC differs only slightly from Tactical Urbanism in accommodating entertaining activities that are artistically motivated which might not necessarily address deficiencies in infrastructure.

Both approaches, nonetheless, challenge large scale efforts and advocate for small-scale, low cost, incremental, experimental, iterative, and open process, that relies on local actors' leadership to test public reception and produce substantial impact in short-



Figure 37: Pop-up bike lanes and intersections in Minneapolis.

term. While tactical urbanism seems to be long-established as a practice in the Global North, it has not caught an organized momentum in the Global South, nor Jordan for that matter. It has been nonetheless mentioned in Amman Resilience Strategy as a promising tool for resilience and ‘to temporarily reclaim space dedicated to vehicles to increase the vitality of our street life, create safe places for people to be active and social’ (GAM, 2016, p. 48). Moreover, Tactical Urbanism offers a unique tool to activate and green open spaces that do not fall into formal definitions of ‘parks’ or ‘gardens’. This is especially relevant to the Jordanian context, where rapid urbanization and residential creep have left few lands that can be zoned as city parks and gardens, and produced patches of underused spaces. Thus, to achieve a resilient city, people’s right to open spaces should address which spaces are most easily accessed and what are these spaces’ sizes. In highlighting proximity and scale, conventional planning should not be completely assuaged

in sufficing to provide neighbourhoods with urban gardens or a large city park that are usually miles away from people's residences.

Instead, smaller and closer everyday spaces like stairs, sidewalks, streets, informal spaces, empty parking lots can qualify for LQC interventions and serve citizens. Importantly, not all activities undertaken in the North can suit the Jordanian context, and in fact new types of activities can emerge locally, but the potential for change and improving living conditions is promising and yet to be explored.

2.3 LOCAL UGI CASES

Several greening and place-enhancing projects have been implemented in Amman that were participatory in process of design and implementation, like the lively space of the 7hills skate park in Amman. What is presented next are three cases that achieved satisfactory outcomes but faced many challenges particular to the Jordanian context. More importantly, two of the cases represent bottom-up initiatives that sought collaboration with other government officials (Harra Initiative and Nour al-Baraka cases) and got approvals for their visions to improve their local communities in enhancing the quality of their open public spaces. Al-Jazaer school on the other hand volunteered to implement the program of educational urban agriculture when learning about it from a non-governmental organization (CSBE) that got funding to implement it.

Each project unpacks a different dynamic of governance and stakeholder involvement but share, nonetheless, a spirit of initiative and willingness to commit, collaborate, and follow through with projects that benefited their local communities.

Moreover, with each case a different type of open space is used (residential alleyways, school leftover spaces, community garden already run by local municipality), but in all of them, transformative ideas and actions were introduced that re-shaped and activated the spaces for social activities. Thus, highlighting stories such as these serves the purpose of identifying opportunities along with faced challenges in the types of collaborations that occur between community-initiated bottom-up projects and governmental officials.

Harra Initiative and Activated Alleyways

Ashrafiyya district is located in Eastern part of Amman and is considered one of the earliest residential settlements in the city. However, some of its parts are characterized as being densely packed with houses of diminished quality and deficient infrastructure. These neighbourhoods suffer from lack of sidewalks and narrow alleyways that prevent regular access of GAM trash collection, in addition to general deterioration of fences, falling plaster, and lack of greenery. This district was approached by the Harra initiative (HI, n.d.) that aims to improve living conditions of disadvantaged communities and upgrade derelict infrastructure from a capacity that is very financially limited. The funding of these improvements is mostly from the community once they are bought into the idea, but it is gradual and very slow process that aims at building trust, understanding capacities of community, needs, and problems. Harra initiative has gained a reputation after several projects and made sure to leave behind a kind of informal structure of a 'community council' that runs and follows up with the community's concerns.

The following quotes are from residents and leader of the initiative Mr. Mohammed Abu-Amira as part of a study that was conducted in 2018 to evaluate people's place attachments to their rehabilitated neighbourhood (Razem, 2020).

In Ashrafiyya there were a range of neighbourhoods that were collectively beautified by its residents from as early as 2011, according to Abu-Amira. The ethos of Harra initiative is to slowly build a sense of community, understand the uses of spaces and people's needs, and mainly achieve improvements by involving the community in low-cost changes. Figures 38 and 39 show low impact interventions that were implemented years ago. However, one must not simplistically judge the value of these physical improvements in their visible impact but should bear in mind the social benefits generated from the invisible process of participatory design and implementation, as one resident remarks:

“There is dialogue and we got educated behaviourally, so if I see a car that is parked and blocking an alley, the neighbour will remove it easily. It is trust that was built over the years. Women are active as well, and we get together for communal Iftar in Ramadan, everyone bringing their own dish, all the neighbours – men, women and kids. This was not culturally acceptable before, now everyone is one family. Also, if there was a funeral, every young person takes a broom and cleans all of the alleys, and when the contractor who installed the tent canopy for the deceased family's condolences, the youth participated in instructing the contractor on the best way to install the tent. Everything is participatory” (Resident A)



Figure 38: Photo of a fence wall showing tiled pattern that involved the community and children in its implementation.



Figure 39: Photo of a house sign that identified homeowners as part of a collective initiative for Harra residents.

While these interventions do not seem to fit within a high aesthetic standard, one of the main initiative's objectives is to instil a long-term sense of place ownership and appreciate the character and usage of the neighbourhood's spaces, as seen in Figures 40 and 41.

"It takes from 6 to 8 months for knowing each other and cleaning the Harra. When respect is instilled for one's own Harra street, don't you think this will transpire to other streets as well? The Harra in its collective area is the meeting space for its residents, playing field for the kids. Public space IS the roads and alleyways of the Harra activated by its residents." (M. Abu-Amira)

"We meet in the alleys, the road and alley are our communal space of meeting. In the evening, every day, the youth meet at the court beside the stairs." (Resident A)



Figure 40: Alleyways used by children to play.

In one of the projects, the story of mending a fence and cleaning the alley, shown in Figure 42, had a high symbolic significance for the participating residents. The participatory implementation supposedly brought the community closer and enhanced their sense of pride.

“The residents of this Harra have been here for at least 60 years. Before working on the Harra, we used to know each other as neighbours superficially and greet each other. After Harra, the impact was positive, the participatory approach of mending the fence and the neighbourhood, allowed us to know each other and be protective. Now I know all the people, and social relations started developing, so in the evening time at 6:00 pm, after I get back from work, my neighbours call me, and around eleven of us meet up, chat and sometimes play cards until 12:00 am.” (Resident B)



Figure 41: People already use the sidewalks to sit, enabling accidental social encounters.

“The most place I feel attached to is the fence that we worked on collectively, because we really worked hard on it, because it was tiring... Ten years ago, when my brother came back from Hajj, a friend of mine wanted to visit us here in this Harra, this friend lives in a mansion in Abdoun (West Amman) and he is highly educated, so the moment I realised he would come and visit us here, I panicked because this place is a dump compared to where he lives. I felt ashamed then when he stepped out of his car and walked through an alley filled with trash and falling fences. Now I feel proud inviting anyone to visit us here.” (Resident B)

“I felt so ashamed when my daughter got engaged and her fiancé’s parents passed through the alley at its previous state with falling fences and trash everywhere. We are proud of this neighbourhood now, especially that this area is older than most of the other zones in Amman!” (Resident C)

Social ties were strengthened amongst community members through and while they were painting fences, cleaning, and planting. This indicates how the action of implementation itself can be conducive to growing social cohesion that would hopefully lead to managing these interventions after all this invested effort. After the completion of the fence mending, a community committee was formed to manage their local affairs.



Figure 42: Mended and maintained fence in one of the Harra neighbourhoods.

“We started delegating tasks in our Harra. So those who have a muscular build are the guards of the Harra, those who have managerial experience manage the Harra affairs; we have all the phone numbers of the Harra residents and their sons. We rented a vacant building to become the headquarters of the Harra where the residents meet and even the youth who usually have no place to go to. We rented it after familiarity with the people was established. If you come after one year, you will also see changes as we are planning to install metal arches at the alley adorned by plants. We have a vision for this Harra and we continue to meet, plan and maintain our work.” (Resident B)

In another project, the community initiated contact with the local municipality, Greater Amman Municipality (GAM), and was aided to enhance their pavement infrastructure and planted a tree. A resident remembers fondly:

“That period of working together was great. We worked on the pavement, and we were helped by a GAM board member who is part of our committee and facilitated the installation of the pavement. We planted a tree on the pavement called ‘Majnouneh.’” (Resident D)

Harra Initiative is one of those community-based initiatives that seems to align with tactical placemaking ideology, in implementing light, quick, and cheap improvements through a participatory process. However, for such interventions to achieve social mobilization and be effective on the longer run, long-time commitment is key. Such slow process might dissuade some potential collaborators and funders as they traditionally expect seeing their efforts and money’s worth in short-term. Another challenge includes restricted financial resources which limits the community’s ambitions to do more, especially in already disadvantaged communities.

Moreover, because the initiative at many times relies on practitioner volunteers who may not be continuously available to assist with co-design phase, this might inhibit more creative solutions proffered by architects and experts. In any case, Harra Initiative is an example of tactical placemaking that largely relies on strengthening social ties before, through, and after improving the community’s physical infrastructure.

CSBE Urban Agriculture Environmental Education Initiative for Schools

In partnership with Friedrich Ebert Stiftung (FES), the Center for the Study of Built Environment (CSBE) initiated a project for ‘developing a hands-on activity guide for school students on urban agriculture, developing training of trainers workshops on implementing the guide, and implementing urban agriculture activities based on the guide in a number of schools’ (CSBE, n.d.-c). Al-Jazaer primary school for girls is in Amman’s Jabal al-Hussein district was one of the participating schools in this initiative since 2019 (CSBE, n.d.-a). Five wooden planting beds were installed that were designed innovatively to use capillary-based irrigation, and were placed in the school’s empty land setback. Interesting unique design of composting tumbler connected to a stationary bike engaged students and served its purpose for composting. Costs of the green infrastructure were supported mutually by the Jordanian bank Investbank and CSBE, and design and installation of planting beds were done by Greening the Camps organization. Following this, a training material was developed to be delivered to school students and staff. What is presented next are quotes from CSBE project organizers extracted from a video lecture that took place in 2020 (CSBE Films, 2020), and another recorded in 2019 (Amman Design Week, 2019).

According to Mohammad Al-Asad, the founding director of CSBE, urban agriculture is beneficial beyond just providing food.

“We noticed from our study that the value of urban agriculture was not only economical, but there is an essential value that is the psychosocial value. There is a part where the society gets closer, exchanges information, some kind of solidarity forms among them, and this is a

very important value that is priceless. We noticed from a psychological point of view, that when people practiced this, it was calming and relaxing, and there is a sense of interaction and affinity to life, because they are taking care of something alive, and they see how fragile this lively thing is, so urban agriculture has many values, the economic one is only partial.” (M. Al-Asad)

The rapid urbanization in Amman has resulted in rapid loss of arable lands and the ones that are left are not economically attractive for farming in a conventional manner. However, the vanishing open green spaces has been coupled with a vanishing memory of recent generations of how to sow, grow, and harvest food. More importantly, CSBE’s project aimed at reviving this past knowledge and strengthen urban citizens connection to nature.

“We have to keep in mind that a city such as Amman has a population of over 4 million people, land that is extremely expensive, and it is very scarce, and basically using available empty land for conventional agriculture simply is not cost effective...In a city such as Amman, for the last two generations, we have really lost touch or connection with the productive capacity of land in terms of food production, this was not the case before, when Amman was a smaller city and had abundance of open unbuilt areas, but over the last two decades, Amman has become large, most of the population live in apartment buildings and they have very limited access to open green areas whether public or private, so if we are to in as well as technically to the act of planting and getting people basically to acquire these skills, which

is not easy, especially for people who are well set on their ways.” (M. Al-Asad)

Realizing the urgent need for connecting with nature along with the difficulty it bears for busy adults, CSBE tailored a program for school students to cultivate urban agricultural ethos and knowledge in the young generation, as Al-Asad explains:

“And that is why we among many others, have come to the conclusion that if we are to re-introduce urban agriculture in a city such as Amman, we really need to concentrate on students, after all students are not set on their own ways yet and intellectually and psychologically and mentally, they are still in learning mode.” (M. Al-Asad)

For Al-Asad, urban agriculture as a practice would also make more sense when students’ commitment is assured as part of a curriculum, thus increasing the plants chances for regular irrigation and sustained care.

“Urban agriculture is not easy...we also tried it personally, there is a lot of trial and error, you have pesticides, some plants have problems, you need a lot of patience, you need commitment, it is much harder to plant food products, than just planting, let’s say ornamental crops, that’s why we are concentrating on schools as part of the curriculum...Not surprisingly in Amman or even Jordan, we really don’t have large scale initiatives for urban agriculture”. (M. Al-Asad)

CSBE's project led the project team to scope the range of urban agriculture initiatives that existed in the city, network with them and share knowledge and skills.

“An important component or aspect of the project is really pooling and disseminating this local knowledge that we accumulated through our study, we met a lot of people, interviewed many experts, and were surprised about how so many initiatives are going on that are not really known and there is so much local knowledge that was developed and worth sharing and communicating, so we are incorporating this information into our activity manual, and doing it through training of trainers sessions.” (L. Zuraikat)

Throughout the project, many challenges were encountered. The main challenge was the upkeep and monitoring of the installed agricultural beds, which is time and effort consuming. However, some people showed this aspired commitment and cultivated, along with their plants, passion and patience.

“We noticed urban agriculture projects face certain challenges relating to sustainability, still I would say there is a ray of hope, we are noticing people are becoming more concerned about what they plant, they are concerned about where their food comes from, people would like to see more greenery in their lives, and I would say that people are willing to give urban agriculture a bit of a chance...Patience is really important, two generations ago it was part of the culture, so people were actually accustomed to it, now we have to start from zero, because most of us has really lost that connection” (M. Al-Asad)

In sum, urban agriculture in Amman, and in Jordanian cities, can be a successful endeavour as an environmental educational project to be integrated in schools. Conversely, it seems that urban agriculture is currently quite difficult to uptake as a widespread practice for the level of skills, economic capital, and patience they entail. Since the project's idea was conceived by CSBE and initiated in partnership with other NGOs, it can be said that more time was spent on design, innovation, and craftsmanship. This is an example of community-based initiatives that infuses creative ideations and execution, in addition to building successful collaborations with niche urban agriculture enthusiasts. The knowledge gained from this project can be invaluable for governmental officials. It would also be worthwhile for CSBE to conduct an assessment after the school project was completed to see how students interacted with these green plots and whether they truly developed an environmental attitude, which is usually promised by these kinds of projects.

**Nour Al-Baraka
Organization
Activities and Princess
Iman Public Garden**

Nour al-Barakah market (NB, n.d.) is run by Nour al-Barakah organization that is non-profit, and the market is a part of Princess Iman Public Garden located in al-Rabiyyah area in Amman. The organization 'aims at providing adults with mental disabilities an opportunity to enhance their skills through environmental activities' (CSBE, n.d.-b). Each Saturday, that part of the garden is open to anyone who would like to sell produce where they display their merchandise, crafts, or food products. It has been long running for 10 years, and initially was established by keen women who wanted to offer a green space for adults with mental disabilities. One of the community members, Hala Bdair, is an environmental activist and composting expert

who guided the design of the organization's headquarters in the garden to incorporate recycled materials. In all of this, the NGO seems to align with environmental and socioeconomic principles of sustainability. What follows are quotes from Bdair extracted from a video recorded in 2019 as part of Amman Design Week session (Amman Design Week, 2019) that hosted leaders of urban agriculture projects in Jordan.

Bdeir shares the objectives of the organization to create a safe and healthy meeting space for children with disabilities were achieved in the garden space they occupied.

“Our members are people with mental disabilities, and through women...we are 14 women, our objective was to create an atmosphere that is secure and healthy for our kids, which was through organic farming, using permaculture, with composting and worked on it for 10 years...you just need the community to have conviction in what it will be doing. We were already convinced in this project and it rewarded us a lot. We created this atmosphere, our kids were happy, anyone can do it...you just need the will.” (H. Bdair)

The idea of the inclusive garden originated from the organization and sought to seek approval to dedicate a zone for them in the public garden of Princess Iman. In seeking approval for their vision and ideas to compost organic waste generated from the local neighbourhood, they approached the municipality and they were granted permission.

“We got the permission from GAM, and we are thankful, to utilize Iman garden as headquarters for our organization... we built a center that used recycled materials, like plastic

bottles and tires instead of using steel and concrete, and we utilized excess tiles for outdoor tiling to capture rainwater. With the participation community, local companies, and students, who helped in their efforts and financing. Our first activity was composting...and while we were preparing the compost, a man from California passed by accidentally and mixed it for us, and ten years later we still do it like that successfully...we designed the composting containers to fit our needs.” (H. Bdair)

The space was utilized to store and compost organic waste and the community was mobilized by members of Nour Al-Baraka organization to participate.

“We started from our homes and encouraging our neighbourhood to sort trash and utilize organic waste for composting...by sorting waste and reusing them onsite we lessen the burdens of GAM in collecting this, as they are so much under pressure with rapid population growth in short time.” (H. Bdair)

In addition to having the space serve as a respite for children with disabilities and a composting station for the community, it provided opportunities for a pop-up market and stalls showing local produce every Saturday, as shown in Figures 43 and 44.

“We have a market in Noor Al-Baraka, that is open every Saturday. We started off with 8 interested vendors and we are 40 now. These are usually housewives, women who produce pickles, plant in their gardens, have olive trees, and they come to sell their products, it is a way for them to find a place through which they can generate income for their homes even on a small scale.” (H. Bdair)

The fact that this market has been running for 10 years shows successful management of the project which stems from the founding organization’s vision and commitment. Moreover, the activation of the garden beyond its public use to especially cater for marginalized groups and offer opportunities for economic gain brings the concept of ‘active citizenship’ closer to reality. Hosting these groups in the garden along with others in a tactical manner aids in utilizing spatial and human resources in the community that at many times are invisible in top-down planning approaches.

Also, having women as the lead-agents for change in this initiative suggests a gendered heightened attention to recognize spatial deficits that hindered provision of safe spaces for disabled children, but also creatively capitalized on the opportunity for the space to serve its community economically. In all of this, how would this prototype of a community garden be replicated in other parts of Amman, or is it only contingent on the unique drive, knowledge, and motivation of certain individuals?

This case exemplifies why community-initiated projects are unique in the way they are localized, but their power lies in the motivational effect for others to revisit how their collective spaces are used, and more importantly encourage governmental officials to support and form strong partnerships when they are approached by community entrepreneurs.



Figure 43: Entry to Nour Al-Baraka Saturday market located in Princess Iman Public Garden.



Figure 44: Photo showing a range of products (organic vegetables, embroidery, crafts, spices, preserves, and pastries) displayed in stalls of Nour Al-Baraka Saturday market.

C H A P T E R I I I

**LOCALIZED RECOMMENDATIONS TO ACHIEVE UGI
SOCIAL BENEFITS**

CHAPTER III

LOCALIZED RECOMMENDATIONS TO ACHIEVE UGI SOCIAL BENEFITS

This chapter reflects on what has been presented so far in the previous chapters with regards to the context of Jordan. In formulating recommendations, two methods were used. First, a literature review assessing the effectiveness of participatory planning in Jordan and MENA region is referred to. Second, three semi-structured interviews were conducted with four stakeholders who were part of participatory planning processes, and whose names are anonymized. They represented three main roles; municipality official who is responsible for community outreach, two architects who were responsible for co-designing a project with a local community, and a social mobilizer who got to know the local community, informed them about the project, and communicated their concerns and needs to the design team and funding body. The following recommendations build on literature review and findings from interviews.

3.1 TOWARDS MEANINGFUL PARTICIPATORY PLANNING

As has been discussed in Chapter II, participatory planning has many levels of citizens' engagement, and there is a need to identify what levels and processes make it meaningful for communities. While not generalizable to other municipalities' projects, Khirfan and Momani (2017) found out that in the Amman Master Plan project, the participatory approach GAM followed only achieved the 'informing' level, according to Arnstein's ladder. Achieving higher engagement with the community has been shown to be beneficial in advancing democratic and civic partnerships between citizens and state. When examining what the word 'participatory' meant according to a municipality official, it appeared to be limited to early phases only, when the community is asked about its needs or the community approaches the municipality to achieve some of its demands, as he shared:

"We believe in the mission that we must be transparent and have connections with the community, provide programs that benefit them, and meet their needs. In a sense, it is a participatory process... So any plan put forth starts by asking what the needs of the local community are. Do they need a social centre? Or children playground? Or traffic gardens? Or to meet needs of people with disabilities? Therefore, we collaborate with them when making our decision." (Municipality official)

From this, it is an invitation for municipalities to be mindful of not homogenizing any type of community interaction under 'participation'; that there are many levels in 'participatory planning' and efforts should be expended to achieve higher engagement with local communities beyond 'informing' or

Raise awareness about the environmental and social benefits of UGI

assessing their needs. In trying to achieve a more nuanced and meaningful understanding and implementation of participatory planning, the following are recommendations for municipalities to consider.

Just as 'UGS (Urban Green Space) plays a central part in sustainable urban development, as does wider societal awareness about the importance of greens' (Pogacar et al., 2019, p. 76). As has been evidenced by research, the environmental and social benefits of green spaces are obvious and numerous, and for an informed discussion and decision making to take place during participatory planning processes, the community should be made aware of these benefits. Introducing these benefits can be through participatory workshops, informational brochures, public signage, or media campaigns, but talking about them directly to people is the most effective way. However, these benefits should not be 'lectured' in abstract terms but linked to people's everyday life and presented in ways to intrigue the community's interest. Thus, it is vital to acquaint the community of concepts of UGI and their various benefits through discussing the ways UGI can improve the quality of individuals' lives and spaces.

Involve the community throughout decision-making

From the literature presented so far, the understanding of community participation in Jordan is very limited and do not extend to perceiving it as a 'process' (Khirfan & Momani, 2017; Shami, 2003). This was shown when the municipality official was asked whether communities are involved in later phases, and his reply confirmed that community participation ended after assessing their needs, with the municipality becoming

responsible afterwards.

If any idea comes to GAM from the local community, it goes to the GAM engineering department to draw and reflect the community's needs, approve it and place a plan for it through tendering... It starts from the community, with people approaching us on what kinds of services we could offer... When asked whether the community is involved in design, the official justified their exclusion based on the assumption that projects are an 'engineering problem' that could best be solved by the municipality's accrued expertise.

“No (community is not involved in design). You know we are bounded by areas, and our projects have similar criteria, like equipment to certain rooms, outdoor areas, parking, and density of people.” (Municipality official)

A social mobilizer for a green space project, who interacted with a local community during design and implementation, reflected on the deficit of understanding participation as process:

“GAM was cooperative (in our project). The problem however is follow-up...It is better to remove the engineering hat and be more with the people.” (Social mobilizer)

Engaging communities in the decision-making process is as important as assessing their needs and responding to them. It is important to make it customary, so that when communities are consulted, they develop a sense of ownership to the project. Of course, community engagement is expected to be long-term and having social mobilizers immersed in the community is a great way to communicate ideas back and forth.

“Our role as social mobilizers...was to connect with the community, to give the idea of the project from the start so they won’t be surprised. You see that in our society, where after the project ends, everyone would wonder what was that all about. Our role was to tell them ‘there is a garden, it is for your kids and you are part of it, to hear your comments, your needs’, and our role was to be close to people so they would share their opinions freely.” (Social mobilizer)

This is doable considering the immersed presence of municipality centres distributed throughout cities. These centres can become nodes of engagement for communicating with the community, conducting workshops of co-designing with the community beyond just designing for the community.

Be pro-active not merely reactive

From Khirfan and Momani’s analysis, it revealed that GAM planners interpret planning as confined to delivering services such as roads, tunnels and infrastructure. Such perception was similarly conveyed by the public, where ‘Amman’s residents continue to misconceive GAM’s responsibilities as limited to the delivery of supply-side physical services, particularly those pertaining to road construction and infrastructure’ (Khirfan & Momani, 2017, p. 94). However, municipalities are shown to be active in providing social and cultural programs that go beyond offering infrastructure services. This was conveyed by the municipal official:

“We deliver services for free for the local community and include training, doing art, supporting children and youth and their talents and enabling them... We deliver different programs like training in health issues, training for

housewives, awareness, seminars, sport training for kids, we try our best to deliver services to the community... Really, GAM is for serving the city people and its visitors... It is like we are a mini-ministry, we do the job of all ministries, health, training, culture.” (Municipality official)

While the municipality-offered programs are impressive in their variety, the repetition of the term ‘delivering services’ seems to permeate the rhetoric of the social branch of municipalities also. This is not wrong and in fact valuable to the communities. But what would make the social impact more meaningful is the need for a broadening of scope and possibly a radical reframing of role.

Arguably, delivering services may risk being limited to reactive attitude in offering solutions. On the other hand, utilizing resources of the community can offer many opportunities for communities and municipalities to become pro-active, thus becoming innovative in offered solutions. Considering urban resources has been argued by Shami and elsewhere ‘to be widened beyond services...(such as utilizing) space, information, environment, kinship networks, good neighbours’ (Shami, 2003, p. 79). Shami further indicates that the city should ‘not (be) seen as the product of master plans and social engineering, but as the product of a multitude of actors, participating in their own ways...in shaping the city’ (Shami, 2003, p. 57). This is relevant to Jordanian municipalities.

When asked whether municipality-administered community centres have a database of local knowledge about the community, their living conditions, or if there were social mapping of the community, the official responded:

“Of course, every centre has information on percentage of people, area, and how many people participate, so we have data for this information and areas.” (Municipality official)

While in reality centres may have more knowledge about the community than communicated by official’s answer, the response foregrounded statistical abstracted knowledge, which if participatory planning is to take place, knowledge about social relationships and neighborhood resources will be most useful.

It seems that there is a missed opportunity to capitalize on what Shami (2003) conceptualized as urban resources, which deserves to be foregrounded for and utilized by municipality officials and staff. Thus, identifying resources of the community is valuable to participatory planning, which the social mobilizer reflects on from his experience:

“There was the mosque Imam. He has a group of kids who read the Quran and do community service and told me he used to hold competitions for them in the garden and encouraged them to plant trees. I felt he was close to people and respectable. He was a link to the community... There were Mukhtars who are usually the link between the community and parliament members and health centres... Social police are positioned in each police station in every city. Their role is to be close to people. They form meetings with leading figures in community like Mukhtar and imams

in police station. Social police can be powerful social mobilizers, as they conduct a lot of trainings and lectures in schools.” (Social mobilizer)

Mosque Imams, Mukhtars, and social police are only a few of the potential key social resources that a neighbourhood offers, who can be mediators and connectors to other members of the community. Knowing the types of kinship and neighbourly relationships can be very useful to access the community and mobilize them towards envisioning improvements and activations of their open spaces. Such partnerships between the communities and officials can start from being on-site and understanding on-the-ground social dynamics.

Cultivate social relations with the community

Getting to know the community is the first step to being proactive and identify the community’s resources. However, many times this process requires breaking out of one’s routine and comfort zone as an architect reflects:

“We are used to sit behind computers. But then (in this project) to design with people...it was an interesting experience in the workshops.” (Architect A)

This reconnaissance mission into the community can be more effective while walking around the neighbourhood and meeting people. A simple technique like walking and moving about can be powerful, where ‘observational walking for urban research (is defined) as a self-conscious, reflective project of wandering around to better understand an area’s physical context, social context, and the spatial practices of its residents’ (Pierce & Lawhon, 2015, p. 656).

Moreover, walking and encountering people can open channels of communication and access groups of people who are usually marginalized or demotivated to come to official meetings or workshops. The social mobilizer shares his experience:

“We used to go in the morning, noon, evening, night, in the rain...to see everything. Not only during daytime...to understand the lighting, movement...In one of the days we visited an NGO for the disabled, and when we went and spoke to them about the garden to be designed, the lady there said ‘you saved us big trouble from going to Hussein gardens, at least this garden is close by’, because this group went to gardens once every two months, and the NGOs gave us contacts of other people.” (Social mobilizer)

In reaching out to the community instead of waiting for them to come with their demands promises to generate stronger social connections on the longer term. Fostering strong relationships with the community can build long-term trust and appreciation for the efforts done on all parties. The social mobilizer shares how one of the decisions was changed to cater for a woman’s request, which ultimately cultivated positive attitudes:

“The idea was that we became very close to them (community). There was another nice moment. There was an old woman who was 70 years old, and when I went there to tell her that the street will be closing from this date to that, so she would not be surprised, she told us ‘please consider that my daughter’s wedding is coming and if the street is closed, she will have to walk up the street!’, so we inquired when the wedding date is exactly, and consulted with the team and told her that out of courtesy to the bride

and groom we will postpone the street closing date by 10 days. That was the beginning of getting the community to interact with us. They were appreciated this. It was very nice.” (Social mobilizer)

Maintaining connections with the community helps keep the channel of communication open and most importantly strengthens trust in the process. During implementation, hearing people’s feedback and responding to their concerns was helpful to building trust.

“During implementation, some people complained of rainwater leaking to their houses from outdoor levels and we would tell designers, which in turn got it fixed. This gave them trust in us with being accountable. Therefore, people started to talk to us...morning, night. We had no problem, because it was our role as social mobilizers.” (Social mobilizer)

Using public spaces to create these incidental encounters between people, and here also officials, is conducive to achieve UGI social benefits. So that within UGI spaces people can meet and collaborate to plan for UGI spaces. Thus, municipality officials, or assigned municipal social mobilizers, are urged to canvass the neighbourhood, walk, meet and greet, and regularly interact with the community, for reasons beyond delivering them necessary services. Since, at many times, it is through these types of conversations that aspirations to beautify and activate spaces can be the product of localized visions and entrepreneurial actions.

Enable good community governance

Communities should be involved in the design and activation of public spaces in order to promote safer neighbourhoods. When residents have more vested interests in a place, they are assumed to become more vigilant in defending and maintaining their neighbourhood against misuse, damage, and vandalism. The better maintained a public space is; the safer and more sustainable it is going to be. The need for involving communities becomes more pronounced when vandalism tends to be a prevalent phenomenon. This is one of the main challenges that municipalities face, which the municipality official declares:

“We face challenges in that people don’t care for public properties. If we plant a tree, it gets cut, if we put a barbed wire here, it gets cut, youth spraying on walls, so this is a burden and it increases cost in cleaning and removing paint. It is costly financially and in effort. If this is not happening, we would increase our services...At the end I am an employee, and will go back home. I am here to serve you, not here to monitor you. Maintenance is very expensive...No (police should be needed), it comes back to citizenship and changing behaviour.” (Municipality official)

The participatory planning process can offer ways to solve problems amidst the community when managed internally. When vandals are identified, sometimes police involvement might not be the effective solution on the longer run. In a story shared by the social mobilizer, urban resources of social relationships and influential people were identified (coffee guy and uncle of vandals) to ameliorate a problem that arose from a group of vandals.

The vandals were reprimanded and prevented from repeating their transgressions without involving the police, as the social mobilizer tells the story:

“The coffee guy was the one spending most time on the street from 5 a.m. till 1 a.m., watching drivers’ behaviours and people, guiding us not to consider certain solutions because some groups would protest. We got tips from him on the types of people there.... We faced this problem in a garden, where some people stole iron and diesel from the tractor...when we found out who they were and we wanted to talk to them with good intentions, the coffee guy warned us and said no one has authority over them except their uncle and told us where he lived. We went there, and we spoke to him and after that the whole situation turned around. No one entered and vandalized the garden.” (Social mobilizer)

Moreover, increasing communities’ symbolic ownership of the process and spaces can organically generate grouping of efforts to manage their public spaces. Here, participatory planning reveals the indirect benefit of creating an organized community to govern its space, as the social mobilizer shares:

“There is a person from the community...who told me that one of the people took red soil from the garden and put it in a tire planter in front of his house to plant something. He went crazy, saying how could that person take red soil from the garden? ...I mean something is not yours, how could you take it? The community then informed me that they would form a committee from families living in the street to maintain the garden and control it. I will also be organizing

a meeting with them and the social police so they can become 'friends of the police' to manage the garden, so that if anyone breaks something or vandalizes, the committee will defend it. We would also tell them how to manage it well, not to the extent of controlling who has access and who doesn't. Oh and the person then returned the red soil." (Social mobilizer)

These stories reveal the potential of organized actions for communities to solve their own social problems as they arise and the zealous sense of ownership and protection people develop for their shared open spaces, when involved throughout decision-making processes. Such self-organizations should not be overlooked but encouraged as they can be the beginning for resilient and strong sustainable communities.

3.2 TOWARDS MEANINGFUL CO- DESIGN

In opening up design to a participatory approach, the power of the expert as the only qualified person to design is challenged, and a more democratic process of co-design promises to localize solutions through incorporating sociocultural factors that are usually absent from conventional planning.

The interviewed architects share what they learned from this:

"It was a new experience for us, first session was orientation to introduce us and what is going to happen. Then a workshop to design, another to present. and then to validate, it was a challenging experience, but we learned a lot from it. Personally, I felt like it was nice that the design was not so...you know we have our pride, ego, that this is my design, and it was nice to do something for someone despite thinking it was not that beautiful."(Architect A)

“Every workshop had an agenda of which activities to give. Cut-outs and graphics. This was all new to us. We were not only developing the design but designing the process and tools through which the community could give us maximum input.” (Architect B)

Thus, for municipality engineering and design experts, engaging in participatory co-design means radically departing from design as delivering a final product and instead understanding design as process and continually changing.

Involve people in design

Involving local communities in design can serve many purposes. People are inducted into what design means and gain a better understanding of design as a problem-solving method. The merit of co-designing can be an opportunity for knowledge transfer from experts to communities and vice versa. While the architects conducted the workshops with the intent of learning the community’s needs, they admittedly reflected that they might need to share some knowledge as well.

“People are not used to be involved in designing of public space. Even the perception of ‘public’ is not there. In the first workshop, it was like (people protesting) that if you put benches then people will come and sit there! And we were saying ‘yes, they can because it is public’. ‘What is public space’ is missing in our society... the perception of what is public and who is allowed to use, it is not clear. When asked, they wanted a fence (around the garden) that is 2.5 meters high...like an embassy! I think in the future there should be a step before participatory design to explain the concept of public space.” (Architect B)

“We are societies that...I don’t know...we had printed images of interesting designs and elements and when we showed them, everyone was welcoming all images. I felt like there was no criticism.” (Architect A)

On the other hand, while people were not particularly trained in aesthetic appreciation and spatial education, the community surprised the architects with issues they attended to and advocated for. For the locals, they thought about design solutions for social issues they are familiar with, like selecting sturdy materials that are not easily vandalised.

“I felt like with issues of vandalism, they were very aware. Like with benches, they wanted everything to be poured concrete. Anything that would be removed, they said don’t put it. In terms of safety and security, they were concerned about this more.” (Architect B)

Through conducting co-designing workshops, designers and locals can have opportunities to learn from each other. More importantly, the community begins to shape a vision for liveable spaces that fit their social and cultural requirements.

Include all social groups

Building on what was discussed previously, to ensure a democratic ‘right to the city’ and just access to spaces, all social groups should be represented in the participatory process and their voices heard. In Jordan Vision 2025, a participatory process was expressed as vital to achieve the Jordanian national goals. It ‘is a widespread belief in Jordan that implementation is the task of the government alone... However, successful reforms require the commitment of all stakeholders - private sector, civil society and individual citizens - to do their part’ (Jordan Government, 2014, p. 18). Including marginalized groups has been stressed in the vision. In addition, ‘Jordan is committed to the 2030 Agenda and to leaving no one behind’ (MOPIC, 2017, p. 20) in drawing a roadmap to achieve SDGs.

In line with the ‘Leave No One Behind (LNOB)’ principle in SDGs, all targeted community groups and individuals with diverse needs and priorities should be considered and invited; especially often marginalized groups like women, elderly, youth, children, persons living in absolute poverty, migrants, refugees, and persons with special needs. Women for instance have been found to be deprived of many economic and social opportunities for lack of safe gender-sensitive infrastructure. The urgency of addressing women’s safe access and mobility has been communicated in sustainable development goals and Jordanian vision plan 2020-2025. According to Faremo, ‘too many women and girls miss out on opportunities to improve their lives for a simple reason: the infrastructure around them isn’t built with their needs in mind’ (Morgan et al., 2020, p. 1). Consequently, venturing into UGI projects must pay extra care for women’s needs.

Thus, it is especially important to include those groups that are underrepresented in the typical design process. For example, women (with their children) who might be the ones frequenting open spaces the most should have their opinions acknowledged for their first-hand experiences.

“Women gave a lot of comments because they go to gardens the most, unlike men. The garden used to have steep slopes and the mother would follow her son when playing ball to catch it as it went downwards, so she was discouraged from going then. That was before. Their daughters didn’t used to go because there was harassment. They see things that men don’t see... (In the existing space) there were no ramps for the disabled. So we thought about how (the disabled person we met) could move from his house to the garden.” (Social mobilizer)

The process of co-design allows those representatives to share their insight, discuss, negotiate, deliberate, and reach a consensus in a safe moderated environment. It was shown for example, that women had a lot to say about garden design and opportunities to include their voices can very well be facilitated through co-design workshops.

“Sometimes, women would agree on something, and men would have another opinion.... When the discussions were open between men and women, there were disagreements... women were prominent in discussion. Therefore, men would say they did not want trees, and a woman stood up and said ‘I will take care of them.’” (Architect A)

Pay attention to the disempowered

From this, municipality officials can more realistically address social justice and gender-sensitivity in design by including the usually marginalized people, like women, people with disabilities, elderly, children, and others.

Participatory planning literature talks about empowerment of the community and individuals and how this is conducive to good governance. However, empowerment should be understood as complex and relative in its manifestation according to each community. In analysing participatory planning of slum-upgrading project in Jordan, Al-Nammari argues that ‘community engagement demands a nuanced approach...that builds relationships with different local groups and stakeholders towards establishing social equity and empowerment’ (Al-Nammari, 2013, p. 230). Her insight reveals that participatory planning should not lose sight of socio-political power dynamics within the community that in negative cases can hijack and derail efforts. She cautions against the uncritical adoption of heroic messages of community empowerment when a ‘context...is lacking in democratic examples and has layers of non-inclusive political and social realities’ (Al-Nammari, 2013, p. 230) that open ways of abusing power. For such projects, Al-Nammari argues for the need for authorities to assume supervisory roles for safeguarding a transparent and inclusive participatory process.

While Al-Nammari suggests stronger engagement of authority in bottom-up initiatives, like slum-upgrading, Khirfan and Momani’s study calls for more community engagement in top-down planned projects. This indicates the need to acknowledge

the unique contextual interdependencies between municipal officials and local communities to create strong partnerships through long-term social relationships and communal visits. Having said that, both governmental officials and workshop organizers should be made aware of the varying displays of power having had prepared tactics and techniques to diffuse charged situations and enable the quiet voices to speak. The architects reflect on these dynamics:

Men were mostly cynical, like ‘don’t do this it will be ruined and vandalized.’ Women would say ‘why say that, they would not vandalize it’ saying they liked planting thyme and advocated it. Women were empowered, but the underrepresented were really teenage boys. Older women were strong voices, but their daughters and the young women didn’t really speak that much. They would kind of just agree with what is discussed. (Architect B)

I felt this in the workshop, where when he spoke, like everyone would just agree with him with no opposition. (Architect B)

Organizers of co-design workshops should pay attention to the varying manifestations of power and moderate accordingly, with the attention of encouraging the drowned voices to speak up if a powerful participant seemed disempowering. Reading the room and its people is conducive to act strategically for a more meaningful opinion sharing and participation.

Embrace uncertainty and flexibility

Part of the co-design process is the crucial understanding that producing an ‘end product’ is a continually moving target compared to the sense of finality achieved through traditional expert-led design practice. There is a comforting certainty to the final drawing in non-participatory design that is not the case when people are engaged. This difference is captured by one of the architects interviewed:

We always have this sense of satisfaction when the projects get built, but with this kind of projects, the satisfaction comes when you see people are happy with it. (Architect A)

The designer’s departure from their normative practice to co-designing with people can be challenging but revealing of the need to embrace flexibility to some level.

We try to adapt the design to emergent needs... At the beginning, because it was all new to me, I exclaimed how come! There was this person who wanted to close the planter, and open a door instead, and I was like ‘how can he open a door!’ But now I embrace it. It is interesting. (Architect B)

This flexibility does not only entail the willingness to change design according to people’s emergent needs but accept that some of the designed features may not be used as intended.

We designed a ramp special for wheeling shopping luggage bags, or for cleaning personnel to drag trash bags (instead of carrying them upstairs). During construction, kids started playing and sliding on them. We were thinking that we should bring grocery bags and drag them on the ramp to show the people how to use them. (Architect A)

“You need to accept that they might not use it (design feature and space) in the way expected. This is interesting.”
(Architect B)

Moreover, from the architects’ experiences of co-designing multiple open spaces, they shared that each space had its own particularities. While all of these spaces can be called open spaces, each one differed in how the space was perceived, contested, territorially claimed, and thus co-designed.

There are differences between the sites... (The largest garden) was like an island where no one could claim the space, unlike smaller spaces like stairs... It varies according to the properties of the spaces and how they are personalized.
(Architect B)



Figure 45 shows how the space of stairs, despite being identified as a public space, can be interpreted as a semi-public or sometimes semi-private space. In all of this, accepting that the process involves uncertainty in what would the final design be, along with embracing flexibility by accommodating people’s needs and spatial inputs affirms that planning should depart from a ‘one size fits all’ approach.



Fig 46



Fig 46 & 47: The community surrounding Mahmoud Al-Qudah Park in Al-Nasr district taking part in participatory co-design workshops.

C O N C L U S I O N

In responding to climate emergency and rapid urbanization challenges, the case for integrating UGI in densely packed urban environments is not only warranted for reaping environmental benefits but social ones as well. The evidence from literature and practice, discussed thus far, highlights the numerous social benefits to be gained from implementing UGI projects, which align with many Jordanian national plans that aim for sustainability. It has been found that UGI ideas are indeed present in Jordan's commitment to SDGs, Amman's resilient city plan, and local municipalities' action plans to address climate change, but were often mentioned in passing. Delineating UGI synergies between these national plans is yet an effort to be made for mobilizing concerned governmental authorities in concert to push forward UGI ideation, planning, and implementation. More importantly, this publication can serve this national effort in raising awareness about the social benefits of UGI, by showing its applicability to the local context and highlighting recommendations for municipality officials, which are repeated here for quicker reference:

- Towards meaningful participatory planning
 - Raise awareness about environmental and social benefits of UGI
 - Involve the community throughout decision-making
 - Be pro-active not merely reactive
 - Cultivate social relations with the community
 - Enable good community governance
- Towards meaningful co-design
 - Involve people in design
 - Include all social groups
 - Pay attention to the disempowered
 - Embrace uncertainty and flexibility

To achieve these benefits, municipality officials are urged to be critical about their currently normative top-down planning practices and integrate participatory planning approaches that cater for local social and spatial realities. Moreover, the international success of tactical urbanism as an urban placemaking tool offers promising potential to energize local communities to respond to their needs but requires the support of officials and conviction in the community's abilities to envision out-of-the-box ideas. Shifting from macro-scale behind-the-desk planning to micro-scale on-the-ground projects is a transition planning discourse has been arguing for. In line with this, overlooked spatial and social resources when conventional planning is followed should be re-discovered. Small pockets of spaces that are often leftover lands, sidewalks, stairways, and even multi-lane roads promise to provide intimate socially interactive spatial enclaves and natural respite. People's social connections and kinship relations are important urban resources to facilitate meaningful participation in the design and implementation of UGI projects. Such localized dynamics are not difficult to identify for municipalities, especially with the presence of numerous municipality-run centres around neighbourhoods that already serve as physical connectors with the community and provider of cultural and educational programs. The more challenging task but proven to enable more sustainable communities, however, is embracing participatory planning as a process and not as a final product, which entails a deeper engagement of communities in the municipalities' decision making. Only then, can UGI projects achieve their full potential in harnessing long-term social benefits.

REFERENCES

R E F E R E N C E S

Alexander, C., Ishikawa, S., Silverstein, M., Jacobson, M., Fiksdahl-King, I., & Shlomo, A. (1977). *A Pattern Language: Towns, Buildings, Construction*. OUP USA.

Al-Nammari, F. (2013). Participatory urban upgrading and power: Lessons learnt from a pilot project in Jordan. *Habitat International*, 39, 224–231.

Amman Design Week. (2019). *Urban Agriculture in Jordan: Opportunities, Challenges, and Accomplishments | Amman Design Week 2019*. <https://www.youtube.com/watch?v=4kJRScF2c4g>
Appleyard, D., & Lintell, M. (1972). The Environmental Quality of City Streets: The Residents' Viewpoint. *Journal of the American Institute of Planners*, 38(2), 84–101.

Aram, F., Higuera Garcia, E., Solgi, E., & Mansournia, S. (2019). Urban green space cooling effect in cities. *Heliyon*, 5, 1339.

Arbuthnott, K. G., & Hajat, S. (2017). The health effects of hotter summers and heat waves in the population of the United Kingdom: A review of the evidence. *Environmental Health*, 16(1), 119.

Arnstein, S. R. (1969). A Ladder Of Citizen Participation. *Journal of the American Institute of Planners*, 35(4), 216–224.

Bailey, N. (2012). The role, organisation and contribution of community enterprise to urban regeneration policy in the UK. *Progress in Planning*, 77(1), 1–35.

Benedict, M. A., & McMahon, E. T. (2006). *Green Infrastructure: Linking Landscapes and Communities*. Island Press

Benevolenza, M. A., & DeRigne, L. (2019). The impact of climate change and natural disasters on vulnerable populations: A systematic review of literature. *Journal of Human Behavior in the Social Environment*, 29(2), 266–281.

Beza, B. B. (2016). The role of deliberative planning in translating best practice into good practice: From placelessness to placemaking. *Planning Theory & Practice*, 17(2), 244–263.

Blair, D. (2009). The Child in the Garden: An Evaluative Review of the Benefits of School Gardening. *The Journal of Environmental Education*, 40(2), 15–38.

Carmichael, J. (2020). *tactical Urbanism: Making it happen*. ARUP.
Coghlan, D., & Brydon-Miller, M. (2014). *The SAGE Encyclopedia of Action Research*. SAGE Publications.

Cohen, M. (2018, August 22). Placemaking definition. *City People*.
<https://citypeople.com.au/tag/placemaking-definition/>

Crompton, T., & Kasser, T. (2009). Meeting environmental challenges: The role of human identity. *Journal of Environmental Psychology*, 29(4), 535–537.

CSBE. (n.d.-a). al-Jazaer Primary School—EN. Center for the Study of the Built Environment. Retrieved June 27, 2021, from <https://www.csbe.org/aljazaer-primary-school-en>

CSBE. (n.d.-b). Princess Iman Public Garden – An activity of Nour al-Barakah Organization. Center for the Study of the Built Environment. Retrieved June 27, 2021, from <https://www.csbe.org/princess-iman-public-garden-nour-al-barakah-organization>

CSBE. (n.d.-c). Urban Agriculture. Center for the Study of the Built Environment. Retrieved June 27, 2021, from <https://www.csbe.org/urban-agriculture>

CSBE Films. (2020). Bringing Agriculture Back into the City. <https://www.youtube.com/watch?v=PhMvJEoHwm8>

Dalton, A. M., & Jones, A. P. (2020). Residential neighborhood greenspace is associated with reduced risk of cardiovascular disease: A prospective cohort study. *PLOS ONE*, 15(1), e0226524.

Davies, C., & Laforteza, R. (2017). Urban green infrastructure in Europe: Is greenspace planning and policy compliant? *Land Use Policy*, 69, 93–101.

De Vries, S., Verheij, R. A., Groenewegen, P. P., & Spreeuwenberg, P. (2003). Natural Environments—Healthy Environments? An Exploratory Analysis of the Relationship between Greenspace and Health. *Environment and Planning A: Economy and Space*, 35(10), 1717–1731.

Demerijn. (2013, March 27). Aldo van Eyck and the City as Playground. MO. <https://merijnoudenampsen.org/2013/03/27/aldo-van-eyck-and-the-city-as-playground/>

Doick, K., & Hutchings, T. (2013). Air temperature regulation by urban trees and green infrastructure. Forestry Commission. <https://www.cabdirect.org/globalhealth/abstract/20133165696>

Doyle, R., & Krasney, M. (2003). Participatory Rural Appraisal as an Approach to Environmental Education in Urban Community Gardens. *Environmental Education Research*, 9(1), 91–115.

Ellaway, A., Macintyre, S., & Bonnefoy, X. (2005). Graffiti, greenery, and obesity in adults: Secondary analysis of European cross sectional survey. *BMJ*, 331(7517), 611–612.

Ellery, P. J., & Ellery, J. (2019). Strengthening Community Sense of Place through Placemaking. *Urban Planning*, 4(2), 237–248.

Elmendorf, W. F. (2008). The importance of trees and nature in community: A review of the relative literature. *Arboriculture and Urban Forestry*, 34(3), 152–156.

European Commission. (2013). Green Infrastructure (GI): Enhancing Europe's Natural Capital [Policy Document]. <https://www.eea.europa.eu/policy-documents/green-infrastructure-gi-2014-enhancing>

Farhan, Y., & Al-Shawamreh, S. (2019). Impact of Rapid Urbanization and Changing Housing Patterns on Urban Open Public Spaces of Amman, Jordan: A GIS and RS Perspective. *Journal of Environmental Protection*, 10(01), 57–79.

GAM. (2016). Amman Resilience Strategy. Greater Amman Municipality.

GDCI. (n.d.). Benefits of Green Infrastructure. Global Designing Cities Initiative. Retrieved May 23, 2021, from <https://globaldesigningcities.org/publication/global-street-design-guide/utilities-and-infrastructure/green-infrastructure-stormwater-management/benefits-green-infrastructure/>

Gehl, J., Kaefer, L. J., & Reigstad, S. (2006). Close encounters with buildings. *URBAN DESIGN International*, 11(1), 29–47.

Gray, D., & Stevenson, C. (2020). How can ‘we’ help? Exploring the role of shared social identity in the experiences and benefits of volunteering. *Journal of Community & Applied Social Psychology*, 30(4), 341–353.

Groenewegen, P. P., van den Berg, A. E., de Vries, S., & Verheij, R. A. (2006). Vitamin G: Effects of green space on health, well-being, and social safety. *BMC Public Health*, 6(1), 149.

Gunawardena, K. R., Wells, M. J., & Kershaw, T. (2017). Utilising green and bluespace to mitigate urban heat island intensity. *Science of The Total Environment*, 584–585, 1040–1055.

Hassan, G. F., El Hefnawi, A., & El Refaie, M. (2011). Efficiency of participation in planning. *Alexandria Engineering Journal*, 50(2), 203–212.

HI. (n.d.). Harra Initiative [Facebook]. Retrieved June 26, 2021, from <https://www.facebook.com/harrainitiative>

Hickey, S., & Mohan, G. (Eds.). (2004). *Participation: From Tyranny to Transformation: Exploring New Approaches to Participation in Development*. Zed Books.

IDS. (2015). *The role of volunteering in sustainable development*. Institute of Development Studies.

IPCC. (2014). *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* ([Core Writing Team, R.K. Pachauri and L.A. Meyer (Eds.)], p. 151). Intergovernmental Panel on Climate Change.

Istenič, S. P., & Kozina, J. (2019). *Participatory Planning in a Post-socialist Urban Context: Experience from Five Cities in Central and Eastern Europe*. In J. Nared & D. Bole (Eds.), *Participatory Research and Planning in Practice* (pp. 31–50). Springer International Publishing.

Jackson, J. B. (1994). *A Sense of Place, a Sense of Time*. Yale University Press.

Jacobs, J. (1961). *The Death and Life of Great American Cities*. Vintage Books.

Jacobs, K. (2017, October 16). *The High Line Network Tackles Gentrification*. Architect Magazine. https://www.architectmagazine.com/Design/the-high-line-network-tackles-gentrification_o

Jordan Government. (2014). *Jordan 2025: A National Vision and Strategy*.

Kaplan, R., & Kaplan, S. (1989). *The Experience of Nature: A Psychological Perspective*. CUP Archive.

Karlsson, M. (2004). Has exercise an antifracture efficacy in women? *Scandinavian Journal of Medicine & Science in Sports*, 14(1), 2–15.

Keleg, M. M. (2020). Prospects of Placemaking Progression in Arab cities. *The Journal of Public Space*, Vol. 5 n. 1, 153–166.

Kellert, S. R. (2012). *Building for Life: Designing and Understanding the Human-Nature Connection*. Island Press.

Kellert, S. R., & Wilson, E. O. (1993). *The Biophilia Hypothesis*. Island Press.

Khirfan, L., & Momani, B. (2017). Tracing Participatory Planning in Amman. In L. Khirfan, K. Good, & M. Horak (Eds.), *Order and Disorder: Urban Governance and the Making of Middle Eastern Cities*. McGill-Queen's University Press.

Korosec, R. L., & Berman, E. M. (2006). Municipal Support for Social Entrepreneurship. *Public Administration Review*, 66(3), 448–462.

Krenichyn, K. (2006). "The only place to go and be in the city": Women talk about exercise, being outdoors, and the meanings of a large urban park. *Health & Place*, 12(4), 631–643.

Kuo, F. E. (2001). Coping with Poverty: Impacts of Environment and Attention in the Inner City. *Environment and Behavior*, 33(1), 5–34.

Kuo, F. E., & Faber Taylor, A. (2004). A Potential Natural Treatment for Attention-Deficit/Hyperactivity Disorder: Evidence From a National Study. *American Journal of Public Health*, 94(9), 1580–1586.

Kuo, F. E., & Sullivan, W. C. (2001). Environment and Crime in the Inner City: Does Vegetation Reduce Crime? *Environment and Behavior*, 33(3), 343–367.

Kuo, F. E., Sullivan, W. C., Coley, R. L., & Brunson, L. (1998). Fertile Ground for Community: Inner-City Neighborhood Common Spaces. *American Journal of Community Psychology*, 26(6), 823–851.

Kweon, B.-S., Sullivan, W. C., & Wiley, A. R. (1998). Green Common Spaces and the Social Integration of Inner-City Older Adults. *Environment and Behavior*, 30(6), 832–858.

Leach, W. D., & Pelkey, N. W. (2001). Making Watershed Partnerships Work: A Review of the Empirical Literature. *Journal of Water Resources Planning and Management*, 127(6), 378–385.

Li, D., Larsen, L., Yang, Y., Wang, L., Zhai, Y., & Sullivan, W. C. (2019). Exposure to nature for children with autism spectrum disorder: Benefits, caveats, and barriers. *Health & Place*, 55, 71–79.

Lindheim, R., & Syme, S. L. (1983). Environments, people, and health. *Annual Review of Public Health*, 4, 335–359.

Louv, R. (2005). *Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*. Algonquin Books.

Lydon, M., Garcia, A., & Duany, A. (2015). *Tactical Urbanism: Short-term Action for Long-term Change*. Island Press.

Maas, J., van Dillen, S. M. E., Verheij, R. A., & Groenewegen, P. P. (2009). Social contacts as a possible mechanism behind the relation between green space and health. *Health & Place*, 15(2), 586–595.

Manzi, T., Lucas, K., Jones, T. L., & Allen, J. (2010). *Understanding social sustainability: Key concepts and developments in theory and practice*. Earthscan Publications.

Masterson, V., Stedman, R., Enqvist, J., Tengö, M., Giusti, M., Wahl, D., & Svedin, U. (2017). The contribution of sense of place to social-ecological systems research: A review and research agenda. *Ecology and Society*, 22(1).

McAuley, E., Blissmer, B., Marquez, D. X., Jerome, G. J., Kramer, A. F., & Katula, J. (2000). Social Relations, Physical Activity, and Well-Being in Older Adults. *Preventive Medicine*, 31(5), 608–617.

Mitchell, R., & Popham, F. (2008). Effect of exposure to natural environment on health inequalities: An observational population study. *The Lancet*, 372(9650), 1655–1660.

Montgomery, C. (2013). *Happy City: Transforming Our Lives Through Urban Design*. Penguin UK.

MOPIC. (2017). *Jordan's Way to Sustainable Development: First National Voluntary review on the implementation of the 2030 Agenda*. Ministry of Planning and International Cooperation.

Morgan, G., Bajpai, A., Ceppi, P., Al-Hinai, A., Christensen, T., Kumar, S., Crosskey, S., & O'Regan, N. (2020). *Infrastructure for gender equality and the empowerment of women*. UNOPS.

Mueller, W., Steinle, S., Pärkkä, J., Parmes, E., Liedes, H., Kuijpers, E., Pronk, A., Sarigiannis, D., Karakitsios, S., Chapizanis, D., Maggos, T., Stamatelopoulou, A., Wilkinson, P., Milner, J., Vardoulakis, S., & Loh,

M. (2020). Urban greenspace and the indoor environment: Pathways to health via indoor particulate matter, noise, and road noise annoyance. *Environmental Research*, 180, 108850.

Musick, M. A., Herzog, A. R., & House, J. S. (1999). Volunteering and mortality among older adults: Findings from a national sample. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 54(3), S173-180.

Musick, Marc A, & Wilson, J. (2003). Volunteering and depression: The role of psychological and social resources in different age groups. *Social Science & Medicine*, 56(2), 259–269.

Nared, J. (2019). Participatory Transport Planning: The Experience of Eight European Metropolitan Regions. In J. Nared & D. Bole (Eds.), *Participatory Research and Planning in Practice* (pp. 13–30). Springer International Publishing.

NB. (n.d.). Nour Al Barakah | Facebook [Facebook]. Retrieved June 27, 2021, from <https://www.facebook.com/NourAlBarakah>

PA. (n.d.). Forest gardens. Permaculture Association. Retrieved May 24, 2021, from <https://www.permaculture.org.uk/>

Pacheco, P. (2015, June 11). How “Eyes on the Street” Contribute to Public Safety. *TheCityFix*. <https://thecityfix.com/blog/how-eyes-on-the-street-contribute-public-safety-nossa-cidade-priscila-pacheco-kichler/>

Parker, J., & Zingoni de Baro, M. E. (2019). Green Infrastructure in the Urban Environment: A Systematic Quantitative Review. *Sustainability*, 11(11), 3182.

Payne, L. L., Mowen, A. J., & Orsega-Smith, E. (2002). An Examination of Park Preferences and Behaviors Among Urban Residents: The Role of Residential Location, Race, and Age. *Leisure Sciences*, 24(2), 181–198.

Philander, S. G. (2012). *Encyclopedia of Global Warming and Climate Change, Second Edition*. SAGE Publications.

Pierce, J., & Lawhon, M. (2015). Walking as Method: Toward Methodological Forthrightness and Comparability in Urban Geographical Research. *The Professional Geographer*, 67(4), 655–662.

Piliavin, J. A., & Siegl, E. (2007). Health Benefits of Volunteering in the Wisconsin Longitudinal Study. *Journal of Health and Social Behavior*, 48(4), 450–464.

Pogacar, M., Bajec, J. F., Horvat, K. P., Smrekar, A., & Tiran, J. (2019). Promises and Limits of Participatory Urban Greens Development: Experience from Maribor, Budapest, and Krakow. In J. Nared & D. Bole (Eds.), *Participatory Research and Planning in Practice* (pp. 75–89). Springer International Publishing.

Pomeranz, E. F., & Stedman, R. C. (2020). Measuring good governance: Piloting an instrument for evaluating good governance principles. *Journal of Environmental Policy & Planning*, 22(3), 428–440.

PPS. (2010, January 3). William H. Whyte. Project for Public Spaces. <https://www.pps.org/article/wwhyte>

PPS. (2012, May 21). Lighter, Quicker, Cheaper: Transform Your Public Spaces Now. Project for Public Spaces. <https://www.pps.org/article/lighter-quicker-cheaper-2-2>

Ranapurwala, S. I., Casteel, C., & Peek-Asa, C. (2016). Volunteering in adolescence and young adulthood crime involvement: A longitudinal analysis from the add health study. *Injury Epidemiology*, 3(1), 26.

Razem, M. (2020). Place Attachment and Sustainable Communities. *Architecture_MPS*.

Reed, M. S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation*, 141(10), 2417–2431.

Rosenberg, M., & McCullough, B. C. (1981). Mattering: Inferred significance and mental health among adolescents. *Research in Community & Mental Health*, 2, 163–182.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166. <https://doi.org/10.1146/annurev.psych.52.1.141>

Saegert, S. (1989). Unlikely leaders, extreme circumstances: Older black women building community households. *American Journal of Community Psychology*, 17(3), 295–316.

Shami, S. (2003). *Ethnographies of Governance: Urban Spaces and Actors in the Middle East*. In P. L. McCarney & R. E. Stren (Eds.), *Governance on the Ground: Innovations and Discontinuities in Cities of the Developing World* (pp. 58–82). Woodrow Wilson Center Press.

Shibley, R. G., Schneekloth, L. H., & Hovey, B. (2003). *Constituting the Public Realm of a Region: Placemaking in the Bi-National Niagaras*. *Journal of Architectural Education* (1984-), 57(1), 28–42.

Stigsdotter, U. K., Corazon, S. S., & Ekholm, O. (2018). *A nationwide Danish survey on the use of green spaces by people with mobility disabilities*. *Scandinavian Journal of Public Health*, 46(6), 597–605.

Strife, S., & Downey, L. (2009). *Childhood Development and Access to Nature*. *Organization & Environment*, 22(1), 99–122.

Stringer, L., Dougill, A., Fraser, E., Hubacek, K., Prell, C., & Reed, M. (2006). *Unpacking “Participation” in the Adaptive Management of Social–ecological Systems: A Critical Review*. *Ecology and Society*, 11(2).

Sullivan, W. C. (Human-E. R. L.), & Kuo, F. E. (1996). *Do trees strengthen urban communities, reduce domestic violence? Forestry Report R8-FR (USA)*. <https://agris.fao.org/agris-search/search.do?recordID=US9615093>

Tatenhove, J. P. M. van, Edelenbos, J., & Klok, P. J. (2010). *Power and interactive policy-making: A comparative study of power and influence in 8 interactive projects in The Netherlands*. *Public Administration*, 88(3), 609–626.

- Taylor, A. F., Kuo, F. E., & Sullivan, W. C. (2002). View of nature and self-discipline: Evidence from inner city children. *Journal of Environmental Psychology*, 22(1), 49–63.
- Thackara, J. (2015). *How to Thrive in the Next Economy: Designing Tomorrow's World Today*. Thames & Hudson.
- Tritter, J. Q., & McCallum, A. (2006). The snakes and ladders of user involvement: Moving beyond Arnstein. *Health Policy*, 76(2), 156–168.
- Ulrich, R. S. (1981). Natural Versus Urban Scenes: Some Psychophysiological Effects. *Environment and Behavior*, 13(5), 523–556.
- UN. (n.d.). What is the Convention on the Rights of the Child? Retrieved March 29, 2021, from <https://www.unicef.org/child-rights-convention/what-is-the-convention>
- UNDP. (2014). *Jordan's Third National Communication on Climate Change*.
- UrbanRock Design. (2014, May 29). Finding Public Space in the Margins. <http://urbanrockdesign.com/finding-public-space-in-the-margins/>
- US EPA, O. (2014, February 28). Heat Island Effect [Collections and Lists]. US EPA. <https://www.epa.gov/heatislands>
- USGBC. (2021). LEED v4 Local food production. U.S. Green Building Council. <https://www.usgbc.org/credits/new-construction-core-and-shell-schools-new-construction-retail-new-construction-3?return=/credits/Homes/v4>

Van Eijk, C., & Steen, T. (2016). Why engage in co-production of public services? Mixing theory and empirical evidence. *International Review of Administrative Sciences*, 82(1), 28–46.

Van Herzele, A., & de Vries, S. (2012). Linking green space to health: A comparative study of two urban neighborhoods in Ghent, Belgium. *Population and Environment*, 34(2), 171–193.

van Meerkerk, I. (2019). Top-down versus bottom-up pathways to collaboration between governments and citizens: Reflecting on different participation traps. In A. Kekez, M. Howlett, & M. Ramesh, *Collaboration in Public Service Delivery* (pp. 149–167).

Van Willigen, M. (2000). Differential Benefits of Volunteering Across the Life Course. *The Journals of Gerontology: Series B*, 55(5), S308–S318.

Vaske, J. J., & Kobrin, K. C. (2001). Place Attachment and Environmentally Responsible Behavior. *The Journal of Environmental Education*, 32(4), 16–21.

Wells, N. M., & Rolling, K. A. (2012). The natural environment in residential settings: Influences on human health & function. In S. D. Clayton, *The Oxford Handbook of Environmental and Conservation Psychology* (pp. 509–523). Oxford University Press.

Wells, Nancy M. (2000). At Home with Nature: Effects of “Greenness” on Children’s Cognitive Functioning. *Environment and Behavior*, 32(6), 775–795.

Wesener, A., Fox-Kämper, R., Sondermann, M., & Münderlein, D. (2020). Placemaking in Action: Factors That Support or Obstruct the Development of Urban Community Gardens. *Sustainability*, 12(2), 657.

Wessel, S., Puren, K., & Drewes, E. (2018). Exploring theoretical trends in placemaking: Towards new perspectives in spatial planning. *Journal of Place Management and Development*, 11(2), 165–180.

Westphal, L. M. (2003). Social Aspects of Urban Forestry: Urban Greening and Social Benefits: a Study of Empowerment Outcomes. *Journal of Arboriculture* 29(3):137-147, 29(3), Article 3.

Woolley, H. (2005). *Urban Open Spaces*. Taylor & Francis.

Wyckoff, M. A., Neumann, B., Pape, G., & Schindler, K. (2015). *Placemaking as an Economic Development Tool*. Michigan State University.

Zhang, J. W., Piff, P. K., Iyer, R., Koleva, S., & Keltner, D. (2014). An occasion for unselfing: Beautiful nature leads to prosociality. *Journal of Environmental Psychology*, 37, 61–72.

Zimmerman, M. A. (1995). Psychological empowerment: Issues and illustrations. *American Journal of Community Psychology*, 23(5), 581–599.

