

Planning [in] Justice

Spatial Analysis for Urban Cairo



About TADAMUN

The TADAMUN Initiative believes that all citizens have an equal right to their city, as well as a shared responsibility towards it. TADAMUN also believes that solidarity among citizens is the only way to achieve social justice and a decent standard of living, particularly for many who have been ignored for too long. TADAMUN strives to work with all stakeholders as it builds alliances and coalitions to encourage change and introduces realistic alternatives and solutions for existing urban problems. What we need is not more undemocratic and elitist decisions, but for all citizens to claim and demand their urban rights and to devise new urban policies that are more effective, equitable, participatory, and sustainable.



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TADAMUN: The Cairo Urban Solidarity Initiative

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Introduction

Before considering the contemporary issue of spatial inequality in the Greater Cairo Region (GCR) in this publication, we provide the historical context of urban governance, the built environment, and national policies and developments in Egypt. The chapters in this publication present findings and analysis from Tadamun's Planning [in] Justice project. We aim to situate those findings and analysis (Chapter 3) within a broader overview of topics and concepts pertaining to studies of spatial inequality (Chapter 1), political and institutional factors creating and reinforcing spatial inequality in the Greater Cairo Region (Chapters 4 and 5), and snapshots of the ways spatial inequality manifests in case studies of three Cairo neighborhoods (Chapter 6). We also provide a comprehensive explanation of the Planning [in] Justice project methodology in Chapter 2.

Egypt has pursued a set of neoliberal economic reforms and policies that have reshaped the country and permeated all dimensions of Egyptian life, since the 1970s. President Anwar Sadat's *Intifah* (1970-1981) initiated the opening up of Egypt's economy to foreign investment, which intensified during the Mubarak era (1981 – 2011) as the government gradually privatized much of the public sector, cut public services, and reduced subsidies. Urban development was no exception to this new neoliberal agenda. The government departed from its previous role as the key provider of housing and public services during the state socialism of the Nasser era, scaling back housing regulation, amenities, and public services to all citizens. As a result, informal housing became the fallback option for most Egyptians. By the 1990s, the government regularly engaged in real estate speculation, selling public land to private investors for profit. Gradually, collective awareness of the true value of the land began to dissipate and the social value of the land, as a right for all citizens and a mainstay

of development and life for communities, was all but forgotten.

Between the 1960s and the 1990s, immigration from rural to urban areas increased, driven by job opportunities in cities and a prevailing vision of development grounded in urbanization, modernization, and industry. Propelled by this vision, the government directed the bulk of public resources to cities, especially Cairo, transforming cities into magnets for rural immigrants. Thanks to skyrocketing real estate prices, the newly-arrived poor migrants looked outside the formal housing market and began to develop their own urban communities without assistance or regulation from the state. Some built their own houses and devised ways to access amenities in nearby areas. Communities living in informal areas thus provided public services—access to water, electricity, sanitation, garbage collection, among other critical services—for themselves, hoping that one day their neighborhoods would grow too large and populous to be ignored and the government would step in to offer them amenities and services. Informal, or unplanned, housing continued to grow even as rural immigration slowed. The demand for affordable housing in urban areas increased as poorer residents were priced out of formal areas and the government failed to provide affordable options for low-income residents. Meanwhile, the government expanded its program for building new cities and urban communities in the desert in an effort to redirect the population away from the narrow strip of the Nile Valley. The government channeled considerable resources into the construction of these new satellite cities. Despite high hopes, the new cities failed to attract people, especially the poor who could not afford the move.

As the government focused efforts on expansion in desert cities, areas within the Greater Cairo Region

(GCR) and other large cities continued to attract private developers. Yet, the urban environment and living conditions deteriorated for most middle and low-income urban residents. Furthermore, cities had no available space to absorb internal migration or even the natural growth of local populations. The government looked beyond urban areas for solutions, outward towards vast desert lands. However, despite stated government attempts to attract businesses, new desert cities could not offer urban residents adequate job opportunities and thus failed to present a viable alternative to older cities. Consequently, older cities remained the primary source of income, services, and community life for most people, while new cities remained cut off from these critical resources, as we discuss further below. Without adequate or effective strategies for managing growth in existing urban areas, unplanned construction proliferated, either on nearby agricultural areas or on state-owned land within cities. Today, as we explain in Chapter 5, unplanned housing is the dominant housing model for the poor and the bulk of Egypt's middle class alike.

Most scholars and policymakers addressing the problems of the GCR tend to differentiate only between “formal” and “informal” areas, with no consideration of the many variations of arrangements of urban space within these two categories. Public discourse often blames residents of informal areas for the substandard living conditions that prevail there, while ignoring the role that state policies have played in creating these areas, commonly referred to as *‘ashwa’iyat*—literally “haphazard.” A closer examination of the history of Egypt's built environment reveals, however, that many of the government's own urban programs and policies inflated housing prices and excluded broad swaths of Egypt's population from the formal housing market. The government was also the first to allocate uninhabited plots of land to underprivileged

groups or others involved in economic activities that were difficult to accommodate within the city. The government did this without a comprehensive plan for managing growth and also without transferring formal ownership of land to new residents in the form of title deeds. As informal areas grew, housing, infrastructure, and public service provision deteriorated. These problems, however, are not unique to informal areas. They also impact certain planned areas, which lack maintenance, governance, or otherwise fall short of meeting residents' needs. Overcrowding, dilapidated neighborhoods, inefficiency, and lack of public services are now common features of Egypt's urban and rural areas alike, raising questions about the availability of adequate housing in Egypt's cities, as well as broader issues of spatial justice and transparency.

Since the 2011 revolution, Egyptians have made public demands for social justice and the equitable distribution of public resources. Despite some attempts by the government to meet these demands, urban policies remain largely unchanged and living conditions continue to deteriorate. Rather than pursuing costly and ineffective desert development schemes, urban policies should target the immediate needs and service deficits impacting urban residents, and distribute available resources accordingly. The inequitable distribution of public resources and services is at the heart of the most pressing challenges facing Egypt's urban residents, impacting both informal and formal areas. Government criteria in financial planning, the relationship between financial planning and urban planning, and the processes by which the government distributes public services all contribute to this problem. Solutions to Egypt's urban challenges require a new, more nuanced understanding of the complex interplay of factors underlying them—one that transcends the current binary classifications of informal vs. formal neighborhoods.

Tadamun: The Cairo Urban Solidarity Initiative studies issues of social justice and the built environment in the GCR, as well as elsewhere throughout the Middle East and North Africa (MENA) region. Tadamun hopes to understand and address issues of spatial injustice by embracing the notion of the right to adequate housing. This broader understanding incorporates the component issues of security of tenure, affordability, habitability, accessibility, location, cultural adequacy, and the availability of services, facilities, and infrastructure.

Tadamun launched the Planning [in] Justice project to study and raise awareness about spatial inequality in the distribution of public resources among various urban areas, and to highlight the institutional causes that reinforce the current conditions in Egypt, especially in the GCR. The Planning [in] Justice project compiled publicly-available data, and data available by request, and utilized Geographic Information Systems (GIS) software to map a variety of indicators—poverty and education levels, access to healthcare facilities, public schools, population density, among other variables—at the neighborhood level. Whereas previous studies on similar poverty and development measures in the CGR have largely been limited to the district level, Planning [in] Justice captures variations in these indicators at the *shiyakha*—or neighborhood—level. The project also aims to explore the possibilities for developing urban areas, to analyze the cost and return on public investment in underserved urban areas, and to compare this return with investment in new cities and affluent neighborhoods. We have previously published specific articles and briefs about spatial inequality, but in this document we present a more comprehensive analysis of the topic, drawing from our previous more specific

publications. It is our hope that the Planning [in] Justice project will provide decision makers and the general public with a necessary tool to advocate for, develop, and implement more effective and targeted urban policies and programs.

Many people in Cairo know that neighborhoods are not equal, that some neighborhoods are wealthier and offer better services, while others have less. But until now, much of the data needed to represent the scope of the problem was scattered. By compiling and translating knowledge and data that was previously inaccessible or fragmented, we offer a compelling way in the following pages to question the fairness and logic of public investment and development strategies that favor wealthier areas and ignore the poorest and most underserved districts. By producing evidence-based research on the scope, causes, and consequences of spatial inequality, we provide a tool for urban dwellers to understand the character of their neighborhoods and the way that their city is managed. This tool is also available for policy-makers to measure the specific needs of individual neighborhoods, to target their policies, and to develop a more equitable and just match between needs and resources in Cairo.

Tadamun imagines the decent city as a place where adequate housing, services, and basic needs are the right of all citizens, rather than privileges afforded to some and not to others. By drawing attention to underserved areas, providing a means to assess the needs of communities within these areas, and offering solutions to help narrow the gaps between neighborhoods, we are taking a first step towards making the decent city a reality for all.

Chapter 1:

Conceptual and Theoretical Framework

Poverty and inequality have recently dominated public debate in Egypt. The political and social dynamism of the last few years brought into sharper focus the country's widespread poverty, the uneven distribution of wealth, and the deterioration of living conditions for broad swathes of the population, especially in poor urban districts. Scholars who focus on development and the basic rights of citizens, and who wish to examine the roots of the current social and economic crisis, now generally recognize the need to introduce a spatial dimension to their research. This perspective affords a better assessment of disparities in the allocation of public resources and development efforts between regions and cities, as well as among districts within the same city. It is now an integral part of what is called the study of "spatial justice."

Concepts, Measurement Tools, and Spatial Dimensions

Spatial justice centers on a basic principle: the rights of a citizen must not depend on where she or he lives. In other words, quality of life and access to public services should not vary dramatically from one geographic area to another. However, in many countries, income, employment opportunities, school performance, the quality of health care, the provision of basic infrastructure (such as electric utilities and sanitation), and even the quality of air and potable water may differ dramatically from region to region, city to city, and neighborhood to neighborhood. Levels of spatial inequality increase as poverty, low-quality services, and infrastructure become concentrated and embedded in specific geographic locations, limiting economic and social mobility and compounding poverty.

The concepts of poverty, equality, and justice – and the spatial dimensions of each of these – are inextricably linked. However, they differ in their definitions and the tools used to measure them.

Poverty and Urban Complexities

Poverty is most commonly measured by comparing the income of the individual or the household to an income threshold for satisfying the basic needs for survival in any given country, often referred to as the “poverty line.” Researchers have argued that income alone is not enough to capture the multifaceted nature of poverty and that other dimensions such as housing, health, food, and general living conditions are necessary to understanding the lived experience of people in greater detail. There are also debates over how to best account for differences in the cost of living between urban and rural areas (Baker, 2008).

The publication of numerous in-depth studies about

poverty and factors contributing to and perpetuating it has encouraged a more nuanced and comprehensive understanding of the concept in recent decades. The Oxford Poverty and Human Development Initiative, for example, employs a poverty index which takes into account levels of education and health, and access to clean water, cooking fuel, electricity, and sewage. In Egypt, however, poverty tends to be measured only by income and wealth, such as in the 2006 Household Expenditure, Income, and Consumption Survey, the 2007 Poverty Map, and the 2012/2013 Poverty Map. However, Egypt’s Population Health Survey does consider access to health and sewage services along with other welfare indicators, and it includes comparisons not only between rural and urban areas but also among various regions.

Although measuring poverty on the national level is still the most common practice in Egypt as well as globally, researchers are increasingly looking to spatial indicators to create more detailed understandings of urban and rural differences, and disparities within cities. Spatial studies offer a more comprehensive understanding of the unique issues impacting cities and thus an opportunity to design better, more targeted policies and programs for tackling urban poverty. Studying urban poverty also offers insight into the characteristics and dynamism of poverty among city dwellers. There is no denying that poor people everywhere face difficulties making ends meet, but in urban contexts the poor also face additional challenges associated with overcrowding, unhealthy living conditions, and the absence of the social support networks one often sees in rural areas. Furthermore, due to the high value of land in cities, poor urban dwellers tend to spend a disproportionate share of their income on housing. Cities, by their very nature, place the poor in close proximity to the rich, making the experience of inequality more visible on a daily basis.

Consequently, the concept of poverty must embrace not only the question of resource concentration, but also broader issues of equality and justice.

Equality and Spatial Justice

In economic terms, equality refers to the equal distribution of income and resources among individuals. The most popular tool used in Egypt and around the world to measure inequality is the Gini coefficient, which measures the distribution of income in any given population as a score from 0 to 1. A score of “0” represents a case of complete income equality while “1” represents complete inequality, such as the case when one person in the population receives all of the income.

In 2013, the Gini coefficient in Egypt was .30, the lowest ever estimated in the country at the national level (See the 2013 Household Expenditure, Income, and Consumption Survey, cited in Verme et al., 2014, 2). National-level inequality in Egypt is also lower than in other MENA countries and other countries at similar levels of development. However, in the past two decades, researchers pointed to a clear contradiction between Egypt’s relatively high rates of economic growth on one hand, and increased rates of poverty and inequality, on the other (al-Shawarby, 2014). A widespread sense of inequality and substantial income gaps among Egyptians seem to contradict the Gini coefficient and call into question the utility or appropriateness of such a tool to illuminate various aspects of inequality experienced by people throughout the country. Some researchers suggest that household surveys measuring income, expenditure, and consumption fail to capture the actual income of the richest segments of the population, thus distorting the results and masking inequality (Piketty, 2014). Furthermore, the Gini coefficient is

not necessarily a good measure of well-being. When poverty is widespread, the coefficient will show a high level of equality, but only because everyone is poor (Verme, 2014). Empirical studies have shown that even when incomes equalize on the national level, this does not necessarily mean that all people have equal access to amenities and public services, or that public resources are distributed fairly based on the needs of communities. Other measurements of poverty and wealth may offer a better picture of the detailed reality of people’s lives (Piketty, 2014; Stiglitz, 2012).

In order to understand the causes and consequences of inequality and determine how fairly or unfairly resources are distributed, we must cast a wider net. To understand how people benefit from resources and opportunities, analyses of inequality must look beyond income indicators and consider variables such as housing, public services, and work opportunities. The geographic or spatial components of poverty are also equally important. Most studies of inequality focus on the national level, which can obscure the sharp variations between localities at the subnational level. Most subnational poverty studies focus on inequality between urban and rural areas. Rates of marginalization and inequality within different areas—districts and neighborhoods—of the same city, however, can be even higher than between cities and the countryside. The dynamics of inequality within Egyptian cities has been largely unexplored. Using research tools and indicators at the micro-level, we can examine the interaction between individuals, communities, and public policy priorities, as well as the impact of this interaction on inequality and spatial injustice.

Spatial Justice and Development Gaps

Just as important as new measurement tools to capture

the various facets of inequality is the integration of the concept of justice into these tools. Measuring equal access to resources and opportunities does not necessarily take into consideration the fact that various groups within the population have different needs.

A broader perspective of justice accounts for the specific needs of individuals, groups, and geographic areas, and is necessary to ensure that resources are directed where they are most needed and not wasted elsewhere. This differentiation is relevant to development plans. For example, assume that two neighborhoods within one city have the same population, but one neighborhood is wealthier than the other. In this case, the poorer neighborhood likely has greater needs. Under a development plan committed strictly to equality, both neighborhoods would receive the same amount of public spending, irrespective of the development gap between them. In contrast, a development plan committed to spatial justice would allocate more resources to the poorer neighborhood in order to reduce the development gap. This idea is at the heart of the concept of spatial justice.

Spatial justice measures people's access to adequate housing, public services, amenities, job opportunities, and other important needs within a particular geographic area. In addition to measuring service deficits, inaccessibility of markets, and availability of economic opportunities, assessments of spatial justice might consider other dimensions such as the nature of social relations, the ability to access opportunities in an equitable manner, and systems for allocating land, among other aspects important to understanding lived realities.

In a perfect world, absolute spatial justice would mean that all citizens have equal access to public amenities and services, including schools, hospitals, cultural

centers, and jobs. The distance between such amenities and an individual's home matters for determining accessibility, and the number of citizens with access to such amenities is key to understanding spatial justice. A more sophisticated definition of spatial justice suggests equal access to their choice of all of the above, meaning that citizens should be able to choose employment options and careers, which schools their children attend, or which hospitals or health clinics best serve their needs. Spatial justice is about the quality of public goods and services within a neighborhood as much as it is about the quantity.

The concept of spatial justice enables us to comprehend urban phenomena that might be puzzling otherwise, such as the concentration of large numbers of the poor in specific parts of the city, commonly referred to as "poverty pockets." In areas where amenities, public services, and transportation are absent, the cost of housing is lower, which makes these areas attractive to larger numbers of poor people who cannot afford to live elsewhere. Yet, these areas could potentially turn into "poverty traps," where individuals born within these spaces, facing unfair odds, are unable to improve their situations. Children born in such areas have to cope with the challenges of poverty and also face social stigmatization, which may diminish opportunities for education and later employment. Merely being associated with a certain area may limit an individual's opportunity to succeed elsewhere (Lobao and Saenz, 2002). In short, the diminished chances of self-improvement are often a function of many factors outside of an individual's control, including institutional prejudice and the negative profiling of impoverished or disenfranchised neighborhoods (Hamnett, 2003; Marcuse, 1989).

Spatial injustice must be analyzed within the context of government decision-making and public financing

processes, as well as the government's priorities and institutional apparatus. Often, policy decisions create or encourage spatial inequality; however, the ways in which the government formulates policy decisions and allocates public funds to urban areas are not always clear-cut. Urban governance, "the linkages of people, organizations, regulations and practices – visible and hidden, intended and unintended," creates formal and informal rules for decision-making that determine which areas get resources and which do not (Marwell, 2014). Governance is a process that can serve as an equalizing force, but governance can also increase the social and political production of inequality (Marwell, 2014). Through revealing the underlying power structures behind the social and political production of inequality, we can render spatial inequality "more publicly unjustifiable" and advocate for policies that aim to bring cities closer to the ideal of complete spatial equality and justice (Lobao and Saez, 2002, 503).

Studies of Spatial Justice in Egypt

In Egypt's case, researchers who have applied spatial concepts to the study of poverty and equality have been able to identify significant development gaps. They have noted that while poverty rates are higher in Egyptian rural areas compared to urban ones, inequality is higher in urban areas. In other words, the disparity between income levels is much more pronounced in cities than in the countryside (El Tawila, Gadallah and El-Majeed, 2014). Aside from income disparities, some research efforts in Egypt have tackled the non-monetary aspect of spatial justice. One study on spatial justice and urbanization by Egyptian urbanist Yahia Shawkat examined aspects of adequate housing across various governorates

within the country. The study examined the system of urbanization in Egypt and the allocation of state resources for housing, as well as the stable possession of land and residence, access to amenities, and other aspects of adequate housing across various governorates (Shawkat, 2013). The Habi Center for Environmental Rights also examines spatial justice and environmental rights; it collects and publishes data regarding access to safe drinking water, access to information, and citizen participation, and encourages the public to play an active role in updating environmental laws and asserting the right to a safe and clean environment.¹

Mapping Spatial Justice as a Global Tool of Change

Across cities, neighborhoods, and regions, geographic inequality emerges when the economy shifts, the allocation of resources becomes skewed, and when policies undermine citizens' rights to the equal distribution of public resources. Public policies almost universally claim to redress inequities, but unfortunately, too often there is a mismatch between government rhetoric and government practices and decision-making. Affluent neighborhoods tend to have better schools and health services, tourist areas have regular garbage collection, and neighborhoods where high-level government officials and diplomats live are invariably well-serviced with water, electricity, and sewage systems, even in cities where poverty and a lack of resources are common. One way to reverse this trend is to provide better information about existing inequities, their degree, and their location—information that can be used to defend the "right to the city."

¹ For more information see www.hcer.org

Using official data, business data, and other materials, including first-hand compilation of community-based information, researchers worldwide are gaining new insights into the scope and causes of spatial inequality on the micro-level, even down to the level of one city block. Since micro-level data on spatial inequality in developed countries is often publicly available and accessible to researchers, communities and activists can find the tools and data to understand where they stand in relation to the rest of the city or country, and advocate for better policies and greater equality.

The “right to the city” is well defined in the Constitution of the Republic of Ecuador:

“Persons have the right to fully enjoy the city and its public spaces, on the basis of principles of sustainability, social justice, respect for different urban cultures and a balance between the urban and rural sectors. Exercising the right to the city is based on the democratic management of the city, with respect to the social and environmental function of property and the city and with the full exercise of citizenship” (Constitution of the Republic of Ecuador, 2008, Section 6, Article 31).

In the following section, we review a few global examples of how mapping tools have been utilized to portray and analyze spatial inequality and to influence public policy, sometimes successfully and other times, less so. The following examples illustrate how mapping can offer insight into crucial problems and help bolster the public’s claim to shelter, clean air, water, education, and health—all of which are integral parts of the “right to the city” whether in the US, China, or Egypt.

Mapping Poverty in New York

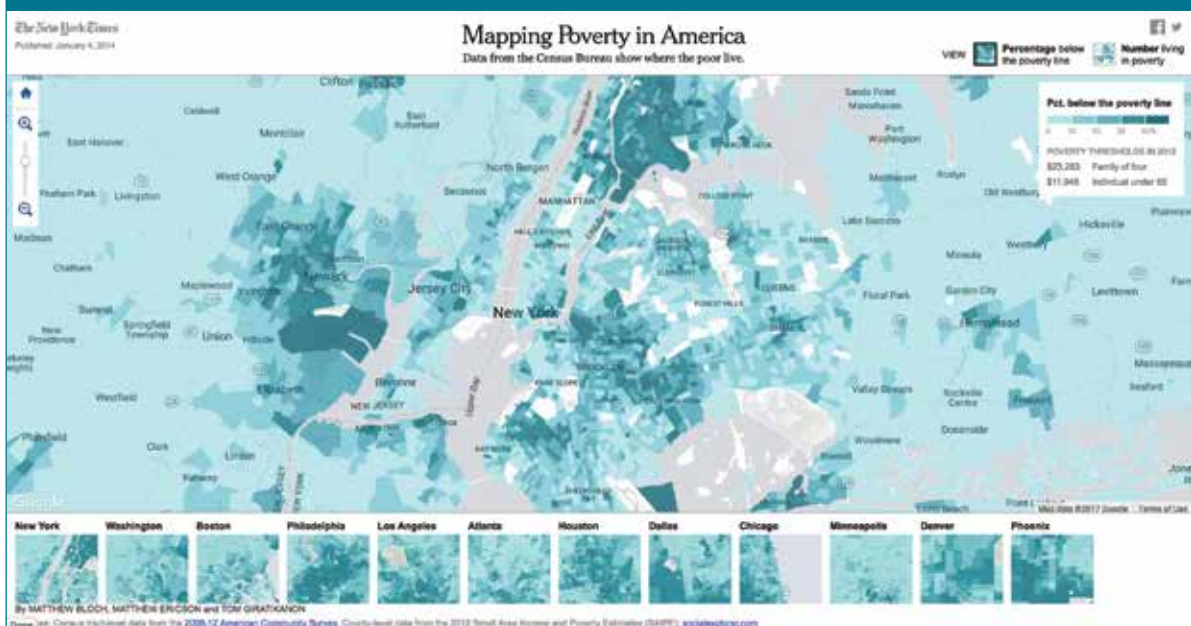
The mapping of census data, drawn from the U.S. Census Bureau's American Community Survey from 2008-2012 highlights the way poverty is geographically concentrated in different parts of New York City. The map below illustrates the percentage of the population living under the poverty line throughout the city on a color gradient. In the darkest shaded areas, 40% of people or more live below the poverty line. The lightest shades represent areas where less than 10% of the population live below the poverty line. In some places on the map, wealthy neighborhoods are directly adjacent to neighborhoods with high levels of poverty.

Maps like this allow us to easily see the extent of the geographic concentration of poverty and spatial inequality for a given region at a very local level. Ready-made maps for all major U.S. cities are available

and the full American Community Survey is accessible for any other region in the United States. As a result, policy-makers, non-profit organizations, activists, or concerned citizens. Certainly, compelling data analysis does not necessarily lead to more equitable policies, but evidence-based research behind persuasive arguments can sometimes mobilize aggrieved constituencies to act, or even mobilize champions of change within government and policy circles.

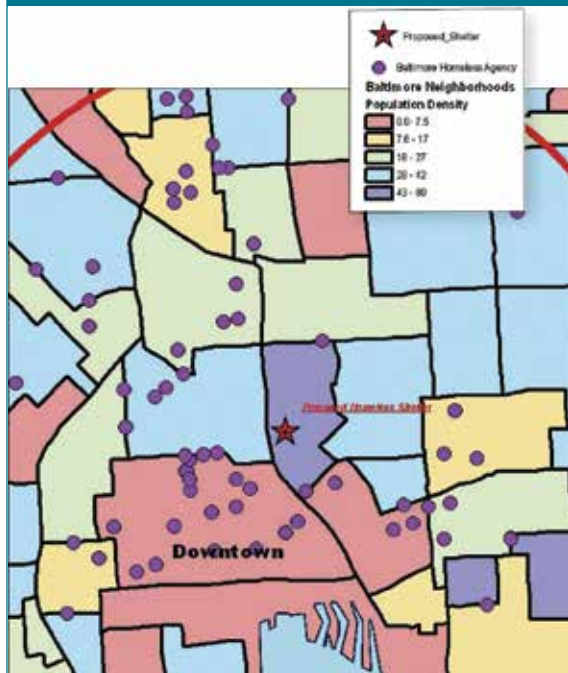
While this kind of data is readily available to the public in the U.S., micro-level data is scarce in Egypt. Most Egyptian studies about poverty and inequality focus on the national level, with local data collected only on governorate and regional levels. Information on neighborhoods is particularly hard to find. As a result, it is more difficult to understand the unique challenges residents face in different neighborhoods on a daily basis, and to design programs to target those

Figure (1) Poverty map of New York using the results of 2008-12 American Community Survey.



Source: (Bloch et al., 2014).

Figure (2) Map showing the population density in various areas and the sites of existing services for the homeless within a 1.5-mile diameter around a proposed shelter in Baltimore.



Source: (Loubert, 2010).

challenges and deficits accordingly.

Sheltering the Homeless in Baltimore

Homelessness remains a serious issue in many major cities in the United States. In 2009, the City of Baltimore, Maryland launched a 10-year program that utilized mapping technology to alleviate homelessness. The city consulted researchers at Morgan State University in Baltimore and the researchers collected information from key stakeholders: homeless individuals, businesses, service providers, and residents.

Using GIS, researchers mapped out information collected from the city, local businesses, and neighbors

Figure (3) Interactive map showing the location of companies as well as links to their environmental records.



Source: (Loubert, 2010).

of the proposed site. They also plotted mobility patterns of the homeless and drew on demographic data from the U.S. Census to create a representation of the areas they selected for analysis. They connected 911 emergency calls to their geographic locations and compiled crime data from the targeted area. After this diversified mapping process and data analysis, researchers proposed a building site for new homeless shelter. Using the years 2004 and 2008 for analysis of crime and emergency medical services data, researchers concluded that an influx of homeless people to the proposed site would not increase crime, and it would provide desperately needed housing for this population (Loubert, 2010). After securing housing, the city could then address various common problems

among the homeless population such as healthcare, mental health issues, and unemployment.

The researchers also contacted developers of buildings for homeless people and solicited design ideas that would incorporate safety measures for shelter residents and residents of the surrounding community, as well as appropriate architectural designs for the area. The proposed shelter, called the Housing Resource Center, accommodates over 200 people. As part of this project, Baltimore also created a 24/7 emergency shelter with an array of support services (including healthcare, counseling, and employment).

However, excellent research was no guarantee of success, as local groups – including the homeless themselves – did not seem to support the mapping initiative's proposals. Morgan State University researchers discovered that businesses, neighboring communities, and developers opposed the idea of having a permanent shelter in their area. Even the homeless individuals who attended a focus group said that they preferred assistance to obtain their own private residences rather than public sector housing.

Mapping Environmental Protection in Shanghai

In another example of the utility of spatial analysis, Ma Jun, a former Chinese journalist, founded the Institute for Public and Environmental Affairs (IPE), a member of the Green Choice Alliance in 2006. Researchers for the Beijing-based institute have used environmental data from various sources—documentation of environmental audits, pollution records made available by China's environmental protection bureaus through state-run newspapers, and others—to compile a database of environmental regulations violations. The database includes over

70,000 records of businesses within China that have violated laws regulating the environmental impact of industrial activities in China. Ma Jun's team created a series of free public resources, including the China Water Pollution Map, which has significantly raised awareness about pollution of China's rivers and bodies of water (Larson, 2010). Figure (3), also produced and published by the IPE, shows the location of companies with industrial activities in Shanghai and direct links to those companies' environmental records. This is a powerful tool for anyone seeking to learn about the impact of industrial activities on air, water, and other environmental qualities in their community. The IPE's environmental mapping campaign was made possible by China's decision, in recent years, to make environmental records public. China launched its first environmental agency, modeled somewhat after the U.S. Environmental Protection Agency (EPA), in 1993, one year after the Rio Earth Summit. In May 2008, the government required local environmental protection departments to make certain categories of pollution records public. Despite these positive moves towards transparency, access to environmental information in China remains incomplete and lacks uniformity.

In many corners of the globe, people are developing and sharing tools to visualize and publicize analyses of spatial inequality. Complex, deep-rooted problems rarely have easy solutions but mapping geocoded data about spatial inequality can increase citizen awareness, educate the public, and give initiatives and organizations the tools to “fight with data” for positive change.

Chapter 2:

Planning [in] Justice Project Methodology

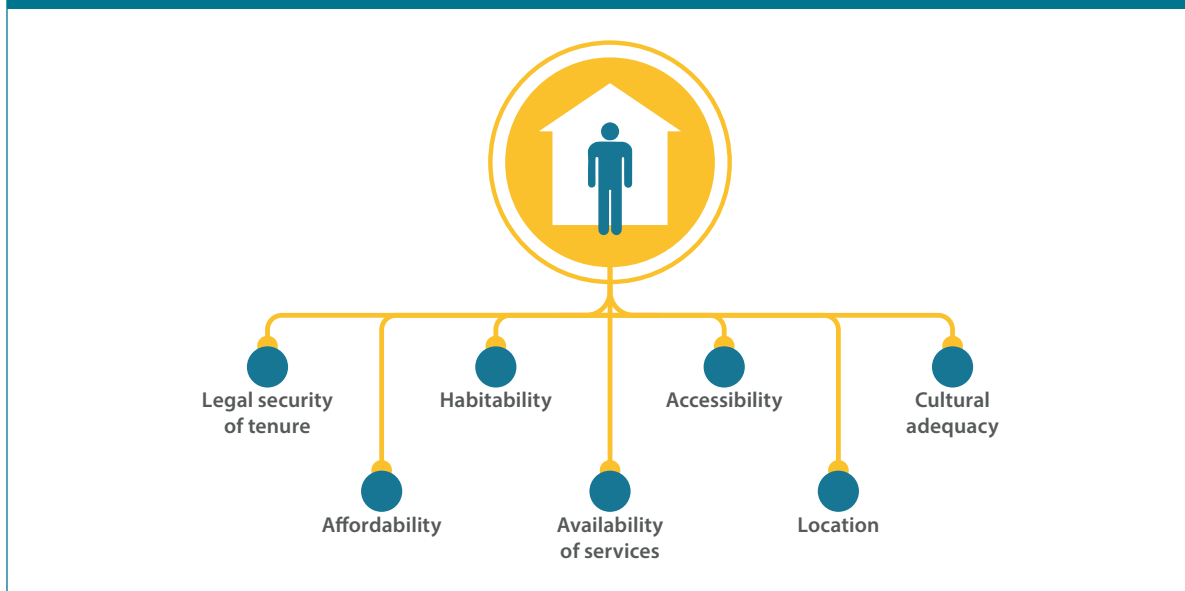
The Planning [in] Justice project relies mainly on quantitative indicators, which capture information on demographics, poverty, living conditions, the condition of dwellings, public amenities, the number of educational and health facilities, government investment plans, and local development allocations. Tadamun supplemented the project's quantitative data with qualitative case studies. Our analysis of spatial inequality focuses on various aspects of adequate housing—a set of housing standards established by the United Nations and recognized by international human rights law as a minimum right of citizenry for all persons. Aspects of adequate housing, viewed in combination with socio-economic welfare indicators, provide a variety of data that offer a more comprehensive picture of poverty and inequality.

An Adequate Housing Perspective

The United Nations established the right to adequate housing as a human right guaranteed by the International Covenant on Economic, Social and Cultural Rights, to which Egypt is a signatory. The United Nations defines the right to adequate housing as comprising the following elements:

- > **Security of tenure:** housing is not adequate if its occupants do not have a degree of tenure security which guarantees legal protection against forced evictions, harassment, and other threats.
- > **Availability of services, materials, facilities, and infrastructure:** housing is not adequate if its occupants do not have safe drinking water, adequate sanitation, energy for cooking, heating, lighting, food storage, or refuse disposal.
- > **Affordability:** housing is not adequate if its cost threatens or compromises the occupants' enjoyment of other human rights.
- > **Habitability:** housing is not adequate if it does not guarantee physical safety or provide adequate space, as well as protection against the cold, damp, heat, rain, wind, other threats to health, and structural hazards.
- > **Accessibility:** housing is not adequate if the specific needs of disadvantaged and marginalized groups are not taken into account.
- > **Location:** housing is not adequate if it is cut off from employment opportunities, health care services, schools, childcare centers, and other social facilities, or if it is located in polluted or dangerous areas.
- > **Cultural adequacy:** housing is not adequate if it does not respect and take into account the expression of cultural identity.

Figure (4) Pillars of the Right to Adequate Housing.



Source: Original graphic by Tadamun (2015).

As discussed in Chapter 1 of this publication, richer analysis of spatial inequality incorporates a diverse array of indicators relating to citizens' welfare, thus capturing a more complex and nuanced picture of the lived experience of urban residents. In the Planning [in] Justice project, Tadamun combined data on economic and social welfare, demographics, and several public services and expenditures. By incorporating indicators on the quality and availability of public services in different parts of the city, as well as income and employment indicators, Tadamun hoped to not only identify areas of deprivation and their distribution throughout the city, but also to better understand patterns of urban development policies and planning that create and reinforce spatial inequality.

The Planning [in] Justice project includes data on the following indicators:

- > **Indicators of economic welfare:** these involve the analysis and classification of various types of employment (full/part-time, official/unofficial, public/private sector); annual per capita income; poverty indices (number and percentage of people living under the national poverty line, density of poor people per square kilometer, and the Gini coefficient); as well as unemployment rates.
- > **Indicators of social welfare:** these include indicators that measure the quality of health and education services on the local level.
- > **Demographic indicators:** these include population figures and classifications according to gender and age groups in various *shiyakhas*.
- > **Indicators for the distribution and allocation of public resources:** these track public expenditures allocated to neighborhoods in the annual economic and social development plan, which lists investment

in education, health, housing, amenities, and transport sectors, in addition to village allocations, which currently amount to less than 1% of public expenditure and are mostly dedicated to road building, improving the environment, training, and limited aspects of security and fire prevention programs.

Project Phases

Phase 1: Data Collection and Classification

Our team of researchers began by scouring official sources for relevant data, and compiling it into a single, uniform dataset to measure various concepts linked to spatial inequality. The project relies on official data. Much of it is the same data the Egyptian government uses to plan and implement public policy. The following table shows the data sources divided according to elements of spatial inequality.

Table 1: Data Sources		
Concept	Relevant Data/Variables	Source
Adequate Housing		
Security of tenure	Type of home possession (available only at the district level)	General Census of Population, Housing, and Establishments (2006)
Provision of services and infrastructure	Variables related to the availability of services, such as the percentage of families and individuals that are connected to the water network, have a faucet in the house, are connected to the sanitation network, have access to a private bathroom and kitchen within the home, and are able to safely preserve food, etc.	General Census of Population, Housing, and Establishments (2006); Egypt Household Income, Expenditure, and Consumption Survey (2011/2012)
Affordability	Income levels in each area compared with real estate prices and rent levels	Egypt Household Income, Expenditure, and Consumption Survey (2011/2012); Egypt Poverty Map (2013); Field research conducted by Tadamun into rents and home prices while researching `Izbit Khayrallah
Safe and habitable housing	Characteristics of the dwelling, including the type of lighting and flooring	General Census of Population, Housing, and Establishments (2006); Egypt Household Income, Expenditure, and Consumption Survey (2011/2012) on governorate level
Housing accessibility	Availability of programs that fund housing and the suitability of available credit to increase the purchasing power of citizens in target groups	Independent study

Table 1: Data Sources

Concept	Relevant Data/Variables	Source
Safe location with adequate public services	Availability of clinics, schools, post offices, police stations, youth clubs, green areas, garbage dumps and collection, and distance between dwelling and sources of environmental pollution	District data as posted on governorate websites ^{**} ; General Census of Population, Housing, and Establishments (2006); Local development plans; Citizen's Guide to the Investment Plan, Ministry of Planning; School Location Data, GOPP (General Office of Physical Planning)
Welfare		
Per capita income	Per capita income in each <i>shiyakha</i>	Egypt Poverty Map (2013)
Number of poor people	Number of people living under the poverty line, as measured by the national poverty line	Egypt Poverty Map (2013)
Percentage of poor people	Number of poor people living under the poverty line over total population in the <i>shiyakha</i> , calculated according to the national poverty line	Egypt Poverty Map (2013)
Density of poverty	Number of poor people per square kilometer in each <i>shiyakha</i>	Poverty Map (2013); Tadamon calculation of the size of each <i>shiyakha</i>
Unemployment rate	Out of work people who are capable and willing to work	General Census of Population, Housing, and Establishments (2006)
Distribution of workers by profession	Percentages of workers employed in the government, or the public sector, or self-employed	General Census of Population, Housing, and Establishments (2006)
Distribution of workers by nature of contract	Percentage of workers employed in temporary jobs or permanent jobs	General Census of Population, Housing, and Establishments (2006)
Social Welfare		
Health indicators	Measuring the improvement in health	Local development data, Health Survey: Available data is divided only into urban and rural areas
Education indicators	Level of education attained	The General Census of Population, Housing, and Establishments (2006)
Demographics		
Size and density of the population	Population, number of households, and population density per square kilometer	The General Census of Population, Housing, and Establishments (2006)

Table 1: Data Sources

Concept	Relevant Data/Variables	Source
Population composition by gender and age	Percentage of the population by gender and within each age bracket	The General Census of Population, Housing, and Establishments (2006)
Projects		
Investment projects	Budget allocations to build and expand schools, as well as hospitals, health units, main roads, bridges, housing, and public utilities	Investment plan directories for various governorates – available on official governorate websites**
Projects in local development plans	Local government allocations to pave roads, improve the environment and train local officials, security services, and fire fighters.	District data available on official governorate websites**

**The Investment Plan Directory and other data that was available on government websites was downloaded at the beginning of the project, but attempts to access these sources in the following months revealed that governorate and district website managers removed the files. We are reminded that accessibility to information is not continuous, nor is it protected by the law, but rather subject to the whims of the agencies that release the data and the views these agencies may hold about what citizens must know, when, and how.

The next step involved classifying data according to location. Since a chief objective of the project was to analyze data at a local scale, we used *shiyakha* data from urban areas and village data from rural areas, when available. We discovered that some data are only

available at the district (urban) or *markaz* (rural) level. (These two 'higher' administrative entities in urban and rural areas sit above the various urban neighborhoods/*shiyakhas* and villages in rural areas). The following table details the availability of data at different spatial levels:

Table 2: Project Data, Sources, and Levels

General Census of Population, Housing, and Establishments (2006)	Central Agency for Public Mobilization and Statistics (CAPMAS)	<i>Shiyakha</i> and village
Poverty Map (2013)	Social Fund for Development	<i>Shiyakha</i> and village
Investment Plans	Ministry of Planning and Administrative Reform	Governorate
Local development plans	Ministry of Local Development	District and <i>Markaz</i>

To produce a spatial analysis of the data, we organized available spatial and geographical data, noting their sources, in the following table:

Geographic Data	Source/Agency
Boundaries of district/ <i>markaz</i> 2006	Central Agency for Public Mobilization and Statistics (CAPMAS)
Boundaries of <i>shiyakhas</i> /villages 2015	Central Agency for Public Mobilization and Statistics (CAPMAS)
Boundaries of inhabited areas	Aerial photo, Google Earth; Tadamun, graphic rendering of aerial photo

Phase 2: GIS Data Processing and Analysis

Mapping comprised a major element of analysis and outputs of the Planning [in] Justice project. Tadamun used Geographical Information System (GIS) technology to collect, process, display, and analyze databases and link available information to geographical locations. GIS enabled us to link our data on housing, social welfare, and demographics to specific geographic areas. Tadamun obtained the spatial data from aerial imagery, satellites, and digital maps. The latter used either clear geographical references such as longitudes and international coordinates, building codes or statistical figures for land plots, or implicit references such as addresses and street names. GIS has the advantage of handling several layers of data simultaneously, while enhancing the ability to analyze data.

To produce map projections for Planning [in] Justice, Tadamun first incorporated various data files including shapefiles and geodatabases into a single database in ArcGIS, and used satellite images to draw and estimate the size of inhabited areas within the *shiyakhas* and villages. This allowed us to incorporate the demographic data for each *shiyakha*, as well as the indicators of

adequate housing and socio-economic welfare with its geographic location. We then standardized measures and projections to ensure that all data used the same coordinate and geographic projection system, and transferred the database to PostGIS/PostgreSQL, an open source software. Finally, we produced a series of maps which provide a visual analysis of the data.

An advantage of GIS is that it integrates complex geographical and tabular data and displays the resulting analysis in a user-friendly manner. It can produce poverty maps, maps for amenities and educational services, as well as statistical data, infographics, and reports, which are all available to users who can access any indicator they wish to study. More than one indicator can be selected in any layer of the same map, and when necessary, the data can be superimposed to facilitate a deeper insight with a multi-layered display. Users, for example, may compare the availability of a specific public service with the public investment allocated to provide this service, in order to determine whether the resources are being allocated according to need. The maps Tadamun produced for Planning [in] Justice make it easier to depict spatial inequality at the *shiyakha* level. To date, Tadamun has only

published static visual maps, but we hope to release the interactive versions, which allow the user to select and view indicators and demographic statistics from a wide variety of options, in the near future.

Tadamun discussed the Planning [in] Justice maps in closed meetings with high and mid-level government officials from the Ministry of Planning, the General Organization for Educational Buildings at the Ministry of Education, and the Informal Settlements Development Fund (ISDF). Tadamun also presented the maps at workshops with groups of economists, urbanists, and civil society activists. We have made printed maps accessible to the public, and some are included in this publication.

In addition to the maps, our research team produced written reports and analysis to compare urban phenomena and public policies through a spatial justice lens. We published a number of texts explaining the project, its methodology, and outcome, and current case studies to identify the challenges facing neighborhoods in the GCR, and the root causes and repercussions of these challenges in terms of spatial inequality. Our graphic designers produced infographics that simplify and explain the project's findings. All Planning [in] Justice analysis and many of the maps are accessible to the public free of charge through the Tadamun website.

Challenges

Transparency and access to accurate and reliable data and information remain a challenge in Egypt. For decades, the Egyptian state concealed information that is public in most open and democratic contexts: information about the public budget, infrastructure projects, and the allocation of resources. Yet, Egypt's most recent constitution (2014) commits to greater transparency and a right to information, as detailed in Article 68:

Information, data, statistics, and official documents are owned by the people and their disclosure from various sources is a right guaranteed by the state to all citizens, and the state is committed to providing information and making it available to the public in a transparent manner, with the law specifying the manner of obtaining information, providing it, classifying it, and the regulations concerning the handling and preservation of information, and the method of petitioning in cases its supply is refused. The law also sets penalties for blocking information or providing erroneous data deliberately. State agencies are thereby committed to depositing official documents after completing their use with the Egyptian National Archives, so as to protect such documents and secure them against loss or damage, and also to restore and digitize them through the use of all means and modern methods, in accordance with the law (Constitution of Egypt of 2014, Article 68).

Progress toward the law set out in Article 68 is slow, but a number of government ministries and governorates have begun posting some data on their websites. Access to reliable and complete data is a challenge Tadamun faced throughout all phases of the project. Much of the data used for the project was available from government ministries, but often only through request and, at times, for purchase. The datasets we were able to access were often incomplete, or otherwise unreliable. Yet, at the same time, with careful, periodic scrutiny some important data is available and can be used constructively, as this project suggests.

The Planning [in] Justice project depends heavily on data from Egypt's 2006 population census. CAPMAS conducted another population census in 2016, and Tadamun hopes to continue the project using the results of the more recent census when the government releases the findings. This will require a similar data collection and geocoding process, and, as mentioned above, the availability of public data is subject to political whims, and is by no means certain. While the findings of the Planning [in] Justice project laid out in the next chapter are in large part drawn from decade-old data, we believe that this analysis remains broadly representative of the patterns of spatial inequality in Cairo's neighborhoods today.

Chapter 3:

Spatial Injustice in the Greater Cairo Region

The Planning [in] Justice project aimed to reveal the scope of spatial inequality in the GCR using a right to adequate housing perspective, and to measure the government's fulfillment of this multidimensional right's component parts. The Planning [in] Justice project uncovered several compelling trends in the way the government distributes resources and services throughout Cairo, including the following:

Predominant conceptions of poverty which 'locate' poverty in informal areas are inaccurate. Rather, some informal areas are actually better off than some formal parts of the city and poverty is not confined to informal areas.

- > Most Cairenes have access to water but the quality of drinking water varies.
- > Sewage services are inadequate in the southern and northern parts of the GCR, forcing many communities to rely on septic tanks, which may contaminate groundwater sources.
- > The distribution of public schools across the GCR is highly uneven. New schools are often built in areas that already have schools, whereas areas that are most in need of schools continue to be deprived of them.
- > Expenditures on local development projects are distorted. Already affluent neighborhoods tend to receive more funding than poorer areas, which are more in need of public resources.
- > Government policy vastly favors expenditures on new desert and satellite cities to the established urban areas in Egypt. The agency responsible for building and planning the new cities—the New Urban Communities Authority—invested EGP 33.2 Billion in new cities in the 2015/16 fiscal year, which is almost four times the total public investment in the entire national education sector, and more than five times the total public investment in the health sector during the same year.

Poverty Indicators in the GCR

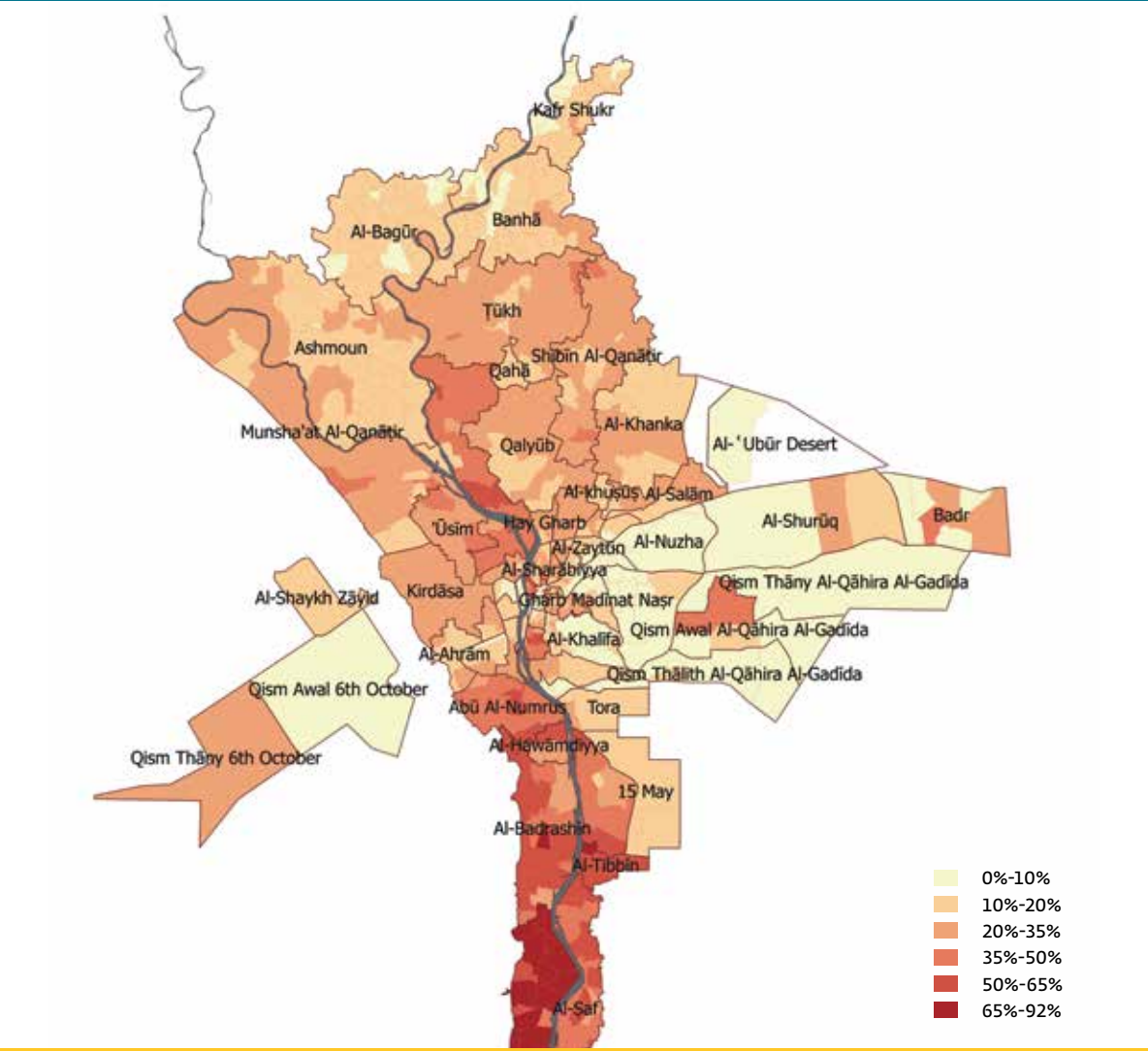
To comprehend the causes and consequences of inequality, we must use indicators that are broader in scope than traditional poverty indices, as traditional measures tend to focus only on the proportion of people living under the poverty line. The picture of poverty and the patterns that emerge both change depending upon the indicators that one employs.

Utilizing a variety of measures yields new insights into conditions in the GCR. Tadamun's spatial analysis of poverty across the GCR, for example, reveals that the poor are not concentrated in southern Giza, but in central and northern Cairo. Using the Poverty Ratio Index, the 2013 Poverty Map Data (Figure 5a) shows that the poorest areas in the GCR are located in southern Giza, where the percentage of poor people relative to the total population of the *shiyakhas* is the highest. However, if we look at the number of people living under the poverty line, rather than the percentage (Figure 5b), the picture changes completely. The greatest concentration of poverty is in northern

Cairo, northern Giza, and southern Qalyubiya. The reason for this discrepancy is that population density is higher in central Cairo than in the outskirts of the city. In other words, the number of poor people in city center neighborhoods is far greater than neighborhoods in the outskirts, but the percentage of people below the poverty line is lower. When we examine the number of poor people per square kilometer (Figure 5c), we find that the poor are concentrated in many neighborhoods in central Cairo such as Ain Shams and Imbaba, as well as parts of Bulak Abu al-Ela, al-Basatin, Manshiyat Nasser, and Masr al-Qadimah.

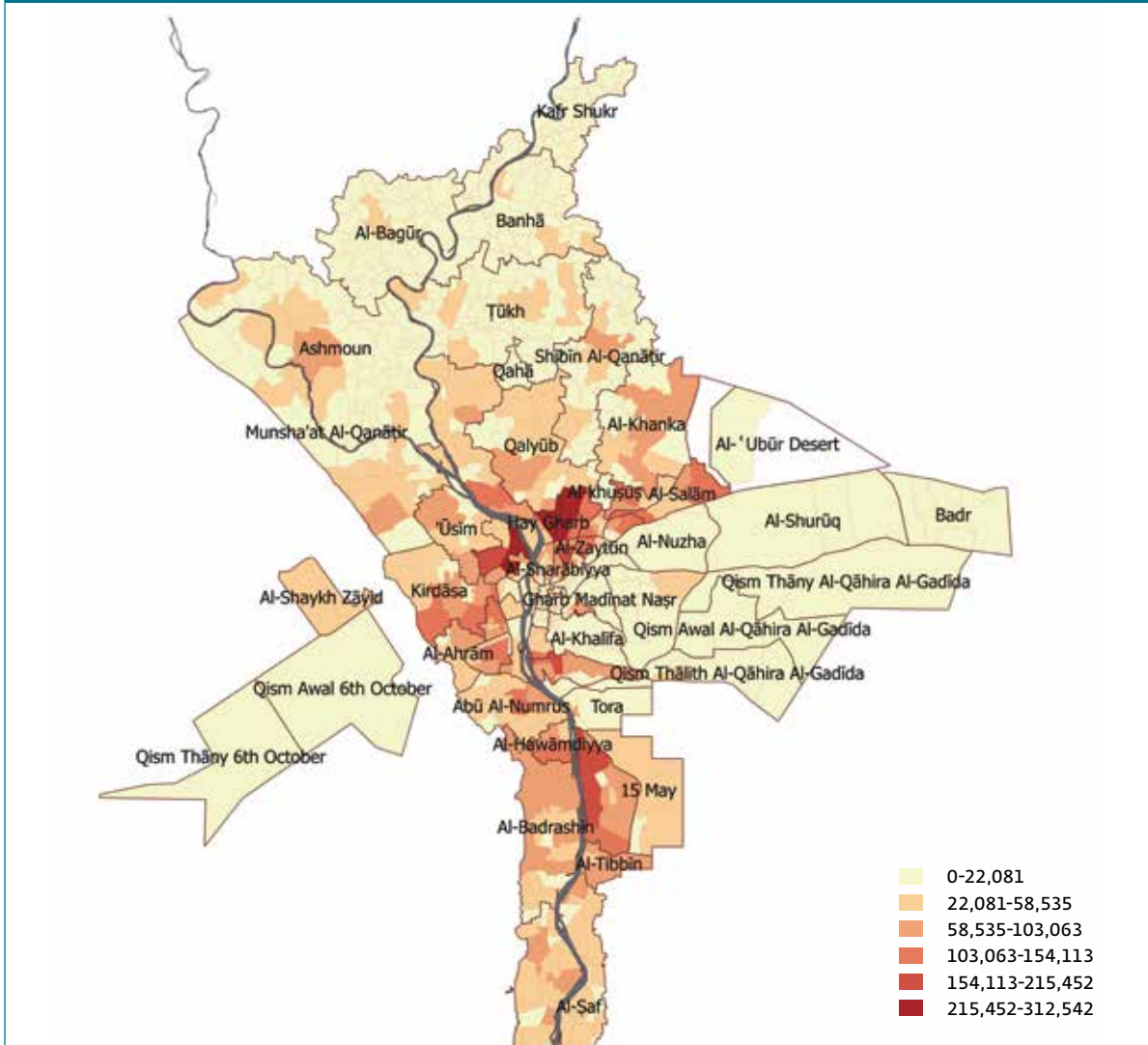
Examining the concentration and density of the poor in neighborhoods across Cairo challenges the impression that the inhabitants of informal areas are always the poorest. The concentration of poverty in some informal areas is much lower than in certain formal or planned areas (where the neighborhood is planned under legal zoning regulations and the buildings are legally registered).

Figure (5a) Map showing the percentage of poor people in each *shiyakha*. Darker shades indicate higher levels of poverty.



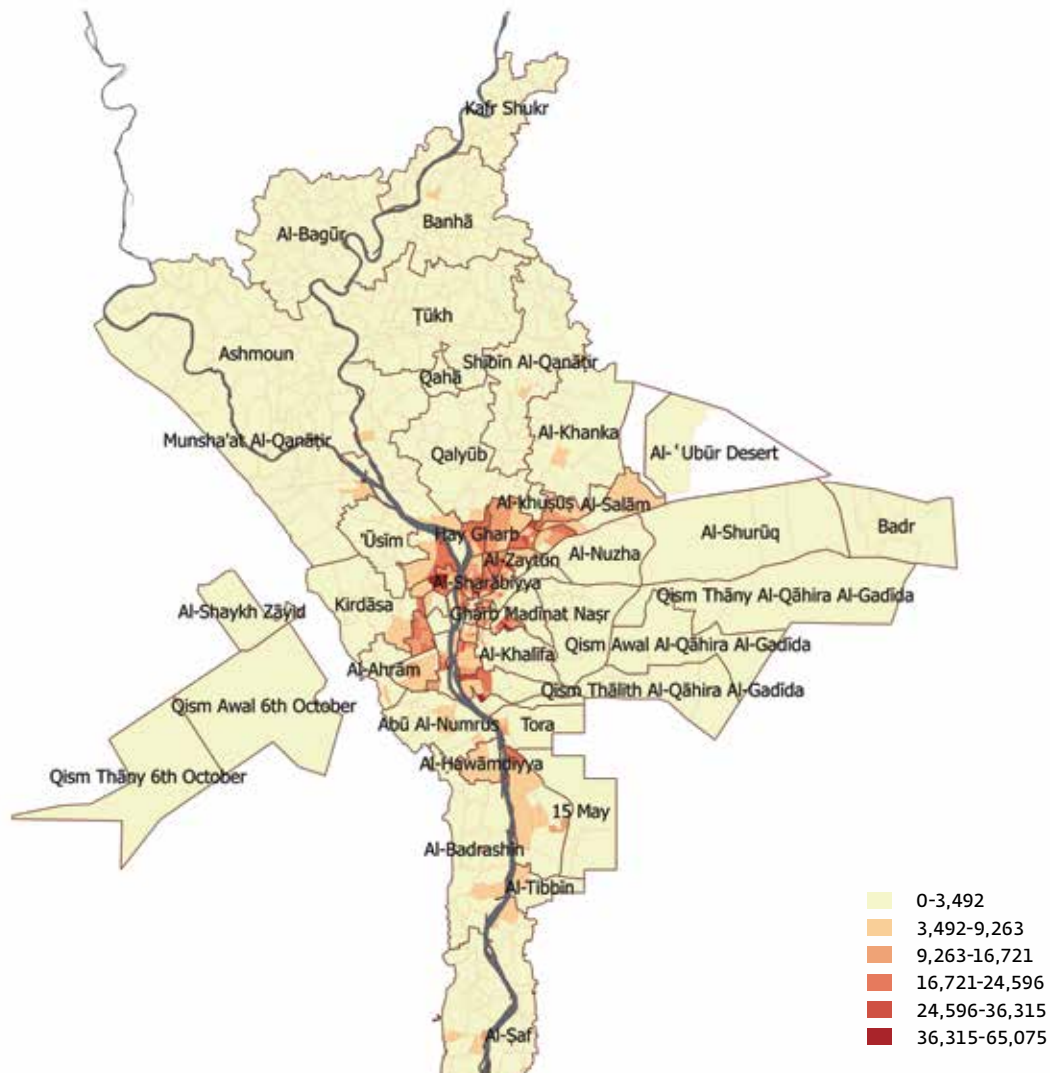
Source: Original map by Tadamon (2015), data sourced from CAPMAS, 2006 General Census of Egypt.

Figure (5b) Map showing the number of poor people in each *shiyakha*. Darker shades indicate greater numbers.



Source: Original map by Tadamun (2015), data sourced from CAPMAS, 2006 General Census of Egypt.

Figure (5c) Map showing the density of poor per square kilometer in each *shiyakha*. Darker shades indicate greater density.



Source: Original map by Tadamon (2015), data sourced from CAPMAS, 2006 General Census of Egypt.

Comparing Local Development Programs to Poverty Levels in 2014 - 2015

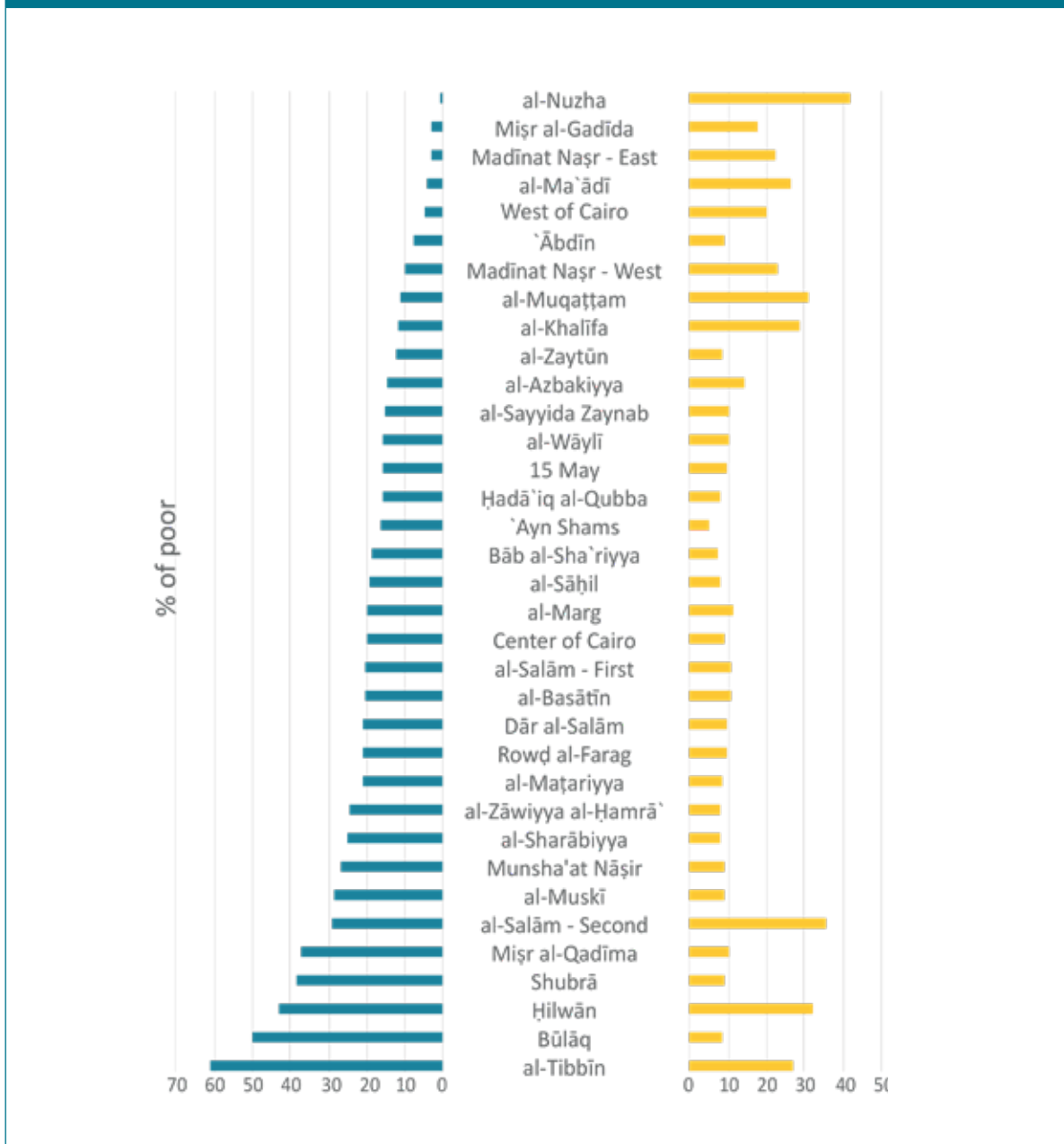
The budget allocation process for local development programs in Egypt is anything but clear. At the start of the budget process, each municipality submits information about its financial needs to the province's Governor; however, political capital and bargaining power, rather than the needs of local communities, often dictate how successful municipalities are at securing necessary funding. The government allocates local funds with little attention to existing poverty levels or the needs of the inhabitants in question. Additionally, spending on local development programs in Cairo is insufficient to meet the city's needs in terms of road maintenance, lighting, environmental needs, and other municipal duties.

Figure 6 compares per capita spending on local development programs for all districts within the Cairo governorate in 2014/2015 to the percentage of the population living under the poverty line in each of these districts in 2013. From a social justice perspective,

areas most in need should receive more development funds. However, this comparison reveals that affluent neighborhoods received significantly more local development program spending per capita than many of the poorest neighborhoods. The government's allocation of resources to local development budgets does not, therefore, correspond to local development needs.

The neighborhood of Nozha, for example, received the highest allocation of local development funding per capita, at 42.1 EGP. Meanwhile, the neighborhood of Ain Shams received a meager 4.7 EGP per capita, almost one-tenth of Nozha's allotment, despite the fact that Nozha is one of the wealthiest areas in Cairo while Ain Shams is one of the poorest. Moreover, the two neighborhoods are adjacent to one another. Spatial inequality thus exists in close geographic proximity and is therefore highly visible.

Figure (6) Per capita spending in local programs for various districts 2014/2015.



Source: Original graph by Tadamun (2015), per capita spending data sourced from Cairo Governorate Website (2015), number of residents living under the poverty line data sourced from CAPMAS 2013 Poverty Map (2013).

Access to Drinking Water and Sewage Networks

According to official figures, over 99% of households in urban areas of Egypt are connected to the water network. This measure, however, tells very little about the quality, quantity, and availability of water. The right to water encompasses more than connectivity to the water network. The International Convention of Economic, Social, and Cultural Rights notes that “adequate water facilities and services must be within safe physical reach for all sections of the population. Sufficient, safe and acceptable water must be accessible within, or in the immediate vicinity of, each household, educational institution, and workplace [...] Water, and water facilities and services, must be affordable for all. The direct and indirect costs and charges associated with securing water must be affordable” (CESCR 2013).

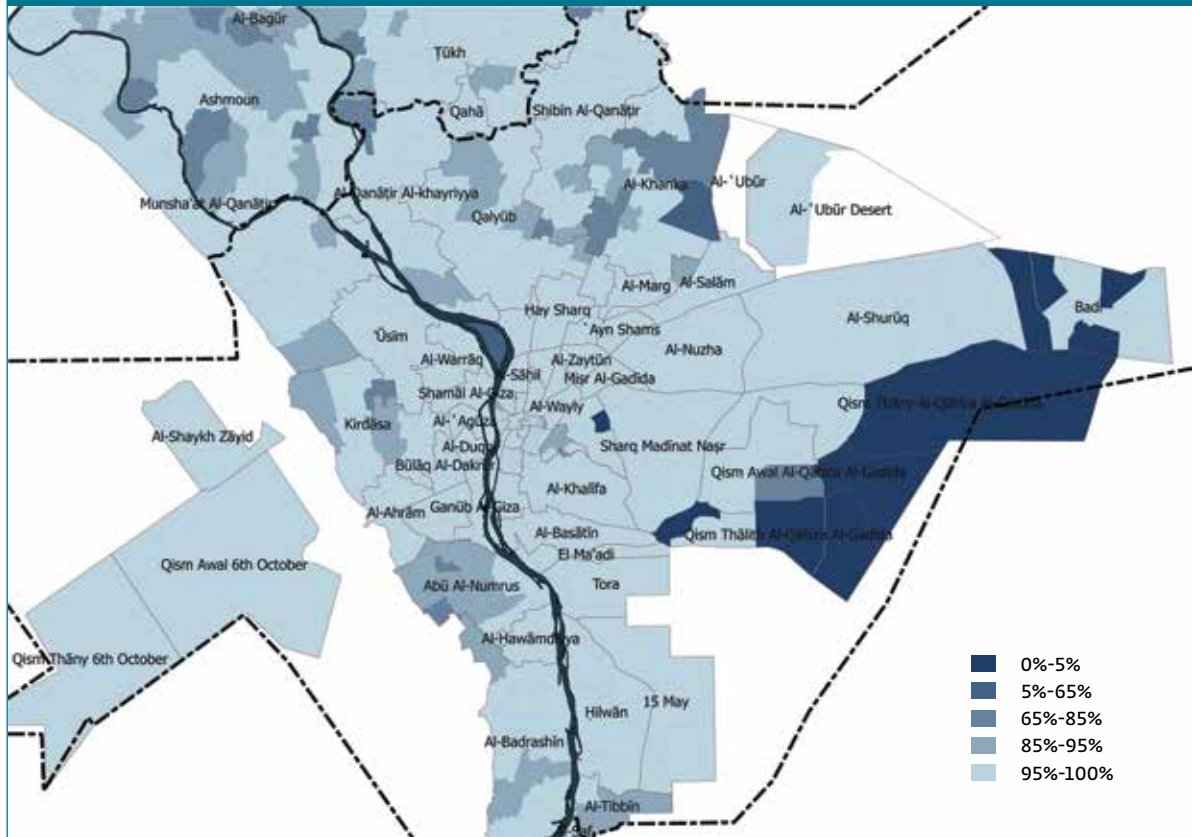
As part of the Planning [in] Justice project, Tadamun studied variations in water access in neighborhoods across the GCR. Our analysis revealed that, despite the high percentage of households connected to the water network, large areas of Egypt and the GCR still suffer from problems related to the quantity, quality, and accessibility of water. Maps based on the 2006 census show that the percentage of areas connected to the potable water network in the GCR is quite high (Figure 7a); however, this does not necessarily mean there is a tap inside each house, only that there is a communal tap in the building or a public tap within walking distance. Furthermore, connection to the water network is no guarantee that the water is clean

or available on a regular basis. If we consider only households that have a water tap inside the dwelling, it becomes clear that the rate of water accessibility is much lower in many areas than official figures would suggest (Figure 7b). Such areas are mainly located on the outskirts of the GCR, in the neighborhoods of Khanka and Qantir (in Qalyubiya) and in Abu al-Numrus and Gazirat al-Warraq (in Giza).

The Planning [in] Justice project uncovered similarly troubling trends for access to sewage networks. According to 2006 census data, the percentage of indoor toilets in households in the GCR (Figure 7a) is relatively high. However, the same census shows that homes in semi-rural areas in the northern and southern outskirts of the GCR use septic tanks and are not connected to the sewage network (Figure 8b). These septic tanks commonly leak sewage into the ground, creating a health hazard for local residents. Due to the deteriorated state of pipes transporting water in these areas, sewage from septic tank leakage may even pollute the water supply. The leakage from septic tanks also undermines the structural integrity of nearby buildings, posing further hazards to residents.

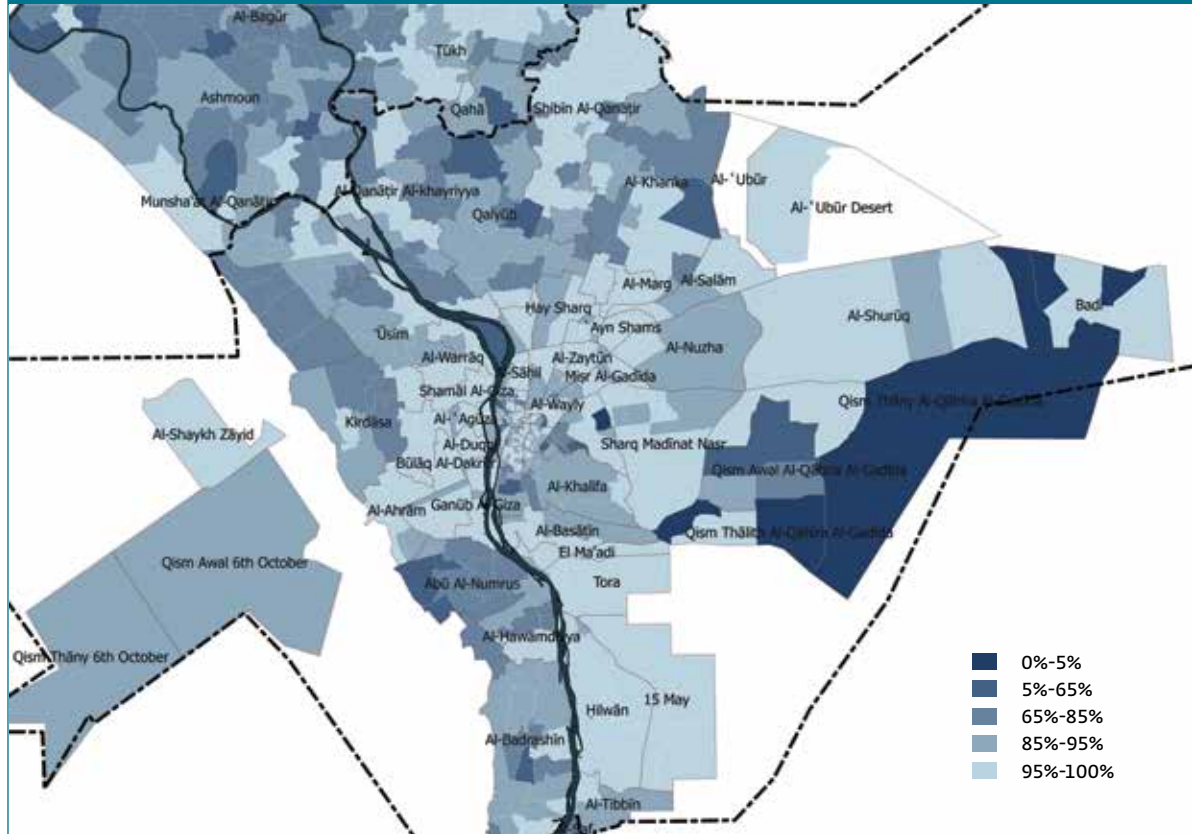
Since the 2006 census, the government has worked to improve access to better and safer sewage practices. Hopefully the data from the 2016 census, when it is released, will indicate improvements.

Figure (7a) Map showing the percentage of households connected to the water network in each *shiyakha*. Darker shades indicate lower percentages.



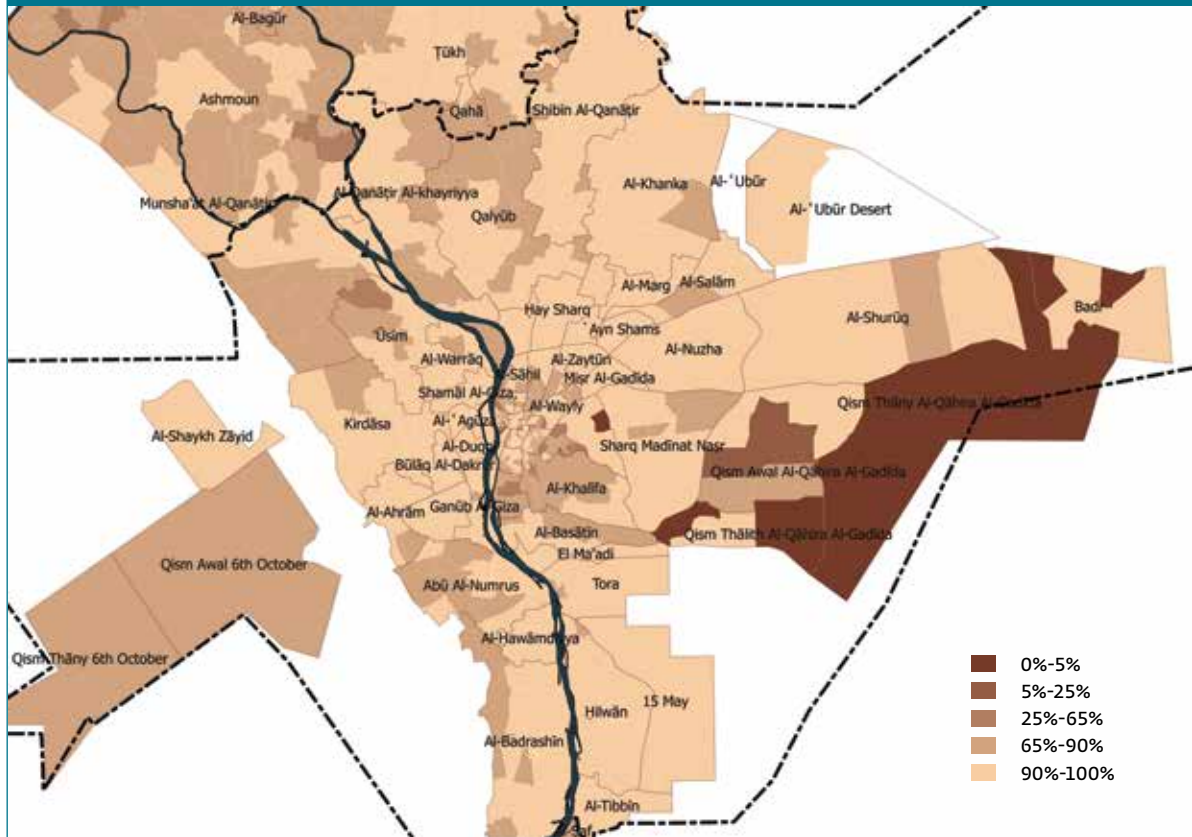
Source: Original map by Tadamon (2015), data sourced from CAPMAS, 2006 General Census of Egypt.

Figure (7b) Map showing the percentage of households with running water in each *shiyakha*. Darker shades indicate lower percentages.



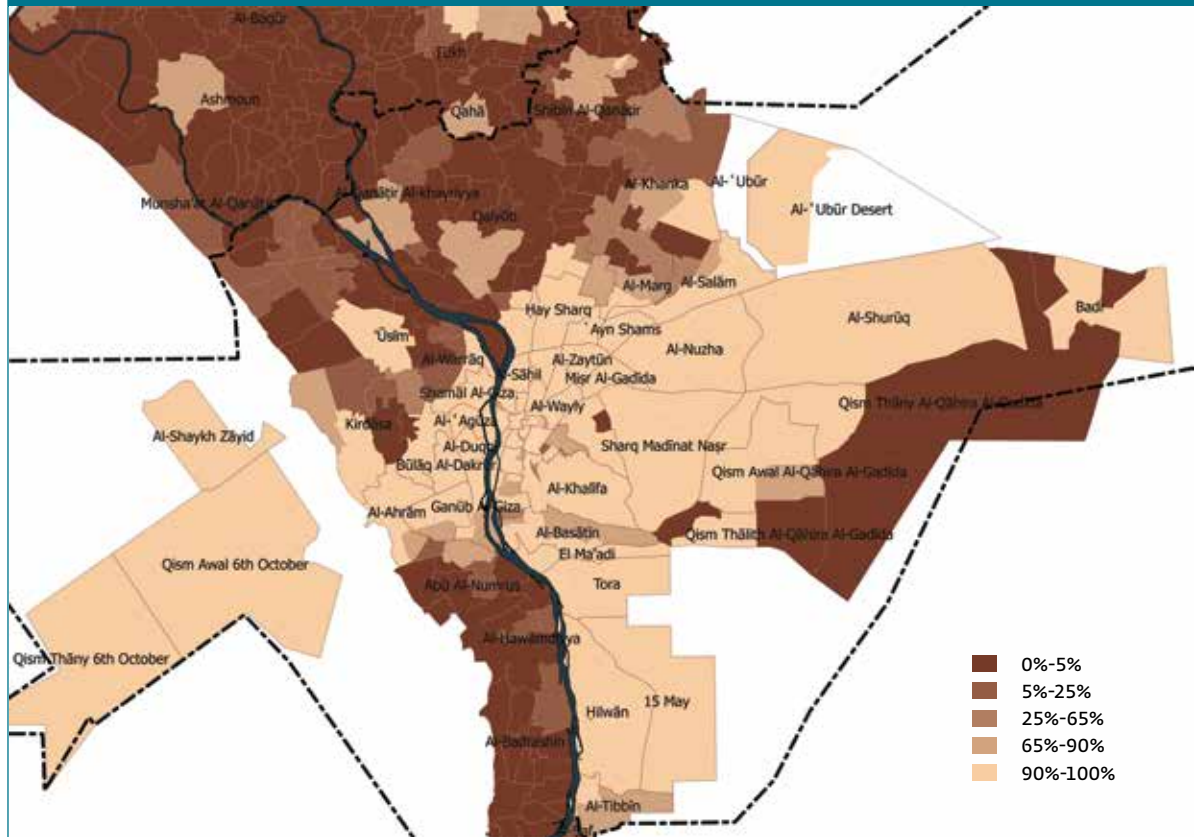
Source: Original map by Tadamun (2015), data sourced from CAPMAS, 2006 General Census of Egypt.

Figure (8a) Map showing the percentage of households with indoor toilets in each *shiyakha*. Darker shades indicate lower percentages.



Source: Original map by Tadamon (2015), data sourced from CAPMAS, 2006 General Census of Egypt.

Figure (8b) Map showing the percentage of households connected to the sewage network in each *shiyakha*. Darker shades indicate lower percentages.



Source: Original map by Tadamun (2015), data sourced from CAPMAS, 2006 General Census of Egypt.

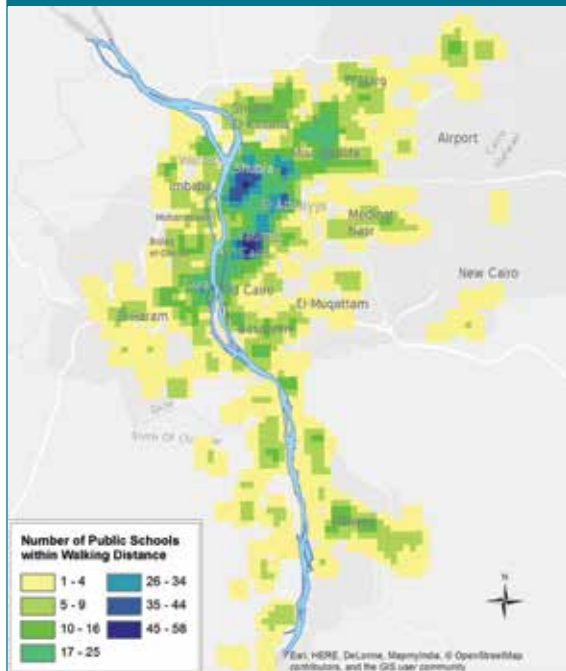
Efficacy and Justice in the Distribution of Educational Resources

Egypt's education sector faces several major challenges. Access to schools and the spatial equality of the distribution of schools needs far more attention. How easily can children get to school and how much do families have to pay to get them there? Two of the primary reasons that children drop out of school are due to poverty: either a child's family cannot afford the cost (because the family depends on the child's wages and employment or another financial reason), or the child must travel too far to school to make the daily trip feasible.

Public schools are intended to serve students that live in the surrounding area. They are inherently community institutions. To ensure equal access to education, public schools should be relatively evenly distributed throughout the city, commensurate to population size. Most families in the GCR do not own a car so the majority of students take public transportation, taxis, tuk-tuks (three-wheeled taxis), or walk to school—Cairo's most common mode of transportation. The farther that families with school-aged children live from school, the more they must spend on transportation or the more stress students experience due to the travel time to and from school. According to the 2012/2013 Household Income, Expenditure, and Consumption Survey (HIECS), families spend approximately 11 percent of their education budget on transportation alone (CAPMAS 2013). If families live within walking distance of their school, the cost of transportation falls to zero and the stress on students declines.

As part of the Planning [in] Justice project, we assessed which GCR neighborhoods have the highest number of public schools within walking distance and compared this data with poverty levels. Since there is no agreed upon definition of what constitutes “walking distance,” we defined the term as one kilometer for the purposes of this study. Using data from the General Office of Physical Planning (GOPP) that provides addresses for schools, we mapped school locations and compared various neighborhoods with regard to the number of schools within walking distance of one kilometer (Figure 9a). Our findings show that some areas are completely deprived of schools within walking distance while others have many. There are four neighborhoods that immediately stand out as having a large number of schools within walking distance: Fatimid Cairo, Shubra, al-Abasiya, and Hadayiq al-Qubba. Within each of these neighborhoods, some locations are within walking distance of 32 or more public schools. This is well over the average number of six schools within walking distance for all neighborhoods within the study area. One reason for this significant imbalance may be that the neighborhoods with many schools are located in some of the oldest parts of the city. The scale and pattern of the urban fabric in these areas cannot accommodate large schools; thus, many existing buildings have been repurposed for schools. Although we do not have enrollment data for each of the schools in these neighborhoods, we assume that the schools in these areas have far fewer students than public schools in newer parts of the city and that they also serve smaller populations.

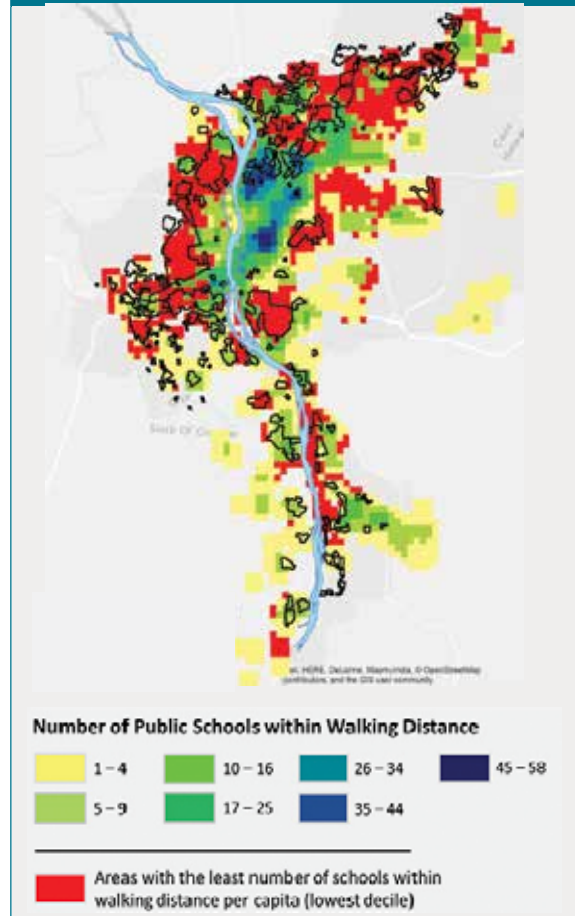
Figure (9a) Map showing the concentration of schools within walking distance (1 km). Blue is the highest concentration, followed by green, then yellow. Unshaded areas have no schools within walking distance.



Source: Original map by Tadamun (2015); data on school locations sourced from GOPP (General Office of Physical Planning).

Cairo's Informal areas are increasingly accommodating denser populations. The population density in both Imbaba and Dar al-Salam is over 100,000 people per square kilometer. When we combined the map showing the concentration of schools within walking distance with a map showing population density (Figure 9b), the results show that informal areas are hugely underserved, with very few schools within walking distance per capita. Although more research is needed to reach a definitive conclusion, the lack of public schools may be due, in part, to the

Figure (9b) Combining two indicators (population density and schools within walking distance), better illustrates existing needs. Red areas have the fewest schools within walking distance per capita.



Source: Original map by Tadamun (2015). Data on population density sourced from CAPMAS, 2006 General Census of Egypt. Data on School locations sourced from GOPP (General Office of Physical Planning).

government's reactive approach to the provision of services in informal areas: the government tends to begin providing services (including schools) only after informal areas have been built and populated. This

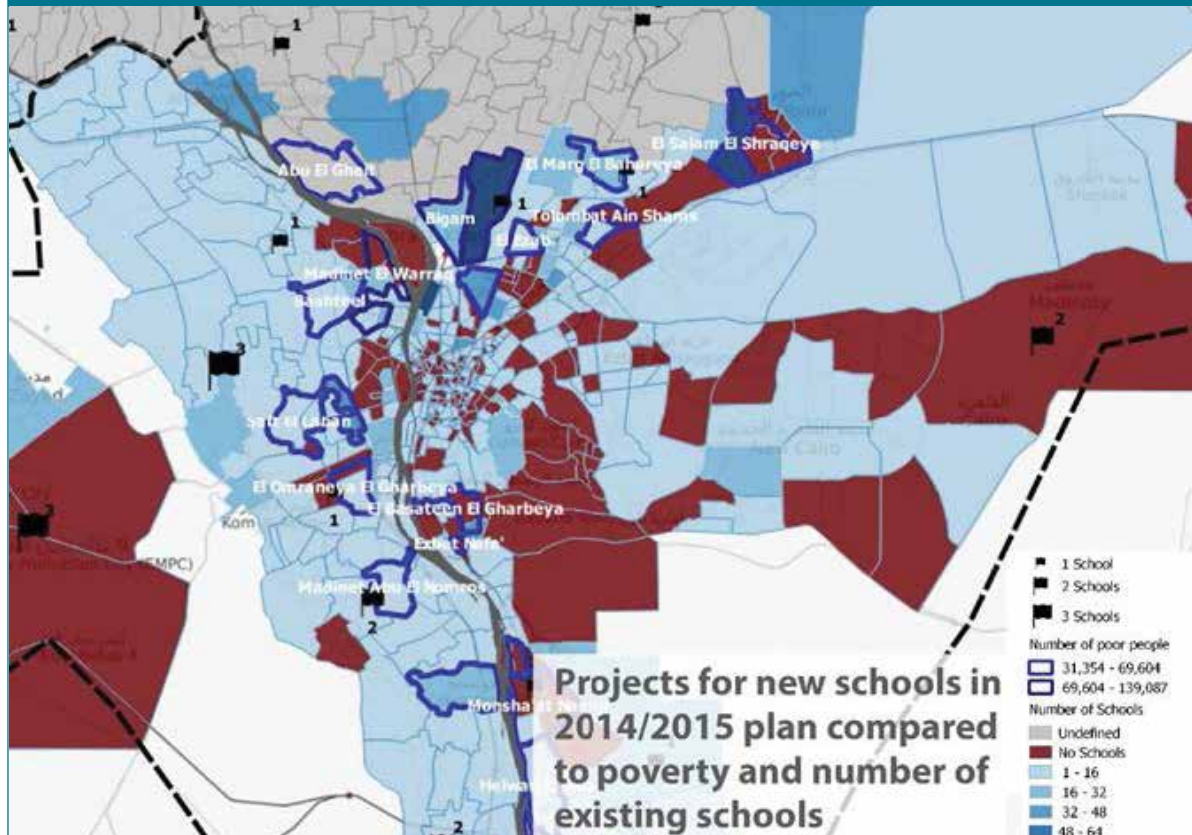
reactive approach forces the government to build schools wherever land is available, rather than in areas where schools are most needed. A more proactive approach to land use management in informal areas would anticipate future growth and designate land for public schools and other public facilities. Examination of multiple indicators—the number of public schools, population density, the number of poor residents, and distance from homes to schools—creates a clearer picture of where services and resources are available compared to where they are most needed. This multi-dimensional approach could help decision makers to bring about a more just distribution of resources. Better data alone, however, will not result in policy changes. The data on school locations, for example, reveals that schools are completely absent in several *shiyakhas* and urban areas, but the Ministry of Education's 2014/2015 investment plan for schools does little to remedy this. By making this kind of information publicly available, Tadamun aims to provide citizens with an important tool that they can use to assess the fairness of the management of their neighborhoods and to advocate for those resources and services, like schools, that they need.

Figure (10) Locations of public schools and their distribution in Imbaba and Dar al-Salam. School distribution is so skewed that one area, al-Munira al-Gharbiya, has no schools at all.



Source: Original map by Tadamun (2015). Data on school locations sourced from GOPP (General Office of Physical Planning).

Figure (11) Map comparing number of new schools planned with existing schools per capita. Areas that already have schools are more likely to benefit from new school projects, while areas that are already deprived are less likely to get any new schools.



Source: Original map by Tadamun (2015), existing school data sourced from GOPP, future school project data sourced from individual governorate websites.

Chapter 4:

Institutional Aspects of Spatial Injustice in Egypt's Urban Areas

Long-standing public policies create and perpetuate spatial inequality. Understanding existing conditions of poverty and resource distribution in Egypt is an important first step in creating a more just city. Only by identifying the institutional aspects that produce and reinforce spatial injustice in Egypt may we go beyond explaining the problem and resolve it. An absence of effective institutionalized mechanisms for assessing development needs in urban areas impairs official efforts to address this complex situation. The official classification of these areas as formal or informal influences the allocation of public resources, regardless of the individual needs and priorities of different neighborhoods. The disconnect that exists between the tools of urban planning and those of fiscal planning complicates the matter even more (see Tadamun 2013a and 2013b). Poor municipal governance, a lack of transparency, limited access to information, and inadequate oversight and accountability all compound existing problems. A detailed examination of the process of financial and urban planning, and the mechanisms determining the local needs for each, may afford a better understanding of the institutional aspects of spatial injustice in Egypt.

Fiscal Planning vs. Development Goals

The allocation of public resources in Egypt takes place annually through the state's general budget. By law, various government agencies play a role in setting the financial needs of different agencies, but the main responsibility rests with the Ministry of Finance and the Ministry of Planning. The former prepares a draft budget for submission to the Parliament, while the latter prepares proposals for investment spending by various government agencies. Before approving the draft budget, the Parliament has the right to amend aspects of proposed public spending. Allocations for urban development are made through the General Budget, with funds spent through the governorates and the municipalities. Funding for health, education, housing, and other development sectors comes from the corresponding ministries and is channeled to local communities through the ministerial departments attached to the governorates. However, it is unclear how the ministerial departments decide to allocate their funding at the lower administrative levels, or why they give precedence to one neighborhood over another. Generally speaking, the distribution of financial resources, by either governorates or ministries, does not seem to reflect poverty levels or community needs, but is rather the result of political bargaining among government officials and bureaucratic departments. In the case of new cities, the allocation of funding takes place through the New Urban Communities Authority (NUCA), whose budget is not formally part of the General Budget, though it receives some public funding and loans and its annual surplus is pumped back into the state's coffers (Tadamun 2015).

According to law 53 of 1973, the General Budget is the "financial program of the plan for the following year, aiming to achieve certain goals in the framework of the public plan for economic and social development

and according to the state's public policy" (Article 1). According to Law 70 of 1973, the aim of development planning is to "raise the standards of living and diminish the gaps between classes through increasing the national income and broadening the scope of services, in order to create a prosperous and just society" (Article 1). The law mentions several guiding principles that include central planning, significant participation by local administration and the public, and a public sector that plays the key role in development and in deciding the economic, administrative, and geographical location of projects (Article 2). Although such laws embrace the concepts of spatial justice, the institutional path defined by the law does not lend itself to enforcing these concepts.

The process of preparing the General Budget begins when the Ministry of Finance (MoF) issues a booklet containing the rules various government departments should follow while preparing their budget proposals. Each department then sets up a committee to prepare budget proposals on central and local levels, and to submit these to the MoF, which prepares the draft budget in consultation with the Central Bank. The MoF then compiles and amends the proposals it received and decides on the allocation of resources. Representatives of various government departments and agencies are allowed access to the studies the MoF conducts while preparing the budget (Articles 13-15 of the General Budget law). This process concentrates decision-making at the center, without further consultation with local authorities, a matter that contradicts the General Budget law (law 70 of 1973). According to Article 19 of this law, the proposals for the General Plan for Social and Economic Development, which is prepared by the Ministry of Planning, must be formulated on the local level with the involvement of the planning offices in local councils (which are executive councils appointed by the government). According to Article 65 of the Executive Memorandum of the

Local Administration Law (Law 43 of 1979), during the preparation of development plans for local units, each local unit must determine its needs according to carefully considered priorities. Such plans are then submitted to the Local Popular Councils (which are elected) for approval, before being sent to the governorate and onward to the Higher Committee for Regional Planning.¹ The Planning Minister then coordinates with the local administration minister and other ministers on how to combine these plans and integrate them into the General Budget. In practice, these financial negotiations occur without further consultation with the local levels, and without any guarantee that local needs will be met in the General Budget or that resources will be appropriated to satisfy such needs.

Meanwhile, there are no clear criteria, based on local needs, to guide the geographical allocation of public spending in a manner that fulfills the basic needs for all citizens regardless of their place of residence, so that they may benefit from development efforts (although this goal is enshrined in the law). Consequently, the officials preparing the budget on the local level do not necessarily follow the spirit of the law with regard to preparing the budget proposals. Officials on the higher levels are equally oblivious to these principles. In fact, the Local Popular Councils – which were dissolved in 2011 and have not been reinstated since – remain the only elected offices linking the citizens and their neighborhoods to the General Budget. It is noteworthy that the share of local development program spending

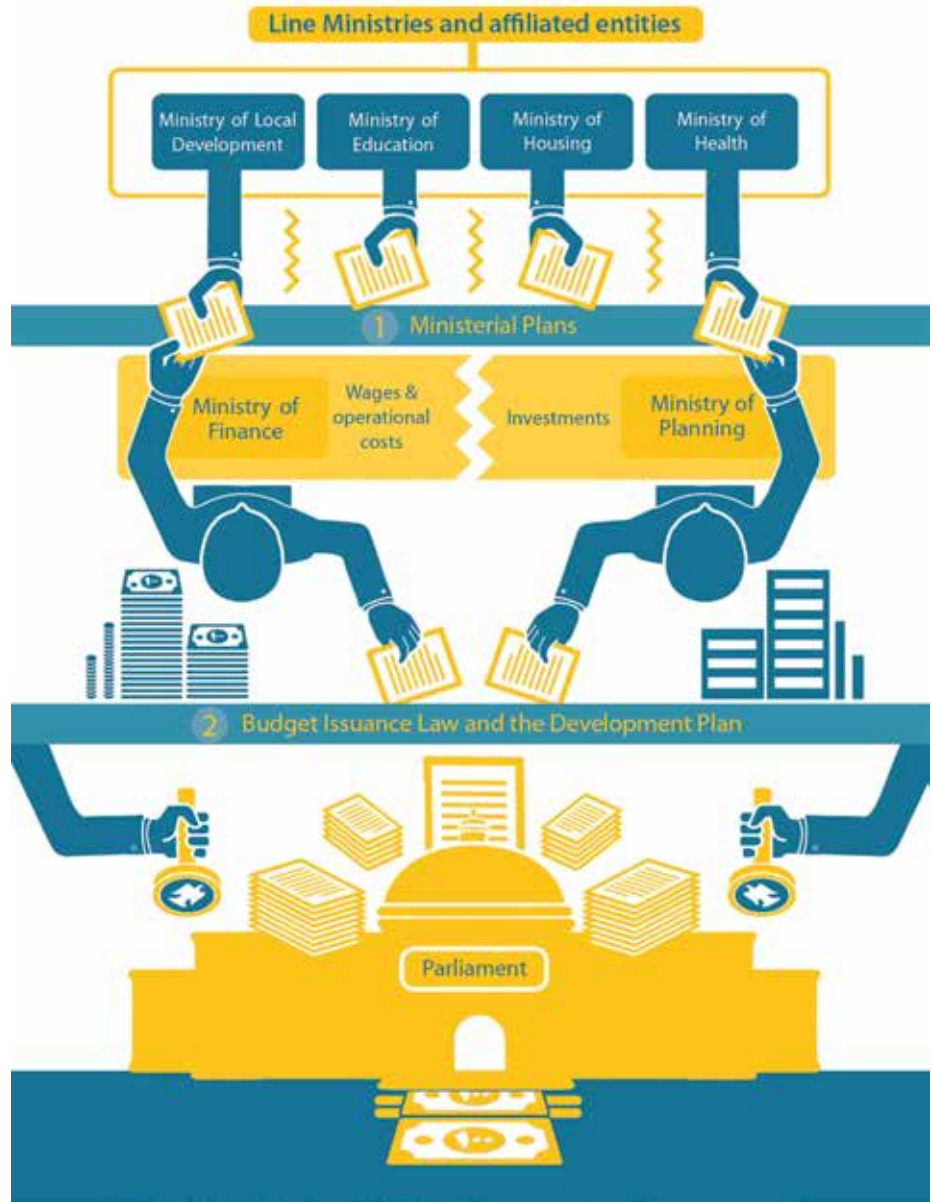
in various governorates and neighborhoods, which falls under the mandate of the popular councils, is no more than 0.8% of the General Budget's total expenditure. Of this meager amount, 69% is dedicated for the Governorate's administrative spending while only 3% is directed to development plans (according to the development plan of 2015/2016).

Another issue of great significance is the way the General Budget is itemized, with items divided into three main categories (administrative, economic, and operational). This does not emphasize spending objectives or facilitate the monitoring of such objectives. This contrasts with other budgets that are designed to encourage development programs, for the latter usually offer details about the development goals and their time frames, thus facilitating follow-up and encouraging accountability and oversight.

From a financial planning perspective, effective spatial justice requires a coherent connection between public spending and development goals, usually in the form of specific programs at local levels, with spending and implementation oversight, and with the public playing a role in assessing local needs and priorities and in setting clear rules for the equitable allocation of resources among urban areas. In Egypt, none of these conditions are met in the preparation of the General Budget, which hampers spatial justice and undermines the development goals of public spending.

¹ A proposed 2015 Local Administration Law sets quotas for women and youth representation in LPCs.

Figure (12) Stages of preparing, approving, and implementing the state General Budget.



Source: Original graphic by Tadamun (2016), data sourced from NUCA (2015).

Aspects of Urban Planning

There is an institutional disconnect between urban planning and financial planning and a resulting mismatch between financial resources and development needs. Consequently, the General Budget process in Egypt lacks mechanisms that connect the estimated financial needs and planning needs, which are decided by the country's urban planning authorities. Because of this, most of the urban plans conceived on the local, regional, and national levels are never implemented. In other words, urban plans that are not incorporated in the General Budget, or other budgets and programs, are meaningless.

Furthermore, the tools of urban planning in Egypt do not reflect in any transparent manner the actual needs of local communities, which makes it difficult to identify and ameliorate existing forms of deprivation. Urban planning in Egypt is still a very top-down process. An alternative approach is participatory planning, which depends largely on collecting information and opinions from residents, who are the main stakeholders in the communities in which they live, and, as such, those best able to identify urban areas' most pressing development priorities. Participatory planning includes mechanisms and measures that protect the rights of residents and ensure the even-handed representation of the population. It also guarantees the effectiveness of planning and the proper balance between resources and the aspirations of communities for upgrading their neighborhoods. Egypt's urban planning institutions have yet to fully comprehend such needs, even though the concept of participation is becoming more common and "social consultation sessions" are becoming,

to some extent, a standard procedure in planning institutions. But these sessions do not amount to real participation, for they are not carried out in a timely or consistent fashion, nor are they an integral feature of the planning process from beginning to end. Also, the outcome of the sessions is non-binding and disconnected from financial resources and realities. Most often, these sessions are held after decisions have been made in a top-down way, to inform residents of what is going to happen in their area, without giving them a chance to participate in determining needs and priorities or proposing alternative courses.

The classification of existing urban areas in Egypt, as spelled out by the law or by the institutions active in urban planning, is one of the institutional aspects that reinforces spatial inequality. The classification is as follows:

- > **Planned areas:** These are areas that were developed with master plans, land-use schemes, and planning and building codes.²
- > **Unplanned areas:** These are areas that were created in violation of laws and regulations for planning and construction,³ or that were not created using urban planning tools.⁴
- > **Re-planning areas:** These are areas that are targeted for upgrading through urban plans, that suffer from high construction density, that have numerous dilapidated buildings, and that are viewed as needing re-planning and reconstruction. In areas that contain some dilapidated buildings and lack amenities and basic services, planners may decide to replace some buildings and provide amenities and services.⁵

² According to the Informal Settlements Development Fund (ISDF) definition.

³ According to the ISDF definition.

⁴ According to the Unified Building Law 119 for 2008.

⁵ According to the definition adopted by the Unified Building Law 119 for 2008.

- > **Unsafe areas:** These constitute no more than 5% of the unplanned areas, and are divided by the Informal Settlements Development Fund (ISDF) into “first degree areas” (areas posing a threat to the life of their inhabitants); “second degree areas” (areas with dilapidated buildings with structural problems); “third degree areas” (areas constituting a threat to public health due to a lack of clean water and proper sewage or the presence of pollution or high-voltage networks); and “fourth degree areas” (areas where tenants lack title deeds and related rights).

These classifications influence the direction of various urban development programs. For example, the ISDF handles the upgrading of unsafe areas, but does not necessarily follow the “right to adequate housing” standards in resolving their problems. The ISDF sometimes resorts to forceful eviction and resettlement, which exacerbates the marginalization and deprivation of residents. Considering that the definition of “unplanned areas” applies to nearly 75% of Egypt’s urban areas, according to some estimates, it is virtually impossible to find an immediate solution to all these areas (Sims, 2012). But of the areas described as informal or *‘ashwa’iyyaat*, some do receive grants and public funds as part of a political program for upgrading informal areas, while others that may have lacked services for decades receive nothing, mostly because they were denounced in public discussions as *‘ashwa’iyyaat*. There is no real or specific definition of this term despite its extensive use in Egyptian politics, the media, and more recently, legislation.

As priority is given to special programs addressing *‘ashwa’iyyaat* (the unsafe areas first and then those categorized as unplanned), other areas classified as planned and safe suffer from a lack of services and infrastructure. This situation increases spatial injustice in various areas. Some of the planned areas inhabited by the middle and lower classes suffer from degradation and a shortage of public services to the same extent, or greater than that seen in unplanned areas. And yet they remain neglected and excluded from the exceptional grants sometimes directed to *‘ashwa’iyyaat* upgrading schemes. Government housing projects, for example, often suffer from neglect, poor management, and inadequate maintenance (see the discussion below about Masakin Uthman in 6th October city, for a good example of this situation).

In summary, the existing classification of urban areas does not reflect the actual development needs of various areas or their urban, social, and economic complexities. Describing one area as “unplanned” does not help us identify the problems the area is facing: lack of title deeds, services, and public transport, or high poverty and low social development, for example. Furthermore, there are no procedures through which the local elected popular councils or ordinary citizens can demand priority status for development funding and upgrading programs in their neighborhood. As the definitions of unplanned areas and degraded neighborhoods multiply, as overlapping agencies come up with their own interpretations, and as reliable information remains scarce, our ability to understand the city in a comprehensive and flexible way is undermined, and the needs of its residents are compromised.

Chapter 5:

Urban Policies and Strategies vs. Spatial Justice

Despite the government's proclaimed commitment to social justice, Egypt's urban policies and strategies have, on the whole, exacerbated deprivation and deepened inequality among Egypt's urban residents. Three main premises have long guided Egyptian urban policies and practice: the real estate and construction sectors will stimulate economic growth, land sales will finance the budget deficit, and building new houses will solve the housing crisis. Despite their failure to solve the many challenges facing Egypt's urban areas, the efficacy of these institutional preferences and policies surrounding land and real estate management and housing construction have largely gone unquestioned by the government, which has pursued the same strategies for over 40 years. Instead of honoring its professed commitment to social justice and the provision of adequate housing, the government has become a real estate agent, using Egypt's land as a profit maximizing resource, at the expense of distorting the entire housing market. Consequently, Egypt's most abundant resource—land—has become prohibitively costly for the average Egyptian. Under a just system of urban governance, land should fulfill a social function rather than a purely economic one, based on the idea that all citizens have an equal right to the city (Tadamun 2014). Through the government's land commodification practices, this principle has been lost and Egypt's cities are designed not for all Egyptians, but for a privileged chosen few.

Ordinary Egyptians, priced out of the formal housing market, have turned to informal areas as their only option for affordable housing. As such, urban planning became a reaction to challenges, rather than a guide to future urban growth and a guarantee that resources would be used to promote spatial justice and sustainability. This chapter reviews the history of Egypt's urban planning approaches and examines the practices of implementing such policies through executive agencies, as well as the outcome of these policies and their impact on efficiency, social justice, and the city as a whole.

Urban development policies in Egypt are largely confined to planning new cities and programs to upgrade informal areas, the former representing the dominant approach. This can be seen in Egypt's strategic plans for urban development, now enshrined in Egypt Vision 2030, a document that spells out the country's official strategy for sustainable development.¹ Vision 2030 incorporates two main policies that have largely shaped urban development in the country for the last 60 years: redistribution of the population from the cities to the desert, away from the Nile Valley and the Delta, and the construction of new housing. The government continues to construct new housing in many cities with little regard for the long-term impact on the housing market or the needs of disadvantaged areas, where housing is poor but living conditions are even worse. Meanwhile, the government keeps building houses on desert land and in new cities, but fails to supply them with adequate infrastructure or services. As the government pursues this strategy in existing and new cities, a conflict emerges between its rhetoric and its actions. While the new cities fail to attract a sizable population or relieve crowdedness in the Nile Valley and the Delta, social injustice continues to grow.

Development Strategy in the New Cities

The Egyptian government has hailed Egypt's New Urban Communities (NUCs) as the solution to all that ails urban Egypt. State-planned NUCs have proliferated since the 1970s when they were first planned as a means to disperse the growing urban population more evenly across vacant desert lands. After the 1973 war, President Anwar al-Sadat released a public policy statement, the October Paper, which officially announced the government's aim of expanding urban growth into the desert. Planning for the new cities began shortly thereafter and by 1977, development of the 10th of Ramadan City, Egypt's first new desert city, was underway. In 1979, the government established the New Urban Community Authority (NUCA), with a mandate and a budget to create and develop new cities. By 1982, NUCA had planned seven "first-generation" new cities. With the exception of the 15th of May City, NUCA designed all of the first-generation new cities as independently economically viable cities, providing employment opportunities, schools, and other necessary facilities, as well as housing. Between 1986 and 2000, the second-generation of new cities emerged. NUCA largely designed these nine cities as satellite cities to already established urban areas. In 2000, NUCA launched seven new satellite cities, as part of the third-generation. As of 2016, there were 23 New Urban Communities across Egypt, with another five underway, bringing the total to 28 NUCs. Yet, according to NUCA's own data, not a single NUC has reached its target population and the vast majority of these communities have not even surpassed the 50% mark (NUCA, 2015). Using CAPMAS estimates, the new cities' success at meeting their target population is 27% at best and 3% at worst (NUCA, 2015).

¹ See the urban development section of Egypt Vision 2030. <http://www.mop.gov.eg/Vision4.pdf>

Furthermore, NUCA established the majority of NUCs as satellite cities, heavily dependent on older urban areas. Residents of many NUCs continue to commute to the nearby older cities for work, schools, and commerce. For example, despite the recent growth of the population in 6th of October, New Cairo, and Sheikh Zayed cities, Cairo itself has not experienced any relief from daily traffic or overcrowding. On the contrary, population density in Cairo is on the rise.

Despite the failure to meet any of its population targets, the state has been increasing the number of NUCs over the years and has even expanded the total settlement area of individual NUCs (see Figure 13). For example, NUCA designed 15th of May City in 1978 to include 6,462 feddans, but then it added another 1,858 feddans in 1995, and another 3,913 in 2009 (NUCA, 2015). These expansions occurred despite the fact that 15th of May City, according to NUCA's (2015) counts, had a population of only 200,000 (40% of its target). Similarly, NUCA originally established New Tiba in 2000 with an area of 5,445 feddans but increased its size in 2014 by an additional 4,050 feddans, even though NUCA estimated its current population at 19,000 people—or only 10% of its target population (NUCA, 2015).

One of the main goals of NUCs, according to the law, is to provide housing for low-income people in order to obviate the need for informal areas. NUCA estimates that 1.5 million housing units are needed for low-income households without much clarity as to the basis for calculating this figure (NUCA, 2015). According to a recent social housing law (Law 33 of 2014), Egypt's social housing program aims to provide housing units to low-income households “in areas specified by the Ministry of Housing across governorates and new

urban communities” and by allocating building plots in NUCs to middle-income families. It is unclear, however, whether NUCA is actually fulfilling its mandate.

According to the data on its website, NUCA constructed hundreds of thousands of housing units for the Social Housing Project (dedicated to lower-income families and youth); the National Housing Project (a 2005 presidential project dedicated to lower and middle-income housing under Mubarak); the Iskan al-Shabab and Iskan al-Mustaqbal (lower-income housing projects); and the Dar Masr middle-income housing project. Egyptian urbanist Yahia Shawkat, in his 2014 research on the Social Housing Project, shows that the units supposedly allocated for lower and middle-income groups are beyond the financial reach of these households (2014) (see Figure 15). On its website, NUCA defines lower-income groups as households with an annual income of up to EGP 36,000 (approximately \$5,400 USD at 2012/2013 exchange rates) or individuals with an annual income of up to EGP 27,000 (approximately \$4,000 USD at 2012/2013 exchange rates).² But according to the 2012/2013 Household Income, Expenditure and Consumption Survey (HIECS) data, households that spend EGP 36,000 annually are among the richest 20% of the Egyptian population.

Another issue that excludes the poor from the NUCs is that, although they were conceived as satellite cities and thus have few job opportunities within them, the NUCs generally lack public transportation. Inhabitants of these cities have no option but to own a private vehicle or commute by privately-run transport services, which may be costly, inconvenient, or both. This makes NUCs even less practical for those Egyptians who cannot afford private cars—the majority of lower-income individuals and households.

² Average annual exchange rates as published by the US Internal Revenue Service. Retrieved from <https://www.irs.gov/individuals/international-taxpayers/yearly-average-currency-exchange-rates>

Construction of Egypt's NUCs is extremely costly and they generate little revenue. As the number and size of NUCs grow, the government must invest more in infrastructure and services. In 2015/2016, NUCA's total budget was EGP 64.6 billion and its budget for projects was EGP 33.2 billion. It allocated EGP 5.6 billion of its projects budget to New Cairo City alone. 10th of Ramadan City came in second at EGP 3.5 billion. Public investment in these two cities and in the new capital together constitutes 42% of NUCA's 2015/2016 projects budget. It is difficult to explain why these cities received so much of NUCA's budget.

NUCA has substantially increased its spending on new cities in recent years at the expense of other development sectors and existing cities. NUCA investment in new cities went up from EGP 7.3 billion in 2014/2015 to 26.2 billion in 2015/2016, not including the additional EGP 5 billion that went to the new capital and the EGP 2 billion allocated to the One Million Feddans Project.

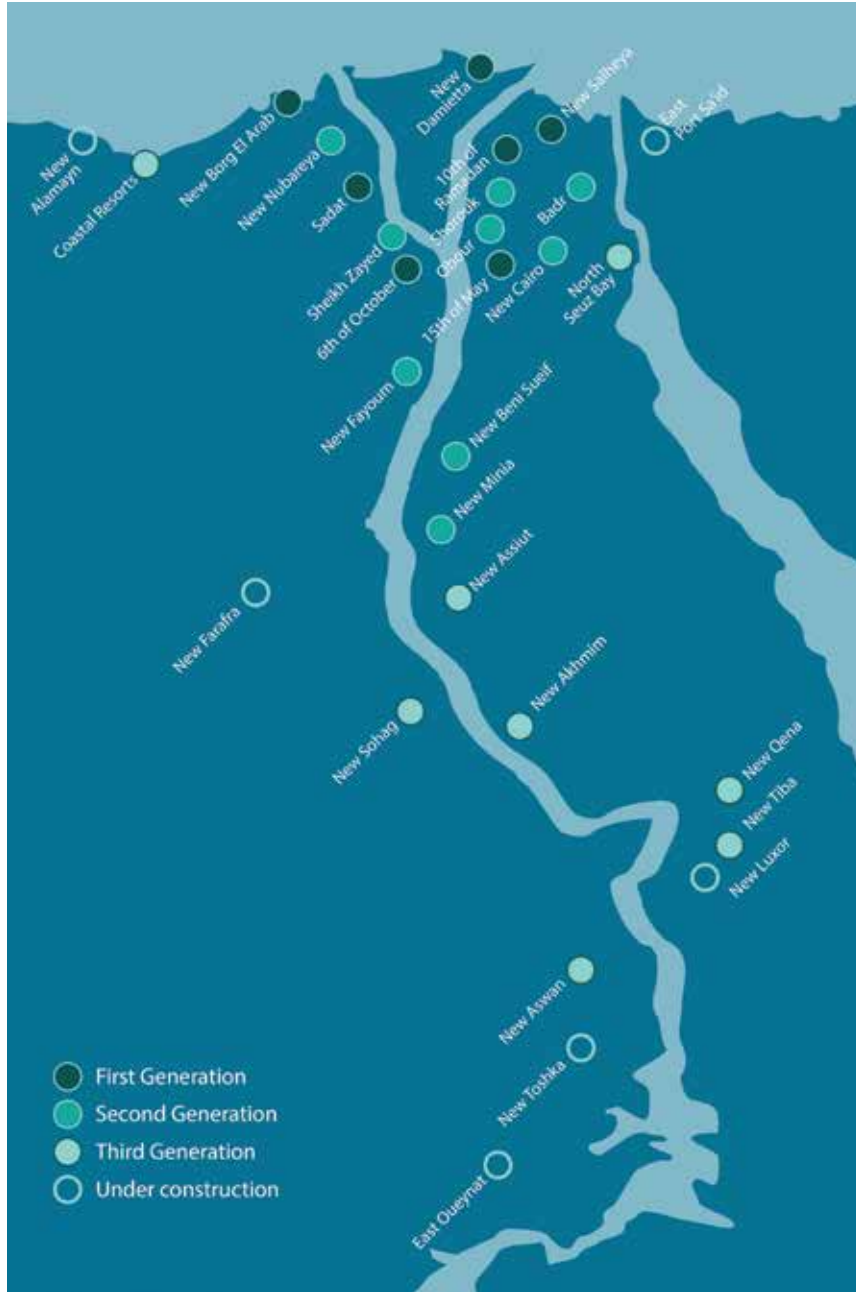
The gross total of NUCA's investment in new cities for the 2015/2016 fiscal year is EGP 33.2 billion, almost four times the total public investment in the entire national education sector, and more than five times the total public investment in the health sector during the same year. By contrast, the former Ministry of Urban Renewal and Informal Settlements (MURIS) had a budget of EGP 0.6 billion for that same year (Tadamun 2015). Admittedly, MURIS had very different tasks than NUCA (unlike NUCA, MURIS was not in charge of providing infrastructure). Still, the sizable public spending on new cities sharply contrasts with the low levels of public spending allocated to existing underserved urban areas. Despite the high cost of the new cities, the financial contribution of these cities to the state's revenue is meager. In the past, the government required NUCA to pay part of its budget surplus to the

Social Housing Fund, as per Decree 33 of 2014, but an amendment to the decree ended this practice in 2015. In 2015/2016, for example, the NUCA surplus reinvested into the government budget amounted to about EGP 8 billion, less than 1% of total public expenditure. Despite its (limited) positive impact on decreasing the public deficit, it is not enough to justify the prevailing government rhetoric and popular belief that expanding new cities is healthy for the public budget and a major driver of economic growth. This is especially important when the government's claims are not supported by evidence of the policy's effectiveness, nor has the government explained how reducing its expenditures for new cities would impact Egypt's economic growth.

A small amount of land in the NUCs has been allocated towards lower and middle-income housing, yet there is no way to measure if this land allocation is actually meeting the housing demand of such groups. The bigger issue is that the homes NUCA is building in most cases are not accessible for the poor and middle classes, and when they can afford these houses they do not satisfy their employment, transportation, education, and other needs.

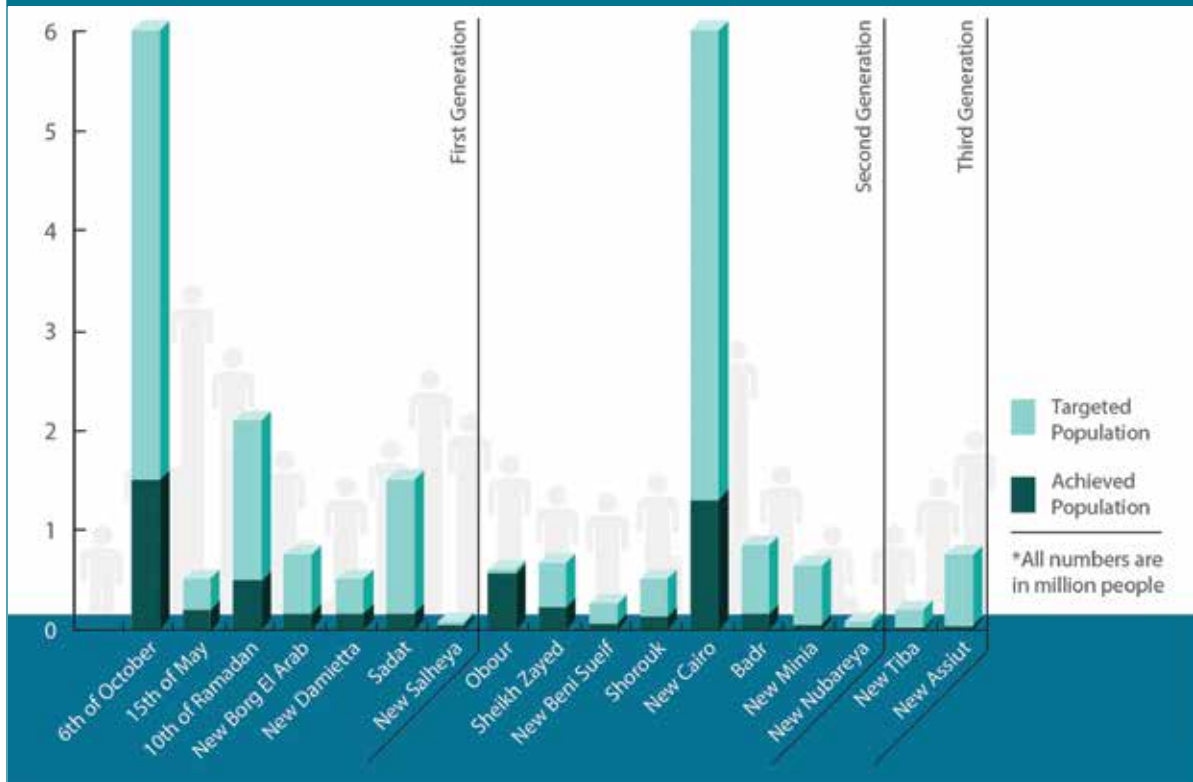
At present, NUCA is investing billions of pounds in the new administrative capital and continues to spend billions on new cities all over the country with various private, public, and global partners. As billions pour into the new cities, living conditions in older cities continue to suffer from inadequate funding and deteriorating services, heightening the sense of imbalance between the existing cities, with their millions of inhabitants, and the sparsely populated NUCs.

Figure (13) Three generations of new cities in Egypt.



Source: Original graphic by Tadamun (2016), data sourced from NUCA (2015).

Figure (14) Current population of new cities compared to their target populations.

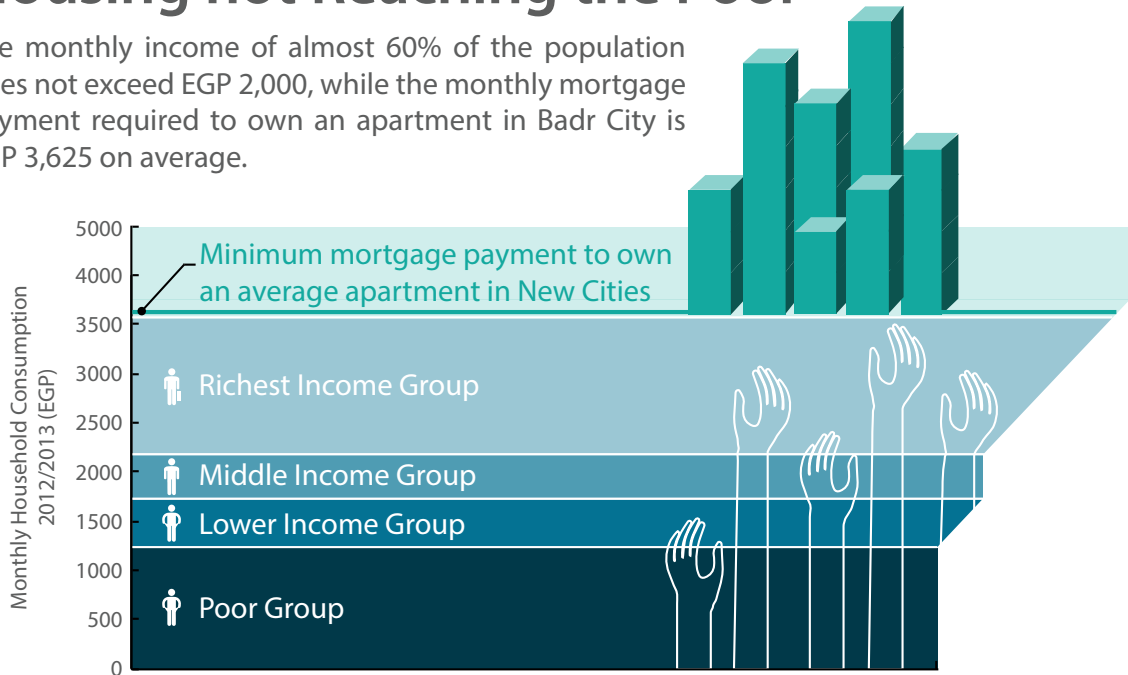


Source: Original graphic by Tadamun (2016), data sourced NUCA (2015).

Figure (15) Average monthly income compared to average monthly mortgage payments in new cities.

Housing not Reaching the Poor

The monthly income of almost 60% of the population does not exceed EGP 2,000, while the monthly mortgage payment required to own an apartment in Badr City is EGP 3,625 on average.



Source: Original graphic by Tadamon (2016), data sourced from Shawkat (2014).

Development Strategy in Informal Areas

One of the reasons for the failure of new cities to achieve their goals is that the government failed to consider the nuances of social interaction in urban communities. The government seems to think that wide boulevards, infrastructure, and services are enough to create a community. But the inability of the new cities to reach their target populations, especially the poor, contradict this vision. Egyptians with modest incomes have developed their own innovative solutions to developing and improving

their communities. They did so independently of the government and without recourse to legal procedures or official planning, and ultimately without the benefit of public services, amenities, and infrastructure. The government condemned their actions and denounced their communities as *'ashwa'iyat* simply because these communities were outside of government control.

In Cairo—the city in which the extent of informal areas is best known—the Ministry of Housing estimates

that 40 percent of the population lives in informal settlements. A comparison of census data between 1996 and 2006 puts the number at 67 percent (Sims 2012), with the percentage increasing since the 2011 Revolution. In the rest of the country, much less is known. In Alexandria, David Sims, a long-time urban practitioner and observer of Egypt, estimates that at least 40 percent of residents live in informal areas. In some of the smaller cities in Upper Egypt and the Delta, the percentage is much higher (Sims, 2013). The Informal Settlements Development Facility (ISDF) estimates that 75 percent of urban areas in cities and villages throughout Egypt are unplanned and one percent are unsafe (ISDF, 2013).

In the second half of the twentieth century, the government oscillated in its approach to informal areas. It ignored them initially, then recognized their presence and provided them with services and infrastructure at a later stage. Later, the government depicted informal areas as dangerous hotbeds of terror and crime, after its confrontation with Islamists and the siege of al-Munira al-Gadida in Imbaba in the 1990s (Singerman, 2009). National programs targeting *'ashwa'iyat* mostly failed to stop the growth of informal areas in cities, and some of these programs were marred by violations of the rights of informal settlement residents. Today, the government recognizes the presence of informal areas in the cities, and even uses terms such as "participation," "public health," and "safety" in policy statements regarding such areas. Article 78 of Egypt's 2014 constitution notes that "the state is committed to the formulation of a comprehensive national plan to address the issue of *'ashwa'iyat* that includes re-planning, provision of infrastructure and services, improvement of the quality of life and public health, the necessary resources for such plan is to be provided

within a definite time frame."

Informal areas fall primarily under the jurisdiction of the governorate in which they are located, and the ISDF.³ The ISDF oversees the surveying of all informal areas in the country and determining the severity of challenges facing each area. Areas that the ISDF designates as unsafe or unplanned become targets for ISDF intervention, which may include eviction and forced displacement. Other informal areas are left to the discretion of the governorates. The ISDF's approach to unsafe areas suffers from certain inconsistencies. In some areas, people living in harsh residential conditions (grade 2) were evicted from their homes before people living in life-threatening conditions (grade 1). In some cases, the government evicted families and then left them homeless, jobless, and vulnerable to human rights violations (Amnesty International, 2011). Meanwhile, most of the unplanned areas that were left to the care of governorates continued to receive inadequate resources. Although such areas are mentioned in the national, regional, and local plans prepared by the General Organization for Physical Planning (GOPP), it is clear that the government has no comprehensive or long-term strategy for dealing with them. Still, the government has created special units at the level of the governorate for upgrading the *'ashwa'iyat*. This is a commendable step in theory, but so far, these units have been inactive and there have been no significant improvements for informal areas left to the discretion of the governorates.

The government utilizes two types of approaches toward informal areas: preventative approaches that are meant to limit informal growth and interventionist approaches in which the government either improves or removes informal areas. Preventative approaches include "belting" or delineating and enforcing urban growth boundaries

³ The ISDF was formed by presidential decree in 2008 in reaction to a tragedy in which nearly 110 dwellers of Duwayqah, an informal area, were crushed to death when a major section of the Moqattam plateau in Cairo collapsed onto their houses.

(UGB), bans on using agricultural land for residential purposes or squatting on state-owned desert land, and using building codes and planning regulations which, when enforced, prevent the types of structures that are built in lower-income informal areas. Preventative policies have not been successful in limiting the growth of informal areas. At best, they have redirected informal growth from one area to another or, at worst, they have encouraged informal growth, left residents unprotected, and increased corruption at the local level. For example, the national building standards produced by the Housing and Building National Research Center (HBRC) are suitable for mid to high-end housing units, but do not accommodate the types of buildings that lower income families can afford. In order to satisfy this demand, these standards force developers to work informally (and technically illegally). Developers know that if they build units that meet the national building codes, their targeted clientele will not be able to afford them (Nada, 2011).

The government has been equally unsuccessful in curbing the growth of informal residential buildings outside city limits. The best known, and oddest, example of this is the ring road (or new highway) around the GCR. When the government first envisioned the ring road, one of its aims was to create a physical barrier to prevent construction outside of the city perimeter or on agricultural land (Dorman, 2007). But, thanks to poor planning, the ring road had the exact opposite effect: it stimulated the construction of new informal areas around the road. The rate of urban growth tripled on Cairo's outskirts in the 20 years following the construction of the new highway (Piffero, 2010).

Interventionist approaches involve either relocating residents to new areas, rehousing inhabitants in their same areas or upgrading existing areas. In the past, the government showed a preference for large scale relocation, especially from unsafe areas. This policy, however, often created additional hardships for those residents who were moved far from their original homes (Patel, 2013). Nevertheless, the government still prefers the relocation approach, especially when dealing with areas that it considers unsafe. One reason for this preference is that it allows the government to redevelop the informal or unsafe areas (unless the areas in question are not attractive for investors). Consequently, informal areas located on prime real estate are more prone to resettlement policies than other areas. For example, the Maspero Triangle and Bulaq neighborhoods are close to the city center as well as the Nile and, as a result, they have always been coveted by developers. The government also believes that resettlement has a positive impact on residents because they are theoretically resettled in higher quality housing units with strengthened security of tenure in modern neighborhoods away from environmental hazards.

This policy, however, is a limited, problem-focused perspective. The government sees the limitations of the informal area—poor housing conditions, environmental hazards, over-crowding, etc.—and sees resettlement as a solution to those problems. However, this perspective fails to acknowledge the positive aspects of the communities targeted for resettlement such as their social ties, their local access to transportation, local commercial activities, and previous investment in their neighborhood. This fact that this perspective uses the household as the sole unit analysis is problematic. A household with two parents and two children with a stable, mid-level income living in a 100m² home is treated exactly the same as a female-headed household with four children and unstable income living in a 40m² apartment.

A household with a bread-winner who works downtown is treated the same way as the bread-winner who relies on the community economy for income.

Consider, for example, the cost of transportation for people who were relocated to distant areas and who cannot find jobs or services in the new location. They pay more for commuting and for many other services, while losing the informal social support networks and employment opportunities that they had in the past. In most cases, the inhabitants oppose the relocation. Several cases of forced relocation that took place over the past few decades sent civil society into action, culminating in the introduction of Article 63 in the 2014 Constitution, which prohibits the forcible eviction of any citizen.⁴ International best practices allow for relocation only when it takes place on a limited scale and with the approval and participation of the inhabitants, who should be fully compensated for any lost property. Also, the inhabitants must be resettled in locations that are as close as possible to their original areas and the government must help them achieve their former living conditions and make sure they can earn a steady living (Miranda, 2014). Recently, the ISDF has sought out community participation more seriously and relocated residents from unsafe areas to new housing much closer to their original location than previous resettlement efforts had done. However, cases of forced eviction and relocation to distant areas have not ended entirely. Rehousing is an approach to human settlements in which the government temporarily houses a community off-site, clears an existing settlement, and builds new apartments on the same land for the original residents. There are two forms of rehousing. The first form of rehousing is financed

entirely by public governmental funds. Residents are temporarily relocated off-site, new public housing structures are built on the full extent of the original site, and the residents are either given the units or the government provides subsidized loans or rents. The second form of rehousing involves both the government and a private developer. In Egypt and other countries with large informal settlements, governments see this type of rehousing as a low-cost approach to urban development and a way to attract new investment to low-income urban areas and “unlock” the true land value. The result is typically that former residents of informal areas are rehoused into high-rise housing complexes while the remaining land is developed for profit. This solution is not without problems. The vertical intensification of building is likely to disrupt the local economy and may paralyze its social ties, as the latter usually takes place at street level (Giridharadas, 2006). In addition, this option involves a transfer of property rights from poor communities to real estate investors in a manner that further disadvantages poor communities. Decisions made in such matters must be primarily guided by the needs of the community, not those of real estate developers.

Upgrading or *in-situ* development is the gradual improvement of existing buildings and infrastructure within an informal settlement to an acceptable standard over time without demolishing the urban fabric or displacing residents to another site or elsewhere on the site (Del Mistro and Hensher, 2009).⁵ The objective of upgrading is to rejuvenate an existing community with minimum physical and social disruption. Upgrading covers a wide range of possible interventions. Minor upgrades include improving

⁴ Article 63 of the constitution states that “arbitrary and forcible evacuation of citizens is prohibited in any shape and form, and violation of such is to be considered a crime that is not subject to the statute of limitations.

⁵ We do not use the term *in-situ* development exclusively as its definition is unclear to most practitioners. Literally, it means development in place. However, it is often confused with rehousing, where residents are temporarily displaced, their homes demolished, and they are rehoused on site.

street-lighting, leveling street surfaces, or painting homes. Major improvements include the installation of natural gas infrastructure, the extension of the sanitation network to each home, the provision of health facilities, schools or other significant public services, or renovating buildings (Patel, 2013). There are three main stages of upgrading an informal settlement (Choguill et al., 1993):

- > Primary level services which address a community's basic health needs
- > Intermediate level services which are socially and culturally accepted levels of service
- > Ultimate level services which are those services that are provided for the convenience of residents.

Upgrading is widely considered an international best practice for improving informal areas. Upgrading minimizes the direct impact on the local economy and, for the most part, leaves communities intact.⁶ It is less costly than either rehousing or relocation and can make an immediate, highly visible improvement in communities. Upgrading is also the best way to ensure that the targeted community actually benefits from the project and it can mobilize local investment or attract outside investment. In Egypt, the government has been engaged in upgrading for a long time. It provided some informal areas with utilities and occasionally with some health, educational, and sports services, often provided by the support and involvement of donor agencies in both planning and implementation. However, the scope of upgrading and manner of intervention require heightened scrutiny. In cases where intervention is not based on a real examination of the urgent needs of the population, precious funding may be wasted without benefiting the targeted areas.

⁶ This is not to suggest that there is not any impact on the local economy. Upgrading schemes can have major implications for the real-estate market. Any major investment by the government, improvement of security of tenure, or change in the quality of a community will attract new investment, new residents, and perhaps reshape the nature of a community in the long-term.

Informal areas must not be left to *ad hoc* interventions that waste money and effort—to engage in action just to give the impression that the problems of informal areas are being properly tackled. Interventions are often wasteful and deprive other areas of the city of much-needed resources. If spatial justice is to be achieved, available resources must reach the entire population and public funds must be distributed fairly among various areas and in accordance with their needs. Government officials must also come to recognize that informal areas are not a passing phenomenon but an integral part of the urban fabric, a part that cannot be overlooked or suppressed. Previously discussed government policies and interventions have not curtailed informal areas, but rather encouraged their growth. Unless we admit that the problems of informal areas can only be tackled through a comprehensive and sustainable system of urban governance, the problem will persist. We need to distribute public funds and development projects fairly and put in place a proper system for managing land. Only then will we have future options for affordable housing, and only then will informal areas become livable, safe, and recognized for the value that they and their residents contribute to Cairo's urban fabric.

Chapter 6:

Three Case Studies of Spatial [in]Justice in the Greater Cairo Region

The following case studies illustrate how a lack of data on individual neighborhoods, confusion over administrative boundaries and the government's unwillingness to integrate the concept of "adequate housing" into its development plans create and exacerbate problems of spatial inequality, in both planned and unplanned areas within the GCR.

- > Case 1, Izbit al-Hagganah: Conflicting Data and Concentrated Poverty
- > Case 2, Izbit Khayrallah: Administrative Divisions and Spatial Deprivation
- > Case 3, Masakin Uthman: Urban Classifications vs. Adequate Housing

Case 1, Izbit al-Hagganah: Conflicting Data and Concentrated Poverty

Izbit al-Hagganah arose as a residential area in the 1960s. It was built on empty land within what is now the Nasr City East district. The area is sometimes referred to as “Kilo 4.5” because its main entrance is below the bridge on the 4.5 km marker on the Cairo-Suez road. The land was originally owned by the army and in the 1930s was used to house the Camel Corps, known as Hagganah (Bremer and Bhuiyan, 2014). Eventually, members of the corps were allowed, for a small fee, to build additional houses for their families although the area was still classified as a military zone. After the 1952 revolution, a real estate boom in east Cairo made the location particularly attractive to working class families who held jobs in affluent areas nearby, thanks to its relative affordability. The settlement process began initially through squatting and later progressed into a complex system of illegal subdivision and sales, resulting in conflicts and physical altercations and the emergence of what some called a “land mafia.”

Although Izbit al-Hagganah is an informal area, it is listed as one of the sub-districts of East Nasr City district on the Cairo Governorate website. The neighborhood of Nasr City East has 21 *shiyakhas* with an overall population of 566,397 inhabitants. Of these, about 67,165 live in Izbit al-Hagganah (CAPMAS, 2013). But satellite images and critical knowledge of the 3-square kilometer area suggest that the actual population may be much bigger. Various experts who have studied the area share this view. Urban researcher and former president of Alexandria University’s Engineering College, Dr. Ahmad Munir Soliman, puts the figure at 400,000 (Soliman, 2004). According to a survey conducted by the Al-Shehab Institution for Comprehensive Development, the local population is one million (Al-Shehab, 2009). Other experts also place

the population at one million inhabitants (Ghazaleh, 2002; El-Gohary, 2004; Masoud and Moawwad, 2007 cited in Sabry, 2009).

The lack of accurate information about the population of Izbit al-Hagganah makes it difficult to assess the adequacy of development resources allocated there. Izbit al-Hagganah is located in the middle of a relatively prosperous area. The poverty rate of Nasr City East as a whole is only 2.5%, but in Izbit al-Hagganah, it is 10% (CAPMAS, 2013). According to available figures, there are 14,000 people living under the poverty line in Nasr City East. Almost half of those, or 6,817, live in Izbit al-Hagganah, and the other half are divided among 20 other *shiyakhas*. The difference in poverty rates between Izbit al-Hagganah (10%) and the nearby *shiyakhas* is astounding: 0.2% in al-Nadi al-Ahli; 1.9% in al-Mantiqa al-Sadsa East; 2.2% in the al-Mantiqa al-Ashira; and 1.9% in al-Hayy al-Ashir (CAPMAS, 2013).

Since budgets are only prepared at the district level, information on Izbit al-Hagganah’s share of the district budget is unavailable. So not only is Izbit al-Hagganah, with its high level of poverty, evidently underserved, but its inhabitants have no way of knowing what their share of the district’s budget is, compared to the neighborhoods around them.

Izbit al-Hagganah must compete for funding with 20 other *shiyakhas* within the district. Though the amount of public investment the area receives in total is unknown, the distribution of schools across Nasr City East indicates that Izbit al-Hagganah is severely underserved in terms of access to education. Of the 62 schools in Nasr City East, only two are in Izbit al-Hagganah despite the fact that the neighborhood, given its high poverty rate, is in dire need of public, low-

cost education. The imbalance in the distribution of schools leads to excessive crowdedness in the schools located in Izbit al-Hagganah, which undermines the area's quality of education.

Tadamun's research in Izbit al-Hagganah revealed that many of the area's residents complained that the area receives insufficient funds for education and that these funds go instead to other, more affluent *shiyakhas*. Official promises for more schools have gone unfulfilled. According to residents, the government often transfers teachers from other Nasr City East schools to Izbit al-Hagganah as punishment for poor performance. Izbit al-Hagganah inhabitants sense that their area is underserved in comparison to the rest of Nasr City East, and there is significant evidence to support this view. The area has no fire station and only one public health clinic.

Izbit al-Hagganah is the poorest *shiyakha* in Nasr City East. It houses nearly half the poor of the entire district, yet it seems to receive disproportionately fewer resources than other *shiyakhas* in the district. Allocating public resources at the *shiyakha* level rather than just at the district level could help to ensure that local development resources end up where they are most needed and that residents of areas like Izbit al-Hagganah do not sink deeper into poverty simply by virtue of where they live.

Case 2, Izbit Khayrallah: Administrative Divisions and Spatial Deprivation

Forty years ago, the area now known as Izbit Khayrallah was an uninhabited rocky plateau situated north of Maadi in southeast Cairo. In the mid-1970s, immigrants from Upper Egypt and the Delta began settling on this vacant land. Using mostly stones quarried from the area, residents too poor to buy or rent a home in other parts of the city began to build their own homes in Izbit Khayrallah. After a 1992 earthquake, population density increased in Izbit Khayrallah and other informal areas as people who lost their homes began looking for an alternative residence that close to the city center. The government was unable to provide affordable housing options, and displaced families ended up in Izbit Khayrallah and other informal areas, where housing was cheaper.

There is no reliable data concerning the size of the population in Izbit Khayrallah, the allocation of public resources, or even the public officials in charge of providing services to the area. Despite being a clearly defined area known to its inhabitants and recognizable in aerial photography, the government does not classify Izbit Khayrallah as a single entity, but rather divides it among several districts, and sometimes among several *shiyakhas* within the same district. Izbit Khayrallah appears on administrative maps as spanning several districts, which makes it extremely difficult to determine the governing body responsible for the area's amenities and public services, such as paving, lighting, and infrastructure.

Izbit Khayrallah is split among the districts of Masr al-Qadima, Dar al-Salam, and al-Basatin. The eastern side of Nagah Street (the main street) is said to belong to the Khalifah district, at least according to CAPMAS data.

But the Cairo Governorate website, which is believed to be more recently updated, tells another story. According to the website, Izbit Khayrallah is divided among three *shiyakhas*: Athar al-Nabil (in Masr al-Qadima district), Kom Ghorab (also in Masr al-Qadima district), and Basatin al-Gharbiya (in al-Basatin district). It has been difficult to establish beyond a doubt the administrative affiliation of the eastern side of al-Nagah Street. The Cairo Governorate division, however, uses the ISDF map (2013), which places the southern areas of Izbit Khayrallah in the district of Masr al-Qadima rather than in the district of Dar al-Salam.

Aside from confusion over which district Izbit Khayrallah belongs to, there is no official assessment of the area's population. It is also difficult to gauge the poverty level in the area, although figures in the three above-mentioned *shiyakhas* are as follows: 44% in Athar al-Nabi, 46% in Kom Ghorab, and 25% in al-Basatin al-Gharbiya. As most of Izbit Khayrallah belongs to Athar al-Nabi and al-Basatin, one can assume that the poverty rate in the area is between 44% and 46%.

The lack of data, which researchers and decision makers rely on to provide recommendations and draw plans, is problematic. The administrative fragmentation of the area creates difficulties for inhabitants when dealing with the government. Even going to police stations and government legal offices to procure official documents, receive IDs, or apply for permits can be frustrating for a resident unsure of which district he or she lives in.

The current administrative fragmentation contributes to the deterioration of services and amenities and amplifies local grievances. It hampers residents' ability to demand services and amenities. Izbit Khayrallah has only one elementary school and one Azharite Institute (a public, religious school). Despite the large size of its population, there are no other government agencies

in Izbit Khayrallah. Local development programs are divided among various neighborhoods. As a result, the budgets of the relevant districts—modest as they are—are largely spent outside Izbit Khayrallah.

Izbit Khayrallah has no independent budget to tackle the large development deficiencies in the area. The responsible government body for developing the area is unclear, thus there are no public officials or offices which residents may hold accountable for grievances. The local inhabitants, despite their significant population, have been unable to win any seats in the local councils or the parliament, mainly because they are a minority in all of their voting districts. Because of the political, social, and economic marginalization of the area, some Izbit Khayrallah inhabitants are demanding a separate district in order to improve access to public services.

Izbit Khayrallah is not the only place in which such problems exist. The way resources are allocated in Egyptian cities does not consider the cohesiveness of urban communities; overlooks the fact that each area has different needs; does not pay attention to the existing networks of social relations, economic transactions, and transportation; and fails to address other pertinent matters. In short, the allocation of resources tends to reflect arbitrary administrative divisions rather than the actual needs of areas' residents.

The phenomena of poverty, deprivation, and urban deterioration are extensive in the GCR. Poverty pockets and deprivation belts crisscross the borders of districts and governorates. For example, the areas located to the east of the Nile in South Cairo, which administratively belongs to the Giza Governorate, share much of the deprivation traits observed across the river in the Cairo Governorate. The needs of al-Tibbin district have

Figure (16) A primary school working two shifts, morning and evening, is the only public school in the area. The residents of Izbit Khayrallah rely on the services of nearby areas or those provided by civil society groups, such as charity and religious institutions involved in health care.



Source: Original map by Tadamun (2015), data sourced from GOPP (General Office of Physical Planning).

much in common with the nearby city of al-Saff, but because the former is part of Cairo Governorate and the latter is part of Giza Governorate, the two areas have independent plans and budgets. The final say in such matters is left to the centralized authority of the governorate in question.

When administrative borders are drawn in a manner that overlooks development needs and ignores urban realities, local administration is muddled and the allocation of resources is distorted. Thus, the needs of certain areas become harder to monitor and address. Unless we tackle this issue, start dealing with areas suffering from spatial deprivation in a comprehensive manner, and redraw the current administrative boundaries, it will be hard to save urban areas from further deterioration.

Case 3, Masakin Uthman: Urban Classifications vs. Adequate Housing

The Awla-bil-Riyaah [worthy of care] housing project, better known as “Masakin Uthman,” is a residential area built on eight square kilometers on the road to the Bahariya Oases. The area consists of identical six-story apartment buildings and is only 10-15 km away from the luxury gated communities and shopping malls of 6th of October City. To a casual visitor, the development would seem as if it sprang inexplicably out of the desert. It is surrounded by arid land in all directions. The nearest sign of life, so to speak, is the 6th of October City cemeteries. Today, Masakin Uthman is home to 16,000 people (ISDF, 2011).

This development was part of National Housing Project (NHP), a state-run and funded project. The NHP aimed to build 500,000 housing units within six years through seven different programs. One of these programs was Awla-bil-Riyaah, which was dedicated to the construction of housing units of 42m² designed to be rented out to tenants on 5-year leases. The project involved the construction of 13,000 units in 6th of October City by three different companies. The state gave more than 1,000 of these units to the Cairo Governorate to house families displaced from various areas considered “unsafe” by the ISDF.

Acting to prevent a recurrence of the 2008 Duwayqah tragedy, Cairo Governorate began evicting residents from al-Duwayqah and Istabl Antar and re-housing them in the new units built near 6th of October City, although this meant sending them nearly 40 km away from their original dwellings.¹ Some of those who relocated to these outlying settlements considered the area to be too isolated and totally lacking in services,

transportation, and jobs. In recent years, powerful individuals exploiting the legal void that followed the 2011 revolution commandeered some apartments and even entire blocks in the area. Rent rates, although now higher than the original rates set by the government, are still affordable in comparison with other parts of Cairo, so the area attracts those who cannot find other affordable housing options. African and Arab refugees living in constrained economic circumstances have also sought affordable housing in the area. Refugees from Syria, Sudan, Somalia, Iraq, and Yemen are known to have moved in, but no figures are yet available about the size of those communities.

Masakin Uthman brings into question the very definition of unplanned or informal areas. The entire development was planned and built by the government, so it cannot be described as unplanned or informal. But most of those living there today have illegal leases. Furthermore, because there are no shops or even religious spaces in the area, the inhabitants created stands and kiosks to sell basic goods, such as groceries. Using the alleyways and ground-level apartments, they also created coffeeshouses and mosques. Lacking access to public transportation, they use minibuses and tuk-tuks.

Although neither unplanned or informal, the area suffers from most of the characteristics of the informal areas. Big families are cramped into small apartments; the supply of potable water is poor; jobs and basic education and health services are lacking; and common facilities such as sport and youth clubs, police stations, shops, and public transportation are either lacking or

¹ In 2008, an earthquake triggered a rockslide, which killed over 200 residents of Duwayqah, an informal settlement in the east of Cairo. This event sparked the creation of the Informal Settlement Development Facility (ISDF) to examine and classify the condition of housing stock in informal places.

in short supply. Due to the extralegal ways in which property changes hands, the residents have no legal protection and may find it hard to fight eviction.

The main reason Masakin Uthman replicates the experience of *‘ashwa’iyaaat* is that government agencies are unwilling to recognize the concept of adequate housing or implement it in a proper fashion. These agencies see housing as a physical product, as the mere provision of a roof over one’s head. But adequate housing goes beyond this narrow definition to invoke other dynamic aspects of urban life. And Masakin Uthman is not alone in this situation. Many official residential areas in Cairo, including those in al-Nahda, Madinat al-Salam, and Madinat Badr, have similar problems.

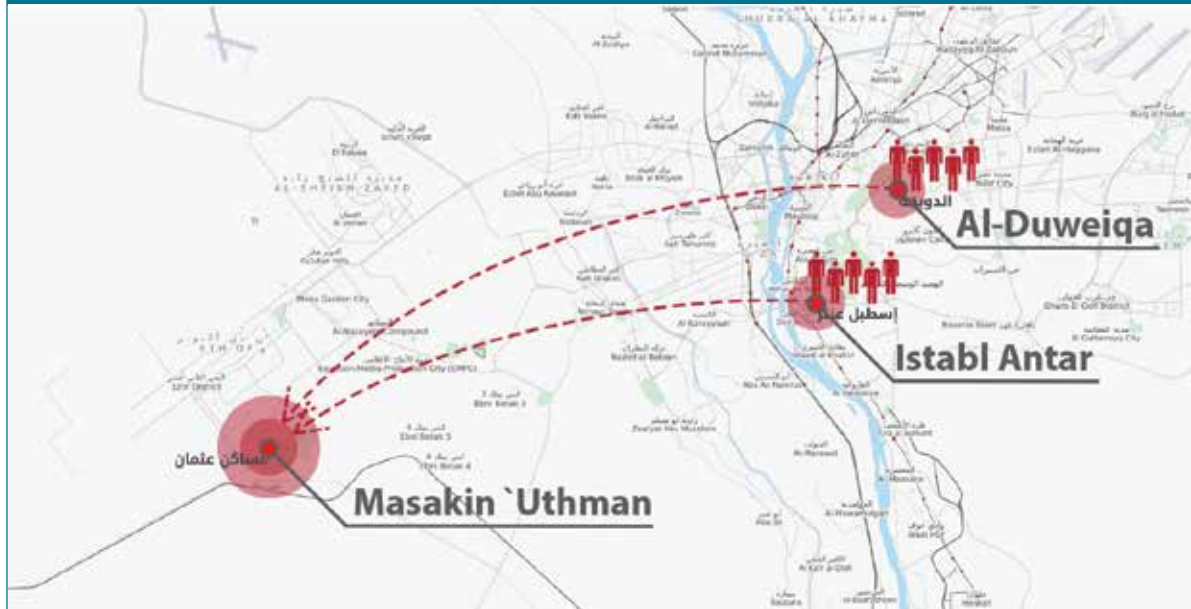
The way to prevent this from happening is to ask the following questions. Why do people inhabit informal areas to start with? Why don’t they try to leave them despite the hardship of life in these areas? Why do many return to their original neighborhoods after being sent to new housing projects? In other words, what are

the advantages of informal areas? And why do official government projects fail to provide such advantages?

The residents of informal areas know the answers. They cite affordable housing, good locations, proximity to work and services, and a tight-knit social support system. These characteristics are key pillars of the concept of adequate housing. As a woman living in Masakin Uthman put it, “one room in al-Duwayqah is a hundred times better than an apartment here” (Tadamun, 2015).

Masakin Uthman, an official social housing project implemented by the government, ended up creating the same problems it purported to solve. Indeed, living conditions in new government housing projects are sometimes far worse than those in areas the government was concerned with in the first place. Following strict definitions, Masakin Uthman and similarly-built areas cannot be labeled informal or unplanned, but from an adequate housing perspective, Masakin Uthman is one of the most deprived urban locations in the GCR.

Figure (17) Transferring residents from centrally-located informal areas, such as al-Duwayqah and Istabl Antar, to peripheral areas without providing necessary services and amenities leads to further inequality.



Source: Tadamon (2015)

Conclusion:

The Road to Just and Sustainable Development

Citizen demands sometimes elicit resentful responses from local Egyptian government officials who are prone to citing inadequate funding as justification for inaction, when in reality, funding is less of an issue than the fair and effective use of available public resources. The fewer resources a nation has, the more careful and responsible its government should be when setting development priorities. This issue is omitted discussions about the availability of funding.

Equally important is the fact that decision makers cannot plan for just and sustainable development if they lack accurate, extensive, and multi-faceted measurements of urban poverty and inequality. Nor can they make good policies without acknowledging that city inhabitants do not share the same access to services and public projects. Officials must identify the disparities between various parts of the city and make it their aim to close existing gaps. Research is also needed on how poverty pockets emerge and how they may turn into poverty traps over time. In short, unless we address the root of this problem, we cannot possibly break the vicious circle of unjust and unsustainable urban development in Egypt.

Furthermore, when planning any urban intervention, we must look at the city as a dynamic entity with its own set of economic and social interactions; for even the poor benefit from the jobs that nearby affluent areas may provide. This comprehensive view of the city may help urban planners make the right decisions. But if they continue treating various areas as separate, independent entities, current problems are likely to endure.

The right to adequate housing is a national goal that is now enshrined in Egypt's constitution. It is also a right that must guide local development efforts. Assessing the needs of various cities and governorates

and understanding the priorities of the population is necessary to tackle the current inequalities. We must appreciate the need for adequate housing across the country, and recognize that adequate housing is not only about providing living quarters, but also access to public services, roads, transportation, and jobs.

Unless current development efforts target the groups most in need, and unless resources are distributed carefully according to well-managed programs, just and sustainable development will remain out of reach. To succeed, we must change our approach to development needs and introduce the kind of institutional reforms that may invigorate the system of local administration in Egypt. We need to empower local authorities in governorates and districts, provide them with financial and administrative backing, enhance their performance, and rid them of corruption. Such tasks presume the presence of a strong civil society that can participate in decision-making and enforce accountability in an effective manner.

To achieve a just and fair distribution of public resources, the government needs to introduce numerous changes to the way in which it prepares the state budget, changes that ensure that the allocation of resources mirrors actual needs and is done through transparent and participatory mechanisms. Instead of local authorities and state employees communicating solely with the Ministry of Finance, local communities must be involved. Local communities must be given access to executive authorities and parliamentary representatives. Furthermore, mechanisms must be introduced for oversight and accountability regarding public spending throughout the implementation of various projects, so as to ensure that these projects meet their goals and succeed in improving the quality of living for everyone, especially those most in need.

The main goal for the Planning [in] Justice project is to illustrate the capacity of spatial justice maps to provide a better and broader picture of development gaps, local investment patterns, the government's urban policies, and the needs of unique urban communities. Maps, as the project shows, allow us to compare various areas with relative ease and apply multiple indicators to produce better assessments of the situation. The maps we produced in the Planning [in] Justice project allow us to see poverty in the GCR in a new dimension. These maps make it possible to visualize disparities between public spending and local needs, by showing, for example, the availability of schools, hospitals, water, sewage, and other public services across different neighborhoods of varying income levels. In short, the maps bring clarity to complex situations, thus making it easier for the public and decision makers to understand pressing urban development imperatives.

The Planning [in] Justice project goes beyond the level of governorates and districts to illuminate conditions at the *shiyakha* level, thus allowing us to identify inequality on a very local scale that is often ignored. Through this analysis, it became clear that some districts tend to favor the richer *shiyakhas*, while ignoring the poorer ones. Far from trying to address such issues, the current local administration system tends to reinforce spatial inequality.

Informal areas are situated in the heart of Egyptian cities and are subject to the mandate of local authorities. But if the local authorities ignore these areas, preferring instead to spend their resources on adjacent but richer areas, areas whose residents

have influence, the conditions in informal areas are bound to worsen daily and the residents of such areas are unlikely to have access to the same level of public services available to affluent areas. In fact, informal areas are not the only places that suffer this fate. Many formal areas, especially those inhabited by low and middle-income people, experience the deterioration of public services. Facts such as these make one realize the problems of informal areas cannot be resolved through ad hoc programs and grants aiming to upgrade the *ashwa'iyyaat*. At the end of the day, such programs and grants will never cover all the underserved areas, for they fall short of addressing the institutional causes that create and perpetuate such problems. If we truly wish to break this vicious cycle, we must reform the local government systems and begin allocating resources and programs in a fair manner. We must start by targeting the communities most in need.

Decision makers appreciate the value of mapping for analyzing and guiding policy. This is one reason for researchers to continue to analyze the spatial dimension of government policies and social changes. Tadamun has established communication with numerous policy makers who appreciate this approach and recognize its benefits. We have written a number of policy briefs which focus on aspects of these problems. But maps are merely a tool—they cannot bring about reform unless supported by political resolve. Laws that guarantee access to information and data are a necessary to create a real partnership between government and the community of researchers, local groups, and civil society that furthers the right of urban citizens to just and sustainable development.

Citations:

Relevant Egyptian Laws and Works Cited

Relevant Egyptian Laws

- > Egypt's Constitution, 2014
- > Law 53 for 1973 on the General State Budget
- > Law 70 for 1973 on the preparation and follow up of the General State Budget
- > Law 127 for 1981 on government accountability
- > Presidential Decree 43 for 1970 on the Local Government Law, amended by law 50 for 1981, by law 26 for 1082, by law 145 for 1988, by law 9 for 1989, and by law 84 for 1996.**
- > The unified building law for 2008
- > Executive memorandum 144 for 2009 on the implementation of the unified building law

* The above laws are available at the government website: <http://www.egypt.gov.eg/arabic/laws>

** Laws concerning local government are available on the website of the Ministry of Local Development: <http://www.mld.gov.eg/Arabic/TOP/AboutMinistry/Orgrelatedtoministry/LD/1971>

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