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Housing Policies: Removal and Resettlement of Residents of Unpopulated Areas and Low-Income People in Greater Cairo from 2016 (Al-Asmarat Neighborhood)

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Abstract:

Policies for developing slum areas in developing countries have varied to confront the slum housing crisis, and the population removal and resettlement approach is one of these policies. Despite its positive aspects in providing higher-quality housing units, more stable ownership, and exploiting eviction areas in development projects, many experiences indicate that it leads to risks, the most important of which is the destruction of the social and economic structure of the local community. Evaluating one of the recent projects, the Asmarat neighborhood in the city of Mokattam, Egypt, and comparing the results with the dimensions of sustainable urban development, by collecting information, personal interviews with officials and residents, field visits to the project, analyzing this data, and deducing the extent to which the dimensions of sustainable urban development have been achieved in the project. The research concluded that the achievement rate reached 66% and that the project focused primarily on the urban dimension. The research recommends the need to establish the rules of community participation, move from theory to application with modern urban trends such as the idea of flexible urbanism, and implement experimental projects and benefit from them in providing housing for unsafe and low-income housing areas.

Keywords: Unsafe areas – Removal and resettlement - Sustainable urban development - Community participation - Asmarat neighborhood.

Introduction:

The Egyptian government has prepared a "sustainable development strategy" Egypt Vision 2030, which aims to achieve sustainable development in all fields, and concerning urban development, its goal is to be free of unsafe areas (Ezzedine and Shawqi, 2022), (Housing Directorate 2017). A program has been prepared to combat the phenomenon of slums and unsafe areas, and the program aims to: Achieve social justice, raise the standard of living, and reduce the negatives resulting from the phenomenon of slums. It is targeted to be completed in 2030. Establishing a national mechanism to manage the direction of foreign aid and international partnerships to eliminate slums. Developing a unified and comprehensive national database for slums and unsafe areas. Establishing an integrated framework for developing slums and providing job opportunities. The program elements are: (Ministry of Planning and Economic Development, 2016): Increasing the efficiency of implementing laws to prevent the emergence of new slums by supplying technological and security means and providing affordable means of transportation, in addition to providing job and trade opportunities and the right of residents to participate in the development process, which leads to the integration of different sectors and achieving sustainable development. Diversifying the sources of funding for slum development projects by developing policies to increase the participation of the private sector.

Study problem Although government policies may consider the resettlement of informal communities a beneficial and healthy matter, their policies may lead to harming the population and instead of improving their living conditions, transferring them to other areas usually leads to the aggravation of their conditions, due to the destruction that this process leads to of the social and economic structure of those communities (Solidarity 2015) unless development projects are carried out by the principles of sustainable development, while providing various job opportunities. If the development process is limited to urban aspects only, the desired goals will not be achieved, as neglecting residents and helping them in developing their resources will lead to a failure to improve their social and economic level, which leads them to invest in their new homes, sell or rent them, and migrate to other slum areas where they find a suitable environment (Suleiman 2002).

The importance of the study Scientific importance: The study lies in the ability of the study to enrich the literature on sustainable development of uninhabited slum areas because the Asmarat neighborhood has the characteristics that make it worthy of study. It is a breakthrough in applying the principles of sustainable urban development to deal with this problem (Amin 2021). Practical importance: The process of evaluating resettlement areas according to sustainability indicators contributes to developing the process of making appropriate decisions in upcoming state projects targeting the resettlement policy for unsafe areas. (Amin 2021). The study objectives are " Show the negatives of the project that need to be reconsidered and recommend what can be done to remedy these negatives, Conclude lessons learned that will bring the project to the completion stage, and Determine to what extent the project can be considered a standard model to be emulated when developing any future development strategy".

The Study Methodology.

The study used descriptive-analytical and deductive analytical approaches to study the environmental, urban, social, economic, and institutional dimensions and relied on collecting information from previous studies, published periodicals, government reports, personal interviews of some officials, field studies, And the results of the questionnaire form. The researcher prepared a list of sustainability indicators for resettlement projects in unsafe areas, to follow up and evaluate that experience according to sustainability indicators, to come up with lessons learned that can be applied to future projects.

The Study Concepts.

The concept of unsafe slum areas: According to the United Nations Human Settlements Programme, families in unsafe slum areas are defined as a group of individuals living under the same roof who lack one or more of the following (UN-HABITAT 2006): Areas that lack adequate housing were built in dangerous areas, such as housing in damaged structures, or housing exposed to railway accidents, or that were built on landfills, or that were built under the influence of heavy industrial pollution, or that were built under overhead power lines. Areas that lack sufficient living space where more than two people live in one room, Areas lacking access to clean water, Areas lacking connection to the sewage network, Areas lacking secure tenure, and Areas that lack adequate housing were built in dangerous areas, such as housing in damaged structures, or housing Which are exposed to railway accidents, or which were built on landfills, or which were built under the influence of heavy industrial pollution, or which were built under overhead power lines.

The Slum Development Fund in the Arab Republic of Egypt has adhered to these classification standards, as it has classified slum areas in Egypt into unplanned areas and unsafe areas, which are those that contain housing, 50% or more of which meet unsafe standards. Unsafe areas have been divided into four degrees of danger according to the following criteria: (Khalifa 2011). First Class: These are the areas exposed to conditions that threaten human life, areas exposed to the sliding of stone blocks from the mountains, exposed to torrents, and exposed to railway accidents, Second degree: These are areas that consist of housing with structural elements that were built using waste construction materials, or were built on lands with soil that is not suitable for construction, Third degree: These are areas that

threaten public health, such as lack of water or sanitation, and Fourth degree: These are the areas whose residents lack a stable life or security of tenure.

The concept of resettlement to unsafe slum areas and its success factors.

It is a process during which residents are transferred from one area to another in the same city, and the new area is usually not close to the original location, and residents are granted new housing units in state-owned buildings with low rent or easy ownership conditions (Patel 2013). Explaining the advantages of resettlement to residents and notifying them with complete transparency about the government's intention to resettle them, and that the timetable set for this be made public and residents must participate in the planning and implementation process. They must also have the right to choose the areas to which they are transferred from among several alternatives. As for alternative housing, its cost must be within the residents' ability to pay and must meet structural safety and security requirements. All basic services must be provided in resettlement areas before residents are transferred, especially transportation and adequate employment opportunities. Residents must also receive assistance until they settle in the new areas.

The concept of sustainable urban development and its relationship to the concept of community participation.

Interest in the idea of sustainable urban development increased during relevant conferences, such as the Earth Summit in (Rio de Janeiro 1992, and the Berlin Conference 2000), and the concept of sustainable urban development was crystallized through (Johannesburg Conference 2022). It is defined as: "improving the quality of life in the city, and this includes, in addition to the urban aspect, the environmental, cultural, political, institutional, social and economic aspects, without leaving burdens for future generations". Which arise as a result of the depletion of major resources, by following approaches that are based on a balance between resources and energy, as well as financial inputs and outputs, which represent an important role in decisions to develop urban areas." (Deeb and Muhanna, 2009). For the development of unsafe slum areas to be more efficient and sustainable, their residents must not be viewed merely as part of development efforts, but as partners in the development process in the stages of planning, implementation, management, and follow-up.(عزالدين وشوقي 2022).

Table (1) The proposed evaluation elements, their indicators, and the elements for measuring indicators according to.(عزالدين وشوقي 2022) .

dimension	Index	Index measurement
Institutional	Local administration	-The presence of an organizational structure that continuously monitors and follows up on maintenance work. -The existence of an executive mechanism to prevent encroachments on the area. -There is a mechanism to identify beneficiaries to ensure that the units reach their beneficiaries.
Social	Social affiliation	-The extent of verification of possession and procedures for legalizing the housing unit. -The availability of community spaces helps form relationships between residents. -Achieving integration with the surrounding areas and not feeling isolated.
	The feeling of security and safety	-Crime rate within the area. -Street lighting at night. -Availability of security services: police, ambulance, and fire stations.

		-The design of the streets allows security assistance to reach easily when necessary.
	Community participation	-Participation of residents in the development project and during the planning process. -Participation of residents in maintenance work in the area.
	Civil associations and community initiatives	-The extent of its availability in the region and the type of assistance provided (financial -Social -.....).
	Providing some job opportunities in the project	-Encouraging the private sector. -Establishing training and production centers and qualifying the people of the region for the labor market. -Providing soft loans to establish small projects.
	Residential designs meet residents' requirements.	Diversity of unit surfaces, and flexibility in designing them to suit the needs of beneficiaries.
	Facilities and infrastructure	Availability of energy sources and moderate prices. Providing alternative energy sources consistent with environmental protection requirements And the economic characteristics of that category Availability of a good sewage network. Availability of a source of pure water. Availability of paved roads and streets. Availability of transportation that connects parts of the city and connects them to the rest Surrounding areas.
	Choose a socially appropriate location.	Providing connectivity to work sites that are compatible with the nature of the population groups. Linking to central service sites and easy access to them. The project's ability to provide units for those affected and enable them to live a decent life
Economic	Project support and financing systems	-Supporting the state by contributing to providing land for the project. -The state's contribution to providing facilities, services, and infrastructure. -Providing access to housing units through easy means of real estate financing - long-term installments -.....).
	The suitability of housing unit prices to the income of beneficiaries	-Determine the unit cost based on the average family income. The ability to pay installments on a regular and continuous basis. -The extent of residents' ability to pay maintenance, utilities, and services expenses.
	Economics of building and construction	-Saving on construction costs. -Method of assembling residential units. -Using a unified architectural model to repeat units and its impact on implementation time. -Standardization of building elements, doors, windows, finishes, and the use of low-cost finishing materials.

	Economic efficiency of the resettlement project	-Recover the cost of creating the new area. -Providing economic resources to sustain the return of the maintenance process in the new area.
	Economic activities suitable for the population	-The extent to which alternative job opportunities are provided for local workers. -The availability of factories, institutions, or commercial facilities at the resettlement site. -The availability of work opportunities from home. -Developing the skills of the moving population needed to create new job opportunities.
	Choose an economically appropriate location.	-The site's connectivity to service areas and its connection to a major road network. -The distance between the resettlement area and the original areas from which the population was transferred.
Urban	Land uses	-Diversity of land uses in the urban area.
	Urban character	The urban planning method is used in the neighborhood. Structural ratio.
	Ratios of urban spaces	The ratio of the building's height to the width of the urban space.
	Site coordination elements	The use of site landscaping elements is economical and highly durable. Local trees and plants consume little water.
	Communication within the region and surrounding areas	Availability of connections to main roads and assembly points on site. Designing the internal street network and the movement system within the site. The number of entry and exit points to the site and their ratio to the length of the perimeter.
	Parking areas	Parking spaces are proportional to the size of the population in the area.

Location of Al-Asmarat district.

In the Mokattam area, south of Cairo, near Al-Shaheed Axis and the Ring Road, it is bordered to the north by the Nasr City neighborhood, to the south by the Ring Road, to the east by a rocky area, then Al-Shaheed Axis, then Al-Tagamoa neighborhood in the far east, and to the west by the Mokattam residences and the central plateau area (Abdullah, Mahdi, and Saudi, 2020). It is linked through the main axes to central Cairo and the city of Giza (Figure No. 1). (عبد الرحمن، ديسمبر 2020)

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Figure1 : Location of the Asmarat district, main roads, and streets.

Urban planning and design of the project.

At the general site level: The total area of the project is 188 acres (2022, property finder) and it was implemented in three phases (Figure 1,2,3). (Figure 2,3). (Presidency of the Republic 2016 - Housing Directorate 2018).

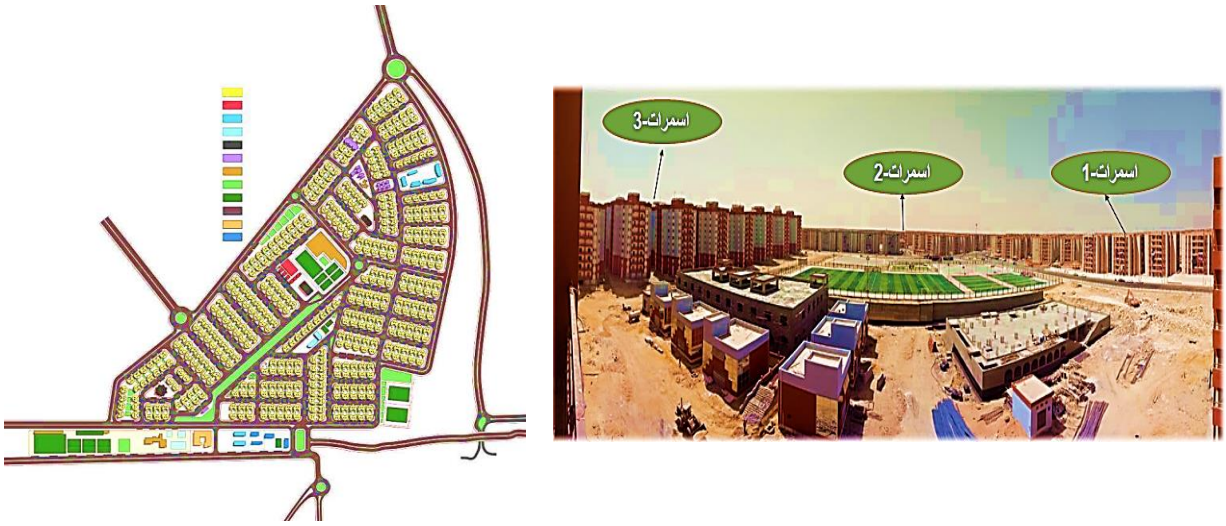

Figure 2: Planning of the city of Asmarat and land uses according to the general plan.

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Urban planning and design of the project.

The city was divided into three residential neighborhoods, each neighborhood having its services and needs, such as schools, hospitals, markets, and commercial areas, in addition to the service axis that serves all neighborhoods (photo 1).

Figure 3: A plan for residential, commercial, entertainment, and religious neighborhoods in the Asmarat district.

Photo 1: A model of the residential block in the Asmarat neighborhood and its parking areas.

Evaluation of the urban dimension of the project.

Land uses Most of the land uses in the neighborhood are residential, as the project is dedicated to rehousing residents of slum areas. It also includes some multi-use buildings. We find 25 buildings in residential and commercial use, with a total of 350 commercial stores. The project's health services include four medical units, health centers, and two ambulances. Recreational services include parks, a club, and five football fields. Commercial services are located in the center of the neighborhood, such as a bakery and an outlet for consumer goods. There are cultural services such as the outdoor theater and the Palace of Culture, and administrative services such as the district headquarters, police point, civil protection, post office, and real estate registration. Educational services also include seven nurseries distributed throughout the district, two schools for the primary and middle stages, a craft training center, and a clothing workshop. Religious services are a church and a mosque in the third phase, and the Grand Mosque in the second phase, and on the neighborhood's southeastern borders is a stop for public transportation buses that reach downtown and Cairo..(عبد الله، مهدي، وسعودي 2020)

Urban character The design of the neighborhood depends on the presence of a main square from which three main roads branch out, dividing the city into three neighborhoods, and the distribution of residential groups, forming urban spaces. There is no difference in the urban character from one stage to another, as it is repeated in a typical manner without distinguishing one part from the other.(عبد الله، مهدي، و سعودي 2020)

Urban vacancy rates The buildings are connected to one residential group by a courtyard extending along the length of the residential block, forming urban spaces eight meters wide between the two opposite entrances, and four meters wide between the side facades of the buildings (photo 2). The appropriate height of the buildings allows natural ventilation and the entry of sunlight into these wide spaces, making them healthy and environmental voids. On the contrary, there are no benches or shaded places for rest. Rather, we find residents sitting on the stairs of the building's entrances, in addition to the fact that the residents do not know each other, which led to these squares being left without any tangible benefit..(عبد الله، مهدي، وسعودي 2020)

Photo 2: Interstitial spaces between buildings in residential squares.

Site layout elements The plant elements are areas of green grass and a group of trees and palms distributed along the movement paths. As for the site coordination elements, interlocks were used in the spaces between the buildings, which contributed to lowering the temperature, and the streets were completely made of asphalt. Lighting poles programmed to light up as soon as the sun sets and turn off during the day to save electricity were used, and shaded seating areas spread throughout the site, economical in materials, to reduce the cost (photo 3).

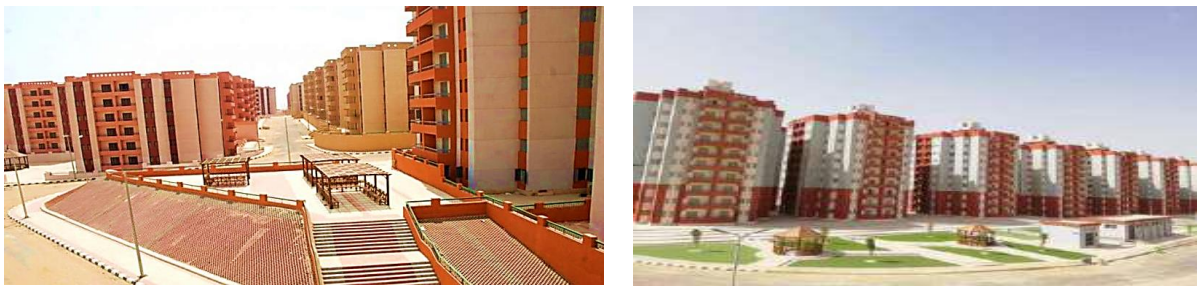

Photo 3: Elements of site coordination and green areas in the Asmarat neighborhood.

Connectivity within the city and surrounding areas The main entrance is located on the western side, and it comes from the Nasr City neighborhood, passing through Street 9 in the Mokattam neighborhood, and then passing through the service artery from the western side, where the main entrance is. There are two entrances to the neighborhood that lead to the service artery, and the public transport bus line is specified from the main entrance of the first phase through the second phase. It ends at the public bus stop on the border of the neighborhood from the southeastern side. It is a unified, two-way road for entry and exit from the neighborhood.(عبد الله، مهدي، وسعودي، 2020).

Parking areas There are plenty of parking spaces available on all the main streets in the neighborhood.

Evaluating the environmental dimension of the project.

Environmentally efficient site selection The city is located within the Mokattam neighborhood, and although it is located in the center of Cairo, which is known for its high rate of environmental pollution, it is considered less polluted due to its higher level than the rest of the city, as it begins with a 60 m contour line and then increases until it reaches 240 m above sea level (Wikipedia website, 2020). The rate of environmental pollution is almost non-existent (Al-

Majalla Al-Aqaria, 2018), and the site is characterized by a moderate climate due to its high level, which makes its temperature lower than other areas in Cairo (2022), (uvisne real state). Environmental suitability of the urban configuration of the site.

Preserving the natural environment The plan aimed to preserve the natural levels of the project land, and the general site was designed so that the buildings appear slowly according to the natural levels of the land, due to the designer's respect for the surface topography and the natural gradient in the earth's surface (Photo 4).

Photo 3: Respect the layout of the topography and nature.

Unit routing The orientation of the residential unit varies according to its location in the neighborhood and the degree of inclination of the building. We find the orientation of the bedrooms, services, and reception hall different in all directions, according to the orientation of the building and its position within the land. (عبد الله، مهدي، وسعودي 2020)

Street network and its offers The width of the streets surrounding the project is 30 meters, while the main streets within the project are 20 meters, and the secondary streets are 15 meters until they reach the internal streets by 10 meters. All directions are taken as a result of grid and radial planning. Most of them end up in the city's central service locations. The perpendicular grid design increases air movement and receives a large amount of solar radiation. This was addressed by providing wooden awnings throughout the project.

Land use efficiency Construction ratioThe Asmarat project is distinguished by the fact that the construction percentage does not exceed 35%, as the rest of the area was allocated to services, playgrounds, and green spaces (Siddiq, 2019). It was possible to increase the construction percentage, and thus increase the residential units by 50% of the total area of the project In a manner that does not conflict with the requirements included in the National Housing Project. .(2015 حافظ وعبد القوي)

Percentage of green areas Green and open areas are spread throughout the city, and their percentage in the Asmarat 3 neighborhood, for example, reaches about 22.8 acres of the entire area of the neighborhood, with a total of 62 acres. 35% of the total surface area and the per capita share of green areas reaches 3.30 m2 (Ministry of Housing, Utilities, and Urban Communities, 2018). These areas represent an outlet for the population and areas for social communication (Photo 4).

Photo 4: Open and green areas throughout the city.

Environmental suitability of building and residential unit designs; The units' connection to the external spaces on all sides gives them a good opportunity for ventilation and natural lighting. Bathrooms and kitchens are ventilated and lit by expansive service skylights, The facades took on light colors that contribute to reflecting heat, and are compatible with the mountainous nature of the region, The presence of terraces in the residential units that serve as a low-temperature living space and a place for family gatherings, The presence of fractures in the architectural design of the building, which allows forming shadows, Entrances in the middle corridor between buildings help create always shaded areas, The average percentage of openings in the facades of the project buildings is 20%, which gives good ventilation, and it has been designed and implemented, and Shaded windows have a protrusion on the sides of the window opening, to provide shadows over the openings.

Environmental suitability of construction materials and systems; The buildings are structural with a construction system of concrete and red brick, which is the traditional building system prevailing in housing projects for low-income people. The use of traditional materials in construction leads to negative changes that affect the environmental system by not achieving sustainability, as it consumes natural resources and results in the emission of carbon dioxide gas during manufacturing..(الامام 2019)

Waste disposal methods; The local administration seeks to develop the neighborhood and maintain its cleanliness. A contract has been made with a company to collect garbage from homes and transport it to the public dumps of Cairo Governorate. Two other companies are being contracted, and a proposal from one of the civil society associations is being studied to distribute 6 garbage collection bags to apartments weekly, after separating solid materials such as glass and plastic. A card is currently being created for each apartment to collect garbage by weight, in exchange for distributing goods and foodstuffs to encourage citizens not to throw garbage in the streets The city does not have a waste system through which recycling can be done and it level is reduced within the city.(عباس،2018)

Evaluating the social dimensions of the project.

Choose a socially appropriate location The city of Asmarat is located south of Cairo Governorate, between the Ring Road, Al-Nasr Road, Salah Salem Road, the Ramses - Nasr City Extension, Al-Mushir Al-Tantawi Corridor, Al-Shaheed Corridor, and the Highway. (Figure 4). (uvisne real state. 2022).

Figure 4: The distance between the Asmarat neighborhood and the cities from which the population was transferred.

Basic services on site The basic services on the site require walking distances appropriate to their location in the city center (Figure 11). The services are connected to a group of roads that facilitate residents' access to them in a way that achieves spatial justice for residents in obtaining their services, and by the principles of sustainability, relying on pedestrian movement within residential complexes.

Photo 5: Location of services in the central area of the city

Facilities and infrastructure The project has traditional energy sources, natural gas is available on the site there are no alternative energy sources, a good sewage network is available in the neighborhood, and the neighborhood's roads and streets are paved due to the modernity of the site, and a source of pure water is available. In addition, the availability of means of transportation links parts of the city and the rest of the surrounding urban areas, thus achieving high connectivity for the site.(2021 ،اسماعيل) (2018 ،شمس)

Residential designs meet residents' requirements The project presented one residential model with an area of 65 m2, which consists of two rooms, a living room, a bathroom, a kitchen, and a balcony. Hence, there is no diversity in the surfaces, and the lack of the possibility of flexibility and change in the design of the residential units by the change in needs, which increases the feeling of cramped housing for some, especially large families, as well as those who

used to live in spacious homes that they owned in their original homeland. Despite this, most residents agreed that the area of the new housing unit was satisfactory and sufficient for their living.(2019 ،عبد الواحد و عبد المنعم) (شمس،2018) (عبد الله، مهدي، وسعودي، 2020).

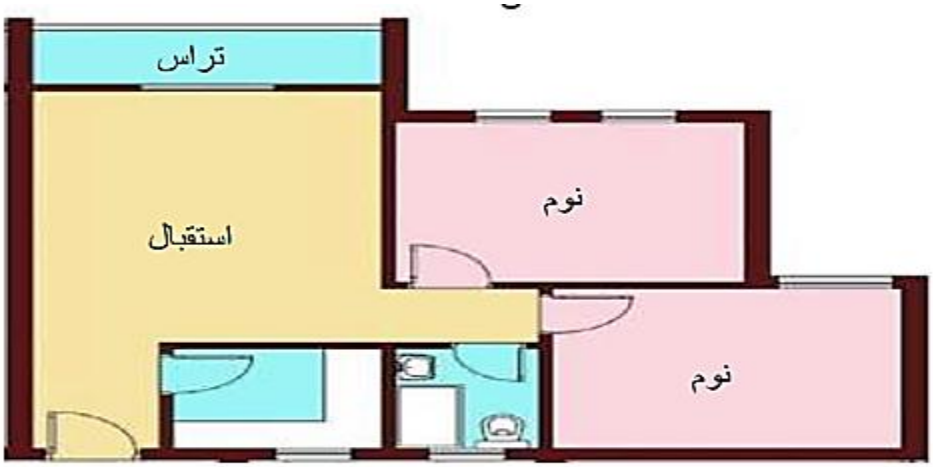

Figure 5: Models of residential units in the Asmarat neighborhood.

Providing some job opportunities in the project The government faced a crisis in providing suitable jobs near the new housing, especially since most of the residents had an unlicensed shop in the areas from which they were transferred, and following their transfer, everyone who had a licensed shop was able to provide job opportunities in new centers that were established through a receipt for obtaining a shop in Asmarat, for industries and encouraging the private and public sectors to establish training centers and qualify the population for the labor market. The opening of a textile center a factory for the production of ready-made clothes, and a factory for the production of rosaries. Citizens are trained in some handicrafts, soft loans are made available to small projects, and exhibitions are available to display the people's products to achieve their economic empowerment within the community. (2019،تمرازم.) (اسماعيل2021).

Civil associations and community initiatives Voluntary development initiatives and works are important partners for the state on the development path, as they are concerned with providing direct or indirect services to satisfy the needs of society. Examples of these associations in Asmarat include the following: Social Solidarity Unit to help those who are unable and provide community initiatives The integrated services complex is divided into three sections: the Women's Hosting and Guidance Center, the Center for Hosting People with Disabilities, and the Center for Hosting Productive Families (Figure 5). The "We Share" initiative for culture, arts, and volunteer work, which is a non-governmental initiative that seeks to advance culture among young people, by providing material and moral support to achieve comprehensive cultural development, the "I Strive" initiative to conduct training workshops for handicrafts, and provide job opportunities and a decent life for citizens, the "Together We Promote" initiative to support new residents and families who have recently joined the Asmarat, and the Asmarat Without Illiteracy initiative for literacy and adult education for children and school dropouts.(2022 ،ابو القاسم) (2022 ،عبد الله م.) (2019 ،سعد)

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Photo 6: Civil associations, nurseries, and libraries in the Asmarat district.

Evaluating the economic dimensions of the project.

1. **Choose an economically appropriate location** The site's connectivity to service areas and economic activity sites and its connection to a major and regional road network have contributed to reducing transportation costs to and from the region, and this is considered appropriate for the type of uses proposed in the project. (حافظ و عبدالقوي 2015)
2. **Economic activities suitable for the population** Economic activities are limited in the Asmarat neighborhood, including a center that sells vegetables and fruits, and a store that sells food products. There are no factories or commercial facilities, which leads to a lack of sufficient job opportunities in the neighborhood, as most residents work outside the neighborhood. (شمس،2018)
3. **Economic efficiency of the project** The cost of construction is recovered from the beneficiaries of the monthly installments as the price of the unit. The first phase also included 240 commercial stores and the second stage was a commercial store that was put up for investment sale by public auction, which contributes to recovering the cost of construction. Maintenance and public utilities expenses are also collected from the residents every month as it is one of the terms of the contract. (2020 Ali & Ali)
4. **Economics of building and construction** Residential buildings in Asmarat are characterized by multiple floors and six apartments are grouped per floor, which leads to savings in construction costs as follows: Multiple floors help provide a larger number of units in the same building area, as the value of the land increases, Providing buildings and ancillary public services, such as schools, kindergartens, commercial markets, etc, and Savings in construction costs due to the presence of common walls between units.
5. **Residential unit prices and their suitability for beneficiaries** Ownership of units is subject to the condition of regular payment of the monthly rental value of 300 pounds per month for thirty years, and most residents reported their inability to pay. In addition to the costs of utilities, services, water, and electricity, the monthly rent, especially after most of them lost their primary jobs as a result of the move, in addition to the monthly payments for utilities, services, and maintenance.
6. **Project support and financing systems** The main challenge for resettlement projects is the availability of land and funds, and the project land was owned by the governorate and the Egyptian Armed Forces. The armed forces ceded their share to the governorate and issued building permits. The financing of the project was a collaborative effort between various donors and development partners, including the Slum Development Fund, the Long Live Egypt Fund, and non-governmental organizations. (Ali&Ali 2022)

Field study Results of a survey of residents' opinions about the project.

A questionnaire form was presented to 40 samples of Israqatani employers in the Asmarat neighborhood, and the diversity in age, educational level, marital status, nature of work, diversity in the slum area from which the case came,

and the settlement areas between the first, second, and third stages of the Asmarat neighborhood were taken into account. The question is about the social characteristics of these families in terms of family size, crowding rate, degree of education, and economic factors in terms of the amount of income, its sources, nature of work, and aspects of family expenditure. The form aims to cover some unavailable data and verify the available information collected in the theoretical part.

Results of questions related to the economic aspects of the population.

The impact of the relocation process on the jobs of residents before the relocation process had a significant impact on the jobs of the residents in their old homes, as most of them depended on working at their place of residence or doing freelance work at home, especially women. The results of the questionnaire summarized that the majority of the population had lost their jobs and had not obtained alternative jobs in the neighborhood. (Figure No. 6) The monthly expenses of families increased, and this is because most of them were living in houses that were taken illegally without a fixed monthly rent, and they were not obligated to pay for electricity expenses because they entered the homes illegally, and some of the homes do not have water connections. After moving to the Asmarat neighborhood, they pay rent and water and electricity bills monthly, so the entire sample reported that expenses increased by 100%.

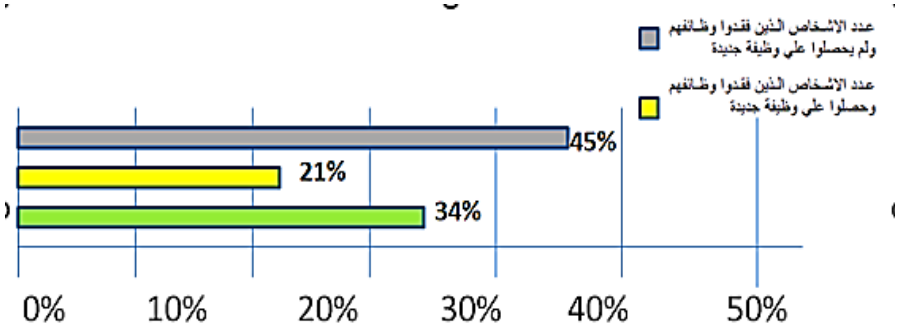

Figure 6: The impact of the transition process on the population's jobs.

The impact of the distance of commercial services from housing on families economically The distance of the central market benefited some of the neighborhood residents from the respondents, and most of them are forced to use transportation to buy their daily needs, which increases the daily transportation expense, especially by not selling all the shops, which may spare the residents the need to travel daily to the central market. Some residents also explained their acceptance of the idea of going to the market on foot, but on the condition that there are shaded paths that make the resident not feel tired until he arrives (Figure 7).

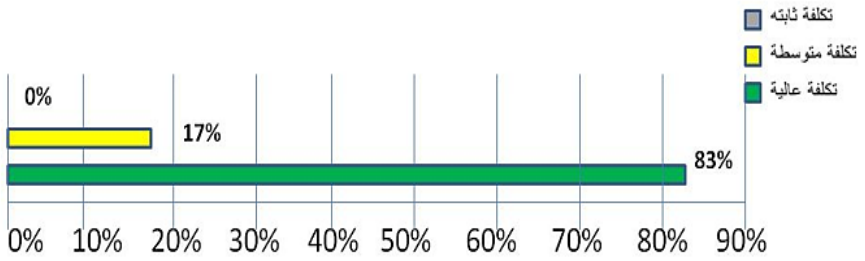

Figure 7: The extent of citizens' satisfaction with internal transportation costs.

The impact of the change in the economic life of residents on the feeling of satisfaction with housing in the Asmarat neighborhood Most of the residents' demands are limited to economic aspects. Some of them demand a reduction in rent, some demand the establishment of nearby markets to save on the cost of moving, and some of them demand a job because they are the sole breadwinner for the family and have become without work. By asking about the extent of the residents' satisfaction with resettlement after the change in their economic circumstances, the results showed an almost equal percentage of dissatisfaction and moderate satisfaction with their residence in the neighborhood (Figure 8).

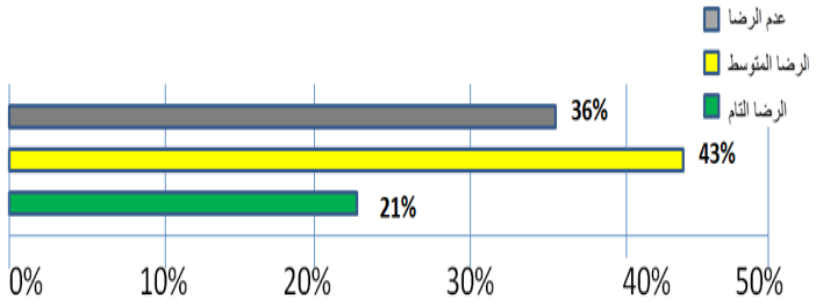

Figure 8: The extent to which they feel satisfied with living in the neighborhood after changing their financial circumstances.

Results of questions related to the economic aspects of the population.

The impact of the moving process on social relations between neighbors after the move The resettlement process was carried out by the army and the Cairo Governorate, and was carried out in stages, with the residents of the area being transferred in batches. Therefore, a large number of old neighboring families were lost by not relocating next to each other, so interaction became less than it was before, and they reported that the interaction rate was average among most families (Figure 9).

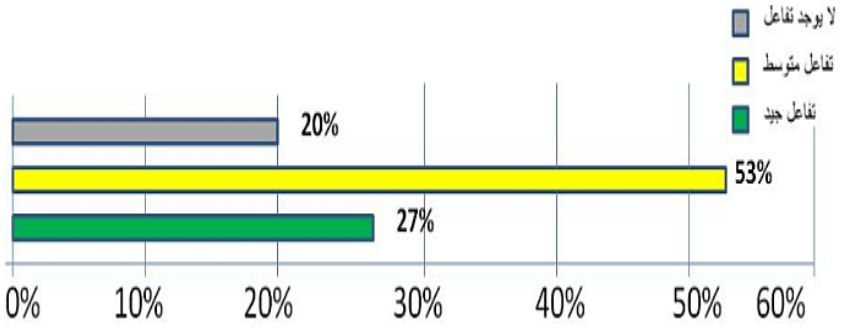

Figure 9: The extent of interaction between residents and each other after the move.

The extent to which families feel safe and secure within the Asmarat neighborhood The planning of the Asmarat neighborhood helped provide an element of security and safety to some extent, due to the absence of invisible areas or narrow streets. Residents reported the presence of security represented by the government and the spread of security vehicles. When asked if it was safe for women to walk at night, all of them confirmed 100% that they could walk around until nine in the evening. Opinions differed about the extent to which it felt safe for children to play in the streets. Some of them felt that the area had a mixture of cultures, so they felt Some of them were worried about going to the street (Figure 10).

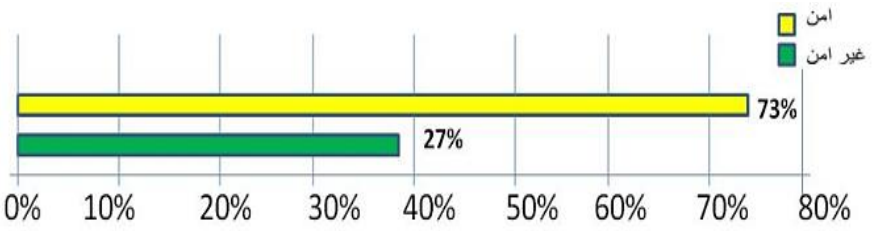

Figure 10: The extent to which children's families feel safe while playing and wandering in the neighborhood streets.

The design of residential units meets the requirements of residents 63% of the sample reported that the size of the housing unit was suitable for them, while 37% of the sample were dissatisfied, as the diversity of family sizes was not taken into account, including those who lived in a family home, and the move to the same building and being with their family did not take into account that. (Figure 11).

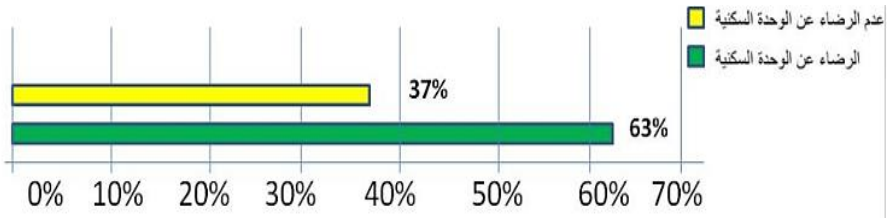

Figure 11: The extent of residents' satisfaction with their stay in the residential unit.

In the extent to which neighborhood residents interact with the outside community 20% of the sample reported that after moving, despite the open streets inside the area, the residents still feel isolated. The questionnaire reported that the presence of gates and fences on the borders of the area and not allowing pedestrians to enter causes the residents to feel isolated from the outside environment (Figure 12).

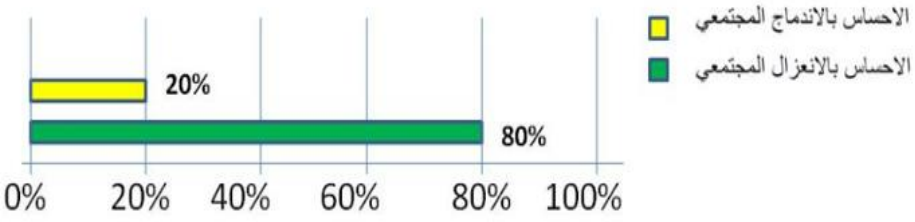

Figure 12: The extent of interaction of neighborhood residents with the outside community.

Community participation It became clear from the questionnaire that 92% of the region's residents did not participate in the development project, but were limited to some social activities to develop the region and provide services, although they are willing to participate in all kinds of ways if they are given the opportunity (Figure 13).

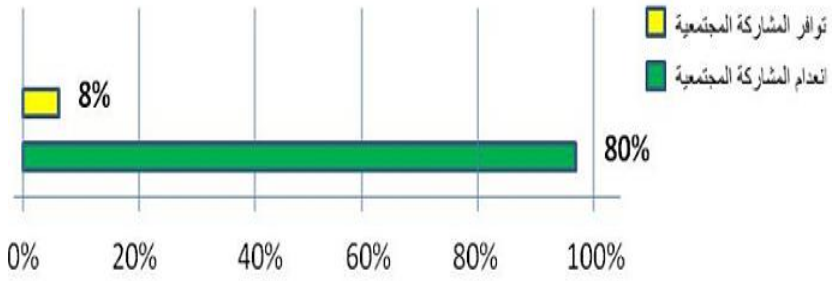

Figure 13: Community participation of residents during project implementation.

Security of tenure The questionnaire showed that the majority of families in the neighborhood lack security of tenure. Only residents moving from the Maspero area have ownership contracts for their units due to the legality of officially owning their units in the Maspero Triangle. As for the rest of the residents who moved, they obtained units under the lease-to-own system, and most of them cannot pay the rental value, which puts them at risk of termination of the contract, and makes them worried about losing the security of possession of the housing unit (Figure 14).

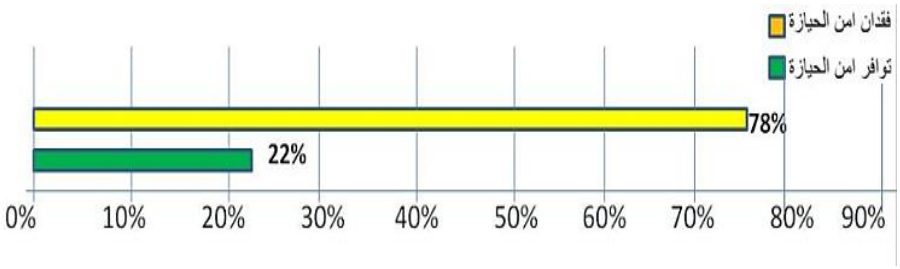

Figure 14: Community participation of residents during project implementation.

Study results.

By evaluating the study of the Asmarat neighborhood project according to the principles of sustainable housing, it is possible to reach a set of results that indicate that the project is considered a new experience in this field, and it has achieved a good result in achieving sustainability indicators by 66% and trying to reach an integrated sustainable housing system. The shortcomings in these dimensions are represented in the following:

The urban dimension The land use index in the region does not represent the real picture, as the shops scheduled to be sold at public auction, which will serve the region commercially, have not been sold. Therefore, this index expresses a theoretical reality that has no relation to reality. We do not find a difference in the urban character from one stage to another, as it is repeated stereotypically without any difference or differentiation of one part from the other. We find residential buildings with one repetitive design, which creates monotony and lacks the possibility of visual distinction. The project took into account the planning principles in designing the urban spaces between the buildings, but there were no seats in them, which led residents to sit on the stairs of the building's entrances, leaving these squares without tangible benefit. Parking spaces are available in abundance, and the low ownership of cars among the categories of beneficiaries of the project was not taken into account, thus directing their surfaces to other uses according to the planning rates.

Environmental dimension The drawback of the planning is the fixed shape of the buildings' horizontal projections and the lack of orientation of each space according to its use, which led to not providing lighting and ventilation to all units in a uniform amount. Also, the perpendicular grid layout of the streets receives a greater amount of solar

radiation, which necessitates the provision of more wooden awnings throughout the project. The structural percentage does not exceed 35%. It was possible to increase it to 50% according to the requirements of the National Housing Project. Traditional materials were used in construction, which caused many negative changes that affected the environmental system. In addition, the project lacks a waste recycling system.

The social aspect The project provided one residential flat with an area of 65 m2. There was no flexibility to change it to suit needs, which affected the rate of crowding in residential units. It also did not take into account the diversity of the shape of families and take into account the resettlement of extended families in one building. Residents reported that the project did not take into account the provision of new job opportunities for residents. There are restrictions on any activities they carry out, whether outside or inside the home, with residents not benefiting from soft loans due to the nature of their work in self-employment. Some residents reported that the central market in the neighborhood is far away, forcing them to use transportation to purchase their needs, which increases families' expenses.

Institutional aspect There are strict monitoring and maintenance bodies for the area, but their role is limited to preventing any infringements or violations, and this contradicts the idea of monitoring and flexibility in making changes that contribute to improving the condition of the residents of the area.

Conclusion.

The research reviewed the extent to which resettlement projects in unsafe areas achieved sustainability indicators through an applied study of the Asmarat neighborhood in Mokattam. The research concluded that their achievement rate reached 66%, that the resettlement projects that are being implemented are primarily concerned with the urban dimension, improving housing and supplying facilities, and that there is no flexibility in the institutional dimension. Instead of prohibiting the existence of any activities practiced from home, the research recommends that they be allowed in the presence of controls and requirements. The study also showed a lack of interest in the environmental dimension. As for the social and economic dimensions, they are not fully taken into account as a result of the lack of involvement of residents in all stages of the project, and the lack of distribution of roles and cooperation among all active parties in the development process, as the non-material negatives resulting from urban deterioration such as unemployment, illiteracy and the spread of crime must be fixed as a priority before repairing housing and supplying facilities. The research recommends the need to establish the rules of community participation at all stages of development

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