IMPROVING INFORMAL AREAS IN GREATER CAIRO
The cases of Ezzbet Al Nasr & Dayer El Nahia
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Results of a case study project 2010
TU Berlin
Urban Management Program
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The growth of informal settlements is a major concern in many cities of the Global South. Therefore, one of urban planning’s biggest challenges is to gain a comprehensive understanding of the complex characteristics of informal growth and livelihoods in informal areas in order to develop integrated and sustainable solutions.

In this regard, the Greater Cairo Metropolitan Region is an extreme case. Almost half of the built-up area is estimated to be informal. Providing shelter for the growing urban population, informal areas have grown for decades as a consequence of the chronic lack of affordable housing. At the same time, informal areas in Greater Cairo demonstrate complex problems e.g. loss of valuable agricultural land, illegal tenure, unsafe building conditions, poverty and a lack of public infrastructure and services. However, it is important to recognise that informal areas also provide valuable livelihoods for their residents as an essential basis for income generation, social networks and community life.

Political decision makers and urban planners are under great pressure to deal with informal areas in a sustainable way in order to integrate them into the city. Finding the right balance between addressing problems while strengthening potentials in an integrated, efficient and sensitive manner is obviously most challenging. An important precondition to developing appropriate approaches is the efficient collaboration between public institutions at all levels combined with intense civil society participation.

The Participatory Development Programme in Urban Areas (PDP), an Egyptian-German development project implemented by the Egyptian Ministry of Economic Development (MoED) as the lead executing agency in cooperation with the German Technical Cooperation (Deutsche Gesellschaft für Technische Zusammenarbeit GmbH, GTZ) and the German Development Bank (KfW Entwicklungsbank), with financial assistance by the German Federal Ministry for Economic Cooperation and Development (BMZ), aims at strengthening capacities of all involved stakeholders and equipping them with the necessary tools and means for successful intervention in informal areas. In order to achieve this, GTZ works on three levels (national, regional and local) to provide support for policy reform, strategy formulation as well as implementation.

Within the framework of the PDP, seventeen international participants of the post-graduate Urban Management Master Programme (class 2009/2010) of the Technical University of Berlin (TU Berlin) were invited by GTZ to Cairo from April 27 - May 6, 2010 and given the great opportunity to work as young expert consultants. Collectively, the students possess multidisciplinary professional backgrounds (e.g. university degrees in architecture, urban planning, environmental management, the social
sciences, etc.) with substantial work experience in public and private sector institutions (including GTZ) in their home countries in Asia, Latin America, Africa and Europe. The interdisciplinary expertise provided by the young experts and their supervising teaching assistants offers a valuable basis for critical reflections and inputs on the current discussion about informal areas in Greater Cairo and especially the activities of the PDP in the urban sector.

The task, set up in the Terms of Reference, was twofold. On a conceptual level, the categorisation approach developed by GTZ - linking different types of informal areas to respective strategies for intervention - was to be critically reflected. On a more practical level, two informal areas (Dayer El Nahia in the Governorate of Giza / Ezzbet Al Nasr in the Governorate of Cairo) were selected for field research and for the development of concrete intervention measures with practical solutions.

Prior to the stay in Cairo, an intense preparation phase was conducted in Berlin. The different sessions comprised research, literature review and critical discussion of current scientific debates regarding informality and intervention strategies. Furthermore, the urbanisation processes and mechanisms affecting informality in Egypt and Cairo were studied and debated, followed by a critical assessment of the already existing tools of categorisation and intervention activities.

During the first part of the stay in Cairo, the group of young experts studied the variety of different types of informal areas in the Governorates of Cairo and Giza. The findings led to a critical reflection of the categorisation approach and respective recommendations. During the second part, the group was divided to be able to conduct fieldwork in the two selected areas. Based on the findings of action research and the application of various qualitative methods, strategies for intervention including concrete measures for implementation were defined. The outcome of this work was successfully presented to and discussed with the Governor of Giza and the Vice Governor of Cairo, PDP staff members as well as local partners in a final event on May 6, 2010.

As experience has shown, –when compared to long-term experienced senior advisers– the involvement of young experts in challenging contexts such as Greater Cairo provides several windows of opportunity to discuss issues in a more open manner. Perceptions and acceptance tend to differ in these working contexts providing for unconventional thinking and innovative action. The benefit of this opportunity has been developed throughout the long standing cooperation between GTZ and the postgraduate Urban Management Master Programme at the Technical University of Berlin dating back to 2003. In the past, fieldwork has included a case study on informal settlements in Aleppo, Syria with the GTZ, its counterparts from the municipality of Aleppo and
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the University of Aleppo in 2007, a study and strategic concept-building visit on sustainable regional tourism in Montenegro in 2008 upon the invitation of GTZ in collaboration with the University of Podgorica, as well as a study and consultancy on good urban governance in four secondary cities in Bangladesh with GTZ in 2009. These experiences have shown that practical field training combined with intense on-site project work enables a vivid exchange of ideas and appropriate strategies between students and local project partners – a win-win situation on both sides.

However, the fruitful cooperation between GTZ and TU Berlin extends well beyond fieldwork. The Urban Management Master Programme benefits from the regular involvement of GTZ staff members in teaching courses and from the nomination of a GTZ senior expert, Prof. Günter Meinert, as honorary professor especially assigned to the programme. Furthermore, over the years, numerous short-term training courses on different topics in the field of urban management have been conducted for staff members of GTZ projects and experts from their local counterparts. These included short courses in 2003 and 2004 on ‘Eco City Management’, ‘Hazardous Waste Management’ and ‘Sustainable Urban Conservation’ for experts from China as well as training programmes in 2004 and 2008 on ‘Sustainable Urban Conservation’ and ‘Sustainable Urban Planning’ for experts from Syria. In 2009, a summer school for government and administration officials from Bangladesh in the field of ‘Good Urban Governance’ was realised. GTZ’s strong involvement in the Urban Management Programme has resulted in the successful recruitment of graduates as high-profile staff members and interns on GTZ projects and at CIM posts worldwide. The track record is impressive. To date, UM graduates are active as: urban planner working with CIM in Ethiopia, eco-sanitation consultant working for GTZ India, advisor on Urban Governance with GTZ Bangladesh, head of the Governmental Urban Management Training Unit in Kuala Lumpur/Malaysia and member of the GTZ-team in Palestine/Jordan. Furthermore, the GTZ has made an irreversible impact on all those who returned to work as experts in urban development in their home country.

In this publication we present the results of the two week field trip in Cairo. The first chapter outlines the current academic discourse on the most relevant topics for this task: Informality, Intervention and Participation. The second chapter introduces Greater Cairo and the mechanisms affecting informal areas as well as government responses. Furthermore, the context of the PDP is analysed followed by a reflection on the categorisation approach and the proposal of qualitative complementation. The third and fourth chapters document the two case studies and provide findings from fieldwork as well as the intervention proposals. This is followed by a guest comment by Hassan El Mouelhi on cultural aspects in informal settlements. This report aims for
extensive dissemination and integration in follow-up activities through the PDP contributing to awareness-raising on relevant issues and enhancing public awareness for the project. We are looking forward to continuing to discuss our ideas and carrying on the interesting debates we had with the partners from GTZ and their counterparts in the Governorates of Cairo and Giza. A great deal of thanks is owed to Marion Fischer, Regina Kipper, Dr. Khaled M. Abdelhalim, Khalil F. Shaat, Amr Lashin and the entire GTZ staff for the time and effort they put into making this project a success. Furthermore, we would like to express our thanks to the Governor of Cairo, Prof. Dr. Abdel-Azim Morsi Wazir and the Governor of Giza, General Engineer Sayed Abdel-Aziz Shehata and their staff at the Urban Upgrading Units for their cooperation and reflections. Further thanks go to our cultural translator Hassan El Mouelhi for his great support and guidance throughout the whole process. A special thanks goes to the residents of the two informal areas Dayer El Nahia and Ezzbet Al Nasr who received us with so much hospitality and openness – with our ideas we hope to contribute to an improvement of your communities.

Josefine Fokdal
Carsten Zehner
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1 THEORETICAL BACKGROUND
1 Theoretical Background

1.1 Informality

1.1.1 Different Approaches to Understand Informality

“The informality discourse is large, vibrant and expanding fast. But there is a certain conceptual incoherence to the literature. New definitions compete with old definitions leading to a plethora of alternative conceptualisations” (Kanbur 2009, p. 9)

The lack of consensus on the definition of informality is evident in the contemporary discourse. It is incumbent upon development practitioners to recognise the contradictions inherent in this subject, and to approach intervention in a manner which is appropriately pragmatic and flexible. This section briefly introduces the contrasting perspectives on informality.

Informality from a Political Perspective

Political decisions depend on the nature and interest of the state and its social and economic objectives. As a result it reflects the distribution of power. Soliman (2004) argues that the major consequences of the global restructuring in developing countries - integration/disintegration, social exclusion and informality - are closely linked to the aspect of power. According to Kanbur (2009) informality is a matter of enforcement or non-enforcement by the state by means of regulations. He argues that a single definition distinguishing between the formal and the informal obscures the existence of varying levels of informality: the intensity of the enforcement has to do with the permeability of informal actions. Hence, he proposes four levels of informality (Kanbur 2009:5):

• Stay within the ambit of the regulation and comply.
• Stay within the ambit of the regulation but not comply.
• Adjust activity to move out of the ambit of the regulation.
• Outside the ambit of the regulation in the first place, so no need to adjust.

Kanbur (2009) further argues that formality and informality cannot be approached or defined without taking into account the relations to economic activity in the presence of regulations.

Informality from an Economic Perspective

Altvater (2004) argues that the informal economic sector is a consequence of economic policies. Linking the process of industrial revolution to technical evolution and transfer of capital he argues that the trend of industrialisation has been accelerated in the last two decades by the emergence of ICT’s - Information and Communication Technologies – that allow financial capital to flow globally in real-time, forcing enormous changes in the worldwide production system – delocalisation – and an incontestable instability in national and local economies (Altvater, 2004). Specifically, the local labour markets are influenced and become more unpredictable and insecure, eventually compelling economic agents to slide into the informal economy (or sector), and therefore accentuating the dynamic of socio-economic inclusion and exclusion - social polarisation. Thus, he establishes a connection between the phenomenon of informality and aspects of globalisation and urbanisation.

Informality as a Way of Life

The connection between urbanisation, globalisation (liberalisation) and informality is further defined by Roy and Alsayyad (2004). By decoupling the definition of informality from the economic sector, they take the argument one step further than Altvater, arguing that informality is a ‘new way of life’ - a mode of urban existence. Recognising that informality can be a survival option in the cities, they argue that in many cases it is a personal decision to adopt behaviours associated with informality. The production of informal space is also an expression of power; the informal economy is deregulated rather than unregulated. Thus, informality can be seen as a different and sometimes organised way of living.
1.2 Dealing with Informal Areas

Informal areas\(^1\) (IAs) can to a large extent be seen as a consequence of a lack of planning, especially in terms of service provision for low-income classes. During the 1970s, informal areas were recognised as a durable structural phenomenon that demanded appropriate strategies, such as, for instance, enabling policies, resettlement, self-help, and in-situ upgrading. This new approach was fostered by increased awareness at an international level of the right to housing and protection against negligence or forced eviction. Additionally, it is related to the definition of new national and local political agendas in a context of an emergent civil society, as well as processes of democratisation and decentralisation (UN-Habitat, 2003). In the following paragraphs the different strategies mentioned above will be described briefly (see UN-Habitat, 2003).

**Enabling** policies are based on the principles of subsidies and involve the dwellers of IAs in the construction processes of improvement, and also in the design and decision-making processes that establish priorities for action and support for implementation within an IA. The enabling policies approach was developed to coordinate community mobilisation and organisation, though communities are very complex and rarely united. Thus, while there are many examples of effective and successful enabling strategies, the process is time consuming and challenging.

**Resettlement** has been associated with virtually all types of approaches. It embraces a wide range of strategies, though all are based on perceptions of enhancing the use of the land and property upon which IAs are located. At best, relocation is undertaken with the agreement and cooperation of the slum households involved, but the housing conditions of the poor have not improved significantly. In most cases, the numbers of urban dwellers living in IAs remains stable or is increasing, except in countries that combine large-scale upgrading and tenure regularisation programmes with the production of serviced sites and low-cost housing programmes.

**Self-help** and **upgrading** consists of physical, social, economic, organisational and environmental improvements undertaken cooperatively and locally among citizens, community groups, businesses and local authorities. These improvements focus on three main areas of concern:
- Provision of basic urban services
- Provision of secure tenure for slum dwellers and the implementation of innovative practices regarding access to land
- Innovative access to credit, adapted to the economic profile, needs and requirements of IA dwellers and communities.

Applying this strategy in principal implies that the dwellers of a certain IA can stay in the same location during and after the upgrading process.

Facing several obstacles, one major challenge by applying intervention strategies is the overlapping of actors and roles resulting from a process of gathering partners without proper management. As a response to the lack of management, the most prominent concept by United Nations emphasises the key aspect “good governance” to properly apply and operate the different approaches of improvement of IAs (UN, 2005 p.45). Further, it is argued that the causes of IA should be investigated and that actions providing sustainable interventions should be taken, for example by incorporating means of participation.

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1. Informal areas will be defined in the context of Cairo, Egypt in chapter 2.
1.3 Participation - Objectives and Mechanisms

Community participation is a central concept in frameworks for interventions in IAs. However, participation is a very broad concept with many dimensions. In the context of this work, the discussion of citizen participation in public policy formulation is approached from three different angles: (a) empowerment, (b) the relationship between community input and process efficiency and, finally, (c) individual motivations and variations of civic engagement. The literature exploring risks and limitations of participatory processes will also be taken into account at the end of this section.

The literature on community participation in policy formulation places a lot of emphasis on the first dimension (a) above. According to Chambers (cited in Piffero 2009, p.129) the idea of participation is to involve the beneficiaries of development projects in the decision-making process, putting them in the “position to influence and share control over the process, the strategic choices, and the allocation of resources associated in development projects and programs.” With the community involved in the decision-making process, and its implementation, people not only feel the impacts of the project but they also feel like a “full-fledged citizen” (Abdelhalim 2009, p.125). Arnstein (1969, p.216) supports Abdelhalim by stating that citizen participation is an essential part of individual exercise of citizenship because it is a mechanism to include all those excluded from the political and economic structure in the decision-making process. Expanding Chamber’s idea, Arnstein states that a participatory approach must enable citizens to influence the outcomes of the process, which includes:
- How information is shared
- The goal definition
- Tax resources allocation
- The operation of programmes
- The decision about other benefits, as for example, patronage and contracts.

In terms of planning, Arnstein, for instance, associates distinct levels of participation to different levels of citizen power. Based on a hierarchy of participation and non-participation types, Arnstein (1969, pp.217-223) proposes a typology of eight levels of participation arranged as a ladder. Each rung of the ladder corresponds to the extent of citizen’s power in determining the end product. Although citizen influence can increase or decrease during the project, there is empowerment only when they achieve the top-three rungs of the ladder, so-called Citizen Power Levels: Partnership, Delegated Power and Citizen Control.

![Eight Rungs on the Ladder of Citizen Participation](source: Arnstein 1969)

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2 For a comprehensive reading about PDP approach on participatory ideas and how they are applied in their different projects and programs, see Abdelhalim (2009).
According to Arnstein, on the Partnership level, the development of plans and responsibilities are shared among all stakeholders, represented in committees. Its effectiveness increases as long as the community has an organised power-base, financial resources to pay its leaders and financial resources to hire its own technical staff. The next rung - Delegated Power - occurs when citizens have dominant decision-making authority. In this stage of the participatory ladder, community organisations are accountable for the project’s budget and the bargaining process starts from the traditional power holders, rather than from the citizens. The highest rung is Citizen Control, where citizens are in charge of project management and policy formulation.

The second dimension poses the dilemma between levels of participation and efficiency. Goethert and Hamdi (1997, p.14) point to different levels of participation, which range from “None, Indirect, Consultative, Share Control to Full Control” and how they affect policy-making processes. The authors argue that there is a trade-off between participation and efficiency, and for this reason, they do not consider the adoption of extreme levels of participation as being convenient. Less participation entails faster and simpler development projects but decreasing community input while more participation represents less efficiency but higher levels of community input. For that reason, Goethert and Hamdi (1997) suggest that community participation should vary according to the phase of the project. For example, in a policy-orientated phase of the project, high community participation is welcome; in a stage with a more technical-orientation approach, less participation may be beneficial.

The third dimension, civic engagement and individual motivations, involves participation in distinct types of social organisations and forms of collective action. Renno (2003, pp.72-73) lists a number of structures for citizen engagement: first there are National Level Associations, as for example, political parties and syndicates; second, participation in local social groups, also called “mediating structures”, which include families, churches, voluntary associations, among others. The third mode is engagement in the so-called new social movements, such as environmental movements, which differ from the traditional social movements in the following aspects: recruitment forms, members’ profile, strategies and resources availability. A fourth form of collective action is political protest, such as participation in protest marches and the occupation of public and private properties. Renno shows evidences that both the political-institutional framework as well as the stock of social capital in society affect the degree of engagement with the aforementioned organisations.

Finally, despite the wide literature regarding the benefits of participatory methodologies, some authors point out the participatory process’ risks. Piffero (2009), for example, refers to a kind of “obsession” with the local approach on the micro-level which could result in a tendency to ignore the macro-level dynamics like clash-es-of-power and political approaches, among others. Likewise, Goethert (2005, p.15) argues that there is a risk of stigmatising low-income social classes to the concept of inclusion and participation. In the words of the author, “if perceived as only involving the poor, [participa-tion] limits the power and potentially marginalises the concept.”
2 CONTEXT
2.1 Introduction to Greater Cairo Metropolitan Region (GCMR), Egypt

To gain a better understanding of the actual context of Egypt, specifically Cairo, this chapter briefly introduces the relevant geographical, political and economic aspects, followed by an in-depth description of the evolution of the informal areas in GCMR and the different definitions and typologies. Finally, some reflections on the existing categorisation framework will be presented.

2.1.1 Geographical Aspects

Greater Cairo Metropolitan Region (GCMR) is located in northern Egypt (known as Lower Egypt), 165 kilometres (100mi) South of the Mediterranean Sea, 120 kilometres (75mi) west of the Suez Canal, South of the Delta in the Nile basin (Wolframapha 2010). It covers an area of 1709 square kilometres (Demographia 2009). The region is characterised by the Moqattam hills to the east and south east and the desert areas extending to the west and east (Roba 2002, p.159).

Until 2008, GCMR consisted of 3 governorates; Cairo, Qaliubeiya in the North, and the Giza governorate (Attia 1999, p.45-46). On 17 April 2008, Helwan and the Sixth of October governorates were separated by a presidential decree to ease the burden placed on Cairo and Giza, especially in terms of density and administration (Leila 2008).

2.1.2 Political Context

The political regime has been described by some scholars as a ‘democracy from above’ (Ferrie, 2003). Although nominally classified as a representative democracy, governance is characterised by highly centralised and personalised decision-making (Fischer and Kipper, 2009). Meaningful political participation is stifled by a constitutional design which has guaranteed single-candidate elections for over 50 years, thus ensuring near-absolute control by the ruling National Democratic Party. Widespread scepticism towards elections and democracy has resulted in relatively low participation levels. National political dynamics have been driven by Hosni Mubarak (Owen, 2003), who has reigned as president since 1981. The policy of negligence towards informal development processes has offered political benefits as well as perceived security challenges for the government (Alsayyad 1993, p.398). Despite the need to be represented at a local government level, the informal areas are reluctant to seek recognition given the illegal nature of these settlements (Alsayyad 1993, p.38).

Between 1993 and 2002, there were public efforts to upgrade the informal areas with investment of 2.3 billion EGP nationwide, and 1.2 billion EGP for the GCMR, but those were mainly focused on physical infrastructures, not including investments in human, economic, and cultural development (PDP, 2010d). Moreover, the government’s neoliberal policies and declining resource allocation to the informal areas have helped cultivate self-organisation and innovation at the local level.
2.1.3 Economic Context

The Greater Cairo Metropolitan Region (GCMR) continues to benefit from its oil-rich neighbours’ high economic growth rates through the provision of specialist services and skilled labour. As one of the most cosmopolitan cities in the Middle East, GCMR is seen as a strategic connection between both the East and West, and the North and South (El Araby, 2002). GCMR generates two-thirds of the country’s GNP. Industrialisation revolved primarily around textiles and food processing, but also iron and steel production. Today, the majority of Greater Cairo’s workforce is employed in the service sector (finance and commerce) as well as in the government. The informal sector absorbs over half of the city’s labour force and informal employment is expanding faster than formal employment. Informal investment in residential real estate of the GCMR was valued at $36 billion in 2000, representing 39% of total (Sims, 2003). In the 1990s, after privatisation, economic reform and liberalisation of the market mechanisms, the region tracked the growth of the national economy, which expanded in real terms at an annual average of 6.2% between 1994 and 1997. The impressive growth rates and the fact that the GCMR produces 45% of the national GDP, has lead the IMF to recognised Egypt as a ‘model’ for other developing countries to follow (World Bank 2008).

2.2 Urbanisation in GCMR and the Development of Informal Areas

2.2.1 Emergence of the Informal Areas in GCMR

The GCMR experienced an intensive urbanisation process in the last part of the 20th century (Sims 2003; Stewart et al. 2004). According to Kamel (2004), the urbanisation process before the 1980s can be divided into three phases, including an ‘Islamic’ period (-1850), a ‘European’ period (1850 – 1950), and the contemporary period (1950 – 1980s) (Kamel cited in Stewart et al., 2004). For the purpose of this report, the following is an elaboration of the urbanisation process during the contemporary period up till the present time.

During the contemporary urbanisation period, new districts emerged as a consequence of the extreme population growth (rural to urban migration) that started in the 1960s, partly motivated by major political changes and partly as a consequence of World War II (Sims 2003; El-Batran M. and Arandel C. 1998).

Between 1947 and 1996, GC had a constant growth rate (Sims 2003; Sims & Séjourné 2000 in GTZ 2010), nevertheless the growth rate from 1986 to 1996 declined from 2.99% to 1.99%. As illustrated in Fig. 3, the growth rate of the population in 2003 was 1.9% while the growth rate of the labour force was about 3% (Sims, 2003). As a response to the constant population growth in the 1960s, the government addressed two
main aspects: establishing laws to control the rent, and the involvement of low cost public housing construction built in the outskirts of Cairo. However, the process of urban expansion was mainly led by private actors and developed mostly outside of, and without regard for, state building laws. As a consequence, land subdivision practices appeared as a major activity, and informal areas such as Isabil Antar and Manshiet Nasser (one of the biggest informal areas in GC) were established (Abdelhalim, 2010).

In 1965 the city’s first Master Plan created industrial poles at Helwan in the south, Shubra Al Kheima in the north and Imbaba-Giza in the west of GC. All of these settlements attracted new inhabitants resulting in unexpected demographic growth (El Batran & Arandel, 1998). In order to limit the physical growth of the city, the second Master Plan for Cairo was generated in 1970. It, aimed to solve transportation problems by creating a ring-road, to contain the city and control its future expansion. However, these plans did not achieve the expected results. The uncontrolled urban development resulted in a lack of service provision, especially in terms of infrastructure systems3.

In addition, this period was marked by the wars of 1967 and 1973, when the public budget was directed to war actions, halting formal urban development and resulting in the appearance of new informal settlements (Sims, 2003).

With the introduction of the INFITAH policy4 it became possible for Egyptian workers to migrate to the neighbouring states in the Gulf area. The newly returned wealth was invested in land and housing in attractive urban regions in and around Greater Cairo (Soliman, 2004). This made the subdivision of agricultural land for housing increasingly profitable (Sims, ibid). There is no reliable data about the areas lost during this period but estimates range from 8,000 ha per year (Parker and Colye, 1981) to 40,000 ha per year (World Bank, 1990). The most reliable figure perhaps is 16,000 to 20,000 ha annually (Hamdan, 1983 and Ghabour and Ayyad, 1990).

Government actions toward housing were exclusively aimed at low income groups while the private sector offered middle and upper class housing units that were not affordable for the majority (Soliman, 2004). According to the World Bank (1981) during 1966 and 1976, 77% of all constructed units were built informally (in El Batran, 1998). This was caused by a lack of affordable housing units for the poor population, leaving them with the only alternative of informal settlements.

During the 1980s the government tried to redefine the urban strategy and invested in urban projects with only very limited success. However, this period is characterised by a massive urbanisation process that exceeded the capacity of the new satellite cities (El Batran & Arandel, ibid). New towns were planned but the houses were still unaffordable for the majority of the population.

A 1980 revision of the master plan attempted to redirect and organise the growth of the city. To achieve this goal, a certain number of objectives were set: the protection of agricultural land, the improvement of transportation efficiency, the encouragement of the de-concentration of population in the GCMR and the organisation of the urban fabric to improve access to public services (El Batran & Arandel, ibid).

The 1990s was a crucial period for the Egyptians who significantly suffered from the earthquake in 1992. New temporary settlements emerged on the periphery of Greater Cairo to house the affected people. These informal areas were not

---

3. 90% of households receive electricity, while 70% benefit from sewerage services. Other issues include air pollution and irregular water supply, inadequate public space (Cairo has only around 0.4 square metres of open space per inhabitant), road maintenance and garbage collection.

4. Starting in 1974, the Egyptian economy was progressively opened up (Infitah) and Egyptians were allowed to travel freely, generating a lot of overseas work, which coincided with the increase in the price of oil. It resulted in creating an unprecedented cash-based economic boom that accelerated informal settlements. (Source: Sims, 2003)
Improving Informal Areas in Greater Cairo

Map 02 Urbanisation Process in GCMR
Source: PDP Cairo
planned, but informally consolidated themselves as part of the city (El Batran & Arandel, *ibid*). It was just one year later in 1993, when the Massive Programme for Upgrading Settlements was initiated with a budget allocation of 106 million EGP (Soliman, 2004).

In summary, the emergence of the informal areas has been closely associated with government policies and their limitations. As a consequence to the rapid urban expansion, high population growth rates, and the government's failure to address the housing demand, informal areas have been developing since the mid 1960s (Sims, 2003). In 2005 it was estimated that the informal areas provide shelter for 6.2 million inhabitants in Egypt, and 59% of these are located in GCMR (Abdelhalim, 2010, p.3).

### 2.2.2 Definitions, Perceptions and Typologies of the Informal Areas in GCMR

**Definitions of the Informal Areas in GCMR**

The coexistence of many discourses that define informal areas in a global context was addressed in the first chapter of the theoretical background. In order to formulate policies for intervention, clear definitions for identification and assessment of local characteristics of the informal areas in a specific context are needed. However, in the context of Greater Cairo different definitions exist for the informal areas established by the various political institutions involved. Thus, this section examines the existing definitions from different perspectives.

According to the reference from GOPP, there are two main criteria defining the informal areas: legal status and level of deterioration. Regarding legal status, an area that has been developed on unplanned land is considered informal. Regarding deterioration, physical degradation is not the only key issue.

Environmental and social aspects, lack of basic services and infrastructure are also taken into consideration. (GTZ, 2010)

According to the new building and planning law (no. 119), however, there are two definitions of the informal areas, comprising only physical factors: unplanned areas and redevelopment areas. The former refers to the areas that were developed without a detailed plan on privately-owned agricultural land, and are consolidated over time by infrastructure and services. The latter refers to unsafe areas that need to be partially or completely redeveloped (GTZ, 2010).

In the context of the Participatory Development Programme (PDP), a definition of informal areas has been established relating legal status with physical condition (Fig. 4). Three of the four categories are considered as informal areas: 1) legal but deteriorated structures, such as old inner-city houses, 2) structures that are illegally built but are in acceptable physical condition with a lack of basic services and infrastructure and 3) illegal and deteriorated structures considered unsafe (Abdelhalim, 2010).

![Classification of the Informal Areas](image)

Fig. 04 Classification of the Informal Areas

Source: Abdelhalim, 2010

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**Excurs on the Perceptions on the Informal Areas in GCMR**

From the citizens’ perspective, there are two different points-of-view. There are unofficial local terms referring to the informal areas used by citizens living outside the informal areas. “Shaabi” describes the working-class neighbourhood and “Baladi” describes the poorer inhabitants who have mostly migrated from rural regions in southern Egypt (Sims, 2003). These terms simply represent the clear distinction between the divisions of GC society, revealing the concept of “them and us” (Safey El Deen and El Mouelhi, 2009).

So far, little has been known about the perspective of the informal areas’ residents. The interviews with local residents in Manshiet Nasser (Sims, 2003) reveal that what people need is more than just better housing conditions. Overall socio-environmental change is more important for them and becoming a member of the society through proper education, medical care and job opportunities is essential.

**Typologies of the Informal Areas in GCMR**

In order to design appropriate intervention strategies for informal areas in GCMR, it is essential to clarify the different types of the existing informal areas in detail by formulating typologies. According to Sims (2003), there are three noteworthy parameters for formulating the typologies: 1) **Where** are the informal areas, regarding their location, urban patterns and plot dimensions. The geographical location of the informal settlements is not applicable in this case because it does not define their complex characteristics; 2) **What** and **How** describe the informal areas in detail, regarding the material used in housing construction processes, infrastructure provided, etc.; and 3) **Who** lives in the informal areas.

Sims (2003, pp.4-7) and Soliman (2004, pp.188-201) defined and categorised the informal areas in GCMR in a quantitative way. According to Sims there are four main types of informal areas while Soliman argues that there are only three, but both of them explore a further extension of the two main criteria of legal status and physical condition from the classification by PDP. A comprehensive synthesis of the categorisation typologies, based on Sims’ four different types, provides an overview (See Table 1).

**Government Response to the Informal Areas:**

According to the World Bank (2008), Egypt does not have official urban policies except the one produced by the Ministry of Housing in 1982, but rather a series of national sector policies and an overarching spatial strategy for desert development. The New Towns Policy has dominated both Egypt’s urban development discourse and budgetary allocations since its adoption in 1977 (Sims 2003, p.13). As described in the previous chapters, there has been a large negligence of informal development processes (Alsayadd 1993, p. 398), which has provided political benefits as well as challenges to the government. Although the Egyptian government has attempted to invest public service provisions to mitigate the problems in the informal areas since 1990, deteriorating urban conditions have not only tarnished Cairo’s global aspirations, but have even been associated with the rise in political Islam in recent years.

These aspects, among others, might then be the motivation for designing a plan such as the forthcoming Strategic Urban Development Plan (SUDP) for GCMR, a joint initiative of General Organisation for Physical Planning (GOPP), UNDP, UN-HABITAT, JICA and the World Bank. With an estimated budget of 3,500,000 USD (most of it funded by the Egyptian government) within the timeframe of 2008 to 2011, it aims to guide sustainable social-economic

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6 Massive public resources and the State apparatus have been committed to shifting urban populations and economic activities to desert areas in Egypt. The national policy of attenuating concentrated urban population growth, named as “New Town” policy, invested in creating an Industrial base outside the Nile Valley and attracting public and private investments to the region. This strategy failed in attracting population to the desert areas. Even worse, it generated unbalanced financial resources allocation: over-relying on State resources and budgetary commitments, the inexistence of recovery cost mechanisms contributed to make it sustainable.
development and to affirm the city’s position as first capital within the Middle East. The plan includes short-term objectives (such as competitiveness through proper planning and institutional reform). Furthermore, it aims to pinpoint the city’s competitive clusters, thereby redefining the region’s economic profile. The plan also aims at strengthening linkages and integration between the consolidated urban areas and NUC, arguing for the necessity to access labour market pockets in the white-collar new towns.

The SUDP is evolving on seven different levels closely related to the above mentioned challenges. First of all, it seeks to upgrade the informal areas through action plans and to prevent their expansion by creating belts of new planned areas around them. Secondly, Egypt’s political centre will be relocated to a new built-up area in Cairo’s outskirts, in order to alleviate infrastructure and investment pressure on the city centre. The plan also aims to relocate heavily polluting land-uses outside the inner city areas, thereby bringing together labour force and facilities, but also attempting to diminish pollution problems. To achieve this aim, the transport and infrastructure regional strategic plans, which are going to be jointly designed with the Japanese International Cooperation Agency (JICA) are needed. In addition to this partial plan, there is a commitment to devising a local economy development strategy focusing on Cairo’s competitive advantages.

Some scholars agree that an improvement regarding the institutional framework is needed for the feasible implementation of SUDP. GC presents a fragmented and incoherent institutional framework (which affects local service delivery), inefficient land policies and management, as well as improper investment allocation in preferential economic clusters. GCMR is not a legal entity, so decisions are made separately by each of the four governorates within the region, and also by the NUCA that runs the New Towns and responds directly to the Ministry of Housing. Adding to this cumbersome institutional map, jurisdictions do not always coincide and, regulations sometimes differ between local, but neighbouring, authorities.

Concern about the consequences of the Cairo 2050 project (a strategic plan for urban modernisation) on the city’s informal areas has also been rising among the international press and the political opposition. Some of the Cairo 2050/ SUDP main axes and real-estate developments are being designed over actual Ashwayat neighbourhoods, such as Manshiat Nasser. Although the Minister of Housing is requesting everyone’s involvement in the project and appealing to the public interest: “It is for everyone and it aims for a better city and country”, it is likely that inhabitants of informal areas will pay the most for Cairo 2050, facing relocation to peri-urban areas and/or improper financial compensation due to their informal status.
## Improving Informal Areas in Greater Cairo

<table>
<thead>
<tr>
<th>Type A</th>
<th>Type B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(Informal settlements on former agricultural land)</strong></td>
<td><strong>(Informal settlements on former desert state land)</strong></td>
</tr>
<tr>
<td>On privately owned formerly agricultural land</td>
<td>On formerly state-owned desert land</td>
</tr>
<tr>
<td><strong>Where</strong></td>
<td><strong>Where</strong></td>
</tr>
<tr>
<td>Emplacement</td>
<td>Agricultural land*</td>
</tr>
<tr>
<td>Layout/Pattern</td>
<td>Irrigation patterns / No open public spaces*</td>
</tr>
<tr>
<td><strong>Plot</strong></td>
<td><strong>Plot</strong></td>
</tr>
<tr>
<td>Small: Average 80m²</td>
<td>First: Quite large plot, then subdivided by owner or pioneer</td>
</tr>
<tr>
<td><strong>How / What</strong></td>
<td><strong>How / What</strong></td>
</tr>
</tbody>
</table>
| Material | • Floor slab construction  
Concrete frame with red brick infill walls | Housing conditions are generally worse than Typology A |
| Process of construction | Incremental (Room by room and floor by floor) | N/A |
| Final product / Use | Frontage 7 to 10.5 metres  
• 100% Plot coverage  
• Some light wells  
• minimum 5 floors | N/A |
| Infrastructure | Basic services: roads, water, electricity. Also religious complex like mosques* | Limited basic services: lack of social and public services* |
| Legal situation / Legal Development process | Completely illegal: No legal paperwork | Completely illegal: No legal paperwork but the legalisation process is quite straightforward |
| Who lives there | • Illiterate females: 40.3%  
• Illiterate males: 28.9%  
• Households living in single room: 18.7%  
• Households without public water supply: 21% | • Illiterate females: 65.9%  
• Illiterate males: 53.4%  
• Households living in single room: 26.5%  
• Households without public water supply: 33.3%  
Only in Manshiet Nasser people work in:  
• 12.4% public sector  
• 16% private sector  
• 65% self-employment |
| Major activities / Income sources | One can find professionals and other kinds of workers, more related to middle class income | Income heterogeneity |
| Examples | Boulaq el Dakrour, Waraq el Hadir, Basatiin, and Embaba | Manshiet Nasser |

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<table>
<thead>
<tr>
<th>Type C</th>
<th>Type D</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Deteriorated historic core)</td>
<td>(Deteriorated urban pockets)</td>
</tr>
<tr>
<td>Neighbourhoods with old, crowded, and deteriorated structures</td>
<td>Dilapidated, multi-storey structures</td>
</tr>
<tr>
<td>Old buildings and medieval urban fabric</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Generally deteriorated buildings</td>
<td>Very precarious type of housing</td>
</tr>
<tr>
<td>N/A</td>
<td>This type represents less than 1 per cent of the urban population. Most are slated for removal or have already been converted into parks.</td>
</tr>
<tr>
<td>From residential spaces to commercial and workshop use</td>
<td>This type represents less than 1 per cent of the urban population. Most are slated for removal or have already been converted into parks.</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>As a result of confusing ownership and/or owner neglect</td>
<td>Due to precarious land tenure situations</td>
</tr>
</tbody>
</table>
| Quite poor families:  
  • Illiterate females: 48.9%  
  • Illiterate males: 36.8%  
  • Households living in single room: 32.7%  
  • Household without public water supply: 32.1% | Very poor families or "Ultra poor families" |
| Income heterogeneity | Income heterogeneity |
| Darb el Ahmar and El Gamalia, and parts of Masr el Qadima, Boulaq Abou Aala, El Khalifa, among others. | Masr el Qadima, Hekr Sakakini in el Wali, and Teraa el Towfiqia in Mataria. |

Table 01 Typology of Informal Areas in Cairo  
2.3 PDP - Participatory Development Programme in Urban Areas

The Participatory Development Programme in Urban Areas (PDP) started as an Egyptian Government’s request to the German Government as part of the official development cooperation between both countries. Likewise, PDP is a project of Egyptian-German development cooperation, implemented by the Egyptian Ministry of Economic Development (MoED), supported by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and the Kreditanstalt für Wiederaufbau (KfW) commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ) (Ibid. 2010a). Amongst a wide number of participating partners aiming at the improvement of informal areas in Greater Cairo are the Governorates of Cairo, Giza, Qalyoubia and Helwan (Kipper and Fischer 2009, p.11).

2.3.1 PDP - Objectives and Approach

The objective of the programme is to support “the public administration and civil society organisations to provide improved and coordinated services to satisfy the basic needs of the poor urban population” (PDP 2010b). According to the PDP (2010d), inducing policy change is necessary in order to ensure an effective upgrading of informal urban areas. However, in order to induce this policy change it is necessary to introduce participatory methods of governance and policy making. Moreover, policy change in urban development also requires decentralisation and subsidies, meaning “that ministries are advised not to intervene in policy implementation themselves, but instead supply local governments with the resources and technical expertise to do so” (PDP 2010d).

According to the programme’s concepts, PDP has a three-level approach, closely related with different phases in order to reach their objectives. The first phase took place between 1998 and 2003. The objective of this phase was to test different models of community participation in various development sectors (social, economic, urban and environmental) in the pilot project areas of Manshiet Nasser and Boulaq El Dakrour (Kipper and Fischer 2009, p.126). The second phase (2004 to 2007) focused on development and the application of participatory development tools in the pilot areas of Manshiet Nasser, Boulaq El Dakrour, Helwan and three settlements in the Governorate of Alexandria (PDP 2010e). The third phase is currently under way (2008 to 2011) and it focuses on capacity building within local administrations in order to facilitate the application of participatory development methods to the pilot areas as models for replication (Ibid. 2010e)7. The project activities take place on three different levels: National, Regional and Local (see Table 2).

2.3.2 PDP Framework of Categorisation and Intervention

The categorisation framework developed and applied by the PDP is used as a model tool to characterise and classify the informal areas in order to derive an appropriate intervention strategy. It is based on a synthesis of several approaches of different public institutions to define the informal areas predominantly using quantitative parameters. The characterisation of the informal areas leads to three categories each linked to one of the following intervention strategies:

A. Upgrading and gradual urban development of large consolidated informal areas, mostly around the city fringes;

B. Radical intervention, including partial demolition and extensive redevelopment of informal enclaves within the city core.

C. Containment of informal encroachment on agricultural land around the edges of urban agglomeration.

(Abdelhalim 2006, p.8)

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7 To have a comprehensive and graphic idea of the phases of the programme go to http://egypt-urban.pdp-gtz.d61.cc, About PDP, Programme Phases.
<table>
<thead>
<tr>
<th>Programme Levels</th>
<th>National Level</th>
<th>Regional Level</th>
<th>Local Level</th>
</tr>
</thead>
</table>
|                  | • Policy advice on decentralisation and the promotion of ministerial support while dealing with informal areas.  
• Developing participatory urban upgrading methods within a comprehensive conceptual framework.  
• Designing capacity development concepts for local administration civil society and the partners involved. | • Creating urban upgrading units for informal areas at governorate level.  
• Supporting governorates in priority areas, implemented by local administration. | • Institutionalising participatory methods through training of local stakeholders.  
• Maintaining Boulaq el Dakrour and Menshiet Nasser as pilot areas for participatory urban development and as showcase areas for local administration. |

Table 02 PDP - Programme Levels  
Source: Participatory Development Programme in Urban Areas, Egypt (PDP 2010e)

Fig. 05 Qualitative Complementation of Categorisation  
Source: UM TU-Berlin
2.3.3 Proposal for Qualitative Complementation

The consideration of exclusively quantitative data tends to present complex and context-specific problems in an over-simplistic, two-dimensional manner. By including a qualitative assessment component to the analytical phase, greater insight may be reached into the inter-linkages that help understand both weaknesses and opportunities in the settlements. Furthermore, the dearth of accurate quantitative data – ubiquitous throughout the developing world – will render a meaningful, multi-dimensional assessment impossible.

Employing an iterative analytical approach (shifting between quantitative and qualitative data) also allows for greater understanding at a finer geographical scale. Accordingly, it may be determined that a settlement should not be dealt with as a singular entity, but rather as a network of interrelated sub-places (or ‘precincts’), each confronting its own set of challenges and offering unique opportunities for the settlement as a whole. A hybrid, tailor-made approach may therefore be a more suitable option, where sub-places within the settlement are identified and categorised for upgrading, redevelopment or containment. The hybrid approach (also known as ‘Urban Acupuncture’) seeks to tackle urban problems in specific ‘pressure points’ that cause positive ripple effects throughout entire communities. Problems may be issue- or area-based, requiring different intervention strategies. It is therefore in contra-distinction to a comprehensive, conclusive, settlement-wide solution. It is ideally suited for urban contexts where resources are limited.

The logic behind the proposed qualitative complementation is inspired by the concept of sustainable livelihoods coined by Rakodi and Lloyd-Jones (2006) which has been adapted for the specific context of informal areas in Greater Cairo. This qualitative approach of understanding is premised on the guiding logic that households construct their livelihoods both on the basis of assets which are available to them and within a broader socio-economic and physical context. Sustainable development thus requires interventions that put these ‘household livelihood assets’ to work in order to generate a flow of income or other benefits for the community (Rakodi and Lloyd-Jones 2006).

For this specific context, the following assets were defined:

![Livelihood Assets Diagram](source)

- **Human capital**: the labour resources available to households, determined by education and health,
- **Social capital**: networks, relationships of trust and reciprocity, and broader systems of governance,
- **Physical capital**: basic infrastructure that enable people to pursue their livelihoods,
- **Financial capital**: savings, credit, remittances and pensions,
- **Natural capital**: natural resources (incl. land, water, air) upon which livelihoods are ultimately dependent.

The assets defined above, inspired by the concept of sustainable livelihoods, were used as a guide for conceptualising the fieldwork in order to obtain a holistic understanding of the informal areas. In the case of Giza, the assets were applied according to a certain area, whereas the assets concerning Cairo were issue-based. The following chapter is a documentation of the fieldwork conducted according to the here proposed categorisation framework.

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8 For more on qualitative data, see section on Multiple Dimensions of Livelihood in Chapters III and IV.
3 CASE STUDY: EZZBET AL NASR, CAIRO
This section presents an intervention strategy for the informal area Ezzbet Al Nasr. The preparatory and analytical process upon which the intervention strategy is based is also documented in this section. Taking into account (a) the objectives set out in the project brief, (b) the contextual specificities related to the study area, and (c) the informational and operational constraints, the study group developed an appropriate methodological approach. The aim is to achieve a high level of impact with a minimum level of intervention. Relying heavily on information generated through participatory methods, the proposals and the analysis from which they derive is a reflection of the residents’ and various stakeholders’ perception of the community needs.

3.1 Context

Ezzbet Al Nasr is an informal settlement situated in the Basateen District, in the South Zone of Cairo Governorate. Located 4 km east of the Nile River and 8 km south of Cairo’s historic centre, the site was planned as an industrial area in Cairo’s outskirts. As Cairo expanded, the settlement became increasingly integrated into the city dynamics and today it is in a strategic position adjacent to several new formal housing developments.

Located in proximity to the south-eastern Ring Road, Ezzbet Al Nasr covers roughly 55 hectares of state-owned land, of which the informal urban fabric covers 30 hectares. The remainder of the land is occupied by a historic Jewish cemetery, a mothballed sewage treatment plant and a 6 hectare paved area that has previously been used as a bus depot and a used car market.

The settlement is bounded by a slaughterhouse to the north, commercial developments to the east and dense residential areas to the south and west. Although the neighbourhood located south of Cairo’s Ring Road belongs officially to Ezzbet Al Nasr, it is not included in this study. Due to a greater physical and social connection to formal residential areas in Maadi (south of Ezzbet Al Nasr), housing standards differ remarkably in that area. Further, this area is well supplied in terms of infrastructure, requiring different intervention approaches.
The next sections identify the main challenges and strengths of Ezbet Al Nasr. Before going through the analysis of pre-existing conditions, the report briefly describes the fieldwork process. The fieldwork, a preparatory study phase carried out in Berlin and the elaboration of this final report are the main phases of the conceptualising process, as the chart below illustrates (See fig. 7). Afterward, proposals for action addressing the most critical issues will be described along with recommended steps for intervention.

### 3.2 Fieldwork Methodology

Due to the complex characteristics of Ezbet Al Nasr, it seems impossible to apply conventional intervention approaches: 

- The settlement is too large to make redevelopment viable, especially given that certain parts have already been redeveloped in recent years.
- The settlement is bounded by built fabric and has a relatively stable population, thus rendering containment unnecessary.

The fieldwork is accordingly designed to support an intervention framework oriented towards upgrading the existing settlement. It seeks to assess strengths and weaknesses intrinsic to the settlement, and identify areas of potential, particularly through the development of under-utilised assets and the better management of existing patterns of self-organisation.

Our analytical approach derives from the Basic Analytical Model, which distinguishes and establishes a causal logic between the intrinsic

### Conceptualising Process

<table>
<thead>
<tr>
<th>Preparatory Study: Berlin</th>
<th>Field Work: Cairo</th>
<th>Final Report: Berlin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Literature review:</td>
<td>Site visit:</td>
<td>Stakeholder meeting (GTZ, district chief and LPC)</td>
</tr>
<tr>
<td>1. Urbanisation process in Cairo</td>
<td>Ezbet El Nasr</td>
<td></td>
</tr>
<tr>
<td>2. Informality</td>
<td>Stakeholder meeting (GTZ, district chief and LPC)</td>
<td></td>
</tr>
<tr>
<td>3. Upgrading</td>
<td>Identifying main issues and dividing groups into units</td>
<td></td>
</tr>
<tr>
<td>4. Methodology</td>
<td>Economic integration</td>
<td></td>
</tr>
<tr>
<td>5. GTZ document:</td>
<td>Service provision</td>
<td></td>
</tr>
<tr>
<td>• Classification study manual</td>
<td>Livelihood assets:</td>
<td></td>
</tr>
<tr>
<td>• Classification study report</td>
<td>• Human capital</td>
<td></td>
</tr>
<tr>
<td>• Stakeholder meeting (GTZ, NGO, local leaders)</td>
<td>• Social capital</td>
<td></td>
</tr>
<tr>
<td>• Interviewing community</td>
<td>• Financial capital</td>
<td></td>
</tr>
<tr>
<td>• Observation of area</td>
<td>• Physical capital</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Natural capital</td>
<td></td>
</tr>
<tr>
<td>Formulating questions</td>
<td>Processing Data:</td>
<td>Clustering possible solutions into 3 main topics:</td>
</tr>
<tr>
<td>Collecting data:</td>
<td>• Synthesising input from GTZ</td>
<td>1. Street upgrading</td>
</tr>
<tr>
<td>(3 Days)</td>
<td>• Identifying crosscutting issues</td>
<td>2. Waste management</td>
</tr>
<tr>
<td></td>
<td>• Prioritising issues</td>
<td>3. Land development</td>
</tr>
<tr>
<td>Steps:</td>
<td>SWOT analysis &amp; inter-linkages</td>
<td></td>
</tr>
<tr>
<td>1. Interrelating main topics</td>
<td>Identifying intervention: Proposal</td>
<td></td>
</tr>
<tr>
<td>2. Identifying mechanisms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Stakeholder analysis</td>
<td></td>
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<td>Fig. 07 Conceptualising Process</td>
<td>Source: UM TU Berlin</td>
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</tr>
</tbody>
</table>

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resources of the settlement, dominant value cycles and regional articulation of these flows:

These preliminary findings are organised into three interlinked ‘priority areas’: accessibility, economic integration and sanitation.

From the preparatory to the proposal development phase, the three priority areas were approached from the livelihood perspective introduced in chapter II – thus ensuring a holistic understanding of the challenges confronting the settlement.

The table (See Table 3) below shows the anticipated interrelation between settlement characteristics and the multiple dimensions of livelihood.

Semi-structured interviews, participatory mapping and focus groups involving 55 residents and local businessmen were the main source of information about Ezzbet Al Nasr

<table>
<thead>
<tr>
<th>Dimension of Livelihood</th>
<th>Priority Areas</th>
<th>Economic Integration</th>
<th>Sanitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Accessibility</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social capital</td>
<td>Reciprocal networks with surrounding areas</td>
<td>Linkage between local households and business</td>
<td>Trust of government</td>
</tr>
<tr>
<td>Physical capital</td>
<td>Efficiency and reach of regional infrastructure and facilities</td>
<td>Community-driven investment and maintenance of local infrastructure</td>
<td>Road and bulk infrastructure conditions</td>
</tr>
<tr>
<td>Financial capital</td>
<td>Earnings ability Travel cost burden</td>
<td>Price of local goods and services job availability</td>
<td>Health of local workforce</td>
</tr>
<tr>
<td>Natural capital</td>
<td>Dependency on motorised travel</td>
<td>Provision of water Equitable land use</td>
<td>Condition of land, soil, water and air</td>
</tr>
<tr>
<td>Human capital</td>
<td>Access to training and health service opportunities</td>
<td>Availability of local training opportunities</td>
<td>Health of local workforce</td>
</tr>
</tbody>
</table>

Tab. 03 Dimensions of Livelihood
Source: UM TU Berlin
and its inhabitants. In addition, insights into local economic dynamics were gained through interviews with sixteen shop owners, artisans and manufacturers. Through discussions with six community leaders, elected councillors and the leaders of three NGOs, a nuanced understanding into the governance and social capital dynamics was gained, in addition to the success and failure of development initiatives in the area. Additionally, exchange with District officials and senior GTZ staff provided official information for research.

3.3 Situation Analysis

The three priority areas were identified according to the perception of several stakeholders, with emphasis on the residents of Ezzbet Al Nasr. The first residents came from Upper Egypt, more specifically from Qena and Sohag Governorates. Motivated by the proximity to stone quarries, they settled in this area and created a migratory flux from their original villages. Family ties became a solid base for community organisation. Over the last three decades, Ezzbet Al Nasr evolved from a first stop for migrants from Upper Egypt to an established permanent community of approximately 60,000 residents, according to GTZ and Cairo Governorate Urban Upgrading Unit (UUU) estimates. This section will give an overview of the current situation and the main challenges Ezzbet Al Nasr is facing.

3.3.1 Accessibility

Ezzbet Al Nasr is characterised by a high level of internal accessibility for pedestrians, and medium level accessibility of vehicular traffic. While street widths permit vehicle access to most areas, accessibility is impeded by the generally poor condition of the streets. The poor condition arises from an almost universal lack of paving and grading, coupled with the episodic occurrence of localised flooding and accumulation of sewage.

3 Case Study: Ezzbet Al Nasr, Cairo

Map 05 Accessibility
Source: UM TU-Berlin, based on Google Earth.

Accessibility in Ezzbet Al Nasr
Of greater importance is the very low level of pedestrian accessibility between the Ezzbet Al Nasr and surrounding areas – external accessibility.

The area is extensively bounded by impermeable borders: highways form the southern and eastern boundary, whilst the slaughterhouse fence constitutes the northern edge. The fence demarcating vacant land and municipal facilities form the western boundary. The access provided by the corridor linking the settlement to the north-northwest is periodic, as this area is considered unsafe after nightfall.

Besides the tunnel in the south and the road in the northwest, community members identified the highway interchange as an unofficial pedestrian access point to the east. This has inevitably resulted in several accidents in this area, where vehicles travelling at high speed strike pedestrians.

The precarious nature of pedestrian accessibility is further aggravated by the recent closure of the bus depot located in the northwest vacant lot.

“I have to go to the hospital every other day. Because of the problem in my leg, it usually takes 40 minutes from my place to the bus stop, crossing the street” – (from an interview with an old lady in need of special care).

3.3.2 Economic Integration

Economic activity in the area has a distinctly dualistic character:

- The trade sector is almost entirely inwardly focused, providing limited goods and services to local households. There is also tentative evidence that this sector is operating sub-optimally due to inadequate competition and resultant collusive behaviour among traders. This may be attributable in part to the lack of a central market. Local prices are generally set above import-parity levels and thus effectively exploit mobility-impaired residents such as children and the aged who cannot easily access the markets in adjacent areas. Besides these individuals, the vast majority of individuals interviewed claimed to purchase virtually all goods and services at the many large markets in close proximity to Ezzbet Al Nasr.

- The light manufacturing sector displays characteristics starkly different to the trade sector, with its value chain segregated from the local trade and household sector. The proliferation of quasi-legal operators in this settlement – most notably marble processing, carpentry and car repair – is directly attributable to the settlement’s highly accessible location relative to massive development to the east, the regional marble clearinghouse ("Shaa’ El Tea’ban" – dubbed “Snake Crack” to the immediate south), and the densely populated and established high-income areas to the south and west. The low level of local ownership and the widespread use of external labour is further testament to the absence of inward linkages.

Lack of Central Market
3 Case Study: Ezzbet Al Nasr, Cairo

Map 06 Economic Integration
Source: UM TU-Berlin, based on Google Earth.

Economic Activities Ezzbet Al Nasr
Table 4 Externalities of Light Industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>Particulate Matter/Noxious Gas</th>
<th>Noise</th>
<th>Vehicular Traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marble processing</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Metal works</td>
<td>Low</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>Car repair</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Slaughter house</td>
<td>High</td>
<td>Low</td>
<td>None</td>
</tr>
<tr>
<td>Carpentry</td>
<td>Low</td>
<td>Medium</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: UM TU-Berlin

Furthermore, the embedding of these activities in the settlement’s residential fabric and the noxious nature of the manufacturing processes suggest prima facie evidence that the well-being of the community is being harmed by these activities in three ways (e.g. interviews, observation): noxious gas, noise and vehicular traffic.

Although some local industries routinely make use of resident workers, most work-seekers from Ezzbet Al Nasr benefit from the intense demand for semi-skilled artisans in the burgeoning construction sites in the area. Economic participation is high but irregular and undiversified, raising questions about the settlement’s economic resilience in the long-term.

3.3.3 Provision of Waste & Sanitation Services

One of the most salient challenges facing the settlement is the provision of reliable sanitation services, specifically solid waste removal and sewerage infrastructure. Waste removal is offered informally by truck owners while illegal access to electricity is often negotiated with state authorities.

Local authorities have invested considerable resources in installing a sewerage network, but technical problems arising from design deficiencies and abuse by illegal users has rendered the system dysfunctional. The inefficiency and unreliability of solid waste removal operations, on the other hand, should not be viewed in isolation as it amounts to a system failure affecting Egypt as a whole, and as such must be addressed accordingly.

The consequences of inadequate service provision – sewage-clogged streets and illegal dumping of refuse – impacts not only on the health of residents and internal accessibility, but additionally impede the ability of the community to pursue lives of dignity and self-respect. Notwithstanding a rights-based problem of existing conditions, the psychosocial consequences identified here render the achievement of broader developmental objectives more elusive.

The pillars of participatory development – self-initiative and trust⁹ – are being eroded as a result.

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⁹ Trust within the community and between the community and local authorities.
Map 07 Provision of Waste and Sanitation Services
Source: UM TU-Berlin, based on Google Earth.

Lack of Waste and Sanitation Services
Improving Informal Areas in Greater Cairo

**Strengths**

- Available Space (Cheap Land)
- Vacant Land (State Owned)
- Proximity to Transfer Facility
- Perception
- Morphology
- Available Skills in Strategic Sectors
- Knowledge of Construction
- Self-organisation
- Almost Finished Layout
- Well Equipped School
- Consolidated Corridors
- Strategic Location
- Workshop Attracts External Business
- Unrealised Demand (Marble & Car)
- Willingness to Pay

**Opportunities**

- Selling plots
- Finance
- Solid waste
- Tunnel
- Well demarcated layout
- Street upgrading
- Participatory building programme
- Self-organised lighting system
- Business ownership of public spaces
- Lower sewage removal cost burden
- Building trust with local authority
- Use of school by community
- Activity corridor
- Solid waste opportunities
- Recycling construction waste
- Reuse of industrial & residential waste

Fig. 09 SWOT Analysis Ezzbet Al Nasr
Source: UM TU-Berlin
Case Study: Ezzbet Al Nasr, Cairo

**Weaknesses**

- Distance to bus station and health care
- Lack of Open Spaces or Greenery
- Unsafe Area
  - No Street Lighting
- Physical Barriers
- Construction Waste
- Weak Civil Society
  - Mistrust of Local Authority
- Noise & Pollution from Workshop
- Lack of Local Economic Linkages
- Insecure Tenure
- Sewage: illegal system, construction delays
- Casual Labour

**Threats**

- Traffic accidents
  - Future densification
- Unsafe walkways
- Lack of health care facilities
- Limited livelihood
  - Continuous degradation
  - Delay in sewage removal completion
- Police extortion
  - Extortion by service providers
  - Pollution & health problems
  - Unemployment
  - Environmental problems
- Pollution, traffic congestion, invasion, fatal accidents
3.3.4 Synthesis of Findings

In order to derive meaningful results from the data obtained through fieldwork in a very limited period of time, a partial SWOT analysis was conducted including all three-priority areas to be able to see correlations. This strategic planning method was applied in order to organize and consolidate the mass of data into a clear causal structure linking strengths to opportunities, and weaknesses to threats. A summary of this process is shown below to illustrate the process logic employed. (See Fig. 9)

The SWOT analysis provided a useful link between the situation analysis, the identification of strategic constraints and opportunities confronting the study area.
To structure the key elements identified in the SWOT the Basic Analytical Model was employed, thus generating a diagnostic model for the settlement. This model consists of the following elements:

- Unique strengths constituted the intrinsic resources available to the settlement
- Value flows reflect the main outputs generated by these resources
- The spatial dynamic of these flows. Hollow boxes indicate a negative dynamic (either through negative feedback loops or leakage of value to the region), whereas solid boxes indicate positive feedback (i.e. re-investment of value)

3.4 Intervention Strategy

This section begins by translating the analytical outcomes of the fieldwork into a framework of intervention. This is followed by an introduction of the three proposals that constitute the intervention strategy. Finally, a phasing plan that indicates the optimal sequence for project implementation is proposed.

![Diagnostic Model](image)

Fig. 10 Diagnostic Model
Source: UM TU-Berlin
3.4.1 From Analysis to Intervention

Our analysis was predicated on the Basic Analytical Model that distinguished and established a causal logic between intrinsic strengths, value cycles and regional spatial interactions. The diagram below indicates how this analytical model can be translated into a framework of intervention. The strengths constitute the resource base attributable to the settlement; while a more sustainable pattern of value flows require process interventions that manage these flows. At the same time, these value flows must be anchored in the space economy through physical interventions.

Adding the findings from the diagnostic model related to Ezzbet Al Nasr the intervention framework becomes an overview of how the local resources can be managed and developed to achieve an upgrading of the current situation. In the Intervention Framework, shown above, the value flows (through inter-linked process and physical interventions) are redirected back towards the study area’s resource base through positive feedback loops. Relating to the three priority areas, three main intervention proposals were developed: street upgrading, land development, and an improvement in waste management. In the following, the three proposals will be presented as a logical consequence of the analysis to upgrade the overall condition in Ezzbet Al Nasr.
3.4.2 Street Upgrading (Proposal 1)

The fieldwork enabled the identification of strengths and weaknesses that conduce to tangible implementation proposals for street upgrading in Ezzbet Al Nasr. This study identified street morphology, residents’ knowledge of construction, experiences of self-organisation, and available construction materials as resources that may potentially be combined to drive upgrading. Weaknesses identified in the situation analysis include (a) difficult pedestrian access to the surrounding area, (b) distance to health and transportation facilities (c) lack of greenery and places for children and (d) poor infrastructure services.

Based on this analysis, an intervention proposal composed of four street upgrading issues was formulated: street lighting, paving, building a pedestrian bridge, and tree planting. By utilising the strengths as available resources and managing them in coordination with various actors, the intervention proposals are aimed to reach the goal of participatory development, encompassing both physical and organisational levels.

Street Lighting

“...The electricity provision is a problem for us. Do you see those electricity cables under the sand lacking secure connection? Those connections are illegal, and some of us don’t have a permission to have light inside our houses and lamps outside the buildings“ – (from an interview with a group of residents).

The first type of intervention is street lighting provision. Because the existing street width generally allows the circulation of special vehicles, it is not necessary to demolish houses in order to provide better access. Thus, street infrastructure can be immediately upgraded, including integration of electricity-lines. In cooperation with Cairo’s Governorate as an electricity-line provider, the community—coordinated by NGOs—can play a responsible role of lamp installation and maintenance. This cooperative management for street lighting can contribute not only to the physical improvement of security and public space, but also to the organisational development of mutual trust and participatory maintenance. There are two types of streets designated for upgrading requiring different types of lighting in Map 8; the relatively narrow streets inside the neighbourhood and the wide streets along the 6th October and El Madbah. In the former case, as shown in Fig. 3, the street morphology is very suitable for electricity-line provision without building electricity poles; therefore either cantilever wall lighting or ceiling lighting can be used for street lighting. In the latter case, as shown in Fig. 4, it is more suitable to provide street light poles for both vehicles-use and pedestrian-use.
**Best Practice**

To explore best practice for street lighting the urban upgrading project in Chile, “Quiero Mi Barrio” (I Love My Neighbourhood), may be consulted. Regarding street lighting, it already demonstrated the importance of participatory maintenance. When the government provided both the electricity-lines and lamps, some residents stole the lamps because they lacked the awareness and responsibility to sustain the system. After this lesson was learned, participatory maintenance was implemented, which involved residents in buying and maintaining lamps, and success was achieved.
Paving
The second intervention involves the paving of designated streets, as shown in Map 9. By re-using construction wastematerials and taking advantage of the construction skills in the area, the community – coordinated by NGOs – can drive the paving of streets for pedestrians using tiling. In that process, the stone workshops and the community are encouraged to organise the recycling workshop which can further result in capacity building and income generation, and to utilise some parts of the vacant land as a construction waste depot. This is proposed in greater detail in the next section of proposal (2). Cairo’s Governorate is also encouraged to participate as a provider of seed capital.
However, local authorities must first lay asphalt for vehicles. Providing asphalt paving on the most heavily utilised streets is a crucial element for all proposals regarding the vacant land development, in a sense of facilitating the mobility from both inside and outside the community into the vacant land.

Pedestrian Access
In addition to improving access within the community, the following intervention aims to integrate the settlement into surrounding areas. This includes the construction of a pedestrian bridge to provide reliable and secure access to the east, and putting together a partnership between government and the community to upgrade and utilise the parcel of vacant land in the northeast.
The idea of building a pedestrian bridge is not only a response to the urgent needs of the inhabitants to mitigate the high incidence of traffic accidents, but also a way of strengthening a new flow of activities from outside into the area and adjacent to vacant land. The proposal for the development of vacant land will be addressed in detail in the next section.

Greening
The final street upgrading proposal is concerned with the idea of tree planting. Through a participatory process involving NGOs, schools, and the community, tree planting can be implemented to enhance the public spaces in a manageable way with relatively small budgets.
Under the guidance of NGOs and with the cooperation of relevant school bodies, the community themselves (including children) can participate in growing the trees at the proposed nursery (see Proposal 2), and help with tree planting in designated streets. Hereby people take responsibility for maintaining and cultivating a sense of belonging to the community.

Best Practice
Greening projects in the informal areas of the desert town of Kimberley in South Africa have shown that by actively involving the community in the growing, planting and conservation of trees, both the welfare of the trees, and the benefits derived from them, are wholly appropriated by the affected communities.
To summarise: the intervention proposal for street upgrading addresses both physical and organisational development of the community, focusing on participatory development. Utilising already existing resources by different actors, strongly involving the community, the street upgrading proposal is expected to achieve not only immediate improvements to physical environment in the area, but also a broader level of integration within the formal society in GCMR.
Case Study: Ezzbet Al Nasr, Cairo

### Resources
- Construction waste materials
- Construction skills
- Vacant land

### Management
- Recycling workshops
  - Actors: Stone workshops, the local community and NGOs, Cairo’s governorate

### Development
- Physical intervention: Street paving, construction waste depot
- Organisational development: Capacity building for recycling materials

### Strategic location
- Actors: Cairo’s Governorate

### Financing (household savings)
- Participation and education
  - Actors: The community and NGOs, schools

### Physical intervention
- Street paving, construction waste depot
- Organisational development: Capacity building for recycling materials

### Organisational development
- Improvement of mobility and safety
- Responsibility to the community

### Map 09 Paving, Pedestrian Access and Greening Proposal
Source: UM TU-Berlin

<table>
<thead>
<tr>
<th>Resources</th>
<th>Management</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Recycling workshops</td>
<td>• Physical intervention: Street paving, construction waste depot</td>
</tr>
<tr>
<td>• Construction waste materials</td>
<td>• Actors: Stone workshops, the local community and NGOs, Cairo’s governorate</td>
<td>• Organisational development: Capacity building for recycling materials</td>
</tr>
<tr>
<td>• Construction skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Vacant land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Strategic location</td>
<td>• Actors: Cairo’s Governorate</td>
<td>• Physical intervention: Pedestrian bridge</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Organisational development: Improvement of mobility and safety</td>
</tr>
<tr>
<td>• Financing (household savings)</td>
<td>• Participation and education</td>
<td>• Physical intervention: Tree planting</td>
</tr>
<tr>
<td></td>
<td>• Actors: The community and NGOs, schools</td>
<td>• Organisational development: Responsibility to the community</td>
</tr>
</tbody>
</table>

Table 06 Paving Proposal
Source: UM TU-Berlin

Table 07 Pedestrian Access Proposal
Source: UM TU-Berlin

Table 08 Tree Planting Proposal
Source: UM TU-Berlin
3.4.3 Land Development (Proposal 2)

A 6 ha parcel of under-utilised, state-owned land extends northwest of the settlement. The strategic position of the land is very suitable for land development. Currently it is used as an unmanaged waste disposal dump for solid and construction waste. Furthermore, several residents pointed out an abandoned bus stop located on the areal. It was observed that although there is the presence of the public sector in this area, no formal management of the land is evident.

Current activities that are predominantly illicit and hazardous emanate from informal arrangements between officials and informal operators from both inside and outside the community.

The close presence of the school to this under-utilised area raises security issues and furthermore the lack of adequate management can result in much more serious problems. The vacant land offers potential for future developments, but at the moment there are many problems related to it. Thus, it is mandatory to solve the overlapping of certain activities, such as school children playing football in the middle of the waste disposal zones.

There are several reasons to propose land development on this site, including improving local conditions and access to the neighbouring areas. If the development of the land is designed in a way that is at once coordinated and strategic – that is, with a greater orientation towards the entrepreneurial, recreational and accessibility needs of the community itself – a more sustainable and self-reinforcing pattern of local activity is anticipated to emerge. The proposal for land development is constituted by a land use plan and a series of community-driven programmes. The parcels, as shown in the plan, are subdivided into different uses suggesting future developments.

Reading the plan from west to east: General Waste Transfer Station, Building Waste Depot, Industrial Cluster (Masonry workshop), Bus Station, Nursery/Composting Plant, Green Areas, Market and Community Centre. The spaces are linked by a series of pedestrian corridors and transit streets. The scale and function of the different proposals are arranged so that there is a more suitable transition towards the inhabited southeast facet.

The waste facilities and bus station are in the most distant part of the vacant land while the community facilities, green areas and market are closer to the community and in close proximity to the school. This section is directly connected with the main pedestrian walkways of the northwest area of the community. In the following section the individual interventions connected to the land development plan are presented.
### Case Study: Ezzbet Al Nasr, Cairo

#### Resources
- 6 ha of unused vacant land
- Already existing infrastructure (public school, lampposts, sewage)
- Direct connection with main avenues

#### Management
- External funding (donors, gov. business)
- Community development programmes

#### Development
- Land development programme:
  1. Waste transfer station
  2. Construction waste depot
  3. Industrial cluster (masonry workshops)
  4. Bus terminal
  5. Market
  6. Nursery - compost
  7. Community centre
  8. Park

---

**Waste Transfer Station**

The proposal of a Waste Transfer Station is an attempt to formalise an already existing situation. The government, the residents and also other districts of Cairo already use this area as a garbage depot. To formalise these practices would enable income generation and better waste management for the community. The Transfer Station is an intermediate phase of the city garbage before being transferred to the main waste disposal depot.

The ‘Street Rangers’ project is an example of potential community participation in waste management in GCMR. Moreover, the possible income from this activity could be used to improve the sustainability of infrastructural maintenance. As an important aspect in the waste management proposal, the composting station will provide organic material for nursery activity in the new park.
Improving Informal Areas in Greater Cairo

Building Waste Depot

One of the main economic activities in the community is the masonry workshops. The waste from these workshops is a valuable material that, with proper management, can constitute a cheap input for the paving programme envisaged in Proposal 1. The current mismanagement of this kind of waste shows the lack of integration between these workshops and the community. The proposal of a proper management of the construction waste tries to link the needs of the community with the waste produced in any construction activity within the area, this depot will be the space destined for the accumulation of this type of waste.

Industrial Cluster

The Industrial Cluster, consisting predominantly of masonry workshops, warehouses and retail outlets, will support one of the main activities of the community. Linked directly to the Market and the Construction Waste Management, workshops would provide the main education related to the craftsmanship of stone cutting and the business of masonry. As part of the economic development strategy this training component aims to build up capacities as a basis to encourage workers to establish their own workshops in the future. Some of these new ‘start-up’ workshops could be located in the new Market.

“We have been running the business of marble workshop for 30 years and also offering a training programme for youth that helped 300 young people become professionals in this field. We believe in the cooperation between marble workshops instead of competition, so we encourage the trained young people to open their new business” – (From an interview with four brothers working in a marble workshop).

Bus Station

Part of the new land development is devoted to rehabilitating the bus station. The terminal would connect the northern part of the community through the main vehicle streets.

Vegetation Nursery

The Vegetation Nursery is envisaged as a green area providing the opportunity for children to learn how to grow different types of plants. Operational costs would be minimised by sourcing inputs from the adjacent composting plant. It would also serve as a barrier between the community and noxious activities in the west, absorbing noise, dust and heat.

Green Areas

There is a need for green public spaces where the people from the community can gather. The idea is also to provide an adequate place for children to spend time. It will be supported by the production of plants from the nursery. The park would be built in a participative programme organised by an NGO and involving the community. The location of this area is the closest to the community, and in front of the public school, to avoid the possibility of a neglected open space.

Market

Envisaged as a corridor-market, the market would connect the pedestrian movement corridor with the main northern street (El Madbah), concentrating retail activities in a single area to encourage competition, create logistical economies of scale, allow for better inter-firm cooperation and enable more efficient enforcement of health and sanitation standards. The anticipated reduction in prices and extension of product choice in turn reduces the need for mobility-impaired inhabitants to travel to distant markets to access basic goods. Ultimately, a market will render the local economy more diversified, robust and resilient. The market would also have a section devoted to the products obtained from the masonry workshop and the nursery.
To summarise: The idea is to create a self-sustained economy in which the community is producing and selling their work to the same community and other people.

3.4.4 Waste Management (Proposal 3)

In formulating the waste management proposal, interventions were categorised into four main components:
- Solid waste management
- Composting plant
- Sewerage system
- Building waste management

Strengths in the area comprise the proximity to transfer facilities, the availability of vacant land (state-owned), the availability of access within the community (i.e. a high level of accessibility between the main road and the waste collection area), existing community knowledge to identify garbage as business potential, and the existence of an almost complete sewage network. Weaknesses in the area include ineffective waste collection, a lack of solid waste containers, the indiscriminate dumping of waste, and delayed construction.

Solid Waste Management
The area has potential resources in terms of available land. The potential can be utilised to develop micro-infrastructures allocated to solid waste, such as a waste transfer station, household/street permanent garbage container, and a storage facility for re-usable waste.

A proposed environmental management committee in cooperation with a street collector organisation, and participatory design of garbage containers are some of the organisational mechanisms proposed to encourage community ownership toward the proposed programme. Environmental awareness can be addressed by building capacity within current community structures.

Best Practice
Best practice for a concrete garbage container was implemented in Kumasi, Ghana (Wikner 2009). The container was designed and constructed through a community initiative and became a solution for collecting solid waste around the neighbourhood.

<table>
<thead>
<tr>
<th>Resources</th>
<th>Management</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Vacant land</td>
<td>• Environmental awareness education</td>
<td>• Intervention</td>
</tr>
<tr>
<td></td>
<td>• Capacity development</td>
<td>• Relocating waste transfer station</td>
</tr>
<tr>
<td></td>
<td>• Meeting local leaders</td>
<td>• Construction of street garbage containers</td>
</tr>
<tr>
<td></td>
<td>• Process of waste collection</td>
<td>• Income generation through recycling material</td>
</tr>
<tr>
<td></td>
<td>• Environmental management committee</td>
<td>• Participatory design of garbage container</td>
</tr>
<tr>
<td></td>
<td>• House-to-house collection</td>
<td>• Capacity building</td>
</tr>
<tr>
<td></td>
<td>• Actors</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NGO, street rangers, users and government, Public Funding Agency</td>
<td></td>
</tr>
</tbody>
</table>

Best Practice of Permanent Brick Container in Kumasi, Ghana
Source: Wikner, 2009

Table 10 Solid Waste Management Proposal
Source: UM TU-Berlin
**Composting Plant**

Through interviews and observations it became evident that the community in Ezzbet Al Nasr located close to the solid waste transfer station has secured land where they undertake composting using very crude technology. The proximity to the transfer station offers them the opportunity to access their raw material without high transport costs. The community, local authorities and an NGO can collaborate in the form of a management committee to harness this opportunity. Local authorities can provide modern machinery, while a university can provide technical knowledge to build the capacity of the people to produce large quantities of compost for agricultural use. Since this will be a community-driven initiative, it would create more jobs in the area and the technology could also be transferred to different areas.

**Sewerage system**

The existing sewerage system can be considered as a passive asset in this area. Local authorities recognise the urgency in addressing the delays in operating the sewerage network. Given that the system will not become functional for at least another six months, it is imperative that local authorities offer intermediate solutions. The temporary installation of a pump at the northern end of the Ring Road Tunnel, and the running of a pipe to the neighbouring sewerage system may provide some temporary relief to local inhabitants. Responding to such ‘low hanging fruits’ is an inexpensive and highly effective mean of restoring trust between the community and local authorities, which in turn is essential for initiating the other, more complex interventions.

<table>
<thead>
<tr>
<th>Resources</th>
<th>Management</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Proximity to transfer station</td>
<td>• Forming management committee involving community, NGO and government</td>
<td>• Providing modern machinery&lt;br&gt;• Capacity building for community regarding technical knowledge of composting agriculture</td>
</tr>
</tbody>
</table>

Table 11 Composting Plant Proposal  
Source: UM TU-Berlin

<table>
<thead>
<tr>
<th>Resources</th>
<th>Management</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Existing sewage system</td>
<td>• Community proposal to government&lt;br&gt;• Actores: community, government, NGO, installation company (private)</td>
<td>• Providing temporary mechanised pumping station&lt;br&gt;• Repairing damage control structure in the network&lt;br&gt;• Capacity building for community&lt;br&gt;• Cooperation with construction company</td>
</tr>
</tbody>
</table>

Table 12 Sewage System Proposal  
Source: UM TU-Berlin
Construction Waste Management
Available resources regarding construction waste management in the area are the availability of vacant land and a surplus of construction waste. The suitable intervention for this area will be the designation and preparation of a storage facility for collecting building waste. This material can be re-used for paving the street or to meet community needs for infrastructure development. A participatory approach needs to be applied in the form of a management committee. The committee will be in charge of storage maintenance, supervising the selection process of useful material, and organising the transfer process of the material to designated points.

To summarise: the intervention proposal for waste management addresses both physical and organisational development.
By utilising already existing resources, mainly relying on the vacant land (Proposal 2), the waste management proposal redirects negative flows into positive value flows by integrating existing resources currently identified as negative, such as solid or building waste.

<table>
<thead>
<tr>
<th>Resources</th>
<th>Management</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Vacant land</td>
<td>• Forming management committee</td>
<td>• Designated storage facility</td>
</tr>
<tr>
<td>• Surplus of construction waste</td>
<td>• Maintenance</td>
<td>• Capacity development in reusing construction waste</td>
</tr>
<tr>
<td></td>
<td>• Supervising selection process for material</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Organising transferring of material to designated points</td>
<td></td>
</tr>
<tr>
<td>• Actors</td>
<td>• NGO, community and government expert, Public Funding Agency</td>
<td></td>
</tr>
</tbody>
</table>

Table 13 Construction Waste Management Proposal
Source: UM TU-Berlin
3.5 Summary Ezzbet Al Nasr

The main challenge of the proposed approach is to achieve maximum results with minimum impact. For this, to optimise the available resources and implement the first actions, a phasing plan was created dividing physical and organisational interventions. Most of the physical interventions can be achieved in the short-term and can result in qualitative improvement of living conditions. Therefore, the short-term interventions are essential steps for the long-term interventions due to the flow of continuity proposed in the plan. The long-term interventions have an organisational character and will be responsible for the sustainability of each proposal, aggregating ownership over all physical improvements and preventing disengagement of the community.

The strategy behind the phasing plan is to create a chain of actions that brings fast solutions for the most urgent problems and builds awareness not only regarding the community rights, but also regarding the potential of self-organisation within the area. That would be the long-term result that can enable continuity of some points considered here and the proper management of the existent resources. Thus, by taking advantage of the unique resources available to Ezzbet Al Nasr (such as vacant land or building waste), interventions managing the value flows (such as defining actors and initiating the establishment of a management committee involved in the process of waste management) have been proposed and related to physical interventions (such as a storage facility for collecting building waste) anchoring the flows in the space economy. Thereby negative flows have been turned into a positive feedback loop, reinvesting the value of the managed resource – thereby attempting an upgrading of the current situation in Ezzbet Al Nasr.