

# Assessment of Slums' Upgrading Interventions: Case Study Jabal Al-Natheef, Amman, Jordan

Amal Abed\* Ayman Tomah Diana Dumour

Department of Architectural Engineering, Applied Science University, box 11931, Amman, Jordan

\* E-mail of the corresponding author: a\_abed@asu.edu.jo

## Abstract

Most slums' upgrading programs aim to provide basic services that improve livelihoods and empower communities to advance residents wellbeing. However, despite of the work and effort, slums in Jordan are rising at a rate of 4.3 % per year. In addition, it was noticed that most of these slums growth infested in the capital, Amman City. Therefore, it is necessary to explore intervention strategies and identify the complexity towards upgrading plans and policies, examine their impact on several levels to include physical, social, economic promotion, environmental, and explore the legality issues associated with such plans. In this work study, it is aimed to assess upgrading strategies and its effect on satisfying residents' needs in Jabal Al-Natheef community. Collected data was analyzed and compared in the form of frequency measures and central tendency. As a result, data analysis has shown poor to fair residents' satisfaction with the impact of upgrading strategies at several levels. Such an assessment is related to the absence of comprehensive plan and organization between stakeholders. Therefore, serious actions are required to improve the physical environment for residents' benefit and empower community socially and financially. These actions can affect positively on residents cooperation level with intervention programs and strategies along with effective community participation. Such an achievement can be accomplished through partnerships among slum residents, community groups, Non-Governmental Organizations (NGOs), and local governments.

**Keywords:** slum, upgrading approach, comprehensive intervention

## 1. Introduction

Despite the Millennium Development Goals (MDGs) aim to improve living conditions of 100 million slum dwellers by 2020 "Cities without Slums", slum's population is still expected to increase from 1 to 1.5 billion people by 2020 and 2 billion people by 2030. In fact, developing countries will suffer the most of this increase, where roughly one third of the developing world's urban population lives in extreme poverty conditions (UN Habitat, 2005; UN Millennium, 2002). Slums do not secure the minimum humanitarian needs and decent life standards where it is notorious for lack of sufficient living spaces, secured tenure-ship, and poor access to municipal services including storm drainage, street lightings, paved footpaths, and emergency access roads. Moreover, slums suffers from paucity of educational and health facilities, social institutions, and outdoor / green areas (UN Habitat, 2003; UN Habitat, 2006).

The fact that slums in Jordan have grown out of control, can be always linked with high cost of properties and the straining mortgages for low-income households. This state of affairs is an obvious reflects to the great housing demands associated with regional political crisis migrations (Palestine, Lebanon, Iraq, and Syria) (Al-Daly, 1997; Ababsa, 2008). As a result, Amman has developed several crowded informal settlements characterized by high density (based on standards) over 20,000 inhabitants per square kilometer. Furthermore, locals and residents relocating from countryside and suburb to the capital Amman for jobs had made matter worse. So, there are economic, social, and political forces causing slums. Generally, these settlements were increasingly marginalized because of lack of secured tenure associated with limited access to decent housing unit, and poor investments in services at architectural and planning levels (Dumour & Ababsa, 2008).

Therefore, several governmental projects, proposals, initiatives, associations, and Non-Governmental Organizations (NGOs) are working to improve the well-being of these neighborhoods. The main focus of their effort can be noticed through infrastructure interventions along with regularization of areas with insecure tenure; home improvement, including material upgrading, new construction and expansion of existing structures; mitigation of environmental hazards; constructing or rehabilitating community facilities such as schools, health clinics and community centers; and enhancement of income-earning opportunities through several trainings (Housing and Urban Development Corporation (HUDC), 2008). This level of improvement is essential, but does it satisfy residents' needs? Therefore, there is a serious need to evaluate upgrading strategies and assess its impact within a comprehensive vision.

## 2. Jabal Al-Natheef

Jabal Al-Natheef is one of the oldest neighborhoods located on 87 km<sup>2</sup> with a private ownership, and has a close proximity to the center of Amman City. It is considered as one of the poorest neighborhoods, and referred to in several phrases such as "refugee concentration", "unofficial camp", "the drug area" or "the Palestinian camp".

These names refer to several migrations of refugees through political crisis in the region. It started by Palestinians arrivals in 1948 (known as Al-Nakba) where they lived in tents on the area that was called at that time Mohammad Amin camp, in reference to the Circassian who owned the land. In 1967, after the Six-Day War (known as Al-Naksa), more Palestinian refugees fled to the area. As a result of lacking hope of returning back to their country, tents were transformed to more permanent living units without any intervention from the United Nations Relief and Works Agency (UNRWA). After that, the gulf war in 1992 provoked a new influx of refugees and Jordanian returnees (Gulf Region's residents). As housing prices were rising, thousands of people joined Jabal Al-Natheef's informal settlement. Moreover, in 2003, Iraqi refugees fled to Jordan to escape the war (led by the US and United Nation). Lastly, since the outbreak of the Syrian civil war in March 2011, Syrian refugees are fleeing in daily bases. As a result, different communities, from different backgrounds live in Jabal Al-Natheef which makes it a melting pot (Schmid et al , 2014).

The built environment of Jabal Al-Natheef is majorly deteriorated, overcrowded, and never been planned to be a neighborhood. As tents were transformed into buildings, paths and steep location were not considered. Therefore, narrow stairwells connected the different services and informal housing units, poor accessibility where vehicles cannot access some areas even emergency vehicles or waste pick-ups trucks as shown in Figures. (1), (2), (3), and (4).



Figure. 1a



Figure. 1b

Figure. 1a, and 1b. Overcrowded Neighborhood



Figure 2a

Figure 2b

Figure 2c

Figure 2a, 2b, and 2c. Examples of Inhomogeneous Facade Finishing



Figure 3a



Figure 3b



Figure 3c

Figure 3a, 3b, and 3c. Deteriorated stairs and Paths



Figure 4a



Figure 4b

Figure 4a, and 4b. Public Spaces

Jabal Al-Natheef's infrastructure was rarely planned. Water pipes are randomly constructed by residents, old and insufficient sewage network along with humble electrical power lines adjacent to houses, poor street lightings. At the same time, it has no public spaces for people to interact. As well as, it lacks of community facilities such as schools, health clinics, police station, and community centers as shown in Figures. (5), (6), and (7).



Figure 5a



Figure 5b

Figure 5a, and 5b. Graphite Expressions



Figure 6a



Figure 6b



Figure 6c

Figure 6a, 6b, and 6c. Infrastructure status (Power Generator, Firefighting Access, and Drainage).



Figure 7a



Figure 7b



Figure 7c

Figure 7a, 7b, and 7c. Low Hygiene Level.

Based on that, several agencies have worked on improving the area such as the Department of Palestinian Affairs (DPA), Greater Amman Municipality (GAM), and the Housing and Urban Development Corporation (HUDC) of the Ministry of Public Works and Housing in Jordan. But, unfortunately, their work was not sufficient enough and led to involve many other initiatives, programs, and NGOs to improve life quality. Therefore, it is necessary to discuss the upgrading strategies and its effect on improving area to be a well-being neighborhood.

### **3. Approaches of Slum's Upgrading**

Slums upgrading is a complex task that requires a huge effort and dedication. This may relate to the need for development and intervention at different levels. The implementation may focus on either or all of the following levels:

1. Physical level includes improving or installing basic infrastructure services such as water, electricity, storm water drainage, access roads, footpaths and street lightings. Upgrading may also encompass home enhancements including material upgrading, new construction, and expansion of existing structures. As well as constructing or rehabilitating community facilities such as child care, health clinics, and community / youth centers.
2. Social level includes improving the role of community facilities in promoting life quality for people through public awareness as well as social support programs to address community issues such as crime and narcotics. Moreover, it may enhance opportunities for social interaction and empower social networks.
3. Economic level includes several programs and initiatives aiming to enhance income-earning opportunities through trainings, workshops, enrichment classes. Moreover, improve chances to create more jobs through collaborative partnerships between different associations and residents.
4. Environmental level includes removal or mitigation of environmental hazards, sanitation, and solid waste collection. Moreover, it considers the appearance of neighborhood.
5. Legal level includes securing property tenure along with public awareness about residents' legal rights (Field & Kremer, 2008; Wekesa, 2011).

Slum's upgrading within a comprehensive vision is a multidisciplinary approach that needs to consider the integration of physical, social, economic, environmental, and legal intervention components. This level of complexity requires partnerships between slum residents, community groups, NGOs, businesses and municipal authorities or local governments (Wekesa, 2011).

### **4. Upgrading Approaches in Jabal Al-Natheef**

Jabal Al-Natheef went through several waves of upgrading after the transformation of refugee tents to permanent buildings called "Dar" in 60s. It started in 1977 by working on two main issues. First, installing some infrastructure services like electricity, water, sewage, and telephone lines. Second, securing housing tenure where the government negotiated leasing the land property for a hundred year from the owner. Then, there were no trials to improve the existing conditions until 2001. Through that time, several development acts were achieved due to the effort of a political local-representative in city council. These changes include routes for public transportation serving the neighborhood, which were constructed by demolishing 300 housing unit. In 2005, post office and public library were established. Then, two years later, police station was constructed to eliminate crimes and drugs traffic. Finally, information technology center was initiated in 2012 (Schmid et al, 2014).

Generally, it can be noticed that there was no strategic plan for upgrading process, where it happened over various time's gap and based on residents' needs. Moreover, the intervention process focused mainly on physical / services aspect. Therefore, several associations were initiated to do a complimentary work and cover the gaps. These associations are: Welfare Association for Orphans' Care, Jordan River Foundation, Islamic Center Charity Society, Al-Zakat Committee, and Ruwwad. These associations are mainly focusing on the community empowerment vision that is guided by residents. It is oriented towards creating community initiatives based on the skills, interests and ideas of people who are marginalized and disadvantaged. Despite the importance of upgrading and intervention programs role in the neighborhood, their effort is scattered and fragmented. Based on that, it is necessary to assess residents' satisfaction for governmental and non-governmental associations' effort to improve life quality of neighborhood.

### **5. Research Method**

A survey was performed to conduct data measuring the effectiveness of upgrading strategies. A structured questionnaire was used through the survey, which was consisted of two parts; First part focused on socio-economics information of respondents that includes eight open-ended questions inquiring data about age, gender, citizenship, marital status, education, employment, family size, and home ownership. The second part, focused on measuring the quality of upgrading strategies through 18 statements with five point Likert scale. These

statements aimed to assess the upgrading strategies at the following levels:

1. Physical level measured through the quality of paths and staircases, efficiency of electricity currency, roads lightings, housing units, and safety (statement 1 – 6, Table 1).
2. Social level measured through the role of community facilities such as community center, public park, mosque, and school in empowering the community and improving quality of their life (statement 7 – 10, Table 1).
3. Economic level measured through the role of governmental and non-governmental organizations in improving financial status of residents through creating job opportunities and improving their skills through trainings (statement 11 – 13, Table 1).
4. Environmental level measured through the quality of sewage system, trash collection system, along with exterior appearance of buildings' facade (statement 14 – 16, Table 1).
5. Legal level measured through assessing strategies that were used to help residents in securing property tenure and understanding their legal rights (statement 17 & 18, Table 1).

The data was collected through face-to-face interviews using a structured questionnaire, which was translated to Arabic language (mother language of the research setting). The interviews were administered from 9<sup>th</sup> to the 30<sup>th</sup> of November, 2014 by two trained research assistants (male and female). Each research assistant administered interviews in the same respondent's gender due to cultural beliefs about gender separation. The survey was conducted by touring the neighborhood and meeting residents of Jabal Al-Natheef that located in Amman City, Jordan. A total of one hundred and twenty responses were collected from the residents, who have been living in the neighborhood for more than ten years, through random selection.

Descriptive and inferential analysis was used to evaluate upgrading strategies based on respondent's feedback. The research results were presented in the form of frequency measures and central tendency. This was achieved by using five point Likert scales, where (1) presents a negative attitude (Strongly Disagree) and (5) presents a positive attitude (Strongly Agree) as shown in Table 1.

## 6. Research Sample

Based on the collected data from residents of Jabal Al-Natheef, about 37% of the sample are unemployed, and more than 40% of them are self-employed who are running small business located within or close to their housing unit. The business is mainly included canteens that serve a costume vegetarian affordable food (Hommos and Falafel), small grocery shop, barber shop, and mechanic shop. Moreover, more than two-thirds of the sample is living either in a rental property or staying in a space to be part of the extended family. This may relate to low income of residents that connected with high rate of unemployment, and seasonal jobs. This is a result for limited education and trainings to make residents strong candidates for job market. This is supported by only 13% of the sample has a college degree and more than 60% of them do not have a high school degree. Along with their dependence on only one source of income, where more than 90% of ladies are house wives, due to the cultural believes and values that female work outside her home is a shame. Moreover, about three quarters of the sample has a large family size ranging between (8 – 12) members. This may relate to young age marriage, where females are married between (14 - 20) years old, and male between (18 - 30) years old.

## 7. Research Result

Based on the collected data from the residents of Jabal Al-Natheef, the outcome results of this research presented an assessment for the upgrading strategies at physical, social, economic, environmental, and legal levels.

- The physical level represented by convivial of the neighborhood, safety and security, along with ease of movement. From the Table 1, the respondents have a negative attitude towards their perception about upgrading strategies for their neighborhood at physical level, the mean is ( $M = 2.63$ ) in a scale from 1 – 5, where (1) represents a negative attitude and (5) represents a positive attitude. This can be supported by a negative perception towards improvement of housing units, streets' illumination, and quality of staircases, where the mean is ( $M = 1.9$ ,  $M = 2.2$  and  $M = 2.4$ ), respectively, as shown in Table 1. This can be noticed through deteriorated buildings as shown in Fig. (2) were mainly constructed for a temporary stay. This may explain inhomogeneous facade and using different types of construction materials, along with unfinished layout where a lot of columns can be seen for near future expansion. Also, people suffering from narrow paths with poor illumination where some residents claimed that they are eliminated of being out after sun set. This may be resulted from poor planning that did not consider the steep location and ignored dealing with topography effectively. This can be recognized clearly through poor accessibility for many housing units that can be reached only through deteriorated and not lightened staircases as shown in Fig. (3). Moreover, these staircases did not consider old and disabled people. On the other hand, respondents have a positive attitude towards their perception about the quality of electrical currency, where the mean is ( $M = 3.7$ ). Despite of this, it can be noticed that municipality did not consider safety issues, where some of the electrical generators were located on the sidewalk within the neighborhood. Generally, allocation of some infrastructure such as firefighting access, storm water manholes are not appropriate as shown in Fig. (6).

- The social level represented by the impact of community facilities in improving life qualities of residents. From the Table 1, there is a negative attitude towards the effectiveness of public facilities, the mean is ( $M = 2.33$ ). Generally, all respondents agreed that Jabal Al-Natheef lacks public facilities especially the parks and schools, where the mean is ( $M = 1.2$ , and  $M = 2.0$ ), respectively, as shown in Table 1. This is resulted from only  $2,000 \text{ m}^2$  is an outdoor green space with poor maintenance as shown in Fig. (4). So, the children play on streets and staircases which are not safe and expose them to danger. Also, they do graphite art at buildings walls as shown in Fig (5). Generally, the neighborhood has some fragmented small properties related to NGOs, but there is no specialized facility providing social / cultural activities for residents. Based on that, it can be said that Jabal Al-Natheef neighborhood was not planned to be a residential neighborhood. So, it is not satisfying "Neighborhood Unit" theme that proposed the social / community activities and open space should be available and accessed within five to ten minutes of walking (Perry, 1929). On the other hand, mosques have a positive effect that may relate to a collaborative work with Islamic associations through several NGOs that helping orphans and poor families along with providing some medical services, where the mean is ( $M = 3.4$ ).
- The economic level represented through improving the financial status of the residents who mainly have a financial pressure due to the families' dependence on one source of income that generated from the male household along with high rate of unemployment. So, there are some initiatives and NGOs working hard trying to empower women by helping them to work from homes, along with setting up trainings to improve residents' skills to be strong competitors for the job market. But, the respondents believed that upgrading strategies were not sufficient enough, the mean is ( $M = 2.5$ ) as shown in Table 1. Therefore, there is a need to improve the layout of the neighborhood to have a zone for local commercial function. This may eliminate commuting time for residents and reduce leasing fees for business owner. This will flourish the area and increase residents' assets who may benefit from it. Moreover, working from home need to be promoted for both genders through improving their residence to be live/work unit by adjusting its layout to include work space.
- The environmental level represented by the hygiene and the exterior appearance of the neighborhood. Respondents have neither positive nor negative attitude towards sewage and trash collection in the neighborhood, where the mean is ( $M = 3.0$ , and  $M = 2.6$ ), respectively. However, residents suffering from poor sewage system that over flows and messed up paths and staircases, poor drainage that cause floods especially in winter season, and poor accessibility that affects negatively on waste collection where waste pick-up trucks cannot reach narrow streets as shown in Fig. (7). On the other hand, the respondents have a negative attitude towards exterior appearance, where the mean is ( $M = 1.8$ ). This can be supported by deteriorated structure and unfinished facade, along using temporary construction materials as shown in Fig. (2).
- The legal level represented by ownership documentation and knowledge of legal rights. Respondents have a negative attitude towards upgrading strategies of legal rights, the mean is ( $M = 2.05$ ) as shown in Table 1. This means that residents are not satisfied with their current legal situation of ownership, especially some of them have only utility bills as a proof of ownership (which is not a legal document), and others suffer from tenure moratorium. This affects negatively on improving or maintaining their properties. So, working on permanent security of tenure is essential to protect residents from eviction and providing property legal rights along with regularity framework that entitle people to use their dwelling.

Table 1. Residents' Responses towards Upgrading Strategies

Level	Statements	SA	A	ND	D	SD	M
Physical M = 2.63	1. Staircases were developed to facilitate movement	13	14	22	26	45	2.4
	2. Despite of the hilly setting for the neighborhood, roads are safe and have no threat on public safety.	16	17	18	44	25	2.6
	3. Electrical current working perfect and has no problem at both street and housing unit.	35	39	26	13	7	3.7
	4. Streets' lightings are sufficient and facilitate pedestrian movement.	7	17	19	25	52	2.2
	5. Residential units was improved at exterior and interior levels.	4	13	6	36	61	1.9
	6. Safety and security was improved and promoted quality of life.	13	30	30	35	12	3.0
Social M = 2.33	7. Community center was developed / improved to serve locals through trainings and several activities.	11	32	21	16	40	2.7
	8. Public park was developed / improved to promote life quality.	0	0	2	21	97	1.2
	9. Mosque was developed/ improved to serve locals	21	52	15	15	17	3.4
	10. Schools were developed / improved to serve locals after school hours.	0	12	27	33	48	2.0
Economical M = 2.5	11. Citizens were employed in Jabal Al-Natheed development's jobs.	4	17	36	35	28	2.5
	12. NGOs are involved in maintaining development projects.	9	23	41	19	28	2.7
	13. NGOs provide trainings that help residents to improve their financial status.	3	21	18	35	53	2.3
Environmental M = 2.47	14. Sewage system was developed/ improved to serve locals.	8	54	10	28	20	3.0
	15. Trash collection system was improved to maintain the area hygiene.	13	27	16	21	43	2.6
	16. The exterior facade of neighborhood were fixed to beautify it.	4	10	5	37	64	1.8
Legal M = 2.05	17. Citizens were helped to document their housing ownership.	4	17	28	23	48	2.2
	18. Citizens were helped to know their legal rights.	4	11	10	38	57	1.9
M: Mean                      SA: Strongly Agree                      A: Agree ND: Not Decided                      D: Disagree                      SD: Strongly Disagree							

## 8. Conclusion and recommendations

In this work study, it was clear that used upgrading and intervention strategies were not satisfactory to residents' needs and not sufficient enough to stop / reduce slums growth. Targeted population in this research has revealed a poor to fair assessment about their satisfaction for the impact of upgrading strategies at several levels. This may relate to the absence of a comprehensive plan for the upgrading strategies that did not consider design / planning criteria of residential neighborhood in Jabal Al-Natheed. Therefore, there is an urgent need to improve the following:

1. Accessibility to neighborhood through sufficient public transportation, along with improving quality of paths and stairs.
2. Infrastructure and environmental amenities such as sewage / drainage, and trash collection system to improve level of hygiene.
3. Vacant properties through rehabilitation to include public facilities such as green / open spaces, and community center. Also, reuse some spaces to be a mixed-use neighborhood by providing places to live, work, and shop.
4. Level of public safety by removing dangerous elements away from public access such as electrical generators on sidewalk, and rehabilitating deteriorated paths and staircases.
5. Level of illumination for the neighborhood, especially at dark areas that have a high rate of anti-social behaviors and crimes.
6. Level of hygiene by encouraging residents to participate in volunteering work through several initiatives aim to clean public access spaces..

7. Legal awareness will help residents to document properties ownership and minimize eviction possibilities. This can be achieved by developing a comprehensive sustainable strategy that requires cooperation between all stakeholders (government, NGO, and community). Therefore, several actions are highly recommended as follow:

- Activate channels of communication between the NGOs and the government to work within a comprehensive vision and framework. This helps to avoid duplicating work and filling gaps.
- Partnerships between NGOs that adapted participatory and empowering approaches may spread their successes more.
- Use a variety of formal and informal sources to generate discussions among slum dwellers to energize them to be a source for changing and improving their life.

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