

## **Under-Privileged Housing - The Jordanian Experience**

**Al-Zoubi, Y. Y., Al-Shehab, S. A.**

Department of Architecture  
University of Jordan  
Yalzoubi@yahoo.com

**Key words:** under privileged housing, types, requirements, population & housing status.

### **Abstract**

This paper studies, analysis, and discusses the housing for the poor: problems and solution that have spread in Jordan since 1970's. The paper contains Six sections. It contains an introduction. And the second section explains the understanding of the poor in Jordan. The third section studies the enumeration of the census, dwellings since (1922). The beginning of economic and social plans and its relationship with housing projects. The fourth section discusses the instruction of king Abdullah II to concerned ministries, governmental departments and foundations to create suitable single and separate houses for poor families. The fifth section concentrates on the analysis of the possibility to having suitable space, vertical extension and unit-cost factors. The sixth section and final section gives the negative and positive results and analysis of the outcome.

### **1. Introduction**

Private and public housing is a subject that dates back to the beginning of mankind. Such groupings were evident as far back as ancient Egypt (1897-1879 BC) [1]. With the Industrial Revolution during the 19<sup>th</sup> century social (mass) housing was created to accommodate factory workers. It provided the bare minimum of the essentials. With the 20<sup>th</sup> Century and its modern developments, new issues surfaced as high income groups appropriate property while lower income groups were unable to acquire such property resulting in bad, unhealthy housing which stigmatized such low income groups. Furthermore both world wars resulted in the creation of a major housing shortage that required the creation of possible solutions by the architects of the century such as the use of pre cast concrete and new economical methods that saved time and effort; such as, cast pouring that produced multi forms that covered external and internal elements [2]. Prior to that, individuals built accommodation to cover their new needs. This became less possible. Thus mass social housing became the known to cover the needs of the nations. Company projects, governmental housing, non governmental housing and factory worker housing were designed with no specific user in mind and it is produced with no specific requirements in mind. The designs are produced generally based on a typical plan (model) for medium to poor disadvantaged elements of society.

The designs usually take into account the prefabrication of general and essential common requirements, and it does not take into account privacy or the real needs of the occupants. Such housing developments required continuous changes in the building process as well as the method of production. Development of building materials processes resulted in the continuation of traditional methods side by side with non traditional methods.

The subject of mass/social housing is considered to be an important subject that touches upon the standards of living of all nations due to its direct relationship with the natural and social environments. This subject became an important section within the national development plans of a large number of the world's countries, as well as being part of a number of election manifestos of political parties within Europe, such as Britain, Sweden and Denmark [3].

Jordan received the first wave of Palestinian refugees in 1948 when about 750000 Palestinian left their towns and cities residing and settled now at five camps, the second wave occurred in June 1967 when 350000 Palestinians left the West Bank to Jordan residing now at 8 camps, the total number of Palestinian refugees residing in Jordan is about 1.9 according to UNRWA March 2008 [4].

## **2- Underprivileged (poverty) Studies in Jordan**

The information presented by Ministry of Social Development (submitted in November 2006) indicate that a number of specialized organizations local and foreign have embarked upon studies and seminars [5]. Some of the most important conclusions outlined by the above organizations, studies and seminars are; the percentage of families under the severe poverty line is in the range of (1.5%-5.8%) of the population. The percentage of families under the poverty line is (18.7%-33.1%). The size of poverty stricken families is large than the size of non poor families. The number of poor people in the districts of Amman, Irbid and Zarqa is estimated to be around 68% of the total population. It was stated that there are 20 pockets of poor zones in the Kingdom where the percentage of poverty is between 34% – 73%.

### **2.1 The Role of MoSD in the Improvement of Housing Condition**

Such under privileged families were unable to benefit from the projects and programs offered by the general association for housing and urban development (HUC) whether by acquiring ready housing units or the obtaining of building land ready for the erection of dwellings due to their economical circumstances and their inability to remit the loans and installments accumulating for such projects which in turn prompted the MoSD to put policies, programs and studies to develop the necessary treatment of the status of the families and a low income, severe poverty stricken groups that could not benefit from the above mentioned projects. The MoSD started a program to improve the housing conditions of under privileged families on a number of fronts; the creation of new housing units and the addition of extra rooms and services within an existing dwelling free of charge based on the status of such units and its structural condition as well as the number of occupants. All this was based on the overall status survey of the housing of under privileged families which was done by the Ministry at 2002. The survey included all regions of the Kingdom which indicated the need of 11130 families in great need of a housing improvement program, with an estimated cost of 50 million US \$. The Ministry with the participation of Ministry of Planning (MOP) in (2002), and executed through the social safety net program phase 1 of the construction and maintenance of such housing which included approx. 80 dwellings in various regions in the Kingdom. The necessary funds were provided to launch the 2<sup>nd</sup> phase within the economical transfer program which centered on the allocation of (3.53 million US \$ for the project [6].

## **3 The Population and Housing Status in Jordan**

Jordan has been exposed since its establishment to a number of migration trends of groups and peoples. Such migration started with the Scharcazian, Shishani and Syrian immigration at the end of the 19<sup>th</sup> Century, followed by the expulsion of the Palestinians from the lands in 1948 and the further informed migration of Palestinian in the West Bank in 1967. In the past 3 decades large number of Iraqis settled in Jordan after both Gulf Wars [7]. Table 1 represents the Jordanian population numbers from 1922 up to 2009, Table 2 represents the Jordanian dwellers numbers from 1952 up to 2004 [8].

Table 1: The Jordanian population numbers

Year	1922	1947	1952	1961	1965	1970
Number	225000	400000	586200	901000	1028000	1508000
Year	1979	1989	1990	1994	2004	2009
Number	2133000	3144000	3486000	4139000	5350000	

Table 2: The Jordanian dwellers numbers

Year	1952	1961	1979	1990	1994	2004
Number	100000	161000	379000	577000	835000	1221000

### 3.1 Economical and Social Plans for the Housing Sector in Jordan

Due to the population status and the increase in the rate of growth of the population including the various forced migration trend, the government started (since the middle of the past century) an economical, social and housing development phase through the building board (MOP) in conjunction with a number of governmental agencies. As a result a number of economical and growth development plans were placed to correct this situation; The plans started with the 10 year plan 1952-1962, The 5 year plan 1963 – 1967, the 7 year plan 1964-1970 [12], The 3 year plan 1973 – 1975, the 5 year plans 1976-1980, the 5 year plan 1981-1985, the 5 year plan of 1986-1990, the 5 plan of 1989-1993, the 5 year plan of 1993-1997, the 5 year of 1999-2003 [9]. the plan of 2002-2003, the 3 years 2004-2006, the development plan of 2007 – 2009, and the governmental plan of 2010? The above is scheduled to be followed by the proposed try development plant of 2011-2013 [10].

As a result of the emergence of these phenomena the government conducted a number of studies to understand the causes of the above in view countering it. The conclusions of the studies suggested the creation of new organized housing sites and the development of new housing units in various reasonable sizes to cater for low income groups and their abilities to afford the cost of land and basic services which represent a plausible solution to the situation and thus would minimize and alleviate the land infringement on private and publicly owned properties or the immediate acquiring of such lands in view of re-qualifying and organizing it in term subdividing the land into small plots that can be sold to the residencies and further introducing the necessary infrastructure [11].

### 3.2 The Aims of Housing and its Objectives

The form and standards of housing is decided by the prevailing, traditional criterion of any society were the residence in considered an important connecting reference between the individual and the society they reside within. Such an element (the home) is an important factor to the individual's right after nutrition and clothing. With the development of urban progress in the 20<sup>th</sup> century some high income groups became able to acquire appropriate housing but at the same time other new issues emerged within the scope of housing were a large number of individuals and groups were unable to acquire or build a proper dwelling for themselves were such dwellings deteriorated to a level that stigmatized such under privileged groups [3]. Thereafter, vast number of mankind awaits comprehensive development plans that would improve their standards of living which would satisfy the basic needs and requirements. The above caught the attention of the planners and the socio economic development policy makers.

### 3.3 Housing Specialists Concentrated on a Number of Issues

The provision of appropriate locations for the creation of housing projects that would be reasonable in cost, that will be within the means of such low income groups, close to the basic various services. In the aim of improving the living circumstances of such groups.

This can be achieved in one of two ways; The creation of proper mass housing for the under privileged groups, The issuing of individual loans to concerned parties within both the private and public sector through housing cooperative agencies, housing funds and housing saving and loan agencies with the purpose of achieving the objective of mass housing [3].

The Jordanian government became concerned by this issue which is on the minds of most of the population in particular the low income groups. Thus it created the housing and urban development cooperative (HUDC) and some other entities directed at such groups as well as encouraging the private sector to create various building types.

Such governmental projects were very few not exceeding 10% of the total erected housing projects in the past few years [12], and further such governmental projects mainly catered for medium to low income groups and did not cover the severely under privileged categories.

### **3.4 The Issue of Housing – the Hurdles and Solution**

The main decisive factor in the process of creating a housing unit is the acquisition of land that is ready for the construction process. As not all lands can be utilized for such projects and thus there must be a regulatory process that identifies and allocates land usages as a density of population increases housing land demand increases; causing a reflective increase in value which is reflected in turn in the cost of construction. Land value and cost varies within the cost of construction from one zone to another due to a number of factors, to curb this issue there are elements that should be taken into consideration (this will not be discussed in the paper) [13]. There are many obstacles and issues that faced the solving of the housing problem, in particular when it is related to the low income groups.

## **4. The Participating Agencies to Execute the Housing Projects**

A number of governmental and non governmental agencies over the various periods dealt with the issue of under privileged housing issues such as, UNRWA Services, The Jordan valley authority, the housing and urban cooperation (HUC), The Ministry of Social Development (MoSD) and the Royal Hashemite Court (RHC).

### **4.1 UNRWA Thirteen's Refugees Camps**

Jordan received tow waves of Palestinian refugees; the first was in (1948), the second wave occurred in June (1967). Jordan hosts the largest number of Palestinian refugees since (1948). Total number of Palestinian refugees residing in Jordan is (1917733) according to UNRWA (March, 2008). (42 %) of the grand total number of refugees registered in the United Nation Relief and Work agency UNRWA records live in Jordan. These refugees lives in (13) camps [4]. The above camps housing are not discussed in this paper.

### **4.2 Deir Alla Project**

The Jordan valley authority in cooperation with the World Bank executed the first under privileged housing project in Deir Alla in the Jordan valley area (1973-1974). The design was based on a project executed in Calcutta - India [2]. The project failed due to some reasons.

### **4.3 Underprivileged Housing Projects done by (HUC)**

The government was very concerned with the issue at hand thus it provided, through (HUC) and other specialized agencies, housing units to mid and low income individuals as well as encouraging the private sector to erect such units [12]. The (HUC) finalized the actual execution of the 1<sup>st</sup> pioneering project in the area of Azraq. The site chosen is close to the

general services as well as the commercial facilities. Further more, the land of project is owned by the government. Work started in August 2002 and was finalized in May 2004 [14].

#### 4.4 The Ministry of Social Development Under Privileged Housing Project

As part of its development activities the Ministry established a permanent committee dealing with housing projects. This committee sponsors supervises and follows up the different aspects of the projects including the development and updating of the conditions for eligibility for the above. Due to the importance of the national housing projects for the under privileged and to ensure that the project will proceed in a clear and accurate progression the MoSD undertook in April 2003 (based on the agreement signed with the MOP) the re-commissioning of the housing management unit (HMU) which became directly responsible for the management, execution of the various activities [15].

#### 4.5 The Royal Hashemite Court's Project

The Royal Hashemite Court's project for the under privileged housing consisted of two phases; Phase I: was based on the identification of the projects locations in every region. The identification of allocated areas for the housing units which was approx. 72 sqm. Surrounded by a boundary wall, supplied with water, electricity, local roads, main roads and finally the execution order based on stages. The projects started with the construction of 600 units as a first stage, the overall cost was (7.1 Million US \$). Spread over all the regions of the Kingdom with the exception of Amman and Zarqa.

Table 3: The unit's numbers

District	Mafrq	Irbid	Ajlon	Jarash	Balqa	Madaba
Phase - 1	42	88	49	40	30	36
Phase - 2	00	180	102	112	86	82
District	Karaqk	Maan	Al-Tafela	Aqaba	Amman	Zarqa
Phase - 1	35	90	45	140	00	00
Phase - 2	100	124	88	40	144	00

After which the Ministry of General Works and Housing assembled joint committees with the representation of different regions to identify the appropriate sites for the implementation of the project. This was finalized. There after the MOGWH developed the designs and conducted the land surveys for the projects and assembled a special tendering committee which launched the tendering process for the different regions as and when the documentation and designs were finalized [16].

#### 4.6 The General Requirements for the Projects

Beneficiaries are any individuals that meet the following requirements; family head (parent), families and income, existing living quarters condition, dwelling ownership and special cases that the above requirements do not include [6]. The possible availability of owned land by any member of the family (registered) that can qualify for the building of the new residence, in some cases priority is given to this criteria (this condition will not be discussed in this paper).

### 5. Analytical Studies of the Housing Units

The types of housing units developed vary from one project to another, from one area to another and from one family to another throughout the Kingdom. There are 3 types of housing units [30] (fig. 1, 2, 3), the variations are related to the number of family members. But all types contain a (4) unit maintaining a kitchen (3.60\*3.30 m), a bathroom (2.25\*1.70m)

a small lobby (1.70\*1.25m) and (number of bedrooms vary). Table (4) outlines the internal dimensions of the rooms including total areas for every type as well as the number of individuals residing in each type.

Table 4: The internal dimensions

Type	Room - 1	Room - 2	Room - 3	Area	No of ind.
1 - core	4.00 * 3.60	Only one	Only one	35.80 M2	Less than 4
2	4.00 * 3.60	3.60 * 3.50	Only two	49.90 M2	4 - 7
3	4.00 * 3.60	3.60 * 3.50	3.60 * 3.50	62.20 M2	More than 7

Type 1 (the core unit) (see fig. 1 & table 4) consists of the above stated services in addition to (1) room (living room), fronted by a uncovered terrace (13.4 sqm.). Type (2) is represented by (fig. 2.) Type (3) is represented by (fig. 3.)

Table 5: The area's per dweller in types 1, 2, 3

Type	Room	Area	2 D	3 D	4 D	5 D	6 D	7 D	8 D	9 D	10 D
1	1	14.4	7.2	4.8	-	-	-	-	-	-	-
2	2	27.0	-	-	6.75	5.4	4.5	3.86	-	-	-
3	3	39.6	-	-	-	-	-	-	4.95	4.4	3.96

The clear height in all the above types is 2.8m with a clear height for windows and doors of 2.2m. Number of doors in the core unit is 3 doors. The external walls are of concrete block work 15 cm in thickness. The internal walls are also of concrete block work 10 cm in thickness. All of which are plastered in cement mortar. The floors are tiled with concrete tiles. The kitchen has a basic sink placed on concrete block work. The bathroom has a wash basin, a wall shower and a floor WC. The design of most of the above housing types has a core unit. Phase (1) is capable to expand horizontally (1 additional room). Phase II is capable to expand horizontally (2 rooms). Further the horizontal design allows for in any of the expansion phases of the stairwell case next to the living room (2.40\*5.60 m) in dimension for all 3 types. The architectural design of the units allow for the vertical expansion of up to 4 stories in total (this was taken into account in the structural design of all units). The occupants can add 2 columns at the outer corners of the front terrace and thus place a concrete roof slab on top and in turn any future additional floors can add the same gaining an extra additional floor space of (13.4 M2).

In the light of the projects specialization in constructing new housing units for the under privileged families that live in marginalarized existing units (tents, mud houses or colligated sheet shelters) which lack the basic minimum standard requirements of a healthy/safe conditions and to benefit as much a number of families as possible from the project, in terms of fund allocation and availability, the MHU amended a 3 type of houses to become 2. The total estimated cost for the construction (indicated by the MOGWH studies) in 2006 for Type 1 was (7763 US\$), Type 2 was (10587 US\$), Type 3 was (13400 US\$) [15].



Figure 1: Core Unite



Figure 2: Type 2



Figure 3: Type 3



Figure 4: The extension

New two types are suggested TABLE (6); Type 1 new for (2 dwellers); tow bed rooms (12.0-16.0 m<sup>2</sup>), kitchen (8.0–10.0 m<sup>2</sup>), bath room (4.0-5.0 m<sup>2</sup>), circulation (6.6-8.8 m<sup>2</sup>) and total area (44.0 m<sup>2</sup>). Type 2 new for (not less than 5 dwellers); tow bed rooms (12.0-16.0 m<sup>2</sup>), kitchen (8.0–10.0 m<sup>2</sup>), bath room (4.0-5.0 m<sup>2</sup>), circulation (9.5-12.6 m<sup>2</sup>), and total area (63.0 m<sup>2</sup>). Table 5 shows the area per person in the new types 1 & 2.

Table 6: The area's per dweller in new types 1 new & 2 new

Type	Rooms	Area	2 D	3 D	4 D	5 D	6 D	7 D	8 D	9 D	10 D
1 n	2	24	12.0	8.0	6.0	-	-	-	-	-	-
1 n	2	32	16.0	10.7	8.0	-	-	-	-	-	-
2 n	3	36	-	-	-	7.2	6.0	5.2	-	-	-
2 n	3	48	-	-	-	-	-	-	6.0	5.6	4.8

## 6. The Conclusion: - Issues and Defects

It can be noted that the numbers (relating to the population count and number of dwellings) (table 1, and table 2) are increasing at a very high rate higher than the average increase rate of most world countries, in particular the advanced world countries. The number of dwellings per number of dwellers is very low Based on the above it is noted that there is a big shortage in the number of housing units in Jordan and the need to increase the rate of use of existing units and the increase of the number of new housing units is urgent.

There are a number of projects in the Kingdom and they vary in the issues, defects and benefits and so as this outline becomes objective in its commentary a study was concentrated on one of the projects. were the following points were noted; a- The areas of the housing units in type (2 & 3) are small in relation to the number of individuals residing in the units In type (1), the areas are appropriate in size, b- The technical spec. of some of the units are below the requirements and as a result some structural defects occurred at an early stage prior to the completion of the unit, c- The location of such units is too far away from the centers of services (in the city and surrounding zones), to which there is a lack of public transportation, d- The external walls of the unit are (15cm) thick with no thermal insulation, e- The flat reinforced concrete roofs have no screed protection or any water proofing to protect from the external elements, f- There is a notable lack of servicing spec. within the bathrooms; no bathing tubs, no ceramic wall tiles, no hot water supply (including kitchen) and only 1 clean out hatch to all the drainage network up to the ground sub tech well, g- No kitchen cupboard were installed, the kitchen sink placement/position is defected, h- The roof water external tank is 1m<sup>3</sup> in volume and is insufficient for all the domestic water usages, I- The lack of allocation in the design for a door opening at the back of the core unit causes issues of cracking when 1 is added for the expansion part in later phases.

### 6.1 The Benefits of the Housing Units

a-The future horizontal expansion (the addition of 1 or 2 rooms as well as the external terrace), b-The future vertical expansion up to 3 external floors, c-The relocation of such groups from the haphazard sites or the infringed upon allocations which has no basis to any proper standards into locations and sites that meet the proper standards of living which are permanent housing units that maintain acceptable health, environmental and social standards, d-The provision of the basic acceptable services such as water, electricity and roads which were unavailable before the introduction of the projects, e-The relocation of mass numbers of individuals (beneficiaries) into zones that can provide and encourage employment in agricultural and production fields, f-The limiting of the levels of poverty, unemployment, crime, unsocial activities which are associated with such groups and further enabling the above to train and work close to their housing units, g-The encouragement of such groups if

located near agricultural lands to utilize such locations in view of improving and increasing their economical potential.

## References

- [1] Fletcher, S. B. *A History of Architecture (20<sup>th</sup> Ed)*. Elsevier, Amsterdam, Boston, Heidelberg, London, New York, 2009.
- [2] Al-Zoubi, Y. Y. Non-Traditional Technology and Environment. *Damascus University Journal*, Vol. 9 *Applied Science*, No 3 (June 1993), p.55.
- [3] Al-Zoubi, Y. Y. Non-Traditional Structure in Jordan. *University of Jordan Journal-Dirasat*, Vol. 23 *Natural and Engineering Sciences*, No 3 (October 1996), pp. 415-441.
- [4] Department of Palestinian affairs, *60 Years Serving Refugee Camps*, Amman, 2009.
- [5] Al-kosha, A. N. and Hamza, O. M. *Many Lectures about Poor in Jordan (2006)*
- [6] Thyafleh, R. Project of Creating and Preservation Poor Houses, *Proceeding of 7<sup>th</sup> Symposium of Housing Sector*, Amman, Jordan, (April 2005).
- [7] Al-Zoubi, Y. Y. Style of Non-Traditional Structure in Jordan. *Proceeding of 7<sup>th</sup> Symposium of Housing*, Beirut, Lebanon, (April 2004).
- [8] Department of Statistics, *Statistical Yearbook*, 2009.
- [9] Ministry of Planning and International Cooperation, *Plan of Economic and Social Growth 1999-2003, 2004-2006*.
- [10] Ministry of Planning and International Cooperation, *Plan of Economic and Social Growth 2010*.
- [11] Gageesh, N. Style of Housing Foundation Work, *Symposium of Low-Cost Housing in Arab World*, Sana'a, Yamane, (October 1992).
- [12] Alfandy, A. Low-Cost Housing in Jordan, *Symposium of Low-Cost Housing in Arab World*, Sana'a, Yamane, (October 1992).
- [13] Albaradey, Erfan. Housing in Syrian Arab Republic, *Symposium of Low-Cost Housing in Arab World*, Sana'a, Yamane, (October 1992).
- [14] Housing and Urban Development *Printed Information and Data*, Amman, Jordan, (2010)
- [15] Ministry of Social Affairs, *Printed Information and Data*, Research Department, Amman, Jordan, (2010).
- [16] Ministry of Public Works, *Printed Information and Data*, Research Department, Amman, Jordan, (2010).