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Recommended Citation

Shllaku, Visar, "Overview of norms and guidelines on public housing design" (2021). *UBT International Conference*. 11.

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Overview of norms and guidelines on public housing design

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Abstract. Knowing that everyone has the right to an adequate standard of living, which includes proper housing, raises the need and reason for creating and improving housing conditions for people with moderate or low incomes. To address these needs, providing housing opportunities for low-income people is required and thus establish standards for their design. Norms and the standards derived from the inputs of particular collected data are processed further in the form of outputs to design affordable and public housing. These provide information about the rational use of premises to create healthy and sustainable housing for residents. It implies the provision of all optimal settings for facilitating the creation of conditions for human activities within these premises. Therefore, understanding the connection of dwellings with other accompanying facilities is essential when drafting standards in numerical, tabular, and graphic forms.

Keywords: Public Housing, Norms, Standards, Dwellers

Introduction

The right to an adequate standard of living, including sufficient housing,¹ makes it imperative to create housing conditions.²

According to UN-Habitat, by 2030, over two billion people will live in urban slums, with poor sanitation conditions and little access to education and health care.³

It is a clear signal to consider the need for addressing public housing.

Public housing was present in the past, thus in post-World War II Europe, it took off and began to be built on a large scale. Later on, adopted by almost all European countries.⁴

¹ Universal Declaration of Human Rights DUDNJ and the International Covenant on Economic and Social Rights, Social and Cultural Organization UN CESCR (<https://www.ohchr.org>)

² Fr. Code de la Construction et de l'Habitation/ (law no. 98-657 of 29 July 1998)/ Low-Income Housing (Fr. Habitations à loyer modéré)

³ UN-HABITAT: Global Report on Human Settlements: The Chalange of Slums, Global Report on Human Settlements 2003, Routledge (2003)

With the development of man through various stages throughout his existence, his residence changed significantly. It created different phases and situations where the aim was to increase the standard of living in conjunction with methods of approaching the problems that appear throughout the process of lifestyle.

Social housing presents a great need for the people affected by various influences such as poverty that significantly affects the way of life and housing, thus creating the necessity to be aided by proper public housing.

It obliges us to adopt norms and standards of the design for public housing buildings, commonly including minimum acceptability of housing conditions.

Any standard or norm of design of public residential buildings is and has to be determined by the relevant institutions.⁵

The design of public housing, among other things, requires care in the position and manner of integration of residential buildings, given that in many situations when their place with the urban whole was inadequate, they have failed to function.

Standards and norms about inputs and outputs

Knowing that norms and standards are necessary tools for designing projects, we must keep in mind that the frameworks that produce them, sometimes represent an obstacle in carrying out innovations in architectural design.⁶ Therefore we understand that we must have a careful approach to norms and standards during their implementation on architectural design.

What the housing unit should offer in the living conditions according to dwellers' needs is the comfort achieved by fulfilling the requirements such as optimal spaces and function, sufficient insulation, ventilation, and as well as the acceptable level of finishes of the structure. Thus we can achieve these requirements by setting the conditions which are regulated by defining the standard features that a dwelling may have.

If we analyze the inputs towards the standards, they are the situations, conditions, needs of the inhabitants, including previous norms and standards.

Situations imply real scenarios that have occurred or may occur in a person's daily life throughout the use of the apartment where he lives.

By collecting data from the dwellers' experiences, it is possible to design spaces that are intended to be used.

In addition to situations, as well involves the condition of dwellers, meaning or considering the current circumstances of the future residents. A dweller's financial status and opportunities they have are all important indicators. Therefore, this

⁴ Ion Maleas: Social housing in a suburban context: A bearer of peri-urban diversity? *Urbani Izziv*, Vol 29, (June 2018)

⁵ Richard U. Ratcliff: Housing Standards and Housing Research, *Land Economics*, Vol. 28, No. 4 (November 1952)

⁶ Monika Grubbauer & Venetsiya Dimitrova: Exceptional architecture, learning processes, and the contradictory performativity of norms and standards, Informa UK Limited, trading as Taylor & Francis Group (May 2021)

condition must be derived from thorough consideration and detailed analysis of who will use the space offered.

In terms of *needs* input, they are closely related to the *situation*, thus contributing to the generation of demands. Therefore these requirements of any aspect, whether functional or quantitative, will generate crucial data for the development of standards.

Outputs deriving from the standards provide the proportions that offer solutions that suit the majority of residents by which they systematize and adapt the rational use of the space and materials used (see Figure 1). Prepared proportions and dimensions are construed as numerical values (area, volume) and graphically (Architectural Graphic Standards).

The data produced in the form of standards are adapted and invented in a certain quantitative and visual form. Regulate and channel the rational use of environmental, human, material resources, etc.

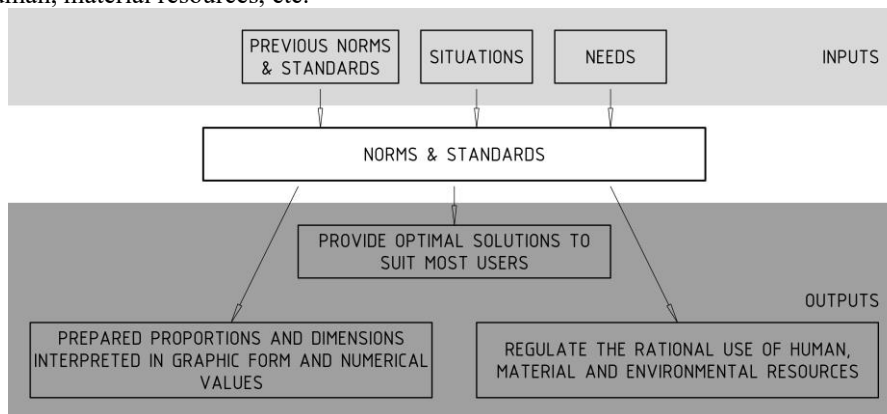


Fig. 1. Presentation of the position of standards to inputs and outputs: October 2021, Visar Shllaku, UBT Higher Education Institution.

Conditions affecting housing by standards and norms

Standards and norms derive data for the rational use of premises, resulting in numerical and graphic data that control the creation of quality premises for residents. To create suitable conditions, but also acceptable while respecting the necessary investment factor.

These conditions should provide spaces where people live, eat, play, work, rest, grow etc. So all this is ensured by the application of appropriate standards. That should provide a healthy and sustainable habitat. Figure 2 shows the connection or route from standards to human activities on the housing premises.

Standards should positively affect phases and steps undertaken as a part of efforts to build a healthy environment and its successful completion. Therefore, in the early stages of development, the connection to infrastructure should be planned well, realizing a proper link with amenities, nurseries, schools, and other institutions.

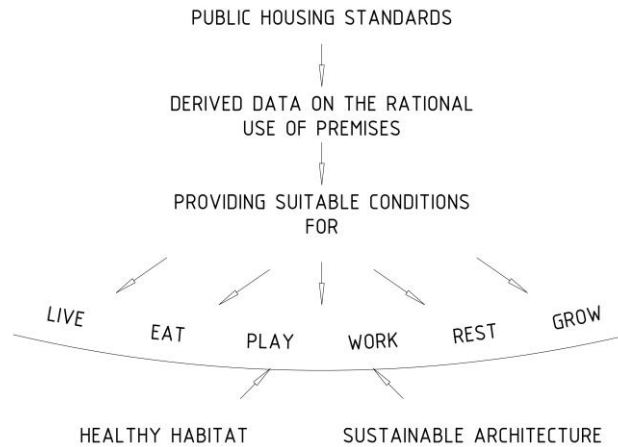


Fig. 2. From standards to the activities of residents within the premises of housing: October 2021, Visar Shllaku, UBT Higher Education Institution.

Another significant factor to be considered is diversity in many aspects, such as social diversity and racial diversity as well.

Social diversity is a crucial and necessary element to be addressed during the placement of housing complexes in decision-making moments. Some cases or aspects require the design of spaces that one culture may need that many others do not.

Diversity treatment is also evident when dealing with immigrants, which implies the need to implement new standards in the design of premises. Thus should be foreseen lifestyle of different cultures and then intervene with the application of typologies that will be in their function.⁷

Avoid design practices that create inequality by placing residents in discriminatory facilities and segregating them from other parts of the city.

Brutalist architecture failed to create successful settlements by not placing housing in a position to connect with components that give man the fundamental conditions for normal development.⁸ Thus creating antisocial spaces made it possible to comprehend that isolation of residential buildings from the rest of settlements was not a good idea. Therefore, social housing has to integrate with other parts of the city by having access to almost all services.

Social infrastructure implies as one of the keys to ensuring a prosperous settlement.

Examples of norms and standards

The design norms and standards of public housing buildings are expressed similarly to those of other residential buildings. Based on the total quantities needed

⁷ Economic Commission for Europe Geneva: Guidelines on Social Housing, Principles and Examples, Copyright © United Nations (2006)

⁸ Saffron Woodcraft with Nicola Bacon, Lucia Caistor-Arendar & Tricia Hackett. Foreword by Sir Peter Hall: Design for Social Sustainability, Published by Social Life (2012)

for a resident,^{9 10} but divided into individual and collective areas within the housing unit, or an area of a unit space to a total area of a building.

These norms refer to the minimum utilization spaces allowed within the eligibility limits.

In addition to the space aspect, the norms also focus on the design and realization of optimal conditions to ensure comfortable temperatures. To reach certain temperature levels on the areas of residential units to achieve the comfort level. It is achievable by determining the construction materials used as thermal insulation of the building and determining the allowable thickness of these materials.

In the below table, we can see an example of residential areas. The table of values expressed in m² presents only the surfaces for the living spaces like the living rooms and the bedrooms.¹¹

Table 1. Residential areas for each type of housing. Social Housing Design and Construction in Albania, A Review of the Existing Norms and Proposed Guidelines, Tirana (July 2019)

Unit Type	Studio		1+1		2+1		3+1	
Number of occupants	Min 1	Max 2	Min 2	Max 3	Min 3	Max 4	Min 4	Max 6
Living Area (m ²)	12.5	20-21	20-21	27.5-29.75	27.5-29.75	35-38	35-38	50-56

On the other hand, graphic architectural standards represent a significant reference for architects. This type of standard presents the minimum and optimal dimensions that are suitable for use throughout the design process. Therefore, even in the case of social housing can become a helpful hand.

The following example shows the case of the living room.¹²

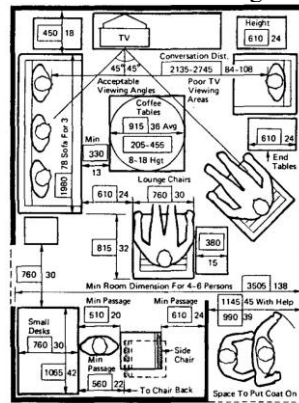


Fig. 3. Living Room. John Ray Hke, JR., FAIA: Architectural Graphic Standards, Tenth Edition, John Wiley & Sons, Inc. (2000)

⁹ Barry Godchild, Standards in housing design: A review of the main changes since the Parker Morris report (1961), (Received 01 Aug 1985, Published online: 27 Apr 2007)

¹⁰ Ernst and Peter Neufert: Architect's Data, Fourth Edition, Blackwell Publishing Ltd (2012)

¹¹ Social Housing Design and Construction in Albania, A Review of the Existing Norms and Proposed Guidelines, Tirana (July 2019)

¹² John Ray Hke, JR., FAIA: Architectural Graphic Standards, John Wiley & Sons, Inc. (2000)

Position of the housing unit

The position of the housing unit to its determining factors and its relation to the necessary premises are presented in Figure 3. All these affect the proper functioning of this type of housing. Therefore, the standards should conform to ensuring the connection of these units with other premises.

Here are the components that directly affect the performance of the housing unit and the building as a whole. As well as its connection with the necessary premises that are an integral part of the housing function. Therefore, depending on the configuration or the adequate approach to these factors, it also determines its performance.

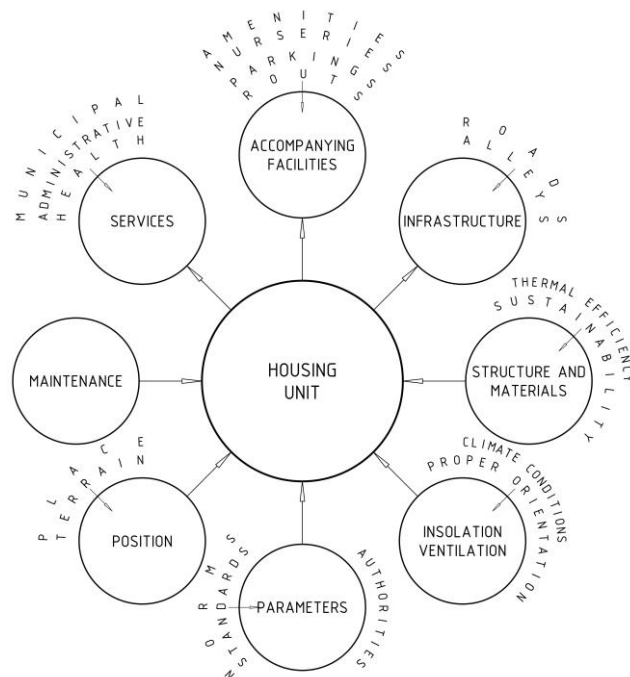


Fig. 4. Position of the housing unit to its determining factors and its relation to the necessary premises: October 2021, Visar Shllaku, UBT Higher Education Institution.

Conclusions and Recommendations

The situation in which a considerable number of people live nowadays is quite alarming based on the fact that they live in slums and do not have access to schooling and medical services. And this, according to UN-Habitat, is expected to increase to two billion inhabitants by 2030.¹³ The problem is quite challenging for the

¹³ UN-HABITAT: Global Report on Human Settlements: The Chalange of Slums, Global Report on Human Settlements 2003, Routledge (2003)

professionals involved, therefore solutions cannot be straightforward. However, with the cooperation of appropriate institutions and the creation of the necessary mechanisms, satisfactory results can be expected.

Housing can be understood as a situation and a process. "Housing is both a situation and a process" (Richard U. Ratcliff, 1952). Likewise, as an illustration of the situations and processes of dwellers living in certain premises, such as in public housing. A process can be viewed as a series of activities performed by a person while using the facility. This can draw us trajectories of human activities within these premises. As a result, it helps us to set or improve preliminary norms and standards.

The tendency of applying the norms and standards is to ensure comfort that may be obtained within the framework of minimum acceptable conditions that provide comfortable, functional, and healthy housing.

In the drafting of standards, the requests and remarks of the residents have to be studied and considered, as well as their assessments and complaints they have.

For the development of design norms for social housing buildings, not only the situations that occurred, but also simulations based on human habits can be helpful as auxiliary data. As well, the reference to the previous norms should be considered to update the outdated norms that are no longer applicable with the advancement of technology and lifestyles.

The outputs that emerge from the compilation of norms in numerically or even graphically expressed form, should provide solutions that suit most users. That regulates the rational use of construction materials and the management of residents' requirements.

Norms determine the amount of personal space a person needs within a housing unit or the total quantity of area.

The position of the housing unit is a product influenced by factors such as its position, parameters, climatic conditions, the structure containing materials, and its maintenance. It needs to have good connections with services, associated facilities, and infrastructure.

Diversity treatment takes place when dealing with different cultures as in the case of immigrants, as a possible solution, the design of specific spaces can be applied (that perform the functions conforming to their lifestyle).

The standards, in addition to being expressed numerically and tabularly, it is necessary to make them graphically in the form of basic typologies that can apply in architectural design.

In selecting the position of public housing in connection with other parts of the city, it should be integrated with other neighborhoods so that it is not ghettoized and not disconnected from social life and its inhabitants get integrated.

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