

IMPORTANCE OF SOCIAL SUSTAINABILITY AT THE MASS HOUSING PROJECTS

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Abstract

Migration from rural to urban area has gained acceleration with education and business opportunity in middle of 20th century. Today half of the world population lives in cities and this rapid migration has caused unplanned urbanization and poor quality building stock. Urban transformation projects are kind of solution for illegal housing, buildings on the scrap heap and infrastructure problems of the cities. Mass housing projects are using for urban transformation of adjacent properties and it offers a remedy for social facilities, integrative infrastructure, and better space occupancy. On the other hand, the social relations on the area have totally changed with physical change of the area and new living styles have suddenly popped-up on these quarters. Neighborhood relations, safety needs and open public space usage have totally changed compared to old settlement areas. The people who live in the mass housings in the cities are not monotype and these places are junction points for many different communities with different income levels, life style and cultures. Although they have diversities, their social relationships like all the people are critical to wellbeing. Despite the large number of people living in the same place, a lack of social connection leads to loneliness and isolation on these areas. Social sustainability shows the satisfaction of human social needs and maximizes community values, knowledge, history, traditions, and social networks for next generations. The mass housing projects can be successful when they also provide social satisfaction and sustainability for habitants but on the design phase of these projects, the social sustainability doesn't take any notice. Social places, mobility, and proximity are important for connecting people with each other and developing social relationships. Within the scope of this research, social sustainability of two different scale social mass housing projects are evaluated in accordance with the indicators generated by The Oxford Institute for Sustainable Development (OISD). A sense of community identity and belonging; tolerance, respect and engagement with people from different cultures, background and beliefs; friendly, co-operative and helpful behavior in neighborhoods; opportunities for cultural, leisure, community, sport and other activities; low levels of crime and anti-social behavior with visible, effective and community-friendly policing; and opportunities for all people to be socially included and have similar life opportunities are defined as the basic social needs for habitants. Amenities and social infrastructure, social and cultural life networks, community space to grow and participation of decision making has used as indicators for social sustainability of these two settlements. Consequently, social sustainability is extremely important as environmental and economic sustainability for the future of the cities and it should be considered in the urban transformation projects.

Key Words: *Mass housing; social sustainability; social needs; neighbourhoods; urban transformation*

1. Introduction

As from the 1300's, towns and cities were beginning to expand with commercial revolution but rural exodus has gained another dimension with industrial revolution and it has showed dramatic increase due to education and business opportunity in middle of 20th century. According to 2016's data, 55% of the world's population lived in urban settlements and half of that lived in a city with at least 1 million inhabitants [1].

This uncontrolled growing has led to many problems in the urban areas. Especially housing problem is one of the fundamental and urgent topics for all cities. One side of this is increase in the need for housing production and another side is prevention and renewal of unplanned and illegal construction. City governments look for ways to guide and control the processes and they are using urban transformation projects as a solution of this problem. Urban transformation can be defined as an urban intervention aimed at providing socio-economic and physical contribution to the city by re-developing of the disadvantaged regions. [2] Heritage conservation, urban regeneration and redevelopment are three major categories of urban transformation. [3] Especially in Turkey, after the "Law on Transformation of the Areas under Disaster Risk" dated on 16/05/2012; urban transformation has been commonly considered as urban redevelopment by policy makers to overcome illegal housing, poor quality of building stock and infrastructure problems of the cities. In the process

of redevelopment, when the problematic areas of the cities are coming into the cities as new urban areas, studies should be carried out not only for spatial transformation but also for social and cultural development.

Urban transformation projects have been implemented in different kinds of urban areas and majority of them is squatter areas. Squatter areas have been arisen by producing unauthorized constructions on the territory of the public or real persons. In Turkey, these areas have been gained legal statues by laws and amendments in the eighties. The total number of squatters in Turkey was around 50,000 in 1955, according to the census held in 2002, there were 2.2 million pieces and 11 million people live in these squatter slums. This proportion corresponds to 27% of the total population [4]. It has showed that the high amount of people living in poor quality housing. Squatter areas in the cities are especially need redevelopment but the economic background of the habitant of these places doesn't allow them to make the physical change on their own. City governments have developed different solutions for these areas such as demolition, rehabilitation, and redevelopment.

Mass housing projects are using for urban transformation of adjacent properties. The word "mass housing" was understood a second-class housing for low income level in the past. By the time of progress "mass housing" has represented the urban transformation projects of the metropolitan municipalities. Nowadays it means that housing initiative undertaken by public or private organizations such as housing associations, housing production partnerships or housing banks. This type of projects can provide social, economic, and technical benefits when they are built as large residential sites, rather than individual structures.

Commercial, educational, health, religious services and facilities are required for better residential areas and mass housing projects many times offer this kind of facilities. On the other hand, slums are built with little to no basic infrastructure and sanitary provision, and mass housing projects offer integrative water, energy, information, and communications infrastructure. It provides cost effective solutions and better organizations for the city structure.

The social relations on the area have totally changed with physical change of the area and new living styles have been observed on these quarters with urban transformation projects. Living in squatter areas formed by relatives or townsman clusters can resist the negativities by urbanization with strong solidarity systems and social control mechanisms. When the area is transformed to new mass housing, more vertical relation opportunities have arisen between the neighbors. Many of them have no idea about their neighbor and also the relationship between neighbors has been settled not natural way and it has taken a long-time period.

Outside areas are used more effectively in slum areas and people spend most of their time at the outside. A clear majority of them have their small gardens and they are engaged in farming. At least they are sitting in front of their doors and involve the street life. So, social control mechanism has been processing on their own and more secure city street life is ongoing.

On this perspective, within this paper, the social sustainability in the regions transformed from the slum areas to the mass housing areas was discussed and evaluated. Two different social mass housing projects which are designed for urban transformation are evaluated in accordance with the social sustainability indicators and it is emphasized that this subject should be approached carefully in the design phase.

2. Social Sustainability

Sustainability is a worldview that seeks to fulfill the environmental, economic, and social needs without harming the living conditions of future generations. The concept of sustainability, in case of the increasing world population, the exhaustion of natural resources, global warming, and environmental pollution, is consistently associated with environmental problems, and this concept is often expressed in the continuity of economic development. Although sustainability is to ensure the continuity of everything in balance within environmental, economic, and social values, the social footprint is constantly forgotten.

Varied definitions of social sustainability have been introduced in different filed. When we looked at urban scientific study field, social sustainability is "development (and/or growth) that is compatible with harmonious evolution of civil society, fostering an environment conducive to the compatible cohabitation of culturally and socially diverse groups while at the same time encouraging social integration, with improvements in the quality of life for all segments of the population." [5] Social Sustainability has been also defined as "the continuing ability of a city to function as a long-term, viable setting for human interaction, communication and cultural development." [6]

As it has been understood from the definitions, the local needs and cultural pragmatics should be considered in the social sustainability. At this point, OISD (The Oxford Institute for Sustainable Development) made the following statement on this subject: “Concerning how individuals, communities and societies live with each other and set out to achieve the objectives of development models which they have chosen for themselves, also considering the physical boundaries of their places and planet earth as a whole. At a more operational level, social sustainability stems from actions in key thematic areas, encompassing the social realm of individuals and societies, which ranges from capacity building and skills development to environmental and spatial inequalities. In this sense, social sustainability blends traditional social policy areas and principles, such as equity and health, with emerging issues concerning participation, needs, social capital, the economy, the environment, and more recently, with the notions of happiness, wellbeing and quality of life.” [7]

At the literature, the criteria of social sustainability have been varied according to year and the subject of the work. It has been listed in Table 1. Themes of livelihood, equity, security, participation, and employment are the common topics used in many studies. At this point, the scale and subject of the study has gained importance for choosing assessment criteria.

Table 1. Key themes of social sustainability [8]

Chambers and Conway (1992) [9]	DFID (1999) [10]	Sach (1999) [11]	Hans-Böckler-Stiftung (2001) [12]	Thin et al (2002) DIFD [13]	Omann and Spangenberg (2002) [14]	Baines and Morgan (2004) and (Sinner et al, 2004) [15]	Bramley et al (2006) [16]
•Livelihood	•Inclusion	•Equity	•Paid and voluntary work	•Social justice	•Education	•Basic needs	•Community stability
•Equity	•Equity	•Democracy	•Basic needs	•Solidarity	•Skills	•Personal disability	•Security (crime)
•Safety nets	•Poverty	•Human rights	•Social security	•Participation	•Experience	•Equity	•Community participation
•Capability to withstand external pressures	•Livelihood	•Social homogeneity	•Enabling of social innovation	•Security	•Consumption	•Social capital	•Pride and sense of place
		• Equitable access to resources and social services	•Equal opportunities to participate in a democratic society		•Income	•Needs of future generations	•Interactions in the community/ social networks
		•Employment			•Employment	•Cultural and community diversity	
		•Equitable income distribution			•Participation	•Empowerment and participation	

3. Social Sustainability at Mass Housing

Social sustainability shows the satisfaction of human social needs and maximizes community values, knowledge, history, traditions, and social networks for next generations. To assess the social sustainability at mass housing, the social needs and problems at the mass housing settlement should be defined carefully.

Firstly, housing also evokes different meanings such as safekeeping, sense of belonging and socialization beyond the shelter of the individual's life. In this respect, it is not right to express the house as physical spaces built with walls only and the housing environment should not be comprehended only as a place of accommodation, it should be considered as a primary physical input that determines people's life habits, cultural heritage, and social relations. In mass housing, where many people live together, this cannot be designed as one family needs, it should be considered as commixture communities.

The people who live in the mass housings in the cities are not monotype and these places are junction points for many different communities with different income levels, life style and cultures. Even though they have diversities, their social relationships like all the people are critical to wellbeing. Despite the large number of people living in the same place, a lack of social connection leads to loneliness and isolation on these areas. The main reason behind that is the nonexistence of places where people can meet and socialize. The mass housing projects can be successful when they also provide social satisfaction and sustainability for habitants but on the design phase of these projects the social sustainability doesn't take any notice [17]. Planners generally are considering the one family unit; its size, living at this unit, technology and economic construction of this unit are the main themes of their work.

Social places, mobility, and proximity are important for connecting people with each other and for developing social relationships. Some social facilities should be defined on the area according to demographical features of people such as gender, age, income level, occupations, education, and ethnic background. For example, where the number of children and working families is high, the number of playgrounds that children can spend time in mass housing and even the nursery facilities should be designed according to proportional to the population at the settlement. In relation to the project size women, pensioners and young people need to be separately considered and involved to the design with the different sharing and socialization space. Social places such as club houses, youth centers, swimming pools and sunbathing terraces, walking and jogging trails, indoor and outdoor sports fields and recreation areas can be added to mass housing design.

From different standpoint, the cultural behavior and needs should be also considered at designing phase. Some special places can serve to these areas in a manner consistent with the lifestyles, beliefs and income levels of the people living in the mass housing. For instance, places that allow carpet washing, wool washing, small scale farming, etc. which are part of the life in slums can be easily included to the projects in the design phase. Public worship place such as small mosque, cem house, etc., can be designed as a meeting space for site and people with similar beliefs can be gathered closer easily.

Social sustainability can be improved with mobility system of the area. The relation with urban public transport system, a network of bike paths, promote of pedestrian paths can connect the people with public spaces and city centers. It is important for harmonizing and involving to city life. Mobility has also connected with proximity. "In an urban context, proximity is defined by the relationship to accessing and moving in the interdependence between two points. Its meaning should widen and define proximity as a mix of social, territorial, symbolic, and physical aspects. For example, one can utilize the physical proximity while experiencing a set of important social boundaries. This is exemplified in a housing block where one lives close to neighbors but have no social relationship. The opposite situation can occur as well: living in a house with a surrounding garden and having an intense relationship with one's neighbors. Likewise, we can notice the difference between rural or more urbanized areas that affect the model of proximity: density, functional mix, accessibility and the way of defining limits affects the reading of relative distances." [18].

4. Evaluation of Social Sustainability at Mass Housing

A sense of community identity and belonging; tolerance, respect and engagement with people from different cultures, background and beliefs; friendly, co-operative and helpful behavior in neighborhoods; opportunities for cultural, leisure, community, sport and other activities; low levels of crime and anti-social behavior with visible, effective and community-friendly policing; and opportunities for all people to be socially included and have similar life opportunities can be defined as the basic social needs for habitants. The social satisfaction level related with their basic social needs and the transfer of this culture should be evaluated for understanding the social sustainability.

Evaluation methods of social sustainability are varying in respect of place and size of the communities so on the literature the best evaluation indicators had been searched for assessing the urban mass housing studies. On this phase, it had been figured out that Oxford Institute for Sustainable Development works on the urban communities related with their social sustainability and they have developed indicators for this type of communities. The indicators generated by The Oxford Institute for Sustainable Development (OISD) was used in this research to assess the social sustainability and satisfaction of mass housing project. This indicator was generated to designing building blocks for urban communities.

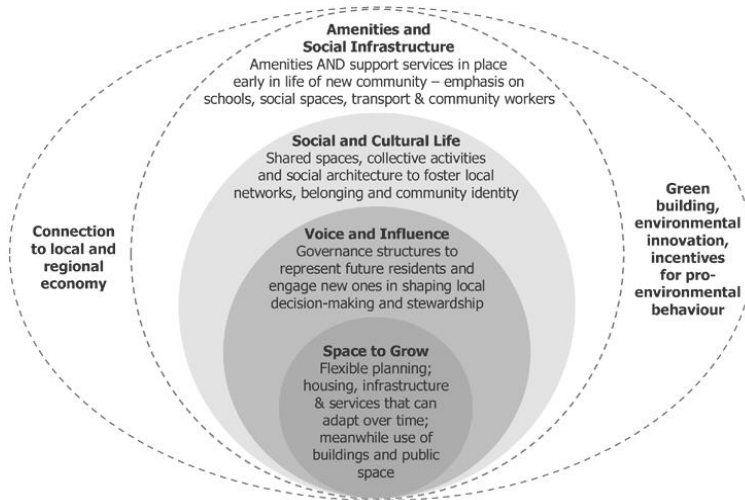


Fig. 1. The Social Sustainability Framework by OISD [19].

Amenities and social infrastructure, social and cultural life networks, community space to grow and participation of decision making has used as indicators for social sustainability which has been presented in figure 1. These indicators represent the social connection possibilities of the site based on the social places, mobility, and proximity on the other hand they show that the life on the site can be adaptable or not for the future generations.

Several of indicators are related with social facilities on the site and those should be decided on the design phase of the area. In Turkey, especially for urban transformation project, site sustainability has never been a subject on the design and instead of this economy or construction quality have been basically taken in consideration. To understand the factual situation of mass housing project, two different mass housing sites have been evaluated with these indicators.

5. Case study (Konya –Karatay)

The mass housing projects selected as research study are in Karatay district of Konya which is one of the main district of Konya metropolitan areas. The mass housing projects in this district are produced chiefly by Karatay Municipality in compliance with “Urban Transformation Law”.

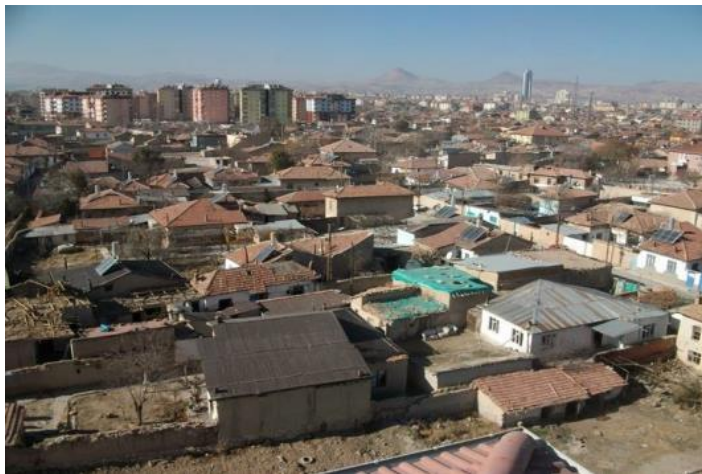


Fig. 2. The photograph of case study area before urban transformation. [20].

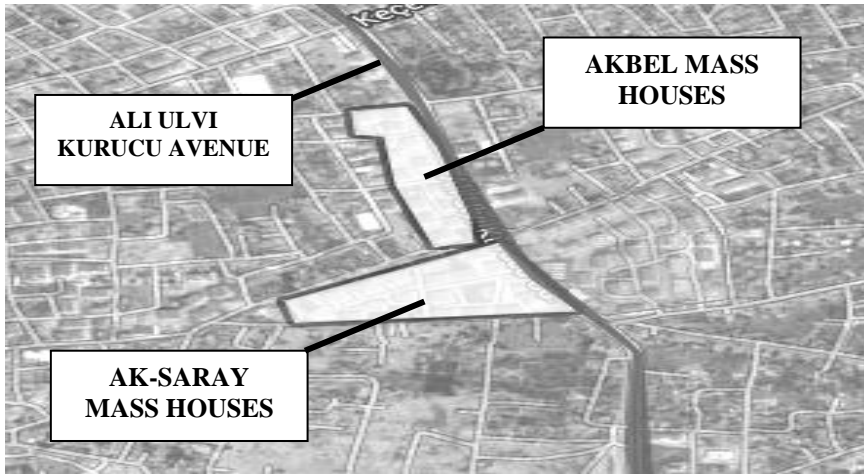


Fig. 3. Location of case study areas [21].

Where the existing houses are decided to be demolished and mass housing is decided to build, the owners of the construct rights are purchased in return for flat. Before mass housing has been built, there were a one-storey slums with gardens in the study area as shown in figure 2. The houses with infrastructure problems were irregular and poor quality on the site.

These two mass housing projects are on one of the main street of the district and they are neighbor settlements. The location of the mass housings has been presented in Figure 3. Aksaray Mass Houses, which was constructed in 2008, were planned as 2 lots, 34 blocks, 444 residences. Akbel Mass Houses, which was constructed in 2005, were planned as 3 lots, 13 blocks, 312 residences.

Ak-saray Mass Houses shown in figure 4(a) are in 2 types, 100-130 m². Houses of 100 m² are as 2+1, houses of 130 m² are 3+1. The blocks consist of six floors and there are 4 flats at each floor. A parking area is designed for each apartment block. The population of the area is 1488 people. 3+1 apartments are 130 m² in Akbel Mass Houses. The blocks consist of six floors and there are 4 flats at each floor. There is not any parking place for each block. The population of the area is 1248 people. The blocks are shown in figure 4(b).



Fig. 4. (a) The photograph of Ak-saray Mass Houses (b) The photograph of Akbel Mass Houses

Table 2. Social Sustainability assessment of case study areas.

SOCIAL SUSTAINABILITY INDICATORS		AK-SARAY MASS HOUSES	AKBEL MASS HOUSES	
AMENITIES & SOCIAL INFRASTRUCTURE	Built environment & public space	Early provision of schools, nursery and childcare	-	-
		Early provision of basic community infrastructure – multi-function/flexible spaces with co-located services: shop, community centre, health/wellness provision, green space (temporary provision if permanent not initially feasible)	+	-
		Good transport and communications connections – including public transport and broadband	+	+
		Meanwhile spaces -temporary use of green space, community buildings or housing to meet intermediate needs (e.g. community house instead of a community centre)	+	-
		Low carbon infrastructure that connects to health and wellbeing agendas (e.g. encouraging walking and cycling)	+	-
	Social architectures & supports	Hyper-local information about community services and groups	-	-
		Neighbourhood-based community liaison or community development staff (could be frontline staff co-located in temporary facilities)	-	-
		Collective neighbourhood services combining professional and volunteer skills, either designed in or initiated by residents – e.g. community wireless networks, community generated power, neighbourhood childcare co-ops, group purchasing networks, credit unions	-	-
		Micro-grants to kick start local initiatives	-	-
		Community-owned or managed assets e.g. community shops, food production	-	-
	Social practices	Baby-sitting circles, parent and baby groups, car clubs, lift share schemes, walking school bus, cycle clubs, neighbouring networks	+	+
		Volunteer Community Champions or Neighbourhood Greeters	-	-
		Community gardening, composting, recycling	-	-
		Social health e.g. neighbourhood walking groups, running clubs, cycle buddies	+	-
	SOCIAL & CULTURAL LIFE	Built environment & public space	People-friendly layouts e.g. car free areas, speed reductions, eyes on the street, well-lit areas	+
Distinctive architecture/ landscaping to reinforce/ create sense of local identity			+	-
Public and congregational spaces e.g. open spaces, parks, wide pavements, benches			+	-
Third spaces (e.g. cafes, pubs, shops), playgrounds and play spaces			+	-
Connections to neighbouring communities to avoid isolation e.g. pathways and shared public spaces			+	-
Flexible working spaces to encourage home-working, local enterprise (e.g. spaces in a community centre or café)			-	-
Social architectures & supports		Time banking – promoting mutual exchange and development of social capital though peer-to-peer time banking or people-to agency time banking	-	-
		Community projects to encourage intergenerational/ inter-group mixing	-	-
		Neighbourhood Charter, Community Design Statement	+	+
		Local rules and norms e.g. Home Zones, car free streets, neighbourhood agreements, local taxes or fundraising	+	+
Informal local currencies e.g. Local Exchange Trading Systems (LETS)	-	-		

	Social practices	Neighbourhood-based groups e.g. Neighbourhood Watch, Residents/Tenants Associations, Pledge bank	+	-	
		Inter-generational, cross-cultural events and activities e.g. The Big Lunch	-	-	
		Local celebrations – e.g. festivals, street parties, fetes, family days, artists in residence	+	-	
		Local oral history projects like Oral History	+	-	
		Local events – e.g. litter picking, planting, fundraising	-	-	
		Neighbouring activities e.g. household network, loanable	+	+	
VOICE & INFLUENCE	Built environment & public space	Community advocate for future residents	-	-	
		Community action planning (e.g. Planning for Real, planning charrettes)	-	-	
		Identify physical spaces and places residents can influence e.g. design, develop or manage	+	-	
		Urban Acupuncture – intensive public consultation on built environment proposals	-	-	
		Influencing public service delivery at the neighbourhood level	+	-	
	Social architectures & supports	Democratic governance structures e.g. Parish or Neighbourhood Council	+	+	
		Formal governance structures e.g. Community Development Trust, neighbourhood management partnership or board, Community Interest Company, Tenant Management Organisations	-	-	
		Participatory governance structures e.g. neighbourhood forum, participatory budgeting,	+	+	
		Campaigning activities e.g. single issue lobby groups, community organising	-	-	
		Devolved or delegated neighbourhood budgets	-	-	
		Flexible stewardship and community engagement/ empowerment strategies	-	-	
	Social practices	Family days, critical walking, neighbourhood walkabouts, Complaints Choirs	+	+	
		Neighbourhood websites and community media e.g., Community Facebook group, Community noticeboard and newsletter	+	-	
	SPACE TO GROW	Built environment & public space	Flexible and adaptable housing	-	-
			Flexible and adaptable community bases and buildings (e.g. temporary, multi-use buildings)	-	-
Flexible Master-planning, e.g. enabling participation in planning of the later phases			-	-	
Social arch. & supports		Flexible stewardship strategy – scope for governance structures and actions to change over time to reflect evolving population and needs	-	-	
		Social enterprise strategy	-	-	
		Community ownership – Community Land Trusts, Development Trusts, asset transfer	-	-	
Social practices		Community gardening, community play spaces	+	-	
		Meanwhile use of vacant spaces in the neighbourhood	+	-	

Although both projects are produced for municipality, the Akbel Mass Houses don't have any social facilities and green areas. The whole site has been covered with concrete, the distance between blocks are the minimum limits in accordance with construction zoning law. On the other hand, there are social gathering areas between building blocks in Ak-saray Mass Houses. Blocks are surrounded with green zones and only the walking areas are covered with concrete.

When the social sustainability of the two projects are evaluated considering the OISD framework, evaluation is presented in Table 2, Ak-Saray Mass Housing project is more sustainable than the Akbel Mass Housing project. When we look at amenities and social infrastructure of two project, Ak-saray Mass Houses have shop, community centre, health/wellness provision and green space and there is no built environment for social communication in Akbel Mass Houses. Also, social communication and sustainability have been supported with green areas and walking and cycling paths in Ak-saray Mass Houses. There are recreation areas, sport areas, children playgrounds and small mosque in Ak-Saray and moreover all around is green. Although there is plenty of green space left, there is no arranged area where farming can be done. It is not possible to continue similar street life as squatter settlement but Ak—Saray housing project offer a recreation areas suitable for outdoor activities. For young people, children and older people can find specific areas for gathering in this recreation area and also there are well thought-out areas for some cultural activities such as making marriage ceremony or cleaning carpets in Ak-saray Mass Houses. Gardening, composting and recycling are not any subject of them, they are totally bound up with municipality servicing for refuse removal.

Both has not any future to grow or for better sustainable areas. The culture of environmental sustainability or sustainable society has not been improved, people are not care about future generations and they are mainly related with their house unit; its organization and size. In both site, there are over one thousand people living but they have never see themselves as a social community which has a power to shape their life and their future. Beside that people are or have not being educated for collective awareness for sustainability problems and putting in place collective solutions.

According to satisfaction surveys, which are consisting of 50 houses from Akbel Project and 65 houses in Ak-Saray Project; the satisfaction of Akbel is surprisingly higher than Ak-Saray. In this survey, the satisfaction of physical properties of housing, open-green areas, accessibility, comfort conditions, social-neighborhood relations, suitability to user profile were evaluated [21]. There is not any relation between satisfaction level and age, income, or education level of residents. The satisfaction levels of female participants were lower than male participants related to physical properties of housing and open-green space factors. It is mainly related with people worldview which is considering only daily life or their own self and they don't care about the future or next generations' life and also when their home is nice, in front of the door is not important for them. In Turkey, especially in Anatolian cities, there is no awareness about environment and sustainability so these points are only shaping by predictions and knowledge of designers. But in many developed countries on the design phase, possible users tend to interfere with the mass housing design of these issues related to the place they live their future.

6. Conclusion

Architecture is one of the field is highly effected from the social behavior and the life style of human beings. Especially houses cannot be considered only physical spaces built with walls, it should be the place to evoke the sense of belonging, safekeeping, and socialization. The houses are the important part of the cultural life and social sustainability of houses shows the satisfaction of human social needs and maximizes community values, knowledge, history, traditions, and social networks for next generations.

In order to obtain a sustainable housing stock, we need to develop new perspectives. This research is on the notion of mass housing and how it can be related to aspects of social sustainability. The research helped to investigate the importance of social sustainability at mass housing project which is built in the process of urban transformation. In Turkey, mass housing projects are bearing in mind as a way to overcome the housing problems and sustainability of site has been never thought. In the design phase, with easy solutions such as social facilities, mobility systems, accessibility and functional mix, etc. can be handle better social infrastructure for the project. In design phase of mass housing, some checklist like OISD framework can be used by municipalities or potential users can be educated and trained related with sustainability of the site by municipalities and their participation to process must be ensured.

Architecture is forming the artificial environment which is unimaginable to separate from environment; in other words, it is imperative part of environment. Education of the people related with the artificial environment is important for sustainable futures. Especially the people should be educated about the environmental problems and cultural heritage. It should be begun with their houses, because it is basic unit for their life and sixty percent of built environment consists of residences. Sustainability is a key factor of quality in urban life. Based on two case studies the most obvious problem with current urban renewal practice is that it completely fails to consider the way of life of residents and fails to acknowledge the need to consult local communities in the urban renewal process. It is not can be solved by modernist urban planning approaches and social needs of communities should be taken into account on the design phase of transformation areas.

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