PARTICIPATORY PLANNING AT MESA-KORU: TOWARD A MORE SUSTAINABLE FUTURE

Aydin Özdemir, Metin Başal, Fürüz San Aslan

Abstract
This case study examines the process of a landscape renovation project of a public housing development in Ankara, Mesa Koru site. The Mesa Koru study discusses and explores new trajectories in the development of sustainable landscape development via a participatory approach. Through focus group discussions, design workshops and personal interviews, groups of residents and property managers were included in plan development. Results show that the community is ready to engage in building a more sustainable model for the future of the site with predictable costs shared by the community members. It is assumed that this new model, which involves a customized participatory design process, designed through collaboration between researchers, designers, and resident and management groups, will be a role model for all other public housing sites in Turkey.

Keywords
Public housing; sustainability; community participation; landscape design

Introduction
Rapid urbanization and migration from rural to urban settings since the 1950s, along with the high-density housing programs built after the 1980s have given rise to numerous urban environmental problems in Turkish urban settings (Erkan, 2002; Mengi, 2007), some of which could be addressed in a cost effective and sustainable manner through urban planning (Bademli, 1986). Although Turkey recognizes housing as a basic human need and the provision of housing as one of its fundamental responsibilities, healthy housing is limited in urban areas with large populations. Mass housing projects, which are usually developed by local governments with the support from the TOK (Housing Development Administration of Turkey), are intended to provide low cost housing developments for large populations and target low- and mid-income groups. These housing developments generally lack planned open and green spaces, and policies such as the Mass Housing Law, approved in March 1984, have no provisions of landscape installations in mass housing projects. The environmental impact of high density public housing in urban areas that lack essential open and green spaces includes high levels of air pollution and dust, pollution of natural resources, damage to natural topography, waste dumps and landfills, unsustainable resource use, and...
loss of access to natural areas and open spaces (Çalış, 2002; Sarısozen, 1984; Yeğin, 1993; Özdemir, 2007). Landscape issues are primarily in the hands of private developers who have not had much interest in long term sustainability because they are primarily in business to make profits (Çalış 2002; Altaban, 1996); thus, most practices adopt only simple landscape installations on limited parcels (Tapan, 1996), and most housing developments do not provide adequate, long term maintenance plans for outdoor spaces. Successful long term plans should stipulate financial support programs which will contribute to building and maintaining the site in terms of sustainability and affordability (Chougill, 2007).

Urban open and green spaces can have marked effects on many aspects of the quality of the urban environment; nature in urban settings improves the quality of life in many ways, beautifying cities and improving human comfort, health and economic well-being (Kaplan & Kaplan, 1989; Milvard & Mostyn, 1989; Wohlwill, 1983). These spaces, which have significant ecological, social and economic functions, are vital components of complex urban ecosystems (Bradley, 1995; Shafer, 1999; Tyrvainen, 2001; Lutz & Bastian, 2002). Good quality outdoor environments make people feel good about themselves and where they live and perhaps even foster more of an appreciation for the landscape than poor quality landscapes. Furthermore, research supports the contention that nearby nature and designed green spaces, such as urban parks, add economic value to the residences (Gold, 1977; Orland, Vining, & Ebreo, 1992; Ulrich, 1986; Anderson & Cordell, 1988; Morales, Boyce, & Favretti, 1976; Smardon, 1988; Anderson & Cordell, 1985; Sheets & Manzer, 1991). Based on these benefits, the planning and management of residential landscape is essential to urban sustainable development (Miller, 1988; Grey, 1996; Teal et al., 1998). Additionally, sustainable approaches in the planning and design of outdoor environments could address some of the environmental problems in public housing sites; landscaping these sites not only provides an aesthetic appeal, but rather is part of a much larger natural ecosystem in urban environments (Ahern, 1991; Forman & Godron, 1986; Linehan, Gross, & Finn, 1995; Cook, 2000, 2002; Özdemir, 2007). These efforts are intended to promote and extend biodiversity within urban areas (Pickett et al., 1997; Jackson, 2003; Allenby & Fink, 2005). The challenge is to find a new vision where social and environmental benefits go hand in hand with lower costs and higher profits through a more sustainable approach (Hopkins, 2005).

In several reviews and research articles, sustainable housing development is mentioned in context of cultural perspectives in developed and developing societies (Anderson, 2006; Giuliani, & Wiesenfeld, 2003; He & Jia, 2007; Crabtree, 2005; Islam, 1996; Sunnika & Boon, 2003; Rousseau & Chen, 2001; Asadi-Lari et al., 2005; Hoversten & Hashem, 2000; Holden, 2004), including Turkey (Çalış, 2002; Sarısozen, 1984; Yeğin, 1993). Chougill (2007) discusses the need to achieve sustainable housing in the future that is designed to meet three primary objectives: (1) policies that provide improvement of the outdoor environment, (2) empowerment of poor people, and (3) resident participation in the decision making and design processes. The third objective is the most influential in achieving sustainable housing development; residents’ participation in neighborhood decisions is considered a favorable method of forming an interactive relationship between the policy-maker and the locality, the living environment and the resident individual (Selman & Parker, 1997;
Taylor, 2000; Raco, 2007). None of these studies, however, focus on the importance of open and green space on the formation of healthy housing environments; they are more concentrated on policy development than on design implications.

The private sector has a major role in determining the nature of our cities and contributes to the formation of communities; some construction companies in Turkey have already changed from their traditional fragmented processes to more client and environmentally oriented approaches, which recognize the importance of innovation, research, participation and ecological sensitivity (Myers, 2005; Schroepfer & Hee, 2007). The subject of this paper, Mesa Koru, is one of the most well-known and regarded mass housing projects in Turkey, with its emphasis on environmental awareness and participatory programs. This case study introduces the successful efforts of a private company, Mesa Company, to build a sustainable and green housing environment along with a team of designers.

**Mesa Koru Site**

Over the last twenty years, a public housing community has been created at the Mesa-Koru Site, a mid- and high-income public housing development in Ankara, Turkey (Figure 1). This housing project, which would eventually become a community of 1600 dwellings constructed and operated by the Mesa Construction Company, is based on environmental and social aspects that highlight emergent forms of sustainable urbanism trends such as planning a walkable community and mixed-use development with a range of housing choices. Mesa Koru site was chosen by the authors of this study because it is a new city quarter in Ankara, eighteen kilometers from the city center that has the facilities to deal with waste and waste water on site, as well as retaining rain water within the locale. This housing project aims to be on the cutting edge of architectural and landscape design and is a stellar example of public-private partnership in achieving the goals of sustainable planning, design and construction. The site has mixed housing types, rich landscape features and self-sustaining practices. The company housing policy aspired to design and construct the buildings in relation to their outdoor environments, develop a long-term management plan and provide maintenance processes after marketing. Several other housing developments in Ankara, such as Batikent co-op, Angora Houses and Konutkent Estates, attempted similar schemes; however, these organizations failed due to limited community participation and funding difficulties.

![Figure 1: The location of Mesa Koru in Ankara city and Turkey (Source: Authors).](image)
Outdoor environmental quality is an important concept in the Mesa Koru site; the goal is to create spaces for social interaction with an aesthetic appeal (Dülgeroğlu et al., 1996). Dr. Alaattin Egemen, the landscape designer, developed his design based on careful analysis of the site, which presents the characteristics of a dry climate and harsh land. Three years prior to the first phase construction in 1982, mature trees were planted to create a green environment. In order to form mass greenery, rapidly growing trees such as poplar (Populus sp.) and willow (Salix sp.) were planted. A total of twelve hectares of green space, more than 50% of the land, was planned as green space. A temporary nursery, which now operates as a permanent facility, was established to store plants and to organize planting processes. Major leading environmental processes included the construction of a waste water treatment center and water supply from three wells. Based on these practices and principles, Mesa Koru site has the potential to be a role model for similar planned communities with the goals of balancing buildings and environment in accord (Egemen, 2007).

Building a site with such green landscape features on dry land and calling it koru—the Turkish word for grove—is a forward-looking and an optimistic approach (Figure 2).

Establishment of a Private Service Organization: KOSAŞ (Koru Management Company)

During the first years of occupancy, Mesa Koru lacked necessary environmental services such as public transportation, electricity and drinking water, due to lack of support from the surrounding municipalities. In order to provide these services to its residents, Mesa Koru management established a self-sustaining and self-supporting non-profit service organization called Kosaş (Koru Management Company) in 1987. The residents themselves pay for these services; Kosaş merely organizes the services for the residents.

This organization has been responsible for all required environmental and social services such as landscape maintenance and regeneration, cleaning, infrastructure development, maintaining public transportation and security, developing plans for water recycling, and organizing social activities. Kosaş operates as a private company that employs its own maintenance team, uses the site's own resources and controls the financial system of maintenance without using any outside sources. The system is based on bridging the link

Figure 2: The change of the outdoor space in Mesa Koru site; pictures taken in 1984 (left) and 2005 (right) (Source: MESA Archives).
between the residents and management—a participatory approach. Mesa Koru is one distinct example that has developed this model based on the principles of “gentlemanliness” or “trust” rather than written laws; currently, there is no law regarding the creation of building a community organization in housing developments. Residents of Mesa Koru actually trust the Kosaṣ—the managers and staff are residents of Mesa Koru—and pay for the proposed works of maintenance. The establishment of such models in other planned communities could prove to be quite difficult without written laws that define the process, duties and areas of work; other housing developments might not have the necessary social character to form an organization like Kosaṣ.

In short, the Mesa Koru community has already built a sustainable management model for ecological living and it has been successful for over twenty years. These practices, however, are now in question in terms of sustainability and long term support. This argument can be linked to the maturity and deterioration of the green areas. An expeditious maintenance plan should be adopted to sustain the current status of the development. Our attempt to propose a landscape renovation plan, which will be defined in the next section, is only one part of the whole desired planning approaches. This will inevitably be a role model for other developments.

**Landscape Renovation Plan**

Over the past twenty years, the landscape of Mesa Koru has matured and deteriorated by over use. The needs of a new generation, more parking and aesthetic requirements should be sustained. These in turn require the planning of a renovation project which will be funded by the community; the community demand to participate in the process as well. The management established a maintenance protocol for the site with the supervision of a landscape team, which is responsible for improving the overall environmental quality, developing maintenance plans and proposing adaptation principles of landscape installations. Resident interest and participation in the plan, demand for the services that the project can provide, and willingness to contribute to the smooth functioning of the site are all critical factors in the ongoing success of this plan development.

In the design development, the landscape team worked extensively to define the problems and find solutions together with the residents and the management. The team, comprising researchers from a major university and practicing landscape architects, assumed the role of a catalyst designing a participatory process. The plan clearly states that resident participation and the collaboration of the designers and the management cannot be neglected. We, the landscape team, proposed a sustainable landscape maintenance and regeneration project, the object being the renewal of urban structures of the development leading to higher standards—improvement of attractiveness and value of the landscape features with soft and hard landscaping practices, concentrating on the value to the overall quality of the landscape with lower costs over the next five years. The project includes a comprehensive intersectional master planning stage and pilot projects in small scales, which were designed to address local needs and expectations. The criteria that composed this project included the following: (1) regeneration of the entire lawn areas, (2) renovation of the sport facilities including basketball and tennis courts, (3) developing recreation centers where residents can gather outdoors, (4) maintaining the running
and walking paths, (5) renovating and enlarging children’s play areas, and (6) proposing a waste management (Figure 3).

The Landscape Plan proposes a mechanism for the recycling of gray water, reuse of the organic material and a cost-effective financial plan for implementation. It also includes an organic material collection system to produce organic fertilizer, which will lower the costs of purchasing plant fertilizers. For this process, the landscape team proposed purchasing equipment such as compost converters, which were included in the proposed budget plan.

The first phase of the project, which is to be implemented in 2008, includes the design and application of a park with a rose garden, a flower terrace, a jogging path, fitness equipment, an irrigation system and site furniture (Figure 4). The proposed budget of the project is approximately 153,000 Turkish Liras (TL) ($127,000), which is funded primarily by the residents, who pay 37 TL (app. $30) per month for all public services. This first phase of the project will add 18 TL ($14) to their monthly bills. It is assumed that with a well illustrated and presented landscape plan with major benefits to the community, all residents will agree to pay this added cost. In order to gain resident approval and management support, a series of focus groups and design workshops, intended to promote and discuss the project, were conducted. The process included specifying the design and regeneration proposals on an annual basis. Each year, after residents allocate the funds, projects will be completed.
Methodology

The main purpose of this study is to help residents relate their daily life experiences to the design team’s proposals. In order for residents to participate in the discussion as active participants and in a meaningful way, they first must understand that the project proposals are conceptual ideas that can be altered. Focus groups, in this context, are an established and accepted research technique for qualitative explorations of attitudes, opinions, perceptions, motivations, constraints, participation, and behaviors. Focus groups are group-depth interviews in which a small group of participants (8 to 12) are interviewed at length about selected subjects. The use of
focus groups provides researchers with insights, new hypotheses, and understanding through the process of interaction. Focus groups allow analyses of thoughts, attitudes, behaviors, and opinions that have a high level of content validity (Babbie, 2006).

Focus group research is considered qualitative research, which sacrifices reliability for increased validity; this means that although focus group findings cannot be replicated statistically as can sample surveys (high reliability), they often give researchers a more valid understanding of issues at the heart of a study (high validity) (Babbie, 2006). Methodological enhancements in planning and conducting the focus group sessions include development of a sampling frame to derive a representative group of participants, standardization of procedures through the use of a moderator’s training manual tailored to each group, identification of topics to broaden content areas and stimulate discussion, and creation of a comfortable environment in which participants could express issues (Debus, 1990; Engelbrektsson, 2002; Krueger & King, 1998; Krueger & Casey, 2000).

Focus group discussions enabled participants to understand the complex landscape design process and then discuss its consequences and advantages to everyday life experience. These discussions focused on individual residents’ perceptions of their housing site and their personal stories (Krueger, 1998). The discussions were moderated with questions regarding why each individual choose Mesa Koru for a permanent residence. We used open ended questions so as to encourage residents to share personal stories—why each chose Mesa Koru, what each found attractive about the outdoor environment, and how they would like to participate in the regeneration process of the site for the next five years. These discussions focused on individuals’ perceptions of site and their real-life stories. The management had canceled some design proposals during the first construction phase because of environmental concerns, and a number of high-rise buildings were never completed because they would have blocked the view along the main entrance. We asked the residents about these canceled phases of construction. On the basis of a concern with social and institutional facets of sustainability, focus group discussions centered on the development process, and the relationships and social dynamics revealed by these.

In a participatory planning process, it is important to develop a representative sample of resident and stakeholder groups within the development. In order to better understand the spectrum of needs and desires for sustainable features, we chose various types of participants for the group: (1) residents, (2) building managers, (3) company management, and (4) members of the design team. In May and June 2007, two meetings with twelve participants were held to accommodate the selected participants. We sought to identify the background of the site, potential for participation of the different groups and conditions that would help facilitate the accomplishment of such a project. Individual interviews with selected members of the community and Mesa Company served as yet another method to garner management input.

In developing the content of the discussions, the team had several initial concerns: first was the topic of sustainability appropriate in the context of a participatory process for the development’s
future. The agenda was developed to include the following sequential elements and goals: presenting landscape design proposals; understanding the site’s needs; identifying the future of the site; maintaining financial support for the renewal projects; identifying the site’s core values and visions; the opportunities and constraints to sustainable development; the possible future of the site and the type of reflections that users make; and the possibility of participating in future planning for sustainable development. The primary objective of the participatory planning process, gathering first-hand information about residents’ and management’s attitudes toward the site, was important to specify the site’s value. The analysis of these focus groups and interviews was an iterative process. The moderator took notes and observations at the time of the focus group. Discussions were videotaped and these recordings were reviewed. Detailed notes were taken during the sessions, including quotes that would be incorporated into the focus group report.

In November 2007, the design team participated in a general assembly meeting, Koru-Gen (Koru General Meeting) in which more than fifty residents and representatives of the management participated. The goal was first to present to a larger audience the landscape project and then to introduce the outcomes of the focus group discussions and personal interviews regarding the project. After a brief presentation of the plan objectives with a set of goals and a budget plan, participants were asked to express their ideas regarding the plan and then their willingness to participate in and fund the plan development and implementation.

Results

Focus groups and discussions during the general assembly meeting enabled participants to anticipate problems and opportunities in the new landscape design by identifying participants’ perception of positive and negative environmental factors. During these discussions, participants introduced different scenarios of site living problems and landscape implementations for the previous two decades. The result was that participants were actively involved in the decision making process and many useful dialogues about environmental issues transpired. The residents, who generally appreciated the existing landscape, not only approved of a long term plan, they also requested a plan for the interim because they were very much aware of the current deterioration.

Focus group participants were asked which environmental features and measures they would consider in sustaining the current status of the site; plants and material quality along with the improvement of the existing outdoor facilities were the most frequently desired measures to be implemented both in new and existing sites. Improvement of accessibility to facilities, along with safety and maintenance were mentioned during discussions. Participants all agreed on the need for a renovation landscape project due to the deterioration of the existing green spaces; this fact particularly indicates the residents’ awareness of environment and the value they place on green space. All participants also agreed that Kosaş is an important part of the current maintenance system, as well as a competent manager of costs; therefore, this voluntary non-profit service organization should continue in its role for the benefit of the community, including the aesthetic quality of the site.
Another major outcome is the recognition of the need to present and promote the proposed landscape plan during other general meetings. The need for renovation of common green and open spaces, and cost management based on the public and private spaces were also specified by the participants of focus group discussions. During scheduled meetings and in the general assembly, the landscape team presented the content and benefits of the plan. The prevailing conclusion of the general assembly was to promote the advantages of the plan to all residents via publications such as local newspapers and magazines. Participants agreed to launch the implementation of the first phase and to pay for the extra cost. One participant, who had experience as a counsel man for a local municipality—and hence, knowledge of that municipality’s perspective with regard to building projects—proposed coming to an agreement with that municipality and requested that the municipality approve and apply the project. The team decided to invite the municipalities and the Mesa Company to take part in the renovation process to share the costs. All participants spoke favorably of preserving the rich environmental features of the site, and all agreed to implement the plan. Although the plan is in its preliminary phases, the landscape team has received several positive feedbacks from the residents and the management. These methods were quite successful for presenting and promoting the renovation project.

Conclusions

In Turkey, lack of financial support and people’s attitudes toward the environment, limited social participation and support for development plans remain major obstacles to achieving a sustainable development for residential landscapes. Companies build the developments based on standards that usually exclude landscape installations because these features add to construction costs. Landscaping the mass housing sites in Turkey is often perceived as being a luxury, elitist, and even sometimes anti-development. Simple landscape installations in state owned projects are not satisfactory and these projects fall short in developing long-term landscape maintenance plans. The focus should be more on the maintenance of the existing green areas rather than on including them in the provision plans. A system of participatory decision support is therefore required to reconcile the greening requirements of the community, and the ecological benefits of urban biodiversity. We emphasize the importance of local community participation to the success of urban greening.

In the past, private builders were prone to excluding any plans for landscape and environment, but the current business culture now views such features as profitable endeavors due to consumer demand. In order to attract potential buyers, companies advertise their projects with their planned landscapes and gardens. Hundreds of future residential developments will benefit from similar plans and organizations as seen in Mesa Koru and these models will increase the long-term success of landscape installations. With a management system like Kosaş and the inclusion of the community to the decision-making process, landscape of large scale housing developments will be kept self-sustained.

The results of this case study indicate resident awareness of outdoor space and strong support from residents and the management for improvement of the green space. Building aesthetically pleasing outdoor environments,
however, is not sufficient; builders should ideally develop a system to sustain the future of the environmental aesthetics of their housing sites. Mesa Company has lead a sustainable approach that utilized maintenance issues after marketing the development. The early established organization now serves as a non-profit service provider maintaining the overall quality of the outdoor environment. Mesa Koru has also applied productive approaches to encourage effective community participation with a strong management system. It is believed that the proposed landscape plan for the Mesa Koru will achieve great success in pursuing sustainable landscape practices. However, Mesa Koru is only one example and more planned communities should adopt similar models for the overall environmental quality of our cities. The policy-makers, municipalities and private companies should include similar plans in their development approaches; new policies and standards should be included in development plans for more sustainable residential landscapes.

**Expectations for the Future**

The replacement of a housing program with planned strategies of renovation, maintenance and regeneration will benefit both the public and the environment. In this context, developers, managers, residents and planners should adopt sustainable planning practices. Unfortunately, the pressure to meet mass low-cost housing targets, coupled with the high cost of implementing services (water, sanitation, roads, electricity) within limited budgets, has relegated environmental impact concerns to a low order of priority, which is the general limitation and problem in developing countries. The provision of easy access to realistic building standards and to affordable building materials along with environmental sensitivity are some of the options toward achieving sustainable housing sites in Turkey.

Sustainable development is a concept adopted in recent years in order to orient societies’ development so as to create a promising future for the coming generations. Housing sites integrated successfully with the natural environment, employing sustainable practices through a participatory approach, may provide a solution for our urban environments. We have illustrated these benefits with the results of a qualitative research project analyzing an experience based on the landscape renovation of a mass housing site. This experience of collaboration between managers, designers and residents constitutes an example of a successful community initiative that integrates sustainability criteria through a participatory approach.

The project is a pioneer in Ankara’s housing development, which has opened the channel for the residents to participate in the regeneration and design process of their own sites. In fact, this is not the conclusion but rather the beginning of a long-term process. The next step is to promote the plan and explore its characteristics and consequences in various arenas. This paper presented the experience of a design team engaged in the current conventional practice of public housing design in Ankara. The participatory approach is a crucial element in the process of creating a more reflective design process. The process and methods used in this project will be documented and presented to provide an example that has the potential to positively influence the way future public housing projects are designed and maintained in Turkey.

Research should direct designers to define the
overall characteristics of a housing site. We are looking for an environmentally friendly living situation that helps reduce negative impacts on the environment. Sustainability in the context of a community network is a complex concept and one that must be able to embrace change and flexibility. The process reported in this study should encourage other similar public housing sites in developing countries to adopt this approach. It is not capable of resolving all of the problems but it can help to renovate existing sites with public participation.

Notes

1 The constitution of the Republic of Turkey clearly states that “The State shall take measures to meet the needs of housing within the framework of a plan ... and environmental conditions shall support mass housing projects.” (Article:57). In a similar manner, Article 56 of the Constitution states that “every citizen has the right to live in a healthy and balanced environment.”

2 Environmental sustainability is the ability to maintain the qualities that are valued in the physical environment. Threats to the aspects of the environment mean that there is a risk that these things will not be maintained. A sustainable community should provide adequate access to green spaces for its residents. One of the goals in creating a sustainable landscape is the maintenance of the vital resources. The basis of adequate maintenance is two-fold: additional funding and expanded public participation. Mesa Koru expands the civic commitment to public participation in supporting the green resources and recreational facilities. A living resource requires consistent funding for regular, long-term management planning. It also requires a reliable, skilled and experienced work force to observe the landscape over time and to recommend maintenance based on these observations.

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Aydin Ozdemir
Aydin Ozdemir received his BSc and MSc degrees in Landscape Architecture from Ankara University Department of Landscape Architecture. He attended to Urban Design Masters Program of Middle East Technical University. He graduated from North Carolina State University Environmental Design PhD Program in 2005. He is a faculty member of Ankara University Department of Landscape Architecture since 1998. He is interested in developing principles of integrating landscape research and teaching. He attended several conferences and presented papers about research-teaching nexus, sustainable design and urban public spaces. He specializes in landscape design, physical and sociological assessments of public spaces and landscape engineering with a focus on site design. Dr. Ozdemir is the co-author of the book “Sustainable Site Design Approaches” (Ankara University Publishing, 2008). He can be contacted at

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Metin Basal
Metin Basal is an emeritus professor of the Faculty of Agriculture Department of Landscape Architecture at Ankara University. He took several academic and administrative duties between 1983 and 2000. He was the head of the Landscape Architecture Association and member of the Association of Turkish Nature Preservation. He worked as a construction control engineer at the Ministry of Agriculture and as a director of science council project engineer at DSI General Directorate of Parks and Recreation Foundation. He is the co-author of several books such as “Sustainable Site Design Approaches” (2008), “Landscape Construction” (1997), “Production Techniques of Ornamental Plants” (1991) and “Ornamental Plants 1” (1989). His teaching, research and consulting work includes landscape engineering, site design, land modeling, site furniture, environmental and landscape planning and landscape design.

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Furuzan Aslan
Furuzan Aslan is currently working on her PhD at Ankara University in which she studies child-friendly school environments.