Case 20 from Turkey: Saygınkent Housing Construction Co-operative, Bursa

I. Issues to be highlighted in the case study

Model of Satellite township in co-operative form for higher income group, with own social, cultural, sports and entertainment facilities and service providers for high quality of life; co-operation with research institutions to develop special construction methods suitable for regions threatened by earthquakes; special security arrangements, central heating with heat share counter system for individual heating of flats, comfort with high level technology standards; strong neighbourhood; secure and healthy environment; contemporary urban settlement project. A case to show that housing co-operatives are not only a means of solving housing problems of the financially weak but that the co-operative idea can also be successfully implemented by persons belonging to the higher income group.

II. Portrait of the co-operative society

Name of Co-operative:	Saygınkent Housing Construction Co-operative, Bursa
Type of Co-operative:	Housing Construction Co-operative Society
Year of Formation:	1995, Commencement Date of Construction: July, 1997, Date of Delivery: July, 2005
Address:	Özlüce District, Bahriye Üçok Avenu, Nilüfer-Bursa, Turkey
Tel.:	+ 90 (0) 224 413 04 04 / 05
E-mail:	aytac1@uludag.edu.tr www.sayginkent.com.tr
Person to contact:	Prof. Dr. Mustafa Aytaç (President of Coop)

Number of members:	426 (some partners own more than one share)
Number of dwellings:	476

Decision-making bodies:	General Assembly, Executive Board, Auditing Commission, Control Engineer, Technical personnel, Site Management General Meeting

Affiliation to federations and other organisations:	

- Union of Bursa Housing Construction and Production Cooperatives (Emir-Koop), Emir-Koop is a member of the Central Union of Turkish Urban Co-operatives (TÜRKKENT)

III. Description of the case

The rise of the Saygınkent idea

According to research findings in 1987, people in Bursa above a certain income level did not consider joining a housing co-operative. However, the majority of them saw living in a satellite township housing co-operative, having its own social, cultural, sports and entertainment facilities and offering a higher quality of life as an option. Another reason for joining a housing co-operative are the high prices of building sites in areas of Bursa where people prefer to construct their houses.

The facts that approximately 80 acres of land exists in Özlüce village, the universities are being constructed on the Western area of the cities and finally the cities are extending westward, led an agreement on founding Saygınkent cooperative at that time.

Land at the outskirts of Bursa, 6 km to the Centre of Nilüfer, 1.5 km to the Uludağ University, was acquired and the Saygınkent housing co-operative was founded in January 1995. It started to admit members in February 1995. Construction works started in July 1997 and the date of delivery was July 2005.

Total Building Plot	:	85,342 m^2
Total Construction Site	:	(11,006 m^2 base area) 182,308 m^2 construction area
Total Sum of Green areas	:	69,372 m^2 green area, 37 m^2/person
The Area of Social Facilities	:	4,964 m^2
Parking Place Conditions	:	Closed area of 700 car, open area of 300 cars

In the process of formation of Saygınkent, invitation letters and information bulletins were sent out to 11,000 people, offering them a new life away from the stress of the great city. It was proposed to create a housing co-operative in a rapidly developing modernisation area of Bursa included in a contemporary urban settlement project.

In one of the information bulletins the motto for accepting a membership application was as follows:

- *"If a secure and healthy environment is one of your principles in your life,*
- *If you are looking for comfort in which technology penetrates into the living standard and allows protection of the environment,*

- *If your demand is to live a blissful, tranquil and smooth life in such locality in company with your friends,*

  LET'S CREATE SAYGINKENT ALL TOGETHER"

Some characteristics of Saygınkent housing co-operative society

The housing stock of Saygınkent housing co-operative consists of seven 20 story blocks and one building for social facilities, each with three elevators. There are 68 apartments in each block and 4 in each story, i. e. a total of 476 apartments. It is built in a construction method that meets earthquake-region regulations (Mat Foundation, Tunnel Formwork System and special high quality building materials).

Security measures include: Single entry-exit, private magnetic card entrance, private security camera system with 24 h camera recording, camera intercom apparatus, closed parking areas for 700 cars and open parking areas for 300 cars (2 cars per dwelling).

Energy saving devices include: Central heating with natural gas and a heat share counter system allowing individual heating of each flat and a central power distribution unit and generator.

Shopping facilities consist of a shopping centre with a supermarket, a pharmacy and several service providers (confection, dry-cleaning, coiffeur, flower-seller, restaurant, patisserie and a car-wash centre).

Social facilities cover an area of 4,964 m^2 with child care facilities (Kindergarten and children's park), a children's club, a youth association, a tennis club, a club house association, a disco, a CD-DVD centre and an amphitheatre. On demand, an apartment is allocated to the youth association or to the children's' club.

Sports facilities include 3 swimming pools, one of which with Olympic size, a closed gymnasium, an open fitness area, several sports grounds including 6 tennis courts, 1000 m bicycle path and walking courses.

Green areas cover 69,372 m^2, i. e. 148 m^2 per flat and 37 m^2 per person, including a forest and cook-out area, an organic agriculture garden and a Japanese garden.

Conditions for membership and membership relations

An important point for the cooperatives is that its members are at nearly the same income level. Warnings that it is necessary to check the individual financial standings were included in the bulletins accompanying the written invitation for membership applications sent to the people who want to join Saygınkent Housing Cooperative, which was founded by academicians.

Before accepting an application, an interview was held with the candidate and the ideas behind Saygınkent and the goals of the project were explained in detail.

The candidates were given the opportunity to become acquainted with other candidates and finally, they were given correct information on the system which they were invited to join. No individual could be admitted to membership, without such interview. The majority of the members consisted of academicians, managers, traders and businesspersons of the higher income level.

In 2008, all members witness the realization of the Saygınkent vision, which 10 years ago appeared to be a mere utopia. Many of the members point out that the success achieved is beyond the expectations of the early years and that despite some defects, the success achieved is by far more important.

> *"We, altogether, have created Saygınkent, with forbearance, courtesy and in cooperation with decent people. We have endeavoured to combine the financial forces of our members with the spiritual support of all our partners and our experience with our scientific perfection. The result is a unique site such as SAYGINKENT, which we now inhabit and which we could not reconstruct today at the same cost level."*

The ability of creating a housing cooperative better and more perfect than the others does not only depend on the activities of the executive board and the payments of the members. Participation of all members/partners in the operation of the cooperative is also extremely important. This is explained always and on all occasions. The board members have always been open for possible criticism or proposals from members and partners in every respect.

Some Peculiarities of Saygınkent Housing Blocks

Saygınkent Site consists of 7 blocks. Each block is 20 storied including ground floor and cellar. The particularities of the blocks are as follows:

- The size of each dwelling is gross 403 m^2, net 200 m^2.
- Installation gallery of 2 m^2 for each apartment
- 1 waste room of between 7-12 m^2 for each apartment
- Fire escape
- 3 high-speed elevator including 1 cargo lift
- Inner court of 200 m^2
- Pre-cast outer walls of building
- Large story passages and staircases
- Waste rooms in cellars for each apartment.
- Opportunity of passing from closed car parks to the blocks
- Illumination on three façade photoelectric cell illumination

Some Peculiarities of Saygınkent Dwelling Units / Apartments

The Saygınkent Site is composed of total 476 apartments and 68 apartments exist in each block. There are 4 apartments at each story and total 60 normal apartments between the 1st and the 15th stories while the 16th stories are terraces and the 17th and the 18th stories are duplexes. Thus in the Saygınkent Site there are 420 normal apartments, 28 terraces, and 28 duplexes. Each block is made up of 1 cellar, 1 ground floor and 15 normal apartment stories and has been designed by taking general aesthetic appearance of the buildings into consideration.

Communication in Saygınkent

'Saygınkent Cooperative Bulletin' is published by the cooperative society's administration in order to provide the most correct information from original sources on the works of the cooperative and on the planned activity schedule of the future. The bulletin is sent to the members/partners approximately every three months. The first bulletin was published in 1995. In addition, the cooperative published calendars in 1997, 1998, 1999, 2000, 2001 and 2002. Announcements and notices are published in newspapers.

Note is taken the members' professions and they are asked to let the executive board know in which areas they may be helpful for the co-operative. Congratulatory cards for religious feasts and for new years are sent to members/partners, including photographs reflecting the construction phase and the general conditions of the housing cooperative.

A web site was prepared in 2000 in order to make information on our cooperative available all over the world. For some years, the web site was not frequently updated due to our concentration on construction works and the intention not to spend too much and not to attract too much attention to the cooperative. The present web site address is: **www.sayginkent.com.tr**

A variety of photographs and detailed information on the Saygınkent Site are shown on our web site.

After our members started to move to Saygınkent, user's guides are prepared on the following subjects:

- Swimming pool user's guides
- Tennis Courts user's guides
- Gymnasium user's guides
- Open air sporting facilities user's guides
- Children's garden user's guides
- The principles on domestic animals on the Site

Earthquake Security

The earthquake calamity in the Marmara Region on 17 August 1999, made the demand to dwell in more secure buildings in respect to ground security and static conditions a current issue. Professors of the Istanbul Technical University (ITU) Construction and Earthquake Application and Research Centre made ground studies in the area in which the buildings of Saygınkent are included and static calculations of future buildings in the region were done. The reinforced concrete projects of Saygınkent buildings were designed in compliance with a license for 20-storied buildings.

Saygınkent Administration asked the same centre of ITU to carry out a soil analysis in the Saygınkent parcel and specify the ground security without evoking any doubt and to prepare a report on this subject. For that purpose, soil samples from the land on which the blocks of the co-operative would settle were analyzed. An amount of TL 500 m (in 1996) was paid for this report, which was extremely important for the study of the ground under the planned apartment blocks and for static calculations.

In 2000, Bursa Metropolis Municipality analyzed the ground security for Bursa. Bursa province was categorized as A, B, C, and D regions, with A as the safest region in respect to a possible earthquake, while the most risky is D region. Results of this analysis show that Saygınkent cooperative's site belongs to the B category. An analysis carried out by ITU came to the same result.

Static calculations of the buildings, including the upper stories, based on the above mentioned findings, were carried out by an expert in this field who calculated the static of many high-rise buildings in Turkey. These static calculations were controlled once more by professors of the Istanbul Technical University and the buildings of Saygınkent were constructed in compliance with the last result.

Consequently, the foundations of the Saygınkent buildings were settled in between 4.5 and 7 m depth. The foundations of our buildings were reinforced by stabile filling material the thickness of which varies between 3 and 5 m. The filling material was stabilised by crushing it out at every 1 m by a roller. All these works were photographed and documented.

1.2-altitude radia foundation method was applied in all of Saygınkent buildings and in the construction process of the buildings the TUNNEL FORMWORK system was used, internationally known as one of the most valid systems in building technology. The ribbed iron used in the constructions is defined as a special brand. The 11-iron content used in the foundation is precisely 180 t for each block.

BS20 concrete, which is earthquake resistant and suitable to the tunnel formwork system, was used in the Saygınkent buildings. Although 350 kg/m^3 cement are necessary for such kind of concrete, the Executive Board of Saygınkent de-

cided to use 375 kg/m^3 cement. Moreover, due to the fact that the cement produced by the Bursa Cement Factory is not agreeable to the envisaged aims, according to the result of the investigation, Portland cement of the Eskişehir Cement Factory was used in order not to make concessions to the high quality principle, in spite of its higher price.

A cubical value of 250 kg for each cubic meter is commensurate with the resistance of the Saygınkent buildings. 6 reinforced concrete samples were collected and tested during the pouring in of the concrete phase, and the results evaluated separately. Among the results, the minimum value was 300 kg/ m³. While the majority was of value 325-375 kg/ m³, there were samples of over 400 kg/ m³.

On the basis of all of these facts, it can be affirmed that the resistance of the Saygınkent buildings is 25 percent higher than the satisfactory standards (the qualities required, according to the investigations made) and the buildings were constructed in such a way that they are resistant against a high-level earthquake. It is good to remember that all these works were done 3 years before the 1999 earthquake. After the 1999 earthquake, all Saygınkent blocks were analyzed by the members of the Executive Board in cooperation with the technical personnel of the contractor firm and were found intact.

On written application presented to the Chamber of Civil Engineers on the subject, a report on the resistance value of the 7 Saygınkent blocks after the earthquake was elaborated by a technical team. In addition, the buildings were analyzed by the authorities of the ITU Earthquake Coordination Centre and the co-operative was informed that there was no problem in relation to the 7 Saygınkent buildings.

IV. Best Practice regarding the application of co-operative principles

Open membership

Open membership is practised in a special way defined by its organisation culture and the level of financial commitment of the members required to finance the high standards of living offered by the co-operative in this satellite town.

The co-operative sees itself as an organisation of the upper middle class. It has devised a special system of informing candidates and screening them before admittance not only for their ability to meet the financial obligations connected with membership, but also to brief candidates of the obligations of members and to find out whether they fit into the social pattern of the co-operative group.

This may appear to some as an infringement of the principle of open membership, while others see it as a legitimate way of defining the conditions for membership in the by-laws of the society in clear terms, so as to create a homogene-

ous membership group, essential for the smooth functioning of co-operatives in general and particularly important for housing co-operatives.

Meeting Members' needs

Saygınkent housing co-operatives applies a holistic approach to meeting all the members' needs. It offers a self-contained, full service satellite town to members who can afford it, catering for the members' economic, social, recreational and cultural needs in a healthy environment.

One important component of this concept is earthquake security. The efforts which the co-operative society undertakes to make its buildings earthquake resistant gives a good example of co-operation with research institutes to gain access to the most modern and most effective building technologies and the most suitable building materials. The investments in site security are another interesting area.

Transparent, accountable and responsive management

The management of the co-operative society invests in providing full and accurate information to its members by publishing a three monthly bulletin, maintaining a web site, encouraging dialogue with the members and enquiring the members' views.

Concern for community

Saygınkent co-operative society has an annual budget (TL 150,000) for activities in this field. It invests part of this sum for the protection of the green areas. The shopping centre is open for the region and relatives and friends are invited to attend events organised by the co-operative.

With its central heating system based on natural gas and its heat share counter system for individual heating of flats, the co-operative sets an example for effective and environment-friendly use of energy.