



Towards a sustainable development strategy for Buyukkonuk (Komi Kebir) village, Northern Cyprus

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Abstract

The concept of sustainability has come about as a result of increased levels of interest on economic viability that damaged the main components of the ecosystem and blocked its ability to sustain human values. Sustainable development is concerned with improvement of the quality of life of human beings – both at the urban and architectural levels – within the capacity of the global ecosystem.

In fact, the idea of sustainability is not new; traditional planning and building methods were often good examples of sustainable design in their time, and represented good uses of local resources matched with local skills. In combination, they produced a built environment which met people's needs. Therefore, considering the fact that traditional settlements provide useful clues to achieve sustainable solutions in new developments, Buyukkonuk Village in Northern Cyprus has been selected as a case study to search for sustainability, as the country is almost synonymous with its small-scale Mesourian villages. Our interest on the authentic olive oil mill from both community development and alternative tourism points of view has also made this decision more viable. Because, olive oil has come to symbolize the Mediterranean lifestyle and an olive oil press that used old stones to crush the olives is something that is unique for visitors to Cyprus to observe. However, due to the opening of a more modern and efficient mill nearby, Cypriot people are on the brink of losing it, like some other old mills in other villages.

In line with these, this study outlines a framework to initiate a sustainable development strategy in Buyukkonuk based on the research undertaken and the



survey conducted by the graduate students of Sustainable Developments course at the Faculty of Architecture of Eastern Mediterranean University. In this context, the following aspects will constitute the scope of the study: community development and rehabilitation of the olive oil mill, density and context, climatic aspects, open space and landscaping.

1 Introduction

Sustainability, in essence, is a way of thinking about one's relationship to the natural world in the context of time. A generally accepted definition of sustainable development is from the Brundtland Report: [1] "Sustainable development is development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs."

Alternatively, sustainable development is based upon a development which balances urban development with the conservation of environmental resources of land, air, water, forests, energy, etc. On the other hand, culture, society, and power are also the bases of sustainable development. Followed by the U.N. Conference on Environment and Development, the Earth Summit, held in Rio de Janeiro in 1992, important recommendations were adopted for sustainable development of human settlements.

It is important to understand that the idea of sustainability is not new. Traditional planning and building methods were often good examples of sustainable design in their time, and represented good uses of local resources matched with local skills. In combination, they produced a built environment which met people's needs.

In line with these, this study aims to analyse a settlement in terms of sustainability. The chosen setting is a village in Northern Cyprus. As part of a small Mediterranean island, Northern Cyprus is almost synonymous with its small-scale Mesourian villages where traditional life patterns can still be observed. Therefore, Buyukkonuk village project in Northern Cyprus was considered a very good example for defining rural sustainability. Although the community in Buyukkonuk shows dramatic changes with a mismatch between the needs of individuals and families and the available housing, there is a big economic asset to be considered in this village which makes this study consequential in terms of sustainability. This economic asset is the olive. Throughout the history, owing to its extensive lands of olive trees, Buyukkonuk (Komi Kebir in Greek) has always been a famous place for its olive mills. However, today, this valuable asset seems to have been ignored and there is a risk of losing it.

In fact, the wild olive precedes the appearance of man on the island and this fact is not surprising as Cyprus is within the range of its natural distribution. As stated by Hadjisavvas [2] "the wild olive is widely distributed over the Mediterranean basin and represents a hallmark of the Mediterranean plant zone". In addition, olive appears as a toponym on the island of Cyprus at least 537 times. Some of these locations are named after the Greek word whilst rest after the Turkish counterpart *zeytin*.

2 Case study: Buyukkonuk village

In the new field of 'sustainable developments', individual buildings built to high energy standards do not address the problems of travel to work and the loss of community to modern life. On the other hand, a sustainable village is the best way to promote the holistic approach needed to achieve a comfortable and economic way of sustainable living for the future. A village is ideal not because the principles cannot be applied to towns or cities but it is easier to do on a manageable scale.

In the case of Buyukkonuk, it is felt that the village, with its economic, social and environmental potential, can be developed into a sustainable village before its original character is completely lost. It has a beautiful location situated in a forestland, which used to sustain village economically. Apart from agriculture, the villagers earn their living from stockbreeding, especially raising cows for their milk to produce cheese. Carob and olive trees are planted extensively for producing carob syrup called *pekmez* and olive oil. It can then be concluded that in economic terms there is an existing potential for the self-sustenance of the village.

Socially, the community life still exists due to the unspoiled cultural values and built environment, which mostly retains its primary qualities.

Environmentally, there are problems caused by the stone quarry located on the southern slopes of Kyrenia Mountains. Although its location is outside the boundaries of the village, the dynamiting process caused harm to some of the houses in the village. Because gravel is not produced on the site, there is no extraction of smoke. The olive oil processing is environmentally safe, and olive remains can be recycled as fuel for the earth stoves in the village and the brick factory nearby.

Furthermore, the original urban context of the village seems to have changed negatively in the last few years owing to the addition of new houses of inappropriate architectural quality.

2.1 General information

Buyukkonuk village is situated on the northeast of the island of Cyprus. The village rests on the skirts of slopes of Girne (Kyrenia) Mountains at a height below sea level.

The village, which was occupied by both Turks and Greeks before 1974, now left its place to a Turkish community with a population of 788 people, whose 40% is Turkish Cypriot, 40% Turkish settlers from the mainland and remaining 20% immigrants (Turkish Cypriots) from the South Cyprus.

In the old times it used to be one of the two important trade centres in Karpaz peninsula because of its olive oil which also made its settlers rich. The village is rich in water reservoirs although in recent years it has been noted that the level of water is falling down rapidly. There are two water tanks, which feeds the village and other 11 villages around.

Due to its abundance of water, agriculture is the main means of economic sustenance of the village. Apart from agriculture, stockbreeding and olive oil production are two other factors bringing cash money to the village. There is an elementary school, a mosque, a couple of small markets, a craft shop and workshop, a sports club, coffee shops, a women's handcraft workshop, a barber shop, and a tailor in the village.

Being a rich village once, Buyukkonuk had seven mills within the village boundaries. Today, the remaining single mill is a functioning enterprise run by the village cooperative and has the potential to become a focal point of what is called 'alternative, special interest or eco-tourism'. It is a functional enterprise operated by the village cooperative and the only surviving mill out of 7-8 mills in the village. The machinery is about 50 years old and of Italian made. There are two large stones for crushing the olives in a big vat, two pressing stands and a separator. The mill is run on electricity and there is a wood-burning forge to heat water for the process. The mill is open for the olive season, through September to November [3].

In fact, the olive oil mill is a part of the cultural history of the island. It is a village agricultural activity that is unique for visitors to Cyprus to observe. Olive oil has come to symbolize the Mediterranean lifestyle and olive oil press that used old stones to crush the olives is something that many tourists would like to see.

To this end, certain qualities need to be clarified and their viability needs to be assessed in the planning of future of the village for sustainability, as is related to all types of settlements. These qualities are density and context, climatic aspects, open space and landscaping, and community development.

2.2 Density and context

The density of a settlement should be related to the design or redesign in such a way that the advantages and disadvantages of its level are investigated by considering the existing social dynamics and environmental values. However, despite the difficulty in practice, the ecological image should not be bound to the density itself; it should use the ground, the soil, and its advantages in every-day life and provide the required setting for it [4, 5].

Considering Buyukkonuk, once being a prosperous village, owing to its abundance of olive trees, the village was densely populated with family housing (row housing/detached) shops, workshops and bars (Figure 1). The concept of neighbourhood, *mahalle*, was an important planning issue in the formation of the village as observed in all Cypriot settlements. Besides internal courtyards of the houses, streets were used as meeting and socialising places as well.

Before 1974, the village was composed of two parts, the upper Greek quarter and lower Turkish quarter, because the two communities did not mingle socially.

However, this distinction is not reflected on the urban form and architecture of the village. This fact has not affected the density of the village but it is noticeable from the overall plan that the village grew towards south and south-east.

Buyukkonuk village has a traditional pattern with narrow streets, with housing and shopping units along them, a number of public buildings and organic public spaces at the intersection of streets or in front of churches (Figures 2 and 3). In terms of dwelling heights, the tallest buildings are 2-storey houses built for the rich families. Pre-British period had mostly single storey buildings but from then onwards to modern times, two storey high buildings have been built. However, there are not much new additions in the village such as modern villas.

With respect to internal layouts, architectural details, proportions and constructional materials, the majority of the houses are similar to each other. In general, horizontal lines are dominant on facades of houses. In some cases arcades complete them. Arcaded housing is very common in the village and can be considered as the main type of residential building (Figures 4 and 5). In addition, courtyards at the rear of the houses make a convenient outdoor environment for dwellers. In some examples these courtyards are connected to the street through an archway. New houses tend to have front yards instead.

In terms of land use, most of the houses in the village are at private ownership whereas municipality, health centre, school, women's craft centre, and mosque are state property. The olive mill is owned and run by the village cooperative but the adjacent building is at private ownership.

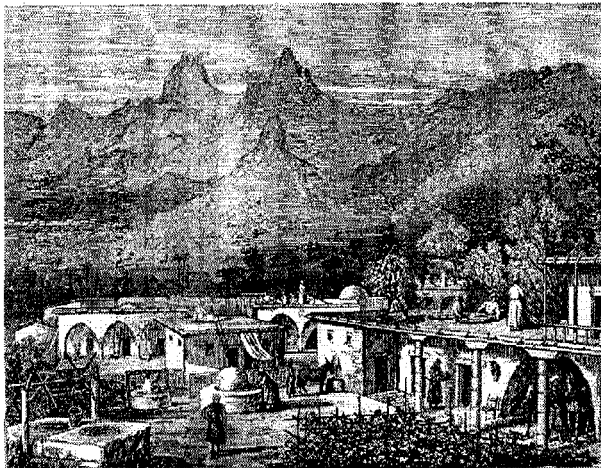


Figure 1: Buyukkonuk village in the older times.

2.3 Climatic aspects

Considering our existence in harmony with the environment, 'design with the climate and with a sense of place' is essential in planning and design. If we ignore this, we miss out on many sustaining qualities of the natural context of site and surroundings [6].

Findings of Buyukkonuk study reveal that larger part of the village is located at a height lower than the sea level. This means that the microclimate of the village is hot-humid.

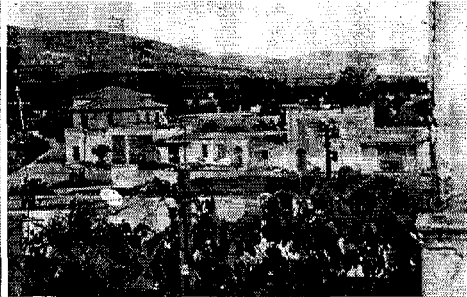
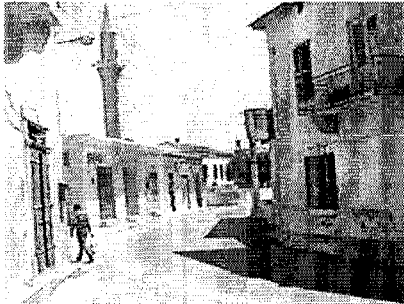


Figure 2: View from the main street. Figure 3: General view from Buyukkonuk.

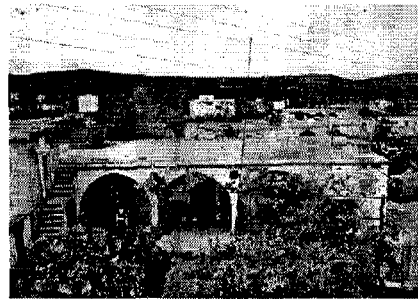
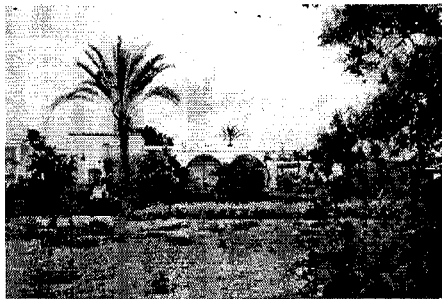


Figure 4: View of an arcaded house. Figure 5: View of the courtyard.

In the case of vernacular settlements as seen in Buyukkonuk village too, architecture always responds to severe climatic conditions, in this case, to heat. This can be observed in the urban form and design of individual buildings, their fabric and internal layout. Houses in the village are either grouped together to shade each other and the street or designed individually with thick external walls either in earth brick or stone with wide porches or vine at their south elevation. Accordingly, they provide environmental comfort both in summer and winter.

One noticeable element of vernacular housing in Buyukkonuk is the arcaded front porches. Courtyards at the back are also very important design solutions for hot-humid climates as they provide ventilation and bring down the general temperature inside the dwelling. They also provide shade with their walls and act as a light well for the dwelling. The transitional space between the house and the courtyard, *sundurma*, the semi-open space, *sofa*, is two other climatic design elements. Another important feature in courtyards is the 'pergola'. Most of the houses in Buyukkonuk village have pergolas in front of them. The use of vine, as a shading element on these pergolas is very common in the village. Depending

on the characteristic of vine, it provides shade with its green leaves during hot summer months, but lets the sunshine in as it sheds its leaves in winter.

Both internal and external environment of these houses are well considered in terms of climatic and socio-cultural factors. Ventilation and shading are two essential design issues applied to vernacular houses of Buyukkonuk village.

2.4 Open space and landscaping

Combining urbanism and nature is an enormous challenge but fundamental to true sustainability. Therefore, the elements of the local landscape should be paid great attention when planning or re-planning of settlements [7].

Buyukkonuk village is located on a sloping site where its upper quarter rests on the slopes of extensions of Kyrenia Mountains and lower quarter on a plainer site. At the highest peak of the village there is a recreational area. When the village is viewed from that peak, it is possible to see the landscape as a whole. There is a natural stream on the northwest of the village, which dried because of the draughts in Cyprus.

The urban pattern of the village reveals an organic character. The streets are narrow with houses located along the main and branching roads. Outside the settlement boundaries of the village, the olive orchards, the main economic potential of the village are found. The most usable open space in the village is the picnic area. Furthermore, there are open spaces in front of coffee shops (*kahvehane* in local language), some public buildings and houses. The courtyard of houses and street are two important open spaces where most of the daily activities take place. The churches in the village were also important meeting places in the past when they were used for worshipping purposes. In the upper part of the village, there is a children's playground, which is still under construction.

The village is surrounded by pine trees (*pinus brutia*, *pinus pinea*), olive trees (*olea aurepa*), carob trees (*ceratonia siliqua*), palm trees (*washington filifera*) and a natural flora called *maki* which is composed of dwarf trees such as laurel (*laurus nobilis*) and bushes such as terebinth berry (*celtis australis*), myrtle, (*myrthus communis*), and Mediterranean medlar (*crategus monegyna*).

Vegetation reveals itself in economic, ecological and aesthetic means. In addition to olive trees, Buyukkonuk village has pine trees which contribute to the micro-climate of the area in ecological terms by bringing the temperature down.

The cultivated land is shaped in line with the three types of food production: irrigated agriculture, grain production, and olive and other fruit trees.

Irrigated agriculture involves production of watermelons, melons and *kolokas*, a local vegetable, whereas grain production only involves wheat which is used as animal pods.

Olive tree is the most important economic asset in the village. Especially during the British Colonial period, the village played an important role in olive oil production. During this period people were encouraged to plant and cultivate olive trees in a planned way. Today, most of the villagers own olive orchards which provide them an extra profit.



Another characteristic plant is carob (*ceratonia siliqua*). Its sweet syrup is used to produce a traditional product called *pekmez*. Its seeds were used to weigh gold in the old times, but they are now used as animal food. Vine (*vitis* spp.) is the most common vegetation in the village, of which its plant is used as a shading device during the hot summer months and its fruits are used to make wine, *zivaniya*, *kofter* and *sucuk*. Juniper (*juniperus*) and mulberry trees (*morus* sp.) are scarce trees found in the village. They were cut down for their valuable timber.

As typical to Cypriot houses, courtyards (*avli* in local language) were important places for the householders as they provided the occupiers with shelter and direct access with nature. Villagers used to dry seeds and grain, grow pets, wash and air clothes and socialize in these open spaces. Detached houses were either separated by walls or decorative vegetation or a combination of both.

All courtyards had traditional earth ovens which are now still used to bake bread. Some entrances were defined by decorative plants such as jasmine or begonville.

Considering the landscaping of these spaces, there were no strict rules to follow. People planted what they required, which were mostly for the purpose of food production (figs, pomegranate, lemon trees, tangerines, almond trees, etc.), decoration (geranium, begonville, roses, jasmine, etc.), and climatic effects (vine and cypress trees).

2.5 Community development

Healthy human development involves a balanced and integrated development of all aspects of human life, i.e. physical, emotional, mental, and spiritual. This healthy development needs to be expressed not just in the lives of individuals, but in the life of the community as a whole. In this context, the local social and traditional values are highly significant [8].

In Buyukkonuk, like in all older settlements of Northern Cyprus, the concept of neighborhood, *mahalle*, is of great importance, as it helps residents to have a strong feeling of community identity and place enabling social and economic co-operation.

Bearing these in mind, a questionnaire survey was carried out to investigate the social aspects in Buyukkonuk village, with a view to have a deeper understanding of the local community. 45 people attended the questionnaire where majority of the participants were male, educated at elementary or secondary school level and only a couple at university level. Most of the participants were originally from North Cyprus, a few from London (who immigrated to Britain after 1974) and some from Southern Cyprus (who were originally living in the Southern side and had to immigrate to the North after 1974).

According to the results of the survey, the majority of the residents have their own houses and the rest live in rented houses. There is not much new construction in the village; in fact there is a housing stock. The residents of the village lived in the village for a period not less than 20 years. The major reason

for their staying in the village is their family ties. A large majority of people noted that they were happy to live in the village while only a small minority wished to move to a larger town or city.

Most still earn their life from agriculture and stockbreeding. The rest works in the governmental offices in Gazimagusa (Famagusta) and Lefkoşa (Nicosia). Most respondents have full time jobs, while some have irregular working hours. Most people visit Gazimagusa (Famagusta), the nearest city to Buyukkonuk village, once a month and the ones working there commute every day. Most respondents do not own a car so they use public transport, which is by means of scheduled buses. The people who work in the village during the week prefer to visit the city at weekends for social activities and shopping purposes. During the weekends, people prefer to stay in the village and spend their time with their family and participate in the social activities in the village such as going for picnics and sporting activities.

Considering hobbies and special interests, most villagers prefer working in their garden or courtyard during the day. The craft shop for women is a popular place for the young women in the village. However, they tend to learn modern skills instead of traditional crafts. Unfortunately none of these products are sold but they are exhibited for rest of the village on a temporary base.

Men in the village spend their free-time working on their land, growing olives or other agricultural products for extra earnings. Otherwise they spend their time at the coffee shops, *kahvehane*, a kind of gathering place for them where they chat while drinking Turkish coffee or the sports club in the village. Women do the same in the houses. Most of the residents are happy with the house they live in and feel that they have adequate space and wish to continue to live there. Only a small minority of the participants turned out to be unhappy with their houses, as they were no longer suitable for their needs today. The owners of typical Cypriot houses with courtyards still use their semi-private spaces for daily activities as they did in the old times. Gardening, storing and airing clothes are the most common functions observed in these internal courtyards.

The olive season is a great feast for them as they get together with other people from nearby villages and towns. This turns out to be an interesting social activity for them. Making bread in the courtyard is another womenly activity. The picnic area is used as a gathering point for the villagers at weekends.

Olive oil, traditional cheese *hellim*, and some by-products of grapes like *zivaniya*, *kofter* and *sucuk* are amongst major products produced by the citizens. Almost all villagers grow fruit trees in their gardens. Vine, peaches, almonds and tangerines are the most common types of vegetation found in the internal courtyard of the houses. The majority of the respondents own extra land where they mostly grow olive trees and use their products to produce their own oil.

A great percentage of the dwellers are happy to have their own olive oil mill in the village. However, their preference is the new modern mill in Cayirova village which is considered faster and more economic. On the other hand they will be happy to use their own mill if it had modern equipment. Yet, most are aware of the differences between the end products of the new and the old



machinery, that latter produces virgin oil, which is always considered the best oil.

According to the observations and the results of the survey, it can be asserted that there is a good living environment in the village. Although traditions were changed over time, they did not disappear altogether. The genuine village life still exists with its varied qualities. The tradition of collecting olives and processing olive oil, raising cows and goats for their milk to produce cheese, basket making, cotton weaving, socialising at coffee-shops, internal courtyard of houses and streets, wedding ceremonies and many more habits are there as before. The significant elements of Cypriot village life, the concept of neighbourhood, *mahalle*, and cohesive community, still survives in Buyukkonuk.

3 Conclusion: recommendations for the future

Buyukkonuk Village in Northern Cyprus has the potential of becoming an eco-village owing to its economic, social and environmental characteristics. Since there is a current interest for the self-sustenance of the village through the production of olive oil from the authentic olive oil mill, and olive oil has come to symbolize the Mediterranean lifestyle, a sustainable development strategy for the village should include community development through rehabilitation of the olive oil mill as the key principle.

The first step in transforming Buyukkonuk into an eco-village should be starting off an eco-village limited. This will initially run by a small group of like-minded people but develop into a community in time. This group will act as a local authority, get in touch with rest of the citizens, local organisations, private enterprises to formulate strategies considering the existing social, economic and physical problems in the village. For the use of this authority, a headquarters will be allocated. Buildings of historical value will be restored and given new uses such as shops selling traditional food and handcraft workshops.

In the village, there already is an initiative started by a Scandinavian couple to introduce the village to alternative tourism. The inquisitives of eco-tourism will participate in this project by coming to the island during the olive season to pick up olives and process their own olive oil in the village mill. These visitors will wake up in the morning to pick up olives and have a villager's lunch under a tree. The scenario will be typical of a traditional village life. If the mill is kept open and these package tours continue to be available, this will provide work for lots of people in the village and on the island.

The other initiative for the revival of the village is the small-scale development started off by a couple at the end of the village. They now live in a house they built themselves. Their old house is now converted to a pension for renting out. They are running a workshop where local people are employed and products of the workshop are displayed and sold in their shop. As part of their sustainable life, they grow animals and vegetables for their own use, produce their own bread, and share all these knowledge with others. This initiative is particularly worth consideration for new schemes in the village as it has already been accepted by the local people.

In order to establish a sustainable development strategy, the aspects of density and context, climate, open space and landscaping in the village should be taken into consideration as well. In this context, application of new technologies, provision for employment on site, conscious planning, social management plan, provision of housing on site, integration with nature, human scale, a sense of belonging, a full featured settlement, business or agriculture supporting healthy human development, and continuity into future should be the basic components.

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