

EKO-KENTLEŞME PROJESİNE YÖNELİK EKOLOJİK PLANLAMA ÇALIŞMASI: CİDE ÖRNEĞİ*

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ÖZET

Kentleşme süreci ve şehirler, geçmişten günümüze yapısal olarak birçok kez değişime uğramıştır. Nüfusun sürekli artması, hakim ekonomi politikaları ve güncel teknolojik gelişmeler; bu değişim sürecinin temel nedenleri arasındadır. Tüm bu etkenler bir araya gelerek, kentsel alanlarda doğal ve yapılı çevrenin uyumunu bozmakta ve çevreyi kirleterek gelecek nesillere aktarılacak olan ekosistemde sorunlara neden olmaktadır. Bu noktada planlama disiplini, kirliliğin nasıl önlenebileceğini ve kentlerin doğa ile daha uyumlu nasıl tasarlanabileceği üzerinde tartışmaya başlamıştır. Bu düşünceden yola çıkılarak eko-kent söylemi geliştirilmiştir.

Bu çalışmanın amacı, dünyada ve Türkiye'deki eko-kent girişimi deneyimlerinin olumlu ve olumsuz yönlerinin değerlendirilmesinden bir pilot proje için yararlanılmasıdır. Bu amaçla ekolojik planlama ve ekolojik yaşanabilirlik analizi bir yerleşim üzerinden örnekleme ile açıklanmaya çalışılmıştır. Araştırmanın örneklemi Kastamonu ilinin, bir Karadeniz kıyı yerleşimi olan Cide ilçesidir. Karadeniz Bölgesi'nin en uzun kırsal sahiline sahip olan Cide, aynı zamanda eşsiz bitki örtüsü ve diğer birçok doğal zenginliğe sahip milli parklar ile bütünleşen bir kenttir. Eko-kent projesi başlatılması ile Cide'nin; kendi kendine yetebilen, ekolojik olarak sürdürülebilir, ekonomik gelişmesini bu yönde kurgulamış, genç nüfusunun dış göçünü durdurmuş ve böylece benzer kentler için örnek oluşturacak bir kent olması hedeflenmiştir.

Anahtar Kelimeler: Eko-kent, Ekolojik Yaşanabilirlik, Cide Kenti, Kent Ekolojisi, Ekolojik Planlama

ECOLOGICAL PLANNING STUDY TOWARDS ECO-URBANISATION PROJECT: CİDE (TURKIYE) CASE STUDY

ABSTRACT

The process of urbanization and the cities have undergone structural change many times in the past to the present. The main reasons of this change are; continuous increase of population, the dominant economic policies and the current stage of technological advances in the application. All these factors come together to destabilize the natural and built environment in urban areas, polluting the environment and create problems in the ecosystem, which will be transmitted to future generations. At this point planning discipline began to debate over; how the cities could be more compatible with nature, how to prevent pollution. With this idea eco-city rhetoric has been developed.

The purpose of this study is to determine positive and negative aspects of experience of the eco-city initiatives in the world and in Türkiye. For this purpose, study of eco-planning and ecological livability's method is determined in examples of settlement. The study sample is Cide which is Black Sea coastal settlement of Kastamonu. Cide have the longest coastline of Black Sea Region besides it is a city that is integrated with national parks, flown in the stream, had with unique vegetation and had many other natural wealth. With eco-city project initiation it is aimed that Cide as a city, quite self-sufficient, ecologically sustainable, with an economic development has proceeded in this manner, halting out-migration of youth, and will be set an example for other applications.

Keywords: Eco-city, Ecological Livability, Cide City, Urban Ecology, Ecological Planing

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1. INTRODUCTION: CONCEPTUAL FRAMEWORK AND THE PRINCIPLES OF ECO-CITY

1.1. The Conceptual Framework

The term of "eco-city" was coined by members of "Arcology Circle", which is a voluntary organization, in the year 1979-80, for the first time. A few years later, Register has used this term alternately with the concept of a sustainable city in his book "Eco-city Berkeley" [4]. In these initial studies, eco-city means self-sufficiency in meeting the needs of all individuals living in the cities and provide an increase in welfare without compromising future generations' living conditions [1]. According to Register, an eco-city is an ecologically healthy city [4]. In 1987, Register stated that there is no planned eco-city in all aspects, but he also accepts that some parts of the cities in those days are ecologically sensitive and the concept of eco-city is emerging.

Another definition of eco-city specifying that it's the new form of urban development in contrast to increasingly prosperous cities and society [2]. The theoretical framework behind the development of eco-city is not a new topic. For example, some of the older cities in Europe and the pueblos in the southwest of the United States, which are Native American settlements, eco-cities were encountered. These cities were consuming less land and energy and they were compact, mobile, and harmonious with nature [3]. Eco-cities can be considered as a continuation of some urban movements from the 19th century, which are trying to reconcile the city with nature (for example, Howard's garden city). In other words, eco-cities represent a step further for nature-city relationship [4]. In the 80's experience in the first eco-cities are solar, wind and recycling practices, stream restoration projects and urban gardens. In the same way, preference of pedestrian, bicycle and public transport instead of cars; starting to be aware hazards such as depletion of resources, excessive pollution and species extinction are clues about the subject [3].

Examples quoted above seem to be easier to implement when considering their time, scale and structure. However, in today's cities, it is not an easy task to create sustainable and ecologically sensitive structures and to obtain successful results, due to the complex nature of cities. Nevertheless; some technological advances especially in recent years provide a certain extent of optimism to create sustainable forms of urban scale. The most important contributions of these technological developments are positive public perception and behavioral change [2].

In the next section of the study, some principles will be transferred about providing integration ecological approach to planning in today's cities. Then eco-city experiences from world and Turkey will be transferred through some examples. It is intended to be a guide the eco-city development principles in theory and practical application of the eco-city for the case study, which is at the beginning of this process. Cide is the town that recommended future eco-city urban settlement in this study. This town's most important potential in becoming eco-city is the request supported by local governments. Furthermore the actors who will manage the process, such as municipalities, universities, non-governmental organizations are in cooperation. In the last part of the study Cide's potential for eco-town principles to be transmitted and some tips for the future will be completed.

1.2. Principles of Eco-City

Various researchers been determined of the basic objectives and principles of eco-city. The principles of eco-city, which are listed by Roseland, as follows [5]:

- Revise land-use priorities to create compact, diverse, green, safe, pleasant and vital mixed-use communities near transit nodes and other transportation facilities;
- Revise transportation priorities to favor foot, bicycle, cart, and transit over autos and to emphasize 'access; by proximity;
- Restore damaged urban environments, especially creeks, shore lines, ridgelines and wetlands;
- Create decent, affordable, safe, convenient, and racially and economically mixed housing;
- Nurture social justice and create improved opportunities for women, people of color and the disabled;
- Support local agriculture, urban greening projects and community gardening;
- Promote recycling, innovative appropriate technology, and resource conservation while reducing pollution and hazardous wastes;
- Work with businesses to support ecologically sound economic activity while discouraging pollution, waste, and the use and production of hazardous materials;
- Promote voluntary simplicity and discourage excessive consumption of material goods;

- Increase awareness of the local environment and bioregion through activist and educational projects that increase public.

The principles of eco-city, which are listed by Wheeler, as follows [6]:

- Compact and efficient land use;
- Less car use, more accessibility;
- Efficient use of resources, less pollution and waste;
- Restoration of natural systems;
- Creating better housing and living environment;
- Healthy social ecology;
- Sustainable economic activities;
- Public participation;
- Protecting local culture.

Eco-City Builders Group that formed by Register, compiled eco-city planning principles in the international eco-city standards document. These principles are as follows [7]:

- Supporting clean air, safe food and water, healthy housing and businesses;
- Cost-effective eco-engineering solutions for the recycling of all waste;
- Production and usage of renewable energy;
- Development of efficient public transport system;
- Infrastructure integration that compatible with the natural qualities of settlements;
- Improving ecological (environmental and cultural) awareness.

Cities must have some spatial, environmental, social and economic features to be an eco-city according to the authors principles. These features are summarized in the ‘Table 1’.

Table 1. Social and Economic Features to be an Eco-City

Environmental	Social	Economic	Spatial
<ul style="list-style-type: none"> • Restoration of natural systems, • Usage of efficient and renewable resources • Development of local agriculture and urban gardening • Waste management and recycling 	<ul style="list-style-type: none"> • Social Justice • Ecological awareness • Public consciousness • Participation • Protecting and supporting local culture 	<ul style="list-style-type: none"> • Sustainable and non-polluting economic activities 	<ul style="list-style-type: none"> • Compact land use • Mixed use • Reducing car use • Promoting short-distance public transport, pedestrian and bicycle transportation

2. THE MAIN ALTERNATIVES BUILDING AN ECO-SETTLEMENT

2.1. The Main Alternatives

There would be three main alternatives for building an eco-settlement. These are:

- to built a new settlement, planned as an eco-settlement, independent of any present settlement,
- to transform an existent settlement to eco-settlement,

- to built a new settlement, planned as an eco-settlement, however dependent for some city functions to present settlement,

To start with a different governmentall approaches, the British and some of the European 'continental countries' such as Germany's, Holland's, Sweden's approach differs as The U.K. government's policies are concentrated on the first alternative, and the 'continental's distributed their efforts between the first and the third, above.

2.2. The European approaches compared

In Great Britain, eco-towns began as a government initiative in 2007 to provide more environmentally friendly places. The British Government in 2009, gave the go-ahead for the construction of four eco-towns, offering 10,000 homes overall, to Show case environmentally friendly living in the UK. the Government's latest proposalis to promote up to ten Eco-towns across England [8]. Their locations are in Hampshire, Cornwall, Norfolk and Oxfordshire. Each site is allocated a share of £60m for their "green" infrastructure.

Eco-towns will be small new towns of at least 5-20,000 homes [9]. These towns all have a common vision to exploit the potential to create a complete new settlement to achieve zero carbon development and more sustainable living using the best new design and architecture. The settlements, to be built by 2016, will include the latest in energy efficiency measures, streets with charging points for electric cars and numerous cycle routes as well as easy access to public transport [8]. The settlemens have their housing objective as to be designed to tackle Britain's housing shortage while minimising damage to the environment. It is known that, more than a quarter of the UK's CO2 emissions come from energy use in houses.

The Britain has, at various times in its history, led the world in the design of sustainable-for the-time –lived, residential communities, suc as:

- Philanthropic settlements in 19th Century such as Bournville or Port Sunlight;
- Garden cities of Early 20th Century;
- and later, Post war new towns, some as large as Milton Keynes.

These are all relied on a number of coinciding factors for their success. Mainline of these factors are; visionary leadership, low cost land, exemplary masterplans, homes close to jobs, and an ongoing neighbourhood management programme. Therefore, the G:Britain's incentives are quite different from the Continental Europe. In the Continent, the eco-settlements are located where there is not only housing but also an expanding population either because it is an attractive place to live or work-place opportunities. This helps to achieve much faster build rates than the Britain's case, and associated economies by spreading the overheads.

These settlements have also relatively compact with higher densities. This supports good quality infrastructure and hence may offer a better quality of life than existing suburbs. Saving energy has long been a priority for countries with colder winters Hence buildings are generally better insulated, and triple glazing is common with greater use made of ambient solar and wind energy, and ground source heat pumps. Electricity can be used for space heating supplemented by local energy generation in the form of CHP (Combined Heat and Power), through district heating schemes, plus the use of renewables so that the scheme as a whole has the potential to be zero-carbon. They make good use of water to create places where people can live close to nature, and without risks of flooding where in the Netherlands in particular has long been a priority and recently in Germany has become an increasing concern. The common parameters both fort he British and the continental case are:

- Community involvement
- Employment opportunities
- Healthy living
- Efficient land use.
- High environmental standards
- Sustainable transport
- Design quality

Tomozeiu and Joss (2014) in their recent article, urge for the need for more concerted governance integration and coordination across sectors and tiers of decision making to enable effective policy innovation and implementation [10].

3. ECO-CITY INITIATIVE EXAMPLES FROM TURKEY

3.1. Gaziantep Ecological Planning Model

The study aimed to create trademark settlement which deal with the concept ecocity and also formed with the concept of ecological planning, within the context of sustainable environment. Kilis State Road which is a major transportation route is located within The study area and it integrated Gaziantep, universities and regular residential area combines with Airport.

Gaziantep municipality has been prepared a climate action plan in order to reduce carbon emissions and minimize effects causing climate change. Within the scope of this action, plan is intended to establish an eco-region. It was started in order to take control secondary residential applications which tends uncontrolled development in southwest corridor of the city and create planned urban spaces which aims the ecological approach without losing the quality of agricultural land in the region as well as create a sustainable urban area by revising the planned urban pattern which not able to implement planning objectives are as follows [11].

- To provide social and cultural needs of the people
- To create a safe and healthy environment
- To improve quality of life
- To balance the protection and use
- To create a planning vision that includes land use planning, protection, restriction decisions, principles will form the basis for implementation and organization
- To create alternative solutions for urban settlement and development trends by making Research related to the physical properties of the case study.

Figure 1. The Site Plan and Conceptual Plan of ‘‘Gaziantep’’ Model



Thus, It aims to build an ecological city -which is 11km from the city center, includes the secondary housing and contains quality of the trees, planted fields and fertile soil- with a population of 200.000 in an area 3200 hectares’’Figure 1’’.

Central business area which is project of 55 ha area of feasibility report has been prepared in terms of energy and water by French Foreign Economy Bank in This Eco-city project. Within the scope of prepared reports existing water and energy sources have investigated and ideas have developed for applying the correct system. According to the scenario; 60% of heating needs will be provided from renewable energy sources was determined and also 55% of greenhouse gas emissions are projected to be blocked. Thus, 4,600 tons of CO2 emissions can be prevented. The study began with the vision plan of works in 2009. Academic views on the subject were taken from various universities. Besides, domestic and foreign experts have consulted [11].

General Features Of The Area

The area is one of the most fertile areas for farming in Gaziantep. It is aimed to protect ecological data of area to prevent negative effects from the devastating effects of public housing of Peanuts, olive and various fruit trees which

grown in this soil. The planning study which aimed necessary standards for the quality of urban life consisting of qualified residential areas, commercial areas, tourism and social infrastructure, was performed In Ecological context of the city.

It is aimed to be served a center which is a new settlement and are contained all factors that should be in a city in Gaziantep ecological urban projects. It is also aimed to include both urban and rural properties which have functions such as Collection of various squares, museums, large landscape areas, public buildings etc. and also have bazaar and ecological farm fields that protect and support the region's ecological values. After many eco city projects applied around the world were examined, an ecological city design guide was prepared for Gaziantep-Kilis road. In the guide, there is information about the people who will do structure there and details of the structures [11].

Ecological city area is like a valley, so lower parts are considered for small garden farming, and low density residences. The density of the houses is rising while rising up on the structure, so that none of the buildings blocks each other's azimuth and wing angle. In the scope of the project the thing thought are not the building only; there are ecological bazaar, healthy life center, ecological farm, renewable energy sources museum, city park primary school areas, and gardening areas are also planned. Additionally, a center which is giving food art courses on the way of the gourmand tourism tours is designed. This center is going to introduce Gaziantep cuisine to the world, and will support the brand quality of the city.

Present Stage Of The Gaziantep Eco-City Project

1/5000 scale of Development Master Plan and 1/1000 Scale of implementation plans have been approved. Planning area covered 3200 hectares is divided into five implementation stage. While dividing the stages, areas of the spatial integrity, balance between conservation and us, existing residential areas within interact with present green tissues, basin boundaries of the stream bed were taken into consideration. In addition, when determining the boundaries of stage, it was taken into consideration criteria such as to be made of the planning area, field of view of the agricultural structure, accessibility to social facilities, constitute to equity in plan casualty. Subdivision is continuing in stages. An area of 35 ha parcel is completed in current state [11].

3.2. Nilüfer (Bursa) Eco-City Project

Bursa is the 4th largest city in Turkey in terms of population size as well as the added value to the national economy. Up to the present many different shapes are described. 'Industrial city', 'old town', 'city of culture' and 'agricultural city' are some examples. Today, it is trying to add one important contemporary approach to urban development as 'eco-city'.

General Features of The Area

Bursa metropolitan-level Environmental Master Plan has determined a new direction of development in the western part of the city. project area that proposed to eco-city model is within the boundaries of new direction development and Nilüfer Municipality. This area is observed that a successful site selection according to analyzes that performed on the macro level and have as regards factors such as topography, agricultural lands, forest lands, close to universities around.

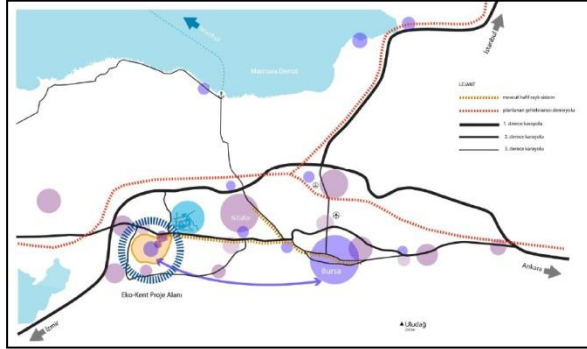
Eco-City Project Area is 2,150 ha. 145 ha. forest area, 258 ha. agricultural land, 8.7 ha. stream area, residential development is located within the boundaries of the project area. Projected population is targeted as 200,000 in the eco-city renewal area [12].

Present Stage Of The Bursa Nilüfer Eco-City Project

All Eco-City Project Area 1/5000 scale of Master Plan and part of 1/1000 scale of Implementation Plan has been prepared and certified. The main purpose of the revision of 1/5000 scale of Master Plan and 1/1000 scale of implementation plan; Implemented plans which approved independently of each other at various scales and partly applied, is reorganized within the borders of Nilüfer Municipality, in the south of Bursa-Izmir highway, in approximately 2,200 ha area, at various scales [12]. It must be reorganized by considering the ecological sensitivity and targeting urban integration'' Figure 2''.

Considering development potential of Bursa, following the completion of particularly Istanbul-Izmir highway, gulf crossing and railway projects with population movements; Nilüfer district is expected to an appropriate site selection for the satellite-city which- will be overcome the new housing needs, will be sufficient in itself in terms of service delivery, will be support sensitive to the natural environment development process, will be provided the functional integration of artificial and natural environment [12].

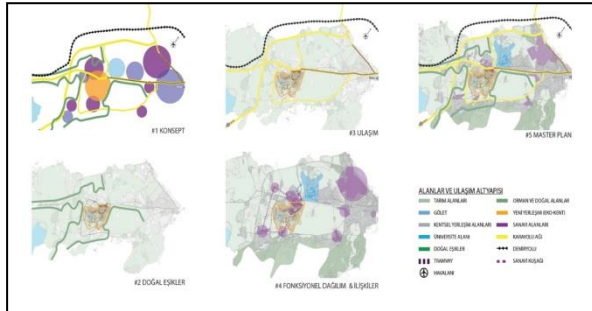
Figure 2. Normative Approaches to Planning Area



When Bursa-Nilüfer Eco-Cities is planned, it is based on the following principles [12]:

- The components of the neighborhood and The concept of neighborhood
- Topography compliance
- Pedestrianization
- Sensitivity on natural thresholds
- Self sufficiency,
- Links with Bursa the central area
- Integrated Transportation systems
- Harmony with the environment
- Unity of accomodation and working

Figure 3. Areas and Transport Infrastructure Map



1/5000 scale master plan of eco-city project has been made along with such analysis New development areas, contour maps, slope analysis, synthesis of natural structures, map orientation in the next step, it was made principled approach of spatial representation maps, maps which shown the relationship with the whole of the city and planning area and recommendations transport links of the planning area. After all that master plan has been designed.

The neighbourhood unit has been evaluated as a basic data in the housing zone planning process of Bursa-Nilüfer Eco-City Planning Area. In the framework of physical conditions originated by the geography of the planning area, the main entrances of neighbourhoods which have population of 5.000-10.000 people are given through the transportation (public transportation) system (Figure 3). In this way, the neighbourhoods will be able to the areas which is not passed but can be reached by public transportation systems. The entrance of the neighbourhood unit has been evaluated as a dense activity zone with the downtown and its environs. Pedestrianization is requisite for the concept of Eco-City with regard to reaching neighbourhood schools and green areas of neighbourhood units.

Different neighbourhood units have been planned varying from dense activity areas to more solitude areas and ultimately the natural areas. Social and spatial diversity have been interpreted in this context. Certainly, this setup mentioned above necessitates a precise spatial planning [12].

Within the context of the de-centralization of the city of Metropolitan Bursa, this Eco-City Project may provide opportunities in terms of the convenience of both physical and socio-economic conditions. Thereby, the success of the planning and application of the project can be evaluated as a model for such settlements of the Country.

4. CİDE AS ONE OF THE POTENTIAL SETTLEMENTS FOR TRANSFORMING TO AN ECO-CITY

4.1. Aim of selecting Cide

There are some important principles of ecological urban planning, as mentioned in the first section, outlined in table. 1. The purpose of selecting Cide, for studying eco-urbanisation potential of small-sized cities of the Black Sea Coast of Country, is Cide's situation to be a good case showing approximation to hold to many of these principles.

The main objective is, to build a model, to define operational procedure; then, to evaluate the aforementioned potential in Cide, and define the procedural shortcomings of the process. To this end, the components of the operational model and the procedure should include a variety of physical, social economic interventions.

4.2. Location and Features

Cide is on the Western Black Sea Coast of Türkiye, which is part of Black Sea Region of the Country. It consists an administrative part the Kastamonu Province, with an area of 662 square kilometers (Figure 4). Cide is 135 kilometers away from the Province centre: Kastamonu; located at the Black Sea coast, surrounded by, at the east of Doğanyurt, at the southeast of Şenpazar, at the south of Pınarbaşı and at the west of Kurucuşile districts. Cide is a typical Black Sea settlement that has blue and green in a great combination [13].

Figure 4. Location of Cide: on the Black Sea Coast (above); in the Kastamonu Province (below)



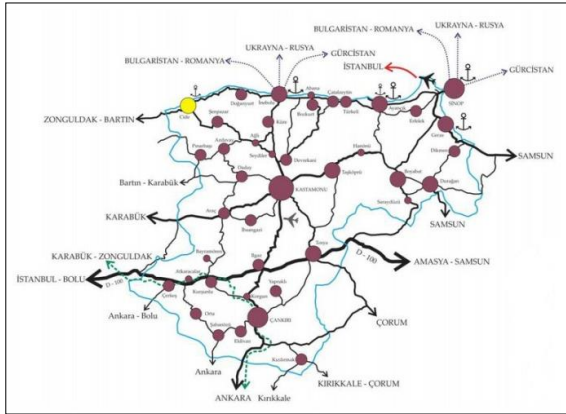
According to the address-based population census, Cide District's total population is 20686, Cide Settlement's is 7544. Cide had been announced as a town in 1868 and now, it has got 85 villages and 204 rural neighborhoods [14]. There are six municipally based neighborhoods in the town. Figure 5 illustrates the urban pattern of Cide.

Figure 5. Urban Pattern of Cide



Sea transportation is relatively weak in Cide, although it is located on the Black Sea coastline. On the other hand road transport links to Istanbul, Zonguldak and Bartın are improved. Figure 6 illustrates the transport links of Cide and it's vicinity [13].

Figure 6. Transport Links of Cide and it's district



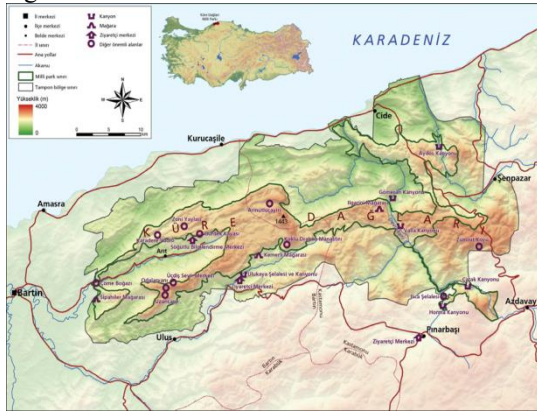
4.3. Geography

Cide District has a hilly and mountainous geographical structure in general; the average altitude is around 800-900m; 70% of the district is covered with forests. The plain areas are very limited; it's territories are divided by numerous streams and creeks. However, the town is situated on a plain on the coast with a long coastline about 12 kilometers. Kestane Mountain, which has a rich forest cover, is located in the north coastal part. There are two rivers, three creeks and two streams within the settlement. The most important river is the Devrekâni River and it flows in a northwest-southeast direction.

The National Park

The Kure Mountains National Park is in the west of the Black Sea Region which is a national park located on Kure Mountains (Figure 7) [15].

Figure 7. The Küre Mountains National Park



National Park is in the provinces of Kastamonu and Bartın. Town centers around national parks are Azdavay, Pınarbaşı, Ulus, Kurucasıle, Amasra and Cide. Kure Mountains have the most extensive and humid forests of the Western Black Sea. Because of Karstic topography of the region and water erosion has occurred the huge canyons and caves and by this way; special ecosystems were revealed. Particularly, The Çatak, Valla and Aydos canyons within the boundaries of the national park create interesting and special ecosystem among themselves.

The Küre Mountains National Park is in Temperate Zone Forests of Northern Anatolia and the Caucasus which is one of the priority ecological regions of World Wildlife Foundation In terms of nature conservation. By 2006, there are 13 certified PAN Park in Europe. Kure Mountains National Park which is first and only PAN Parks member of Turkey, is one of them. The aim of the PAN Parks is to ensure better protection of nature via the development of tourism [16].

4.4. History of Cide

Cide's history is as old as human history. Exact date of the foundation is not known. Throughout the history Cide remained under the domination of, respectively, Paphlagonia, Roman, Byzantine, Danisment, Candarogulları and Ottoman throughout its history. Homeros who lived in ancient times, refers to Cide in the Iliad which he wrote about 2800 years ago. He said that “we passed through the homeland of high cultural Henet from Kiteros and Aycelos. Aycelos is Cide today”, Kiteros which is natural harbor and known as Gideros today, is an old settlement. Cide which remained in Byzantine rule for a long time, has entered into Ottoman rule with Candarogulları to participate in the Ottoman Empire [13].

Cide has maintained feature of being a major port throughout history. During the period of the Ottoman Empire, it has gained importance as a port with the name of "Karaağaç iskelesi(Pier)” that was distribution centre the salt which brought from Russian Czardom and dispatched goods for empire.

Gideros as a natural harbor was the first place that comes to mind for the trees (expecially boxwood tree) which used in the construction of ships from the 8th century BC until the 1700s AD. The economy of town is generally based in agriculture, livestock, forestry and fisheries in terms of manufacturing, shipyards contribute significantly to economy of the town. Small boat manufacturing has an important place in the county [17].

4.5. Cultural Pattern

In addition it's natural, archeological and protected areas, Cide has unique cultural values such as it's tradition, customs and local culture. Noted writer Rıfat Ilgaz who was born in Cide, has talked about Cide's beauty in his books, many times. To honor his memory, people from Cide have organized a festival called “Rıfat Ilgaz Sarı Yazma (Yellow Scarf) Culture and Art Festival” since 1996. Festivals like mentioned one that most of indigenous people who lives out of Cide attends, contribute county's cultural improvement.

On the other hand, Cide has been a city that has many emigrants for a long time. This outland and domestic emigrations provide interaction between local culture and national and global culture thus it is possible to observe some alterations on local culture. Cide is also famous for its yellow scarves (sarı yazma). This scarf is the most

important piece of the local traditional outfits. Coffee grinder, pepper mill, wedding chest, wooden spoon and model imperial caicque are well known crafts of Cide and its villages. Cide has an advanced fishery culture and this could be about having longest cost line of Blacksea Region. In addition to fishery, Cide also has famous dockyards since the ancient times. Because of being a lowland and settling on the coast line which is 11 kilometers, bicycle is a prevalent vehicle in Cide. Hence, Cide already has a bicycle culture while so many projects aiming to give a eco-friendly and healthy habit to the habitants [18, 19].

Vernacular architecture has preserved and reached the present day. Local houses are mostly three floored. First and/or second floors are built out of stones; other floor(s) are often wooden. Roofers use an endemic stone called “Marla Taşı” as the roof material.

Figure 8. Examples of Vernacular Architecture



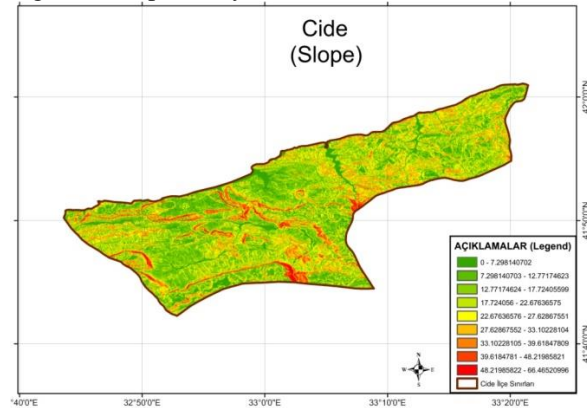
Cide’s civil architecture is able to protect Ottoman settlement structure along with urban fabric, historic buildings and houses until today. Structures belonging to the Ottoman and Candaroğulları period banded together. Front or back yard of the house is quite large. Thus settlement is integrated with nature (Figure 8).

4.6. Climate, Aspect, Slope, Soil and Agriculture

Cide has the typical Black Sea climate and every season in Cide is rainy. The temperature differences are very small between summer and winter. The average annual temperature is 14.8 ° C, maximum temperature is 27.5 ° C, and minimum temperature is 4 ° C. The hottest months are June, July, August and the coldest months are December, January, February. Annual precipitation is 114.9 mm and the most rainfall is seen in November and December. The average wind speed is 7.0 m / s and northwest winds are dominant in the region. Average relative humidity is 72.8% and the average number of rainy days are 152 [13].

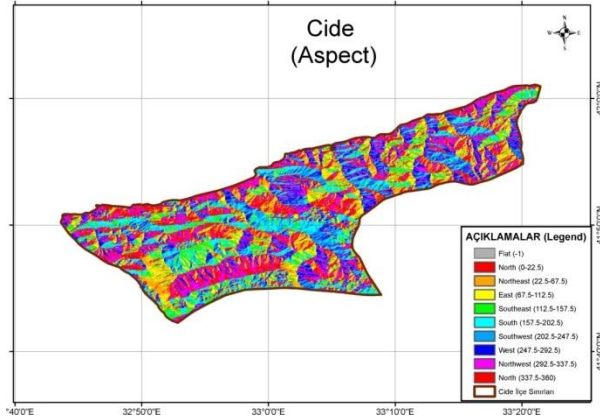
According to the slope analysis in the centre of Cide, current residential area is flat and slightly sloped down to the sea and the other areas are medium and high-pitched. Slope of additional the western part of central is around 0-5%. Slope at the end of consisting alluvial plains is between 5-10%. The slope is abruptly upright and locally variable in areas outside of these fields. Most of the area has a slope between 15-20%. Slope analysis of Cide is observed on the “Figure 9” [20].

Figure 9. Slope Analysis of Cide



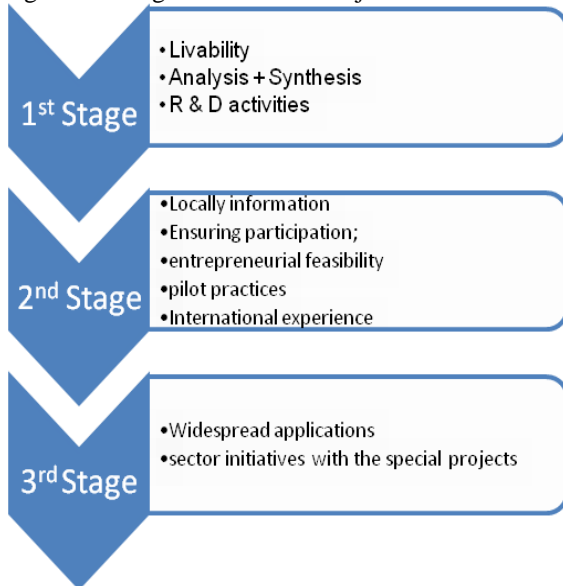
Aspect affects the angle of incidence of sunlight and the enlightenment period. A field angle of the light rays hitting the ground changes depending on the slope and local differences are observed in the warm-up. Southern facades are warmer due to more sun exposure. Northern facades are also colder due to lower value of temperature range and shorter sunshine duration. The aspect analysis provides information about the slopes of structures that should be considered during the planning processes. The aspect analysis of Cide is observed on the “Figure 10” [20].

Figure 10. Aspect Analysis of Cide



Cide has 94,541 decare of agricultural land. These areas are comprised of cultivated agricultural lands, fallow lands, vegetable gardens and orchards. The figure 11 and table 2 below, summarises the authors’ conceptual development stages with the main ingredients, where, these figures are borrowed and used by Yapı journal, for an Interview with M. C. Tuzcuoğlu, who has co-operated with the authors for Cide ecological initiative [21].

Figure 11. Stages of the Cide Project



First stage includes R&D anchorage. Survey and data compilation. For this purpose, the below study groups are thought to be structured:

- Natural resources
- Social resources
- Economic resources
- Transportation and urban infrastructure
- Building
- Cultural resources
- Sustainable energy

Second stage includes R&D to planning concepts and principles. Strategical, Structure Plans and development plans are to be revised according to the concepts and planning principles, defined after the 1st stage compilation and results.

3rd stage includes ecological planning and ecologixcal urban design stage. A rather new planning approach for the country, is defined and implemented for Cide and it's environs, namely: Cide Municipality. The participation of the Cide's people to the conculusive statements and the decisions at all stages, is thought to be a prime principle applied throuhout the process.

Table 2. The Poject Stages- Mission- Program Schema

Ecological Livability	1 st Stage	2 nd Stage	3 rd Stage
Livability	Direct supporting program (3 months)		
R & D activities			
Research on eco-city			
Several educational programs			
Master Plan		Support programs to increase knowledge and experience	
Implementation Plan			
Conservation Plan			
Site inspection in Europe Eco-Cities (Germany, England)			
Ecological Planning			Financial Support Program for the Development of Infrastructure
Ecological Design			
Efforts to Practice (civil society, business people, local authorities)			

5. CONCLUSION AND GENERAL RECOMENDATIONS

5.1. Conclusion

Building a new settlement is inherently complex and long-term process. Where, all the concepts and underlying paradigm has changed from the 'conventional' to a new: ecological, the process has to be led by an inherently developed procedural process and actively participating local community, hence influential local politicians. There should be an R&D procedure, built in the process, with survey-data compilation- modeling- planning-design-implementation. Such an effort needs to be led by local government, supported by governmental agencies, and public and private development agencies, where, needed and possible, to be successful. So, government encouragement and with active community engagement, process and procedures are made ready to have been set out and be operational. The European common parameters are those:

- Community involvement
- Employment opportunities
- Healthy living
- Efficient land use.
- High environmental standards
- Sustainable transport
- Design quality are to be accepted, beforehand.
-

In addition to all these, it should not be forgotten that it is not desirable to raise the existing population with the concern of creating ecological settlements. Because, each new human settlement is a threat against nature no matter

how eco-friendly is. Making the existing settlements ecological should be the most important and fundamental goal rather than creating new ecological settlements.

5.2. General Recommendations

- Vision: The eco-settlement initiatives in this country can avoid making mistakes by learning from Europe and earlier British experience with new communities, including new town developments particularly as far as the location and mixing of uses and tenures is concerned.
- Resourcing Planning and Design: Beforehand programming of funding social and physical infrastructure in advance of eco-development must be found. A properly funded and eco-comprehensive masterplan and following design procedure in spatial, social and economic terms must provide the long-term direction needed to give governmental agencies, public and private investors confidence, along with enough flexibility-feedback and monitoring- to allow for changing circumstances.
- Implementation and Monitoring: There should be a driving force for eco-settlement project's process and procedures to secure the commitment of the community and public and private investors alike, and realise the agreed vision in terms of quality and livability.

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