

A RESEARCH ON THE APPLICABILITY OF ECO-VILLAGE SETTLEMENTS IN HOUSING SOLUTIONS

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Аннотация

Процесс урбанизации, усилившийся с промышленной революцией, привел к негативным последствиям, таким как миграция из сельской местности в города, безработица, неконтролируемый рост населения, социальная сегрегация и жилищные проблемы. Неконтролируемый рост населения в городах создал проблемы жилья и бездомности наряду с важными социальными и физическими проблемами. Бездомные пытаются временно удовлетворить свои потребности в жилье в общественных местах, таких как улицы, парки, автовокзалы и вокзалы. Согласно исследованию, проведенному ООН, число бездомных в мире достигает 100 миллионов человек. Среди моделей размещения, разработанных для бездомных на международной арене, есть постоянные решения, такие как коллективное жилье и крошечные дома, а также временные жилые помещения, такие как контейнеры, навесы и палатки. Примечательно, что в последние годы принципы эко-посёлки также использовались в качестве альтернативного решения для бездомных в качестве модели устойчивого проживания. Целью данного исследования является изучение предложений по решению эко-посёлков, разработанных в этом смысле из разных культур и географических регионов, в контексте экологической, экономической и социальной устойчивости, а также оценка стратегий модели эко-деревни, которая возникла как альтернативное решение

проблемы бездомности. В свете этой информации был изучен потенциал экологической, социальной и экономической устойчивости практик экопоселений, которые отбираются с помощью типичного метода выборки из США, Шотландии и Австралии для бездомных. При рассмотрении примеров было видно, что модель эко-посёлки является решением проблемы постоянного жилья для бездомных, а социальная и физическая устойчивость достигается за счет проектирования жилых помещений, использования экологически чистых строительных материалов, организованы тренинги и встречи. Примечательно, что тот факт, что экономическая устойчивость в основном обеспечивается за счет поддержки волонтеров и доноров, может создать проблему с точки зрения долговечности решения экопоселения для бездомных. Бездомность — это не только отсутствие дома; это также дискриминация и социальная проблема. На основании проанализированного опыта экопоселений можно сказать, что важно найти решение этой проблемы при поддержке общественных организаций и государства. Для повышения экономической устойчивости необходимо обратить внимание на практику профессионального обучения, которая может интегрировать бездомных в социальную жизнь и поддерживать их экономически.

Ключевые слова: Эко-деревня, Бездомность, Модель жилья, Устойчивое развитие.

Аннотация

Саноат инқилоби билан кучайган урбанизация жараёни қишлоқдан шаҳарларга кўчиш, ишсизлик, аҳолининг назоратсиз ўсиши, ижтимоий табақаланиш ва уй-жой муаммоси каби салбий оқибатларга олиб келди. Шаҳарларда аҳолининг назоратсиз ўсиши муҳим ижтимоий ва жисмоний муаммолар билан бир қаторда уй-жой ва уйсизлик муаммоларини ҳам келтириб чиқарди. Уйсизлар уй-жойга бўлган эҳтиёжларини вақтинча кўчалар, боғлар, автовокзаллар ва вокзаллар каби жамоат жойларида қондиришга ҳаракат қилишади. БМТ томонидан ўтказилган тадқиқотга кўра, дунёда уйсизлар сони 100 миллион кишига етади. Халқаро майдонда уйсизлар учун ишлаб чиқилган турар жой моделлари орасида жамоавий уй-жой ва кичик уйлар каби доимий

ечимлар, шунингдек, контейнерлар, шийпонлар ва чодирлар каби вақтинчалик турар жойлар мавжуд. Шуниси эътиборга лойиқки, сўнги йилларда экологик қишлоқ тамойиллари барқарор ҳаёт намунаси сифатида уйсизлар учун муқобил ечим сифатида ҳам қўлланилмоқда. Ушбу тадқиқотнинг мақсади экологик, иқтисодий ва ижтимоий барқарорлик нуқтаи назаридан турли маданиятлар ва географик минтақалардан шу маънода ишлаб чиқилган экоқишлоқни ҳал қилиш бўйича таклифларни ўрганиш, шунингдек, экоқишлоқ стратегияларини баҳолашдир. Уйсизлик муаммосига муқобил ечим сифатида пайдо бўлган модел. Ушбу маълумотлардан келиб чиққан ҳолда, Амэрика Қўшма Штатлари, Шотландия ва Австралиядан уйсизлар учун намуна олиш усулидан фойдаланган ҳолда танлаб олинган экологик қишлоқ амалиётларининг экологик, ижтимоий ва иқтисодий барқарорлиги потенциали кўриб чиқилди. Мисоллар кўриб чиқилганда, экоқишлоқ модели уйсизлар учун доимий уй-жой муаммосини ҳал этиши, ижтимоий ва жисмоний барқарорликка эса турар-жойларни лойиҳалаш, экологик тоза қурилиш материалларидан фойдаланиш, тренинглари орқали эришилаётгани аён бўлди. Шуниси эътиборга лойиқки, иқтисодий барқарорлик кўп жиҳатдан кўнгиллилар ва донорлар томонидан қўллаб-қувватланиши уйсизлар учун экологик қишлоқ ечимининг барқарорлиги нуқтаи назаридан муаммо туғдириши мумкин. Бошпанасизлик фақатгина уй-жойнинг йўқлиги эмас, балки бу ҳам камситиш ва ижтимоий муаммодир. Экологик қишлоқларнинг таҳлил қилинган тажрибасидан келиб чиқиб айтиш мумкинки, бу муаммога жамоат ташкилотлари ва давлат кўмагида ечим топиш муҳим аҳамиятга эга. Иқтисодий барқарорликни ошириш учун уйсизларни ижтимоий ҳаётга интеграциялаши ва уларни иқтисодий жиҳатдан қўллаб-қувватлай оладиган касбий таълим амалиётларига эътибор қаратиш лозим.

Калит сўзлар: Экоқишлоқ, уйсизлик, турар-жой модели, барқарор ривожланиш.

Abstract

The urbanization process, which increased with the Industrial Revolution, brought negative consequences such as rural-to-urban migration, unemployment, uncontrolled population growth, social segregation, and

housing problems. The uncontrolled population growth in the cities has created the problems of housing and homelessness along with important social and physical problems. Homeless people try to temporarily meet their housing needs in public areas such as the streets, parks, bus terminals, and train stations. According to the research conducted by the United Nations, the number of homeless people in the world reaches 100 million. Among the accommodation models developed for the homeless in the international arena, there are permanent solutions such as collective housing and tiny houses as well as temporary living spaces such as containers, sheds, and tents. It is noteworthy that eco-village principles have also been used as an alternative solution for the homeless as a sustainable living model in recent years. The aim of this study is to examine the solution proposals of eco-villages developed in this sense from different cultures and geographies in the context of ecological, economic, and social sustainability, and to evaluate the strategies of the eco-village model, which emerged as an alternative solution to the problem of homelessness. In the light of this information, the ecological, social, and economic sustainability potential of eco-village practices, which are selected with a typical sampling method from the USA, Scotland, and Australia for the homeless, have been examined. When the examples were examined, it was seen that the eco-village model was a solution to the permanent housing problem for the homeless, and social and physical sustainability was achieved thanks to the design of living spaces, the use of environmentally friendly construction materials, and the training and meetings organized. It is noteworthy that the fact that economic sustainability is mostly provided with the support of volunteers and donors may pose a problem in terms of the longevity of the eco-village solution for the homeless. Homelessness is not only a lack of a home; it is also discrimination and a social problem. Based on the analysed eco-village experiences, it can be said that it is important to find a solution to this problem with the support of non-governmental organizations and the state. In order to improve economic sustainability, it is necessary to pay attention to vocational

training practices that can integrate the homeless into social life and support them economically.

Keywords: Eco-village, Homelessness, Housing Model, Sustainability.

1. INTRODUCTION

The industrialization has created a breaking point that causes significant changes in global economic, political, and socio-cultural structures in the historical process. Before the Industrial Revolution, home-style and small-scale production started to be made in factories thanks to inventions such as the steam machine, weaving loom, and lathe, and the production speed increased. The factories, which formed the new place of production in the new industrial city, caused the poor people to leave the rural areas and migrate to the big cities for job opportunities. Mechanization in agricultural activities has reduced the need for labour in agriculture, and unemployment and poverty problems have emerged in rural areas. After the mass migration movements from the countryside to the cities, agricultural production decreased, the abandoned countryside became idle, and the cooperation culture prevailing in agriculture-based communities was replaced by competition. Problems such as unemployment, homelessness, slums, and unplanned urbanization have emerged in the cities receiving immigration. The population growth in the city has caused the existing housing, infrastructure, sewerage and other services to grow faster than expected. The injustice in income distribution has created social inequality and classes, and the number of low-income and homeless people has gradually increased. Engels defined the living conditions of the poor in England's big cities in this period as "a portrait of misery and deprivation" (Engels, 1945, p: 33).

Different policies and strategies have been developed to cope with homelessness, depending on the problems faced by countries. Funds created for homeless people, legal arrangements for their basic needs, interest-free bank loans to buy a house, and local government support can be considered among these. In spatial terms, solutions such as containers, shelters, tents and

huts respond to the need for temporary accommodation for the homeless. Low-cost mass housing, homeless offices where the needs of the homeless can be met, guest houses and tiny houses are permanent accommodation solutions to the problem of homelessness (Akyıldız, 2017). Eco-villages, on the other hand, have come to the fore in recent years as an alternative and sustainable housing model proposal at the international level for the problem of homelessness.

Eco-villages are not only ecologically and socially sustainable settlements, but also financially self-sufficient and economically sustainable living spaces. The first of the eco-villages categorized by Robert Gilman in 1991 is a settlement established in 1930 in Sólheimar, Iceland. Although eco-villages are mostly known as a sustainable life model in western societies, they are also considered as an alternative solution to the homelessness problem with their lesser-known aspects. The eco-village created by the Nickelsville homeless community in 2014 can be considered a good example of this situation.

The aim of this study is to examine the potential of the eco-village model, which has emerged as an alternative housing model for the homeless in recent years, in terms of ecological, economic and social sustainability, and to examine the solution strategies developed for homeless people by addressing its advantages and disadvantages. For this reason, three eco-village projects designed for homeless people with typical sampling methods from different cultures and geographies were selected and examined. Of these, Nickelsville Community is located in Seattle-USA, Transition Village Wallan is located in Victoria-Australia, Social Bite Eco-village is located in Granton-Scotland. The eco-village model, which was brought as a solution to the problem of homelessness in different cultures, "Can there be a way out for our country facing similar problems?", "What can we learn from eco-village practices applied in different cultures and geographies?" questions such as these constitute the motivation of this research.

2. THE PROBLEM OF HOMELESS IN THE WORLD AND IN TURKEY

The industrialization process began in 1769 with the invention of the steam engine by James Watt. While England was a rural country in the first

quarter of the 18th century; After the first public railway opened in 1825 and the Industrial Revolution, population density increased throughout the country and new cities emerged. Factories were established in cities after mechanization. With the increase in production, the need for labour has also increased and the working class has formed. On the other hand, productivity has increased due to mechanization in agriculture and the need for manpower in rural areas has decreased. For this reason, a migration movement from rural areas towards the city started and the urban population increased unplanned. Municipal administrations were established to regulate services such as housing, roads and infrastructure; Between 1830-1850, modern urban planning was born (Benevolo, 1971, p: 40).

Although the innovations brought by the Industrial Revolution have made our lives easier by increasing general welfare, many reasons such as uncontrolled population growth in cities, migration from village to city, need for housing, unemployment, and financial problems have led to homelessness. Homelessness is not just a lack of shelter; it is a lack of social life. Homelessness can have many causes such as war, poverty, unemployment, natural disasters, violence, mental and physical disabilities. According to a study conducted by the United Nations (UN) in 2005, the estimated number of homeless people in the world is approximately 100 million. According to Habitat (2015) data, 1.6 billion people live in informal settlements and without basic services (Javelosa, 2016).

It is important and necessary to examine the policies implemented by countries to cope with the homelessness and housing crisis. The constitution and housing laws of many European countries state that public authorities must provide housing to the population. Providing services to the homeless is a legal obligation, therefore, the step model and housing priority models have been developed for the homeless. In the step model, homeless people are placed from the street to the shelter, from the shelter to the hotel, from the hotel to the temporary accommodation area and finally to their permanent residence. In the housing priority model, people in need are placed in their permanent residences

in the long term. These models are also carried out in some states of the USA, Canada, Japan and some European countries (Johnsen et al. 2010, cited in Akyıldız, 2017, 77). Strategies to prevent homelessness are being developed and these studies are supported by academic research. While a bottom-up development and regional diversity plan are implemented in Austria, a housing priority model is implemented in France and Finland. In most European countries, homelessness is under the control of local governments, but in Germany, Sweden, England and Hungary, municipalities directly meet the needs of the homeless (Anderson, p.47, 2010).

Homelessness, which is an important problem for developed and developing countries, is also an important problem in Turkey, especially in big cities. There is no database for registering the homeless in Turkey. Studies on homelessness are limited and applied studies are very few (Özdemir, 2010, p.86). The current constitution does not have provisions specifically for the homeless; there are articles related to the protection of the rights of families of martyrs, the elderly and disabled individuals who need to be specially protected in terms of the right to housing and social security (T.R. Constitution, 1982). In the Municipality Law, there are articles such as social services and aid services that can open all kinds of health-related facilities provided or built by the municipality (Municipal Law, 2005). However, there is no specific article on homelessness. T.R. Child and Youth Centres and Child Protection Agency affiliated with the Ministry of Family, Labour and Social Services provide rehabilitation of homeless children. There are also women's shelters affiliated to the Ministry, NGOs and municipalities. Guesthouses affiliated to the district governorship, governorship and municipalities also serve homeless people. There are these guesthouses for women and children, but the number of services for men, who make up the majority of the homeless, is less (İlhan and others, 2010).

3. ECO-VILLAGES AS A SUSTAINABLE LIFE MODEL AS AN ALTERNATIVE TO HOMELESS

We can define eco-villages as conscious communities. According to the sociologist Bill Metcalf, the oldest of the conscious societies is the Homakoeion, which was created in 525 BC by Pythagoras in Southern Italy. About 4000 Essenes (a Jewish sect) lived around the Dead Sea in the 2nd century AD, Celtic monasteries during the reign of Patrick in Ireland, a millennial believer in medieval happiness in Europe, the Diggers in 17th century England, and New Lanark Community initiatives inspired by are also examples of conscious community movements. According to Metcalf, the aim of these communities is to become contemporary societies equipped with modern technologies, away from the troubles of the capitalist world, rather than getting away from physical life. the "Back to the Land" and hippie movement in North America in the 1960s and 1970s; Co-housing movement that started in Denmark and Kibbutz, a traditional agriculture-based community initiative in Israel, are some of today's conscious community movements (Dawson, 2012, p:20-22).

When we come to the 18th century, we encounter the Industrial Revolution, which first emerged in England and then affected other European countries. With the Industrial Revolution, production based on human and animal power began to be replaced by machines, and unemployment began to be seen in the villages. As a result, migration from villages to cities started and the urban population increased rapidly. The spatial order existing in the cities was insufficient to meet the population growth and needs, and the increasing housing problem caused rapid and unplanned urbanization. Rural areas have been abandoned, class divisions have formed, and the working class has been placed in the worst parts of the city. According to Mumford, the two main elements of the new urban complex were the factory and the slum (Mumford, 1970, p. 161). The resulting unhealthy urban environment brought along problems such as increasing air pollution and increasing natural disasters with the human factor. The unhealthy cities caused by the industrial city started the search for a more planned and healthier environment; in the 19th and 20th centuries, some utopias were theorized as anti-urban. Robert Owen New Towns; Ebenezer Howard proposed the Garden City Model, Frank Lloyd Wright

proposed the Broadacre City, Richard Meier suggested Urban Village and Raanan Weitz offered the Rural City model. These initiatives that support communal life aim to ensure self-sufficiency and rural-urban sustainability. It is aimed to be an agricultural society by being located in an isolated settlement with certain borders. An ideal settlement planning with a planned settlement and community is suggested by developing suggestions for social, economic and environmental problems. These utopias and eco-villages are similar in that they propose a new model against the thought system and management style of the period.

According to Lucas, the eco-village movement was formed in the 1960s and 1970s by a combination of growing environmental movements and old ideas about coexistence. The people who founded the eco-villages are the ones who take action and lead by not waiting for the increasing social and economic crises to be noticed by the people. These communities also make a difference politically and symbolically with their lifestyles and strong community relations. Global threats such as climate change, poverty, disease and war can be resolved when societies adopt and apply principles such as sustainability, peace and justice. State governments should create a structure that supports a stronger and healthier lifestyle by sharing the social and ecological benefits of eco-village life with communities (Dawson, 2006, p: 14).

It is necessary to go to the end of the 1980s in order to better understand the concept of eco-village. The quality of life in industrialized countries has risen to higher levels with production and technological developments. However, the world's self-renewal capacity has been exceeded, natural resources have started to deplete and the ecological balance has deteriorated. Policies that support the free movement of money and mass production have damaged the integrity of society; crime, depression, substance abuse and suicide rates have increased. While companies continue to strengthen, the number of politicians criticizing business growth and addressing environmental and social issues has decreased, and states have remained unresponsive to these problems. This political vacuum led to the growth of the civil society movement, independent

initiatives emerged, and the questions in people's minds about sustainable common living were first formed in these years. Danish activist Hildur Jackson founded the Gaia Foundation in 1987 with her husband Ross Jackson, following the success of the co-housing model in which she played a role (Dawson, 2012, p:16-17). The purpose of the foundation, a Danish-based charitable association, is to support the transition to a sustainable and more spiritual society (Gaia, 2018).

In the report “sustainable communities”, written by Robert Gilman and his wife Diane Gilman in 1991 at the request of the Gaia Foundation, ecovillages are defined as “full-fledged human-scale human activities that integrate harmlessly with nature, support healthy human development and can continue successfully in the future. settlements” (Gilman, 1991, p:10). According to this report, in terms of ecological sustainability principles, it has been deemed appropriate that the number of members in the community be between 100 and 500 people so that people in eco-villages can get to know each other. The harmless harmonization of human activities with nature, that is, the use of natural resources such as the sun, instead of the use of exhaustible energy sources such as oil, principles such as compost and recycling gain importance. In accordance with the principle of economic sustainability, all functions in life such as housing, food supply, manufacturing, leisure, social life and commerce should be present in a balanced manner in eco-villages. The fact that eco-villages are self-contained settlements does not mean that they are isolated from the environment. Access to units such as hospitals and airports can be provided. In accordance with the principle of social sustainability, physical, emotional, mental and spiritual health is considered as a whole and it is aimed that the society consists of healthy people. It is aimed to continue the eco-village life successfully until an uncertain future and to be sustainable (Gilman, 1991, p:11).

Eco-villages are planned residential communities designed to encourage a higher level of social interaction than other communities. They have a shared social, political and spiritual vision. They develop social and

ecological programs that offer positive visions and real-life solutions for humanity and the planet, such as consensus, decision making, intergenerational knowledge transfer, alternative economic models, perm culture practices, renewable energy systems, education models (Irrgang, 2005). located at the centre of the eco-village approach. Cooperative culture requires not only sharing, but also interacting with human relations (Schaub, 2016). Litfin also stated that the most important aspect of eco-village life is sharing. Since facilities such as food, living space, cars and tools are shared in eco-village societies, per capita consumption is lower than the country average (Litfin, 2014, p: 34).

4. ECO-VILLAGE MODELS DEVELOPED FOR THE HOMELESS

One of the most fundamental elements of eco-villages is the desire to establish settlement models in which people integrate with nature in a healthy and sustainable way (Dawson, 2012, p:53) The problem of homelessness is not only the lack of physical shelter, but also social exclusion, social exclusion, It also includes social deprivation problems such as loss of family and sense of belonging. Eco-village model among the solutions developed for the homeless is first seen in Nickelsville homeless community in Seattle, USA Transition Village Wallan and Granton- The Social Bite Eco-village from Scotland is explored in the next section.

4.1. Nickelsville Homeless Community- Seattle, USA

Nickelsville Homeless Community, which has been living at various campgrounds in Seattle since 2008; contacted Sawhorse Revolution and stated that he wanted a residence designed for them. Social Revolution is a non-profit Seattle-based charity founded in 2010. This initiative, which aims to provide craft training to young people, volunteers, professionals and high school students come together at summer camps and carry out construction projects. The economic sustainability of Social Revolution is ensured by the support of private foundations, individual donations, citizens and associations (Sawhorse Revolution, 2019).

The Nickelsville Homeless Community teamed up with Social Revolution in 2014 to build ten tiny houses. The Nickelsville Homeless Community provides safety, shelter, and solidarity for an average of forty to one hundred people, and moves its camp to another area every three to eighteen months. It is not certain whether there will be infrastructure facilities such as water, electricity and sewerage in the camp area where the community will be moved, therefore, individual dwellings independent of infrastructure are needed. Therefore, the small house units built by Social Revolution are designed to be able to move on wheels (Robarts, 2015).



Image 1: Nickelsville Homeless Community (Source: <https://seattle.curbed.com/2017/6/12/15776206/tiny-houses-nickelsville-georgetown-homeless>)

In terms of ecological sustainability, recycling principles draw attention to the design of this eco-village. Units on campus are built from waste and old building material whenever possible; Thus, sustainability has been achieved in both ecological and economic terms. For example, a used aluminium panel was

used for the roof of residential units, old street signs used for the facades, and an old discarded window was used for the windows. Attention was paid to the direction of the sun while positioning the accommodation units on the campus, and attention was paid to designing the units in harmony with their surroundings. The units are 2.6m wide, 3.4m high and weigh 820kg, making it easy for small houses to transport too. Ecological sustainability units such as the cooking area, rainwater collection system, compost toilet are also located on the campus. Thanks to the designed solar charging station, village residents can charge their electronic devices and meet their hot water needs (Robarts, 2015).

The gardens on campus are used for food and ornamental plant cultivation, but it is not specified whether these farming practices benefit economically (<https://www.facebook.com/groups/nickelsvilleworks>).

In terms of social sustainability principles, large firms such as Olson Kundig Architecture and Architects Without Borders provided consultancy to Social Revolution students in the design of some residences and communal units in the eco-village. Sawhorse Revolution students took into account the basic human needs of homeless people in the design of the housing units, and obtained user approvals for the construction of small home units by meeting with homeless people (Sawhorse Revolution, 2019). The ability of homeless people to share their ideas is a very important issue in terms of having a say in society and self-confidence. This eco-village design for Nickelsville Homeless Community is very important for end-users to have a say in the design and in this context, it differs from other eco-villages. The common areas and gardens on the campus enable the villagers to interact. Disabled ramps used in eco-village design are also an important detail in terms of accessibility and social sustainability.

The projects carried out with the Social Revolution students are an important initiative in the context of social sustainability both in terms of getting the opinion of the villagers and the contribution they provide to the education of the students.

When examined in terms of economic sustainability, it has been seen that this community mostly lives on donations. The Nickelsville Homeless Community has rented the eco-village area where they live by the municipality. In addition to the aid of the municipality, donations made by the government, institutions and individuals also support this community. It is not clearly stated how the individuals living in the community earn their living. Fundraising events are held regularly. For example, a rally was organized in 2013 and larger donations were collected with the “sleep out” event. Most of the posts made on websites, on platforms such as Facebook and Indiegogo consist of clothing, food, household goods, garden equipment and financial demands. From this situation, it is thought that an economically sustainable system cannot be provided in the eco-village.

4.2. Transition Village Wallan, Victoria, Australia

Australia has been experiencing a housing crisis for the past 30 years, with more and more of its citizens homeless. According to UN reports, more than 116,000 Australian citizens suffer from homelessness at the last census (UN, 2019). Transition Village Wallan, one of the voluntary non-profit organizations established to combat homelessness, built a village of ten small houses in 2017 that provides a temporary shelter solution for local homeless people. Transition Village Wallan's vision is to provide people with safe and sustainable living space over a twelve-month period. Designed in accordance with the principles of Permaculture, Maslow's Hierarchy of Needs and Social Justice and Transition Hierarchy, it is aimed to create a collaborative and resilient community in this village. Food, employment, education, vocational training, and emotional and physical health support are provided for village residents (Transition Village Wallan, 2018).



Image 2: Transition Village Wallan (Source: <https://www.mav.asn.au/>)

When examined in terms of ecological sustainability, each of the living units in the village is designed as 3m x 4m. These small houses consist of beds, lighting, heating, cooling, drinking water and handwashing units. Units such as kitchen, laundry, shower, toilets, meeting room, barbecue area, gardens arranged in accordance with perm culture principles, garden shed and micro-business area are also designed for common use (Transition Village Wallan, 2018). In the layout design, attention was paid to the use of sustainable materials that do not require repair or painting. It is aimed to get away from the city infrastructure with solar energy systems, compost toilets, water tanks and garden systems. Village residents are directed to healthy and seasonal food consumption. Recycling is supported by a repair cafe where items can be repaired (Hynninen, 2019).

When evaluated in terms of social sustainability, it is seen that eco-village management is provided by a committee. Seventy-seven-item Transition Village Wallan rules, set in accordance with the Australian Victorian Legislation, Associations Establishment Reform Act 2012, are valid on the campus (Transition Village Wallan, 2019). The development of strong relationships between individuals and groups is encouraged in the eco-village. All village residents adhere to established behavioural standards and participate in a ten-

hour-a-week joint work plan for cleaning, gardening and maintenance. Village residents are offered volunteering, work and life skills training. It is aimed to help residents regain their self-confidence and independence by taking part in daily administration and organization (Clarke, 2017). Village residents are required to be over the age of eighteen, living in the Wallan area, not using alcohol or drugs, and with no criminal record of serious crimes (Transition Village Wallan, 2018). When the eco-village projects developed for the homeless are examined, a restrictive user profile as in the Wallan eco-village has not been found. In Social Bite Eco-village, treatment and rehabilitation programs are implemented for alcohol and drug addicts. In their report, the Gilmans also stated that while talking about eco-village principles, human activities should be harmless and compatible with nature. Therefore, it is thought that this item requested on the campus is contrary to the philosophy of a settlement that embraces the homeless and acts according to eco-village principles.

When examined in the context of economic sustainability, it is aimed to provide a significant part of the daily food needed in the eco-village by the villagers and to generate income by selling the surplus. However, there is no data on whether these sales have started or not. The training and workshops on gardening are planned to be informative for both eco-village residents and local people (Transition Village Wallan, 2019). These training is thought to contribute to sustainability both economically and socially.

The issue of digitalization, which we do not see as a title in other eco-village examples, but which is very important for today's communication age, is discussed as a separate title in the annual report of the Wallan Eco-village. The Transition Village Wallan team has been working with the Digital Services Lab since 2018. Accordingly, a budget was created for services such as website service, e-mail and campaign control, the listing of volunteers and eco-village members, and graphic design work. Transition Village Wallan provides its financial resources through donations, sponsorships, and events such as concerts and music halls.

The 2020 goals of Transition Village Wallan eco-village are stated as completing the village's construction work with volunteers and professionals, formalizing sponsorships, completing management documents for village residents, preparing a strong financial management plan, continuing to develop the volunteer program, and providing job opportunities to village residents (Transition Village Wallan, 2019).

4.3. Social Bite Eco-Village, Granton- Scotland

Despite the 2003 Scottish homelessness law, strong legal safety net and widespread support, homelessness is still a major problem for Scotland's major cities (Littlewood et al., 2017). The number of homeless registered in Scotland in 2019 is 51,000 (Homelessness in Scotland: 2019 to 2020). A cafe called Social Bite, established in 2012 in the capital city of Edinburgh; He donated the profits of his businesses to charities and produced projects aiming to help homeless people by providing jobs (Jacobsen, 2019). One of these projects is the “Pay it Forward” program, where people can buy food or drink for the homeless. Customers who come to the cafe buy more than they need; these surplus foods and drinks are listed on a board. When people in need come to the cafe, they can choose from this list. Another project is the “Sleep in the Park” organization, the world's largest sleeping outside event, which started in 2016 with the participation of 9000 people and is held every year. This organization made an impact all over the world and turned it into a global campaign. In 2019, Sleep in the Park event was held in eleven cities, including New York and London (Social Bite, 2019). Thanks to the income from this event, a living space where homeless people can stay was designed.



Image 3: Social Bite Eco-village (Source:

[https://www.facebook.com/socialbitebusiness/photos/pcb.1790778044290532/1790771004291236/?type=3&theater\)](https://www.facebook.com/socialbitebusiness/photos/pcb.1790778044290532/1790771004291236/?type=3&theater)).

Social Bite Eco-village opened in 2018, to which Edinburgh City Council donated a large piece of land in the Granton area. The aim of the project is to support homeless people economically in the short term, to meet their shelter needs and to provide permanent housing support. The long-term aim is to end homelessness in Scotland by raising awareness in society through actions that provide financial resources. In the eco-village, which is designed for a homeless group of twenty people, which is organized in an innovative, low-cost, controlled and safe manner, people living in the eco-village are given financial and moral support for up to twelve months, they are helped to regain their mental health, employment is provided and efforts are made to integrate them into society. These people, who are also offered the opportunity to work in Social Bite cafes or partner companies, can move to their permanent residences after twelve to fifteen months. After the eco-village residents moved to their permanent residences, it was aimed to admit twenty more homeless people to the campus and to save at least twenty people from homelessness every year with this cycle (Social Bite, 2019).

In the context of ecological sustainability, this eco-village consists of eleven insulated wooden structures and a shared community centre built using

a cold bridging system. These tiny houses, which are energy-efficient, environmentally friendly and sustainable, can be used as mobile or stationary. This eco-village, which includes units for common use such as a vegetable garden, chicken coop, and furniture workshop arranged in front of the houses and in the common area, offers a safe and supportive living environment to its residents (Social Bite, 2019).

When evaluated in terms of social sustainability, it is seen that eco-village residents socialize by cooking and eating together at the community centre on the campus. Yoga, meditation, sports, cycling, food club, choir and DJ meetings are also held at this centre, and the residents of the village are encouraged to participate. Social Bite Eco-village consisting of fourteen men and four women at the end of 2018; It reaches people in an emergency, living in a temporary accommodation area and wishing to live in the community. Thanks to Social Bite and its partner organizations, there is a team of talented and experienced employees and volunteers on campus. By being a positive role model to village residents, support is provided in health and spiritual matters. These supports include job-vocational education, literacy training, financial counselling, personal development, drug and alcohol treatment. With positive and social relationships, it is aimed that homeless people live in a society with the aim of gaining self-confidence and self-esteem again (Social Bite, 2019).

When examined in terms of economic sustainability, it is seen that the Social Bite Eco-village has established thanks to donations and partner organizations. Some programs are organized for homeless people in Scotland to ensure financial sustainability. With a program called Social Bite Academy, a platform is provided for homeless people to lead their own lives. A supportive, genuine and commercial environment is provided for first-time workers where people who lose their jobs and become homeless can re-engage with the business world. This support, which is given according to people's interests, hopes and career plans, covers a period of twenty-one months (Social Bite, 2019).

The first village for homeless people in Scotland, Social Bite Eco-village is leading governments and organizations in the fight against homelessness. It is an important initiative as individual initiatives can also be a good role model. A large number of data could not be reached in the context of the ecological sustainability of the campus. Detailed data on local and recycled material use, renewable energy, water use, which are important elements for the eco-village, could not be accessed, but the sustainability of the project in the social and economic context is very well coordinated. It was emphasized that the reason for the separation and exclusion of homeless people from society is that they do not have a strong purpose in life. It is aimed that these people find the value they deserve by giving them a role in business and social life.

This eco-village design, which offers a home environment by embracing homeless people physically and spiritually, has raised the awareness of Scottish society.

It was concluded that the project that provided the best coordination among the examined projects was the Social Bite Eco-village. In addition to attracting attention in their geography through social media and individual connections, they aim to find support for homeless and marginalized people by bringing the "Sleep Outside" event to a global level. Two months after the last "Sleep Outside" event, in February 2020, the United Nations Social Development commission convened under the topic of "Affordable housing and social protection systems for everyone to solve homelessness" and took decisions on homelessness for the first time in thirty years (Social Bite, 2008). According to these decisions, affordable housing and job opportunities will be provided for homeless people to rebuild their lives, people will be prevented from becoming homeless due to illness and job loss, and safe and accessible neighbourhoods will be built. The UN report invited governments to cooperate with the private sector and organizations to combat homelessness. It encourages all relevant organizations, including the UN and non-governmental organizations, to take the necessary measures and support good practices in order to achieve the 2030 Sustainable Development Goals (UN, 2020).

5. CONCLUSION AND EVALUATION

As can be seen in Table 1, the ecological sustainability approaches of the examined villages are similar in terms of material usage. Ecological sustainability can be achieved by applying solutions such as solar energy systems, compost toilets, water tanks and garden systems used in the Transition Village Wallan project, both in traditional villages and in newly established eco-village projects. Courses and training held in eco-villages are important in terms of social sustainability and interaction of people. The use of local materials, nature-friendly construction technologies, and the use of recycled materials are also positive solutions in the context of ecological and economic sustainability. Food produced in communal agricultural areas allows villagers to interact socially, as well as important in terms of economic sustainability. The common feature of these examples, which were chosen from both eastern and western geographies in order to examine the cultural differences, is that they offer economical solutions with their small living space designs and are easily accessible settlements.

Housing units in Transition Village Wallan, similar to Social Bite Eco-village, were completed before homeless people settled in the village. However, a settlement was designed for the homeless people in Nickelsville, taking into account the demands of these people.

Eco-village settlements should be evaluated according to the geopolitical position of the geography where they are located, and economic, social and ecological solutions should be developed for the residents of the eco-villages, taking into account their proximity and distance to the city. It is seen that a solution to the problem of homelessness can be found with social policies, legal regulations, housing priority models and projects to prevent homelessness, as applied by developed countries. Although the problem of homelessness is perceived as a problem that should be solved by governments, as the eco-village examples examined have shown, projects carried out with individual and institutional cooperation have been successful. Most of the urban transformation policies and mass housing practices implemented in our country

to find a solution to the housing problem are implemented from the type projects prepared without considering the existing lifestyles. Urbanization is only considered as building-specific rebuilding, and a holistic approach to the problem is not shown. Elements such as job creation, planning, maintenance, repair and energy are not considered together, and there are deficiencies in the ecological, social and economic sustainability contexts of the projects.

Eco-villages are not the only way to find solutions to homelessness and housing problem. However, the eco-village approach is part of the larger whole, meaningful and inspiring, and a beneficial initiative for nature, society and economy as it ensures ecological, social and economic sustainability. Situations such as living in an eco-village environment intertwined with nature and forgetting loneliness by socializing in communal areas are very beneficial for homeless people.

	<i>Nickelsville Community</i>	<i>Transition Village Wallan</i>	<i>Social Bite Eco- village</i>
<i>Ecological Sustainability</i>	<i>Material: Design of sustainable and mobile living units with waste and old building materials.</i> <i>Energy: solar charging station and compost toilets too</i> <i>Water: Rainwater collection system</i>	<i>Material: Housing unit design with sustainable materials that do not require repair or painting</i> <i>Energy: Solar energy systems</i> <i>Water: Water tanks</i> <i>Compost toilets</i> <i>Garden systems</i>	<i>Material: Housing unit design with insulated wood materials</i> <i>Energy: Using the cold bridging system that saves money</i>

Social Sustainability	<i>Common kitchen areas</i> <i>communal gardens</i> <i>Involvement of campus residents in eco-village design</i> <i>Involvement of residents in daily work</i>	<i>Common living areas</i> <i>joint business plan</i> <i>Common agricultural areas</i> <i>Making necessary repairs in units such as micro business area</i> <i>Training and workshops</i>	<i>Common living areas</i> <i>Common units such as vegetable garden, chicken coop, furniture workshop</i> <i>Organizing various courses, meetings and trainings</i>
	<i>Solidarity economy: donations and income from events</i>	<i>Solidarity economy: Income from donors, sponsorships, event organizations such as concerts and music halls</i> <i>Income from on-campus product production and export</i>	<i>Solidarity economy: Revenues from various sponsorships and organizations.</i> <i>Off-campus employment: Opportunity to work at Social Bite and partner companies</i>

Table 1: Comparison of eco-villages

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