

Developing an approach for conservation of abandoned rural settlements in Turkey

Koray GÜLER¹, Yegân KÂHYA²

¹koray.guler@msgsu.edu.tr • Department of Architecture, Faculty of Architecture, Mimar Sinan Fine Arts University, Istanbul, Turkey

²kahyaygn@gmail.com.tr • Department of Architecture, Faculty of Architecture, Istanbul Technical University, Istanbul, Turkey

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Abstract

Following the industrial revolution, abandonment and decrease of population in rural areas are common problems that can be faced all around the world, as a result of various factors. As a consequence of implemented policies and radical changes in social life, nowadays large number of rural settlements in Turkey are also in the process of abandonment. However, many of these abandoned rural settlements have invaluable vernacular assets that bear the traces of past rural life and comprise the spirit of these cultural landscape areas. Although rural heritage in depopulated settlements have melted against the natural conditions by time, some settlements succeed to preserve their authenticity and integrity to a certain extent. On the other hand in some villages, which are more crowded and close to the city centers, authenticity and integrity values of traditional architectural heritage has been destroyed by human beings as a result of new construction pressures. This situation accompanies a big dilemma about conservation of traditional architectural heritage. This article aims to discuss reasons of depopulation in countryside, impacts of abandonment, pros and cons of re-evaluation alternatives for rural settlements and to develop proposals not only for preservation of rural architectural heritage in rural regions of Turkey, but also for revitalization and sustainability of livelihoods in there.

Keywords

Abandoned Rural Settlements, Rural Depopulation, Rural Architectural Heritage, Rural Landscape, Cultural Landscape



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1. Introduction

Abandonment of rural settlements and decrease of population in rural areas have become common problems all around the world resulting from various factors coming into play after the Industrial Revolution. However, many of these abandoned rural settlements have invaluable vernacular assets that bear the traces of past rural life and embody the spirit of these cultural landscape areas. The de-population process leads to neglect, gradual deterioration and finally the destruction of the traditional environment built with the experiences gained over the centuries. These rural settlements are shaped by the interaction between man and nature. Accordingly, the loss of continuity in habitation does not only cause the loss of cultural heritage but also has negative effects on natural life, the agricultural landscape and bio-diversity of these settlements. The factors leading to abandonment of rural settlements can be classified into two main groups: human and nature based. The former can be divided into three subgroups as socio-cultural and economical, political, and other reasons (Table 1). Traditional rural settlements whose vulnerabilities increase day by day reflect the everyday life, architec-

tural approach, building technology, construction techniques, craftsmanship and landscape features of their period and require a holistic approach for their protection. This article aims to propose solutions by discussing possible options for Turkey's rural architectural heritage which is being lost due to abandonment and neglect.

2. Reasons for abandonment of rural settlements

The reasons for abandonment of rural settlements are multidimensional and interdependent to each other from time to time. It can be classified basically into two groups as follows: Human-based or nature-based reasons (Table 1).

2.1. Human-based reasons

2.1.1. Socio-cultural and economic reasons

Socio-economic conditions such as unemployment, agricultural inefficiency, lack of public investments and services, inadequate access to education, health and cultural services, lack of infrastructure and transportation facilities, distance to focal points and psychological influences, such as dissatisfaction with the living conditions caused by these circumstances, desire

¹The village of Sarihacilar has been abandoned as a consequence of declining income from agriculture and animal husbandry, which were the traditional livelihood, and the tendency of out-migration from rural to urban seen in the whole country.

²During the First World War and the years of the Turkish War of Independence, the inhabitants of the Dumanli village, who supported the rebellion in order to establish a Greek state in the region, became lonely after the absolute defeat of the Greek army in Western Anatolia (Tutkun, 2009: 121). Even though, the villagers from Trabzon and Gümüşhane were settled to the village instead of the inhabitants who migrated to Greece as a requirement of "The 1923 Population Exchange between Greece and Turkey", the settlement could never regain its vitality and was abandoned in time (Tutkun, 2009: 121).

Table 1. Reasons for abandonment of rural settlements.

A.Human-based reasons			B.Nature-based reasons
A.1.Socio-cultural and economic reasons	A.2.Politic Reasons/ Conflicts	A.3.Other reasons	
Economic decline/ The lack of rural finance / Inadequate rural policies	War and Conflicts Between Countries	Expropriation due to Construction of Public Works or Urban Development Activities	Natural constraints
The overall economic contexts of countries/ Territorial inequalities	Civil war	Location on an Archaeological Site (Multi-layered Settlements)	Climate change/ Global warming
Unemployment/ Agricultural inefficiency/ The fall of agricultural holdings/ Ageing population/ Migration	Terrorism, Security Vulnerabilities		Fires
Lack of public investments and services/ Remoteness from focal points	Mandatory Migrations / Evacuations	Location on a high valued mine reserve	Floods
Difficulty in Access to Education, Health, Culture, etc. Services	Political Discrimination/ Oppression Policies	Exhaustion of mine reserves	Avalanches
Lack of infrastructure, transportation and communication	Racism		Landslides/ Erosion
Dissatisfaction with living conditions/ Search for a better life	Legal obstacles	Pollution and Environmental degradation	Volcanic disasters

for life in big cities, hopes for a better life or the desire to change social status are grouped as socio-cultural and economic reasons for abandonment of rural areas.



Figure 1. A view of a village abandoned for socio cultural and economic reasons: Sarihacılar Village in Antalya, Turkey.¹

The beginning of the abandonment in rural settlements for socio-cultural and economic reasons could be linked to the Industrial Revolution that began in Europe in the 18th century. The technological developments and mechanization of production caused rural populations to accumulate in the cities where factories were located. The number of people working in the agricultural sector, which constitutes the source of livelihood of the rural population, declined and migration from rural areas to urban centres was accelerated because of change in production systems from traditional form towards mechanization (Figure 1).

2.1.2. Political reasons/conflicts

Factors causing loss of population in rural settlements such as wars, conflicts, terrorist incidents, security issues, forced migrations, political discrimination, and racism have been grouped as political reasons. Over the years, many urban and rural settlements have been devastated by wars



Figure 2: A view from an abandoned village because of politic reasons: Dumanlı Village in Gümüşhane, Turkey.²

and conflicts, and in some cases all of the traces and remains have been completely and intentionally destroyed following the war (Figure 2).

2.1.3. Other reasons

New public or private sector investments such as small or large-scale dams built on rivers, investments in wind and solar energy, unplanned growth of settlements, improper development policies, motorway, seaway or airway investments or public works and urban development activities, are examples of other elements that threaten traditional rural environments (Figure 3).



Figure 3. A view from an abandoned village because of human based other reasons: Dereuzunyer Village in İzmir, Turkey.³

Following the legal restrictions introduced by conservation boards in some of the multi-layered rural settlements located on an archaeological site, settled continuously since ancient times and bearing traces of different civilizations above or below ground (Bilgin Altınöz, 2006:1), it is seen that local communities willingly leave their living environment because of the inability to sustain their lives or through the expropriation decisions. Pollution and environmental degradation are another reasons for depopulation in rural settlements. Being located above high-valued mine reserves, or exhaustion of reserves could also cause migration from rural settlements.

2.2. Nature-based reasons

Natural constraints or natural disasters like earthquakes, fires, floods, erosion, landslides, volcanic eruptions and avalanches which cannot be foreseen and occur suddenly are nature-based reasons for abandonment of rural settlements (Figure 4).

Even though climate change and

³The depopulation process in the village of Dereuzunyer was started in the 1970s after the news about a dam construction in the region (Kâhya et al, 2018). Following the government decision of expropriation in 2014, the village has been completely abandoned. In the near future, on completion of the Rahmanlar Dam, all of the settlement and agricultural areas of Dereuzunyer will, unfortunately, be submerged by dam waters (Kâhya et al, 2018).



Figure 4: A view from an abandoned village because of nature based reasons: Roghudi Village in Calabria Region, Italy (*Italian Ways*, 2014).⁴

global warming are caused by human activity in the world, they are considered as nature-based reasons in the classification.

Natural disasters cause loss of population in villages directly and/or indirectly. Rural settlements are not abandoned only because of direct effects like becoming unusable after natural disasters, but also some are evacuated before the disaster due to high risk (location on the fault line, presence of an active volcano in the area, avalanche danger, etc).

3. Impacts of abandonment

It is possible to classify the negative impacts of depopulation in rural settlements into three groups as impacts on culture, nature and human beings. The loss of rural heritage, which has been shaped by the daily lives, traditions or cultural activities of past societies availing themselves of resources and opportunities in the surrounding environment, causes cultural desertification and loss of today's generations' links with past (Bronner, 2006: 26). Depopulation of rural settlements does not have only negative effects on the historic environment and cultural heritage but also on natural life, agricultural landscape and bio-diversity (Macdonald et al, 2000: 56).

The loss of cultivated areas which have great importance in terms of sustenance can be caused by the lack of maintenance and neglect of agricultural landscape elements such as terraces and waterways built to protect agricultural land and to increase production. Flood disasters in 2011 in the Cinque Terre National Park, which is one of Italy's World Heritage sites, is a typical example of this circumstance. While

life in the region continues, in some areas traditional farming practices have been abandoned and terraces where agricultural products had previously been planted have been left to nature. 90% of these cultural landscape areas, which were damaged by excessive rainfall in 2011, are abandoned or uncultivated agricultural terraces (Agnoletti, 2014: 69). Agricultural products in the uncultivated agricultural terraces have been covered over the years by Scots pines and mediterranean shrubs, and cultural landscapes have been damaged as a result of changing vegetation. Compared to big effects in abandoned terraces, excessive rainfall has only negatively affected 2% of the cultivated areas where traditional farming practices have been continued (Agnoletti, 2014: 69).

Considering the difficulties and cost of activities for reducing the negative impacts of abandonment on biodiversity and environment, preventing the migration trend and depopulation is crucial for the future of conservation of nature and cultural heritage. Apart from negative impacts of depopulation, other direct effects like loss of social identity and a sense of belonging in the rural population, which has strong ties with the living environment and traditions, can also be seen. It is evident that some of the people who migrated from rural areas to big cities have experienced difficulty in adapting to city life and have wanted to return. However, they could not return because their old settlements are in bad condition due to lack of maintenance related to depopulation. This situation creates a sense of desperation for these people and indirectly causes social crises.

4. Possibilities for re-evaluation of rural settlements

4.1. Re-wilding or reforestation approach

Approaches for re-evaluation of rural settlements can be classified into four groups as re-wilding/reforestation, museumification, tourism, and re-settlement. The first one of these options, re-wilding/reforestation, is based on the principle of conversion of abandoned rural settlements to wild life or forest area via abolition. This approach,

⁴The depopulation process in the village of Roghudi Vecchio began in the 1940s with the migration of some of the villagers to the coastal areas because of declining agricultural income (*Italian Ways*, 2016). After a series of floods and landslides occurred in the 1970s, the settlements, dwellings, animal shelters, agricultural fields and most importantly the hopes of the villagers for the future were flooded and the settlement was completely abandoned (*Italian Ways*, 2016).

which consciously destroys the rural environment created by the common contributions of nature and man as a result of centuries of cultural accumulation, causes irreparable loss of cultural heritage and a period of human history which can not be reproduced.

According to Navarro and Perreira, the living conditions of the rural population are poor and traditional farming techniques are not environmentally friendly contrary to the common belief, so abandonment of rural areas can be regarded as an opportunity for rehabilitation of nature (Navarro and Perreira, 2012: 900). Furthermore, it has been argued that policies to prevent the loss of population in rural areas and protection of rural heritage are very costly, so re-wilding/reforestation option should be considered by policymakers.

On the other hand, some believe that the protection of nature without the human factor will not be possible and the reforestation of abandoned agricultural areas will cause different disadvantages by making the land use homogeneous contrary to Navarro and Perreira (Agnoletti, 2014). Because of its controversial aspects and severe consequences, the reforestation approach has been excluded from the alternatives of re-evaluation.

4.2. Museumification approaches

The first approaches in the preservation of rural architectural heritage are known to have been implemented in a way in which buildings were dismantled from their authentic location and relocated in an open-air museum that could be visited by the public. The first examples of open air museums, which were located in Europe, were built around a green area or an existing village near the big city centres. In these museums, different themes and periods ranging from the medieval farm buildings to the bourgeois towns, the workers' neighborhoods representing the early industrial cultures and ateliers have been exhibited (Zippelius, 1974). The presentation and interpretation of the rural architecture through open air museums had become an effective tool for raising awareness, keeping traditions alive, and introducing past rural

life to local communities (Figure 5).

After the adoption of the Geneva Declaration by the International Council of Museums (ICOM) in 1956, the European Open Air Museum Association (AEOM) was established in 1972 to determine international criteria for open air museums. AEOM suggested the protection and restoration of rural buildings in their original environment as far as possible in order to raise the scientific quality of the open air museum approach (Eres, 2016: 162). The notion of preserving cultural assets in their authentic environment began to be accepted with the introduction of modern conservation principles in 1960s. The International Council on Monuments and Sites (ICOMOS) suggested encouraging the open air museums to protect rural buildings in-situ as well in the International Colloquium on Folk Architecture held in 1971. Although the educational roles of open air museums like introducing visitors to the past rural life are acknowledged, it is thought that the approach of bringing different buildings together in a new environment by dismantling them from different contexts is in contradiction with contemporary conservation principles. So it can be said that such museumification approaches cannot be considered as a desirable or sustainable option for the conservation of rural settlements anymore.



Figure 5: A view from in-situ conserved museum village: Lehde Village in Spreewald Region, Germany.⁵

4.3. Tourism approaches

One of the possible scenarios for the protection of cultural assets in abandoned rural settlements is the re-functioning of these environments for touristic activities, either partially or fully. Tourism, which has created new economic resources for countries and affected their policies, is recognized both

⁵The village of Lehde, which was declared as a Biosphere Reserve Area by UNESCO in 1991, has been partially transformed into a museum-village. The village is located in the midst of Spree Forest which consists of many small islands that are surrounded by the streams of the Spree and are connected only through small pedestrian bridges. The open-air museum, located in the village where only 150 people live today, gives broad information about the rural life of the XIXth century.

as a positive and negative force for the conservation of natural and cultural heritage (ICOMOS, 1999).

While it is known that the travel action which is the basis of tourism is as old as the history of humanity, the first mass visits for recreational purposes to remote and hard-to-reach rural areas took place after the developments of railways in the second quarter of the 19th century (Roberts and Hall, 2001: 3). After the Industrial Revolution in European countries, technological developments have facilitated human life and extended the average human lifespan. With the expanding scope of human rights, ordinary citizens gained freedom of movement and began to travel more in their more expansive leisure time over time.

The preference for leisure tourism based on the sea, sand and sun trio up to the end of the 20th century has begun to change due to reasons like improved educational level and intellectual capacity, globalization, development of new marketing techniques, change in holiday perception, problems of urbanization and improved social mobility. Nowadays, rural areas endowed with natural and cultural amenities attract more people due to the growing demand for alternative holidays (Figure 6).

The European Commission (EC)



Figure 6: A view from a World Heritage Site where rural tourism developed: Bacharach in Upper Middle Rhine Valley, Germany.⁶

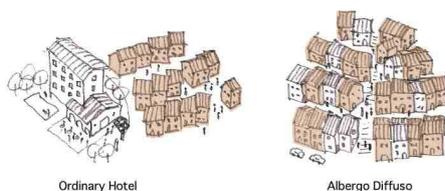


Figure 7: Albergo Diffuso Approach (Dell'Ara, 2015).

defined rural tourism spaces in which small-scale businesses provide services such as accommodation, food and beverages to visitors who aim to have a pleasant time integrating agricultural or local values with reference to agricultural tourism (EC, 1999: 151).

As in industrialized countries all over the world, rural areas of Italy started losing population due to migration in the 20th century. The population in the rural areas of Tuscany, which is the most prominent region of Italian rural tourism today, declined by 50% from 1951 to 1971 as a result of rural migration (Randelli et al, 2014: 278). The depopulation trend in the rural areas of Tuscany has been reduced after the success of the policies implemented by the Italian government, and thus the region has maintained its vitality today (Randelli et al, 2014: 278-280). This success of the region in rural tourism can be related with the wealth of local resources, a picturesque landscape, high quality agricultural products and the location of many historic town centers on the periphery of rural areas (Randelli et al, 2014: 278).

“Albergo Diffuso (AD)” (Scattered Hotel) is one of the models used for revitalizing life in rural regions of Italy by developing tourism (Figure 7). In the AD approach, which was first implemented in Friuli-Venezia Giulia village, located in the northeast of Italy and abandoned in the 1980s due to the earthquakes, the principle of restoring and using abandoned buildings for touristic purposes has been adopted (De Montis et al, 2015: 12). In line with AD approach; the restoration practices and contemporary designs built with traditional construction techniques will contribute not only to the conservation of cultural heritage neglected after abandonment, but also prevention of permanent loss of living population by strengthening the site with modern equipment (De Montis et al, 2015: 12). According to Dall’Ara (2010), in the AD approach horizontal and scattered use of the buildings in historic rural settlements has been adopted instead of vertical use preferred in traditional hotels. In AD, accommodation units, are scattered around 200 meters away from reception and other common ar-

⁶The village of Bacharach is located in the Middle Rhine Valley between Bingen, Rudesheim, and Koblenz. The region as a transport artery has been comprised of sixty small towns, the extensive terraced vineyards and the ruins of castles that once defended the trade. Various rural tourism activities such as grape harvest festivals contribute to the rural economy of the region and also the preservation of the physical and natural environment.

eas of the complex.

China was and still is the biggest agrarian society by population in the world (Su, 2011: 1439). Although it is a relatively late-starter compared to the Western countries for rural socio-economic regeneration through the promotion of rural tourism, after the efforts of the Chinese National Tourism Agency, which offers both financial incentives and government policy support, farm diversification into tourism has shown great improvement over the country in recent years (Su, 2011: 1439). According to Hu (2008: 89-90), the number of rural communities has greatly increased in pursuit of different forms of rural tourism, particularly “Nong jia le” (Happy Farmer Home) tourism, a dominant form of rural tourism in China. “Nong jia le” tourism, a distinctively Chinese version of rural tourism which is promoted as “having fresh food, tasting green vegetables, experiencing traditional courtyard living, doing hard farming work, seeing entertaining farmers’ plays, and purchasing indigenous products from farm families”, has been developed not only as a style of holiday, but also as a new form of privately-owned small enterprise among millions of Chinese farmers (Su, 2011: 1439). According to Su (2011: 1439), “Nong jia le” tourism appears to be as a new concept of cultural rural tourism integrated through the cultural and rural tourism, invested and operated by individual farmers and farmer’s families, providing rustic meals and accommodation (farmhouse) services and amusements for tourists and vacationers who during the holidays leave their homes in the

⁸The cultural assets in the village of Počitelj, which is a typical traditional Ottoman settlement with its castle, mosques, Turkish Baths, public kitchens, madrasahs, and half-timbered dwellings, suffered great damage during the Bosnian War (1992-5). After the end of the war, rehabilitation works were carried out with the support of national and international organizations and the life in the village was restarted again.



Figure 8: A view from a rural settlement that life restart after war: Počitelj village in Čapljina Region, Bosnia Herzegovina.⁸

city to go and enjoy “Nong jia le”.

4.4. Resettlement approach

The third re-evaluation scenario for abandoned rural settlements is the usage of this built environment with its authentic function. Revitalization of livelihood in depopulated settlements can be achieved in two ways, the first of which is the return of the former inhabitants, the second being resettlement with new residents.

4.4.1. Resettlement of former inhabitants

The first option for the revitalization of life in abandoned rural settlements is the resettlement of the built environment with its former inhabitants. The prerequisite for this option is availability and willingness of the people who left their villages for various reasons to return to their homes. Another requirement in the return of former inhabitants is not to face any legal restrictions.

The encouragement of people subjected to forced migration due to man-made disasters such as war, terrorism, or political pressures, to return to their villages after changed political conditions can be given as an example of resettlement of former inhabitants (Figure 8).

4.4.2. Settlement of new inhabitants

The second option for the revitalization of life in abandoned rural settlements is the settlement of new inhabitants who want to live in the countryside. Increasing population in big cities causes expansion of cities towards rural areas and transforms these areas into an integral part of the city. Beside the expansion of the cities towards to the countryside, recent developments in mobile communication and transportation facilities make the remote rural areas more residential and livable.

People have been enabled to do their jobs via telephone and internet thanks to the progress in technology. Accordingly, a new trend to settle in the rural areas to escape the city, air pollution, noise and overcrowding was born, particularly among the upper income group. In some cases, these new dwell-

ers, referred to as the neo-rural population, bought abandoned buildings in rural settlements and transformed them according to their own desires. The refunctioning of cultural assets that have been neglected as a result of abandonment can be considered as a kind of rural gentrification by re-functioning by people belonging to the middle and high income groups and a transformation of the past rural fabric into a closed new living environment (Dinçer and Dinçer, 2005: 2). In some cases, this wave of migration from cities to rural areas is in the form of secondary usage like weekend or holiday housing (Figure 9), while in others it leads to permanent settling.



Figure 9: An instance from a rural settlement in which new inhabitants start to live, Doğanbey Village in Söke, Aydın, Turkey.⁹

Migration to rural areas by some ecologically conscious people who have chosen an alternative way of life based on the principle of ecological life such as natural architecture, organic farming and animal husbandry is another example of resettlement in rural areas. These settlements, which are called eco-villages, can be established in an abandoned village by restoring buildings, or in a village where life goes on as well as on empty plots close to an existing village by constructing new buildings.

5. A model proposal for conservation of abandoned rural settlements

5.1. Discussion of international approaches

Different approaches such as “analytic hierarchical process”, “multiple criteria evaluation”, “methodological bases for documenting and reusing vernacular farm architecture”, “village renewal”, “developing interpretation

plans to promote traditional rural buildings”, “natural and cultural heritage conservation and multifunctional valorization in abandoned villages” have been suggested for revitalization of life and conservation of cultural heritage in rural settlements.

Russo et al. (2013: 323-342) exemplified the analytic hierarchical process proposed for designating alternatives for the reuse of rural buildings in an abandoned village on the island of Sicily (Italy). The aim of the analytic hierarchical process, which is used for comparing, evaluating and classifying the reuse options of abandoned rural settlements, is to determine the best scenario among all alternatives for the target case (Russo et al, 2013: 25).

Zavadskas and Antuceviciene (2007: 436-451), suggested the use of the multiple criteria evaluation method for the restoration of abandoned rural buildings. The method is composed of eight phases. The first phase of the method is “preliminary research for derelict rural buildings regeneration”, the second is “formation of variants of derelict rural buildings regeneration”, and the third is “identification of the evaluation criteria”. In later phases, the most appropriate reuse alternative for the abandoned rural buildings has been determined with the help of the “fuzzy decision matrix” (Zavadskas and Antuceviciene, 2007: 442).

The first phase of Fuentes’ six-phased proposal (2010: 119-129) for “methodological bases for documenting and reusing vernacular farm architecture” aims to collect geophysical, historic, socioeconomic and legal data about the study area and to analyse the traditional materials and building techniques under the title of draft studies. The second phase is inventory, the third is typological analysis and selection of significant samples, the fourth is cataloguing, the fifth is assessment of reuse potential and the last phase is development of a local reuse scheme. In the assessment of the reuse potential, which is defined as the fifth step of the method, variable factors such as location, accessibility, landscape value, settlement character, close environments features, property structure, legal status, architectural, historical or other

⁹After the landslide in 1985, the village of Doğanbey was declared as a disaster area by the government and subsequently evacuated. After the change in the status of the disaster area at the end of the 1990s, a group of intellectuals living in Istanbul was bought and repaired the damaged historical buildings in the village and thus the life in the village started again.

authentic values, number of storeys, lighting conditions, privatized areas, structural conditions and state of authenticity are taken into account for re-evaluation of abandoned rural settlements (Fuentes, 2010: 127).

For rural regions of eastern Germany, Wilson (1999) proposed the concept of village renewal (*Dorferneuerung*) which has been successfully implemented in West Germany since 1950. This concept aimed to prevent the loss of population living in rural regions of eastern Germany and to achieve rural development following the fall of socialist rule after the unification of East and West Germany (Wilson, 1999: 247-255). The *Dorferneuerung* approach, which is related with agricultural policy, includes not only the modernization of villages in terms of 20th century necessities, the addition of the deficient modern equipment to the traditional fabric, and the improvement of the infrastructure possibilities but also the preservation of the rural heritage (Wilson, 1999: 248).

Porto et al. (2012: 421-436) proposed a four-phased method to local governments for developing interpretation plans to promote traditional rural buildings as built heritage attractions. The first phase of the method is focused on the definition of historical, cultural, environmental and social values and evaluation of tourism potential. The second phase consists of determining visitor profiles by surveys and the third phase includes selection of rural buildings for interpretation and collection of data about them (Porto et al, 2012: 424). The interpretation strategy, which is expected to be finalized in the last phase of the proposal, consists of preparation of sub-targets and action plans for their implementation, identification of working groups and stake-holders and production of necessary tools for presentation (Porto et al, 2012: 424).

According to Filipe and Mascarenhas' (2011: 21-45) guidelines to natural and cultural heritage conservation and multifunctional valorization, which is exemplified in Broas village in the north of Portugal, abandoned rural settlements can be reused with touristic, museological and similar ap-

proaches. In this direction, Filipe and Mascarenhas (2011: 38), suggest that the Broas village can serve as a cultural park that is supported by versatile activities. The cultural park concept is mentioned as a new kind of cultural heritage management and rural museum strategy, which provides a contemporary education and research opportunity and creates new economic resources with development of cultural tourism and several touristic activities in rural areas (Filipe and Mascarenhas, 2011: 21-45).

It is seen that different proposals have been developed for the revitalization of life in rural settlements and for relating re-evaluation and conservation of rural heritage with rural development policies, as well as refunctioning of building types associated with agricultural production.

Fuentes et al. (2010: 738-748) discuss the re-functioning of abandoned underground wine cellars in Spain. Major transformations in the agricultural sector and industrialization of economic activities caused decline in rural population in Spain as well as other developed countries (Fuentes et al, 2010: 738-748). Fuentes et al. also stated that wine cellars can alternatively be reused for aging specially produced wines, local restaurants and wine tasting areas, and these new functions not only contribute to the regional economy and conservation of cultural heritage, but also reverse the migration trend from rural to urban (Fuentes et al, 2010: 742-747).

Van Der Vaart (2005: 143-152) questioned re-use alternatives of abandoned farms within the Netherlands-Friesland borders. Re-use alternatives in Friesland have been concentrated on residential functions and the economic vitality created by new inhabitants restoring and living in rural buildings has contributed to the conservation efforts (Van Der Vaart, 2005: 146).

Figlia (2012:2), put forth in his research conducted at Aspromonte and Belize valleys in Italy, where abandonment problems have been experienced intensively, that rural buildings should be considered as a regional source with their local values. According to Figlia

(2012: 14-16), life can restart with new uses such as tourism or ecological life, which are determined as a part of rural development policies.

Although there is no direct emphasis for conservation of abandoned rural settlements in Burra Charter, a three-stage process of “understand significance”, “develop policy” and “manage in accordance with policy” has been proposed for planning and management of all areas which have cultural significance, whether rural or urban (ICOMOS Australia, 2013).

US National Park Service’s Cultural Landscape Program focuses on preserving a landscape’s physical attributes, biotic systems, and use, when that use contributes to historical significance (Page et al, 1998: 8). The National Park Service program involves three primary activities, namely, research, planning, and stewardship (Page et al, 1998: 8). The landscape characteristics and associated features, values, and associations that make a landscape historically significant have been defined in the research (Page et al, 1998: 8; McClland et al, 1999). While planning outlines for the issues and alternatives for long-term preservation, stewardship involves such activities as condition assessment, maintenance, and training (Page et al, 1998: 8). According to Birnbaum (1994: 3), the preservation planning generally involves the following steps: historical research; inventory and documentation of existing conditions; site analysis and evaluation of integrity and significance; development of a cultural landscape preservation approach and treatment plan; development of a cultural landscape management plan and management philosophy; the development of a strategy for ongoing maintenance; and preparation of a record of treatment and future research recommendations.

The management plan, which was declared as a prerequisite for heritage sites to be nominated for World Heritage by UNESCO World Heritage Center (WHC), can be defined as a constantly revisable guideline that describes which methods, sources, experts and programmes should be followed to protect cultural and natural heritage sites. Feilden and Jokilehto

(1998: 25) described the process for preparing a management plan as: initial survey of the site, site description and boundary definition, identification of resources, formulation of objectives and consideration of constraints, definition of projects, work programme and annual plans, execution of works, recording, reporting and review of results, storage of information and data, revision of site description and re-evaluation, formulation of revised objectives and reconsideration of constraints, definitions of further projects and revised work programme and the next annual plan. Similar to other definitions, IUCN have defined the process as: getting started and planning the work, understanding the property’s characteristics and its natural values, deciding who should be involved and when, agreeing a vision for the property and setting management objectives, examining management policies, agreeing on management policies, agreeing on management actions, consulting on and approving the plan, monitoring the plan and reviewing the plan (IUCN, 2008: 8).

As a result of implemented policies and radical changes in social life, nowadays a large number of rural settlements in Turkey are in the process of abandonment or rapid transformation (Güler, 2016). Although rural heritage in depopulated settlements has been eroded by natural forces over time, a few settlements have managed to preserve their authenticity and integrity to a certain extent. On the other hand, in some villages, which are more crowded and closer to the city centers, in some villages, which are more crowded and closer to the city centers, unfortunately, the authenticity and integrity values of the traditional architectural heritage have been destroyed. This fact indicates a big dilemma about the conservation of rural architectural heritage in Turkey.

5.2. Proposed conservation approach

The international approaches for conserving the rural patrimony have been evaluated in terms of applicability in Turkey and possible challenges during implementation process of the models that have been discussed (Ta-

Table 2. Comparison of international approaches and assessment of applicability of those approaches in Turkey.

Name / Proposed Method	Aim / Targets	Possible Result/s / Outcomes	Assessing the applicability of the proposed methods in Turkey / or possible challenges
Using the Analytic Hierarchical Process to define choices for Re-using rural buildings (Russo et al, 2013)	*Identify the best hypotheses for reuse of the village	*Development of a multi-functional centre *Active conservation of the ruins *Virtual museum	*Difficulty of mathematical statistical calculations required for the application of method (-) *The inexperience of local governments in rural conservation practices (-) *Expression of suitability of each re-use alternative by ratios / considering all options (+) *Lack of national rural heritage inventory in Turkey (-) *Deficiencies in democratic participation for decision-taking mechanisms in Turkey (-)
Multiple criteria evaluation of rural building's regeneration alternatives (Zavadskas and Antucheviciene, 2007)	*To develop a derelict rural building's regeneration variants and the evaluation criteria	*Reconstruction of rural buildings and adapting them to production (or commercial) activities *Improving and using them for farming *Dismantling and recycling the demolition waste materials	*Considering the cultural assets as waste materials or dismantling them for recycling according to one of the possible scenarios is unacceptable (-) *Physical deteriorations of cultural assets in Turkey are generally at bad level (vacant or ruined) (-) *Difficulty of mathematical statistical calculations required for the application of method (-) *The inexperience of local governments in rural conservation practices (-)
Methodological bases for documenting and reusing vernacular farm architecture (Fuentes, 2010)	*Assessment of the reuse potential by multicriteria decision making techniques *Drawing up a list of priorities	*Development of a traditional buildings reuse scheme *Assessment of its consequences on the area	*Big differences in farm buildings and traditional agricultural structure between other countries and Turkey (-) *Uncertainty in the selection of representative samples for conservation (-) *Physical deteriorations of cultural assets in Turkey are generally at bad level (vacant or ruined) (-)
Village Renewal (Dorferneuerung) and Rural Development (Wilson, 1999)	*To enable former agricultural villages to adapt to the demands and needs of the late 20th century while preserving village heritage	*To achieve improvements in rural living standards, through improvements in living conditions, employment, recreation opportunities and the environment *Creation of jobs outside agriculture, improvement of infrastructure, restoration of run-down historic buildings	*Big differences in development levels of rural and urban regions, lack of economic resources in rural regions of Turkey (-) *Lack of conservation awareness among Turkish society (-) *Lack of continuity in implemented policies for rural areas in Turkey (-) *Continuation of rural abandonment in Turkey (-) *Big differences in development levels of rural and urban regions, lack of economic resources in rural regions of Turkey (-)
Developing Interpretation Plans to Promote Traditional Rural Buildings as Built Heritage Attractions (Porto et al, 2012)	*To develop heritage interpretation plans aimed at promoting traditional rural buildings as built heritage attractions	*After being promoted as built heritage attractions, traditional rural buildings could become tourism products, and they could provide the basis for competition between rural tourism destinations and other visitor attractions	*Lack of national rural heritage inventory in Turkey (-) *Deficiencies in democratic participation for decision-taking mechanisms in Turkey (-) *Lack of transportation, tourism and museological infrastructure in rural areas of Turkey (-)
Abandoned Villages and Related Geographic and Landscape Context: Guidelines to Natural and Cultural Heritage Conservation and Multifunctional Valorization (Filipe and Mascarenhas, 2011)	*The re-invention of the rural in an ecological sustainable context	*The revival of old villages, multifunctional systems and micro-geo-economy of rural spaces *The cultural park concept: a model of multifunctional activities and tools development	*Deficiencies in democratic participation for decision-taking mechanisms in Turkey (-) *Lack of continuity in implemented policies for rural areas in Turkey (-) *Continuation of rural abandonment in Turkey (-) *Big differences in development levels of rural and urban regions, lack of economic resources in rural regions of Turkey (-) *Lack of transportation, tourism and museological infrastructure in rural areas of Turkey (-) *The inexperience of local governments in rural conservation practices (-)
New uses for old traditional farm buildings (Fuentes et al, 2010)	*Saving in energy and materials *Promotion of cultural tourism *Preservation of a valuable documental source about countryside culture *Recovery of native construction techniques	*A carefully reuse of vacant rural buildings to suit economic or residential purposes	*Failure to prevent illegal constructions, insufficiency of control mechanisms in Turkey (+) *Big differences in farm buildings and traditional agricultural structure between other countries and Turkey (-) *Physical deteriorations of cultural assets in Turkey are generally at bad level (vacant or ruined) (-)
Towards a New Rural Landscape: Consequences of non-agricultural re-use of redundant farm buildings (Van Der Vaart, 2005)	*Reuse of traditional farm buildings to circumvent the risk of losses of important features through redundancy *To form the link between the new agriculture and architecture and those of the past	*Contribution of new inhabitants and new economic activities to the vitality of rural areas *Contribution to the survival of rural buildings by change of use of the redundant farm buildings *The re-use of farm fossilised in shape but not in function	*Risk about loss of authenticity and integrity values of historical farm buildings after reuse projects (-) *Failure to prevent illegal constructions / insufficiency of control mechanisms in Turkey (-) *Big differences in farm buildings and traditional agricultural structure between other countries and Turkey (-) *Lack of transportation, tourism and museological infrastructure in rural areas of Turkey (-) *Lack of continuity in implemented policies for rural areas in Turkey (-) *Continuation of rural abandonment in Turkey (-) *Big differences in development levels of rural and urban regions, lack of economic resources in rural regions of Turkey (-)
The Abandoned Villages as a Regional Resource (Figlia, 2012)	*In order to understand the meaning and role to be given to each abandoned village, *To identify possible models of revitalization	*Recovery for tourism: Route tourism, park-museum, vacation homes and apartments, country-hotels, popular hotels *New anthropization: The revitalization of the abandoned town involves a process of new human settlement by individuals or small groups of people	*Lack of transportation, tourism and museological infrastructure in rural areas of Turkey (-) *Lack of continuity in implemented policies for rural areas in Turkey (-) *Continuation of rural abandonment in Turkey (-) *Big differences in development levels of rural and urban regions, lack of economic resources in rural regions of Turkey (-)

ble 2). Aspects of these approaches pertinent to Turkey's own conditions have been taken into account and incorporated into the creation process of a conservation model. In the creation process of conservation model, criteria such as suitability to the rural heritage conservation principles, fitting the conditions in Turkey, being easy to apply and understandable, not recommending only one option (proposing different alternatives) for re-evaluation have been taken into consideration. As a result of all the research, analysis and evaluations contained in this paper, the proposed conservation model is based on five main parts, namely, (i) "Definition of cultural and natural values and importance of the settlement", (ii) "Determination of the re-evaluation alternatives", (iii) "Determination of conservation policies", (iv) "Implementation"

and (v) "Monitoring, evaluation and update" (Figure 10). In this regard, determining cultural and natural values of abandoned rural settlements constitutes the first step of the conservation approach in response to the question of why these settlements should be preserved.

5.2.1. Definition of cultural, natural values and importance of settlement (1st Stage)

Documentation of biodiversity and tangible-intangible values of rural environments, which should be a part of the national cultural and natural heritage inventory system, is a precondition to be able to define the cultural significance. It is also a necessity to define the boundaries of protected areas and buffer zone. When determining the borders of protected areas, elements such

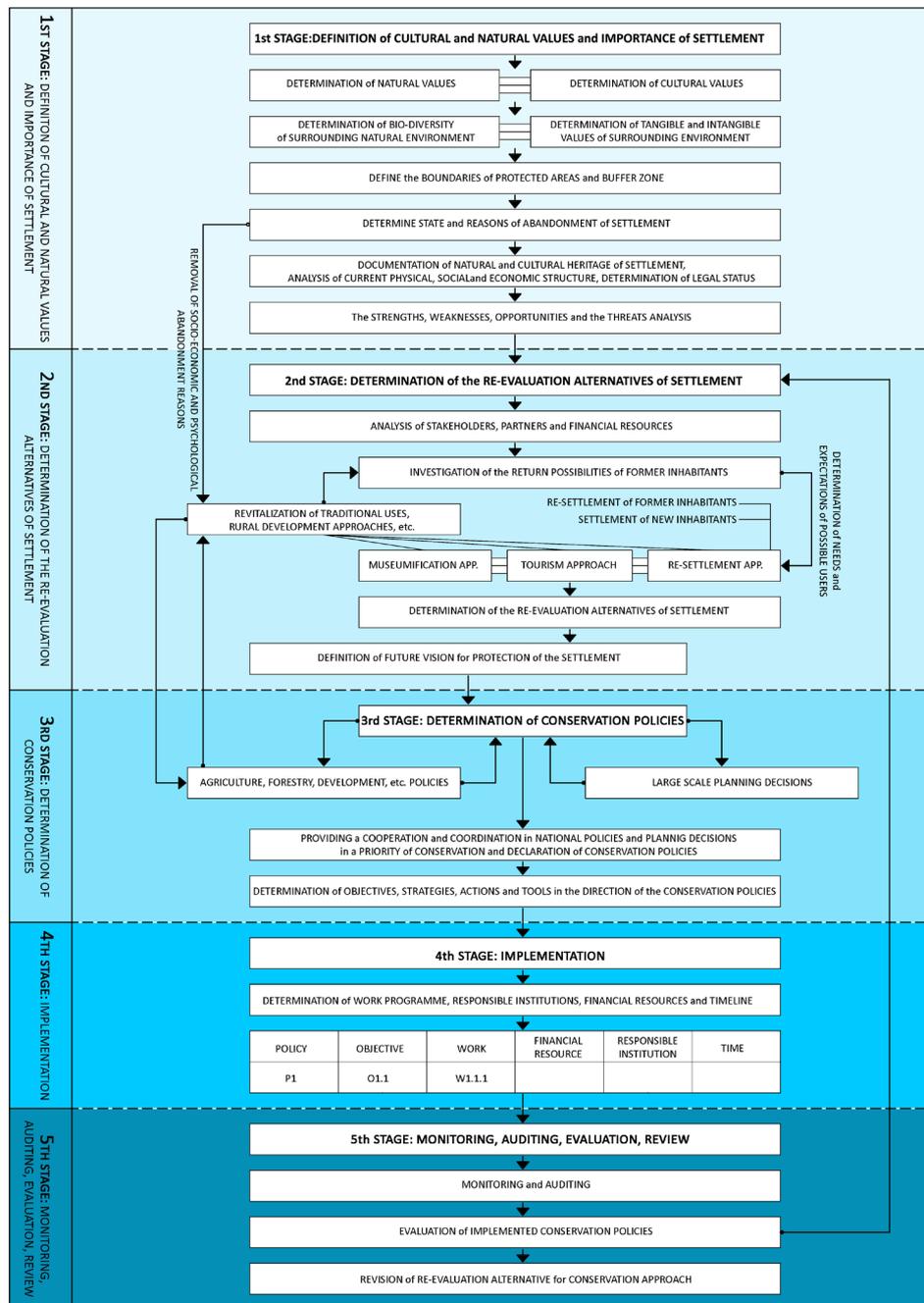


Figure 10. Stages of proposed conservation approach for abandoned rural settlements.

as traditional settlements, agriculture and forest areas, water resources, and transportation links, should be taken into consideration. Boundaries of protected areas should consist of core protection area, shaped by traditional buildings, roads, squares, agricultural areas, etc. and buffer zone, which is located outside of the area and affects it physically, visually and socially. It is crucial to determine the state of built heritage and reasons for abandonment, which can differ according to various factors outlined in Table 1.

Determining the reasons for abandonment of rural settlements is one of the most fundamental issues that will guide decisions to be taken in next step “Determination of the re-evaluation alternatives”. Reversing abandonment conditions is a necessity to revitalize life and to conserve the rural heritage with decisions made in accordance with the country’s rural development policies and other planning tools. Re-evaluation possibilities can differ in some cases where there is no chance to remove the factors causing abandon-

ment. Simultaneously to identify the underlying causes of demographic loss, not only documentation of the cultural and natural heritage of the settlements, but also legal status of the protected area, land use and planning decisions, international and national conservation legislations and analysis of physical, social and economic structures need to be done. If it is determined that there is a deficiency in current legal status during analysis, it is crucial to attain legal protection for the site with the definition of boundaries of protection zones in line with the aforementioned criteria. At this point, making reforms in national conservation legislations of the countries in line with the contemporary conservation principles to meet the needs of rural settlements should be seen as one of the prerequisites for success. In addition to this analysis, information such as availability of natural resources, structural conditions of cultural heritage, state of ownership, usage of building stock, sufficiency of infrastructure facilities in terms of current and possible future uses, transportation facilities, land use and planning decisions and socio-economic indicators are necessary for deciding the re-evaluation alternatives of the site. As a result of the documentation process which requires interdisciplinary studies, all related data should be compiled and an information database about the protected region should be established. After analysis and synthesis of all the obtained data, the strengths, weaknesses, opportunities and the threats (SWOT analysis) of the protected area should be determined.

5.2.2. Determination of the re-evaluation alternatives of settlement (2nd Stage)

The second part of the conservation approach is "Determination of the re-evaluation alternatives of the rural settlement". The first step of the determination of re-evaluation alternatives stage is identification of national and international partners, stakeholders and financial resources in relation to the protected site.

Most of the stakeholders and partners involved in the protection of rural settlements can be listed as follows; all

units bound to local or central government which are responsible due to legislation, national and international organizations related to conservation of natural or cultural heritage, universities, representatives of professional chambers, financial sponsors, non-governmental organizations, national and local media organizations, local communities and users, who are local and foreign tourists, tourism companies working in the region and guides. The effective conservation and reassessment of the cultural and natural heritage and re-establishment of a sustainable economic structure in abandoned rural settlements are only possible by developing social awareness with the contributions of all stakeholders and partners. Participation of locally related people as well as professionals, representatives of professional chambers, non-governmental organizations, central or local governing bodies which influence and shape decisions, is crucial in determining and achieving the future goals for conservation.

Considering that the economic power of the property owners in the abandoned rural areas is very limited, the development and conservation of rural areas, which have rich cultural and natural heritage, depend on the economic resources provided. Mitchell et al. (2009: 73-78) have classified the strategies for creating financial resources for conservation of cultural landscape areas in two categories; external resources, which are directly provided by public or private sectors, and internal resources, obtained from uncovering the hidden traditional potential of these areas.

According to this classification, possible sources for conservation of cultural and natural heritage in rural settlements can be classified as; direct public resources allocated to agriculture, forestry, rural development and other village affairs and resources provided from public-private partnerships, chambers of commerce and industry, private individuals or companies, and national or international organizations. In addition to above-mentioned external resources, possible contributions or sponsorships of wealthy people living in big cities or

other places but having strong ties with the settlement (hometown) or citizens' associations can also be considered as other sources.

Limited resources provided for rural areas should be used not only in the rehabilitation of the physical environment but also in building a sustainable economic structure in these settlements. Along with direct sources of public and private sectors (external sources) for establishing a sustainable economic structure in cultural landscape areas, it is crucial to enable internal resources such as "directing the site operation income to site management" (Mitchell et al, 2009: 73-78).

Incomes derived from sales of high quality touristic objects and agricultural products promoted by using the advantage of heritage site image with area-specific labels are examples of internal sources.

Before determining the alternatives for re-evaluation of abandoned rural settlements, it is necessary to investigate the possibility of local people's return to their villages. In the re-evaluation stage, it is crucial to consider former residents who want to return and not demolish the ties of these settlements with the past. Strong rural economies, which will be created by support in agriculture and forestry that comprise the traditional livelihoods of rural environments and by other rural development investments, will encourage the return of former inhabitants by overcoming socio-economic and psychological factors that cause abandonment. The return of former inhabitants is not always possible due to natural, political and other reasons. On the other hand, it should be considered that some of the former residents may not want to return, despite the incentives provided for returning and revitalization of rural life. In this respect; determination of needs and expectations of former residents who are willing to return, of people who want to live in rural areas or who want to use these areas for vacation, education, cultural, sportive or different concerns or want to invest in these areas is another step when considering the re-use alternatives. The needs and expectations of potential users should be compatible with the

physical condition of the settlements. When adapting rural environments built in past centuries to contemporary living standards, it is crucial to respect authenticity and integrity values of settlements. Major interventions and reconstructions should be avoided in re-use projects, unless they are compulsory. The state of integrity of the architectural heritage in all conservation work to be done is another factor to note. The structural condition of the architectural heritage is another factor that affects the decision of re-use alternatives. In all rehabilitation or conservation activities, preservation of traces of abandonment, which is a historic turning point for settlements and development of informative interpretation and presentation techniques about this historic era should be considered.

Museumification, tourism and re-settlement approaches which are determined as re-evaluation alternatives of abandoned rural settlements, can be implemented on their own or all together depending on various factors such as the reasons for abandonment, socio-economic structures, physical conditions, strengths, weaknesses, potentials, risks, financial resources and legal status.

In the determination of re-evaluation alternatives, physical and social conditions of settlement along with necessities and expectations of possible users are key shaping elements. The next step in this phase is to identify a common future vision in the direction of new use or uses, which should be determined through participation of all stakeholders and partners in order to protect the settlement and establish a sustainable economic structure.

5.2.3. Determination of conservation policies (3rd Stage)

After defining the cultural and natural values and significance of the settlement and determining the re-evaluation alternatives, the third main part proposed in the conservation model is to determine the conservation policies (Figure 10). Conservation policies should put on the agenda matters like financial resources, tools, conservation methods and priorities for sustaining the cultural and natural values and

ecological balance of the settlements integrated with other national policies. Conservation policies of rural heritage can only be achieved if they are compatible with the national policies such as rural development, environment, forestry, agriculture, water, urbanization, tourism, education, energy, economy and administration. From this point of view, countries should revise their national agriculture, forestry, development and all related policies and large-scale planning decisions with the priority of conservation and a partnership among these policies must be ensured. After the reforms in national policies, it is necessary to determine objectives, strategies, actions and tools in line with the announced conservation policies.

The forms of intervention required by the reuse scenario, which is determined by the conditions of the rural settlements, should be shaped according to the values of the architectural heritage and conservation principles (ICOMOS Turkey, 2013: 24). In conservation practices, conservation of authentic features and minimum intervention are main aims but if it is seen as a requirement within the scope of maintenance and restoration; one or more approaches such as rehabilitation, adaptive re-use, moving, anastylosis, re-construction and forms of intervention such as cleaning, consolidation, reintegration, structural reinforcement can be implemented with a holistic view and understanding (ICOMOS Turkey, 2013: 24-27).

5.2.4. Implementation (4th Stage)

The tools, timelines, resources and methods of projects should be defined as work packages in the implementation process. Orbaşlı (2010: 56), recommended the use of "Policy-Time-Responsible Institution-Financial Resources" headings for preparation of work programmes of the projects aimed to be implemented in short, medium and long terms. Objectives to be achieved through the implementation of the proposed policies, works to be carried out to achieve these objectives, people/organizations who will undertake these works, financial issues and time intervals in this work programme,

which can be defined as a type of distribution of roles, should be determined.

5.2.5. Monitoring, auditing, evaluation, and review (5th Stage)

Conservation of rural heritage and sustainability of rural life can only be achieved by monitoring the proposed implementations, the cooperation between all the stakeholders and sharing the knowledge and experience. In case of changing conditions, the monitoring process will provide a chance to fix the problems in advance. The monitoring process requires observing the projects' compliances to work packages and the success in conservation of rural heritage. In order to review the implementations objectively, it is recommended that an independent expert team, in which the representatives of all stakeholders and partners can contribute and can share their views should be established to evaluate the projects periodically. In case of failure detected by the expert team, re-evaluation alternatives of the settlement determined with the participation of all the stakeholders and partners and related common future vision should be discussed again and the process should be reconsidered. This will ensure effective conservation of cultural and natural heritage, which are non-renewable resources.

6. Conclusion

The conservation of rural settlements depends on preventing the loss of population and revitalization of life which can only be possible if factors that cause abandonment are eliminated. If it is possible to reach former inhabitants of rural settlements, they should be respected and priority should be given to encouraging their return by enhancing their living conditions and rehabilitating the physical environment. Rather than re-functioning of all or most of the rural settlements for tourism or turning them into a museum through ownership change, fostering the attractiveness of rural areas by encouraging the return is suggested.

In order to conserve cultural assets and to revitalize life in abandoned rural areas, the museumification, tourism

and resettlement approaches can be adopted together or independently, in accordance with reasons for depopulation, socio-economic structure, physical condition, strengths and weaknesses, potentials, risks, possible financial resources and legal status of the settlements and also in harmony with national rural policies. Whatever conservation approach is preferred, it should not be forgotten that all of the efforts are just a tool for preserving these areas and sustaining rural life. In restoration works for new life scenarios, first of all, the traditional buildings which are not used, abandoned or ruined should be considered, provided that the number is limited. In re-use approaches, special attention should be given to prevent damaging the social structure of settlements. They should not be left at the mercy of a single person or an institution; instead, they should be open to all segments of society after rehabilitation.

It is thought that preventing the physical erosion of cultural assets is more difficult and expensive in settlements re-functioned as a museum-village after depopulation than where life continues. However, in some cases where the factors leading to abandonment cannot be eliminated for various reasons, the only alternative for preservation of such neglected and ruined rural settlements is turning them into a museum-village. In addition, there are examples of rural settlements turned to memorial sites after abandonment or compulsory evacuation due to such causes as war or conflicts. In such uses, it should be seen as a necessity to conserve and maintain the cultural assets exposed to great destruction through war, abandonment and so on in order to prevent the deteriorating effect of the natural conditions.

Despite acceptance of educational roles of open-air museums, which emerged as the first practices in history for the protection of rural architecture, it is thought that the approach of bringing different buildings together in a new environment by dismantling them from different contexts is in contradiction with contemporary conservation principles except in extraordinary circumstances. Transformations of abandoned settlements into muse-

um villages or only tourism oriented usage, do not provide a permanent life in some cases, and therefore some challenges can appear in preserving cultural assets. Some negative impacts like changes in the traditional way of life or complete abandonment of traditional habits can be seen in some cases after uses related to tourism. Cultural assets in depopulated settlements can be re-used with touristic functions to meet the wishes of people who want to spend their free time or vacation in rural areas; however, it should not be overlooked in the interventions to be carried out that tourism is not an aim but merely a tool. Tourism is only a way to preserve these areas and improve the living conditions of the local inhabitants; it should not change the social structure completely.

It is evident that rural settlements from which there has been enforced evacuation because of conflicts, wars, security problems, etc. can be re-settled after the circumstances causing the abandonment have disappeared. Although revitalization of life can be provided with the return of the former inhabitants, it is seen that preservation of cultural heritage does not even come to mind in some cases and instead of repairing or restoring the traditional buildings, people choose to demolish them and build new buildings after their return. For this reason, it is thought that people should be encouraged to restore their traditional buildings and additional government support can be provided for this purpose.

Another form of re-settlement in rural regions is settling of new inhabitants, apart from local people, especially those coming from the cities through reverse migration. Such uses cause changes in traditional rural life, social structure and landscape characteristics of the living environment. Although revitalization of life after abandonment is favourable, limited life in certain seasons and major interventions in the restoration of cultural assets are negative effects. Another group of migrants from the cities to rural areas are those who have ecological tendencies. It is observed that those who prefer an alternative lifestyle in this way establish a new living environment or in some

cases transform derelict villages to a new living environment.

This article has aimed to discuss reasons for depopulation of the countryside, the impacts of abandonment, the pros and cons of re-evaluation alternatives for rural settlements and to develop proposals not only for the preservation of the rural architectural heritage in rural regions of Turkey, but also for revitalization and sustainability of livelihoods in such regions. Eventually, the conservation approach, which was prepared to meet the needs of special conditions in Turkey, proposes different perspectives by creating a multi-staged guide for protection and revitalization of rural settlements. This guide created a framework that can easily be understood and implemented by local authorities or other policy practitioners who are authorized to protect cultural and natural heritage. With the implementation of this approach, which can be elaborated and developed with the contributions of different disciplines, the effective use of restricted resources of Turkey will be ensured in order to overcome human or nature-based problems.

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