HİSTORİCAL HERİTAGES AND ANCİENT CERAMİC WARES THREATENED BY ENERGY POLİCİES: HASANKEYF CASE

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Abstract
With the developments in technology, energy requirement became indispensable for all countries in the world. Nowadays, energy resources decreased and people began to look for alternative ways for producing energy and using it efficiently. For that purpose, communities identify policies to supply their energy need. But within the scope of some energy policies, historical heritages face with danger of being destroyed by the effects arising from production of energy. In this sense, hydroelectric power plants sometimes threaten historical and archaeological regions and may create a danger of extinction for historical structures and goods which transfer information about social, economic, cultural and political life of mankind. One of these hydroelectric power plants is Ilısu Dam which is under construction in Batman, Turkey. This dam is a huge threat for Hasankeyf which is a village of Batman and which has witnessed the most crucial developments and inventions in the history of humanity such as wheel, money, farming tools, astronomy and written language. As soon as the dam project is completed, Hasankeyf will be obliterated forever. In this study, it is aimed to demonstrate the importance of historical heritages especially ceramic wares (materials which are mostly used by archaeologists) threatened by energy policies and Hasankeyf case was evaluated for this purpose.
Keywords: **Historical Heritage, Ceramics, hydroelectric power plants, Energy and Hasankeyf.**

Introduction

Water, being the main material generating the earth, has been the source of life since ancient times. It was used by societies in almost every field of daily life such as agriculture, transportation, industry and energy. Oceans, lakes, rivers and seas have also served people with their fertile contents so that many civilizations who did not have facility of feeding animals or farming have lived by only fishing. Today, there are still countries trying to overcome water scarcity while some countries are using water in producing electrical energy even knowing that lifetime of dam is approximately fifty years. It seems as an ordinary situation for countries that have various and numerous water resources to use water in energy production. But, reduction in amount of water in the world is becoming a critical question in our century because of dramatic changes in climatic, ecological and geological conditions, especially in last three decades. As a consequence of this, people began to try different ways in order to achieve water. They have improved incredible methods to harvest, transport and store different kinds of water such as groundwater, spring water, rainwater, and even air moisture, but the cost of procuring water will show itself as a function of combined costs of extraction/harvesting, transportation, treatment, storage and delivery (Fekri, 2003). People have to maintain looking for different water sources

because water is a significant material in all around the world and this situation is preparing a basic for wars and unfair economic interests.

Ceramic Wares in History

Throughout the history, human has used many different materials in sustaining their lives. They used animal leather, brushwood and plants for the purpose of collecting their foods and they also used metals to produce knives, pots and pans, but these materials could not come up to now because of their chemical and physical weakness (Okse, 2002).

By the time, people discovered the unique facility of soil. It was realized that clay and clay based soils were appropriate for shaping process owing to their plasticity. So they began to use clay in production of daily tools. The first tools were produced with utilization of clay and brushwood together. Then, incidentally, they saw that clay-containing materials gained stiffness after firing process, so those materials could be used for many various purposes. In this sense, it can be mentioned that use of ceramic wares dates back to very early times. This explains the importance of ancient ceramic residues which are accepted as the most significant materials in science of archaeology. Archaeologists mostly use these earthenwares in order to have information about ancient times and improve their knowledge. This is because ceramics can defend themselves from almost all environmental, geological and climatic effects so that they can remain for centuries (Okse, 2002,).

In archaeological excavations many kinds of ceramic wares were found in all around the world and most of those researches still continue. When we talk about ancient ceramics, we can use the words "pottery" or "terra cotta". The word "terra cotta" in which "terra" means "soil" and "cotta" means "fired" in Italian, is often used for archaeological ceramic findings. In our century "ceramic" reminds us "luxury tableware" in the context of traditional or daily life, and "high-tech products" within the industry. It is obvious that the beginning of all technological and traditional ceramics is pottery production which roughly includes shaping soil (clay) with water, drying with air and sintering by firing. Initially, potters had produced only simple goods based on necessities of daily life, then with the changes in needs they began to improve design, form, content and structure of terra cotta. After a certain time, people began to create societies and were civilized, so social classifications came into question spontaneously by the time. As a consequence of this level difference between people, artistic approaches began to show themselves and this has resulted with many radical changes in production techniques, design & form methods and especially ornamentation mentality of potters. Another effect of civilizing on human life is the emerging of commercial life in which people began to exchange or sell what they produced. All of these changes have been conveyed by archaeological findings, primarily ceramics (potteries). So, it is clear that potteries include the key information about past as if all history has been coded on them.

Historical and Cultural Heritages

Since the beginning of life people have always discovered new approaches in their both social and private lives. Civilizations always influenced each other with social and cultural interactions. They changed their styles, designs, habits, languages, even beliefs, then as a consequence of these alterations they changed their habitats and architectural structures. In their daily lives, people used many different materials to alleviate the workload. With the time, it became possible to produce more effective tools so that people gained the opportunity of having fast and efficient productions. All of these improvements generate the characteristic of historical and cultural heritages, therefore those heritages

should be evaluated as the maps of history of mankind. It is obvious that historical and cultural heritages can be mentioned as the living organisms of history holding a mirror to the past and so, needless to say, they are the most unique evidences gathering the spirit and charm of the heritages (Aydın, 2009).

Cultural heritages can be considered as the traditions of societies and can be classified in many various ways. They include temples, churches, mosques, also languages, faiths, clothings, meals, daily goods, and art works as well. In this sense, it can be expressed that cultural heritage covers historical heritages. Besides, most cultural (especially traditional and religious) behaviours have resulted with tangible residues in history. For example, people have built places of worship in order to meet their religious requirements and they have used contents of their own traditions and beliefs during the construction, so that, these architectural structures reflect their past and all details about the living conditions, cultural interactions and social status. Hereby, today one can see that each of historical heritages have special styles such as ornamentations, decors, sometimes images and they also have specific purpose of use.

In Turkey, there are numerous historical places including many various cultures and religions, because it has witnessed a lot of civilizations throughout the history as a result of its geographical location. Anatolia, having its own traditions and faith, has been influenced by both Europe and Asia for centuries, so it has a complex and hybrid culture and it still shows this historical and cultural wealth on its structures such as temples, churches, mosques, synagogues, aqueducts, castles, palaces, bridges, fountains, mansions and cemeteries. Except these structures, there are also many historical residues under the earth such as underground cities and places of worship, and also many ancient daily tools and equipments. Most of ancient findings are potteries, because they have been used in most vital parts of life such as cooking, food collecting and nutrient storing. Potteries were produced in order to ease severe living conditions in the beginning, but then it began to change its view, because craft and art had come into question at this point. All these changes have brought personality to the pots so they became the main materials of archaeological excavations. In this sense, one of the most significant region is Hasankeyf where has many cultural heritages and structures such as mosque, castle, bridge, tomb and archaeological ceramic residues.

Hasankeyf

Hasankeyf is a small village of Batman city in Turkey. It has a small population but when the civilizations lived on this region is thought, it is clear that it has hosted many crowded societies in total. Multiple literature sources agree that numerous civilizations have lived on north Mesopotamia where also includes Hasankeyf. There are substantial number of different civilizations lived in this region gathering the cultures of Artuqid, Ayyubid, Ottoman, Byzantine, Assyrian, Urartian, Arab and Turk, and it is known that the first settled nation in the region was Urartian or Assyrian then respectively Roman, Byzantine, Turk, and Arab dynasties (Sener, 2004). The region has an international prominence for the understanding of earliest human origins such as Neanderthals, and also it was one of the first areas in the world where communities domesticated plants and animals (Ronayne, 2005). So, it is possible to think that this region has witnessed to many important migrations, wars and invasions. Civilizations have always struggled with each other to take the advantages of the region because of its natural, geological, climatic and strategic features. These movements have frequently brought developments and innovations which some of them are the most critical ones in history such as farming

tools and techniques, written language, money, astronomy and wheel (Postgate, 1992, Fekri, 2003). These improvements show that people began to be civilized after landing on a fertile region which offers them every daily needs such as water, soil and food (vegetable, fruit, fish etc.). A photograph showing residential area of Hasankeyf is given in Figure 1*.

Figure 1. Old Bridge and Castle; Hasankeyf, 1910.
* *This photograph is supplied from press archive of Batman University, 2011.*

Hasankeyf was one of the most prominent village in region of Mesopotamia. First of all, it provided accommodation with its natural caves. This point is very important for people lived in ancient ages. Secondly, Hasankeyf is located near the Tigris River which has a great impact on the region, so people used the river in many ways such as transportation, fishing and using water in daily needs. As a result of these, it can be thought that Tigris River has made Hasankeyf so attractive for centuries that many societies wanted to live around there and inevitably this region became rich in history throughout the ages.

Interaction of communities with different faiths was one of the significant effect directing cultural movements in the region. Since the medieval period, Hasankeyf has been a pilgrimage centre and particularly because of the tomb of Imam Abdullah which was a place of religious significance to many Muslims, and additionally, religious heritage of the village also comprises Christian history and a substantial Syrian orthodox group lived in Hasankeyf in the time of the Byzantine Empire (Ronayne, 2005). It is said to have been the seat of a Bishopric of that church in the fifth century and to have been a center of the eastern Christian churches in the sixth and seventh centuries (Young, 2000, Sinclair, 1989).

Energy and Dams

In 21st century, energy seems as the most vital need of countries. Governments specify their economic policies according to their energy needs and capacities. They have two ways which one of them is to use their limited amount of energy providently and other is to find new energy sources and technologies. While developed countries use both of these options, developing or underdeveloped countries and others who have less resources and technology have only one of those alternatives or none. It is not always enough to have abundant energy resources, but also technology is required in most cases, and in the same way, technology means nothing if there is no raw material or source. When all these parameters come together, importance of energy policies can be clearly emphasized. Some governments deal with each other, some of them use their advanced technologies and some of them use colonialism with justified or unjustified

pretexts in order to meet their energy needs. All these positive and negative events have forced people to find alternative and renewable energy sources.

Dams are accepted as the huge and costly constructions, but they are widely used by many countries in production of electrical energy. Although dams have a limited lifetime, countries mostly prefer them within their energy policies. But sometimes they strictly do not pay attention for determination of locations of dams, especially in the context of historical and cultural heritages. Once a historical region is flooded by a dam reservoir, it becomes so difficult even impossible to save its relics (both movable and immovable ones). Ilısu Dam is one of the most controversial projects in this respect, because it is predicted that its reservoir will seriously alter the valley, displace communities and submerge historical, cultural, religious and natural heritages, additionally it will destroy numerous ancient sites in the valley of the Upper Tigris and these could not possibly all be excavated and recorded (by visual documenting tools) in the time it would take to build the dam. (Ronayne, 2005).

Conclusions

Hasankeyf case is usually discussed by both authorities and scientists. Archaeologists and art history experts sometimes remained in the center of this debate inevitably. The most important question waiting for an answer is about if it is really necessary to destroy cultural heritages within the energy policies. While the government defends itself by showing the less amount of energy sources as an excuse, people who want to save Hasankeyf have no tolerate about destruction of the heritages, because they do not want to lose their culture, history, lands and homes. Although a new urbanization project including convenient and pleasing architectural houses for the town was represented to the public, some ambiguities about new residential areas intensified concerns. While some people definitely want to live in their own old houses, some of them want to move out as soon as possible, because most houses they live in look so old. On the other hand, all of them agree that there would be health problems arising from the river. First of all, people are aware that serious illnesses would appear, because the dam reservoir will critically reduce autopurification of Tigris, so the raw sewage flowing into the river from nearby cities will have much more intensity with time, and secondly they know that this pollution and disruption caused by the construction works of dam will eradicate the fish life in the river (Ronayne, 2005).

Historical structures, telling all about the history of humanity, are one of the most essential parts of cultural heritage and they represent the overlooked details related with workmanship and art, production technology, architectural features, material characteristics and spiritual value of their periods (Aydın, 2009). Needless to say, ceramics are the common materials in cultural heritages with their unique designs, forms, bright colors and ornamentations. In history, they were used in both interior and exterior fronts of architectural structures, especially in Anatolia. For example; a famous Turkish art tile called "Çini" (in Turkish) has a special use in the time of Ottoman Empire. These art tiles were used in many various architectural structures such as Turkish baths, palaces, mansions and fountains. All these structures have gained impressive views thanks to the "çini" wares which have tulip, carnation, rose, hyacinth, daisy, crescent, passion flower and pomegranate motifs, also Rumi (ornamentation formed with composition of bud, leaf and animal), Çintemani (a decorative motif) and geometric patterns with a bright glaze (Ozaltın and Olmez, 2011, Anonymous, 1983). There were also miniatures on Ottoman art tiles depicting historical events and they were important documents in sense of transferring lifestyles, customs and traditions of that

period. There is no doubt that almost all communities had a type of ceramic art including many different styles and figures which give messages about their history. When all of these come together, it is so clear that ceramic residues have an unique ability in reflecting social, economic, cultural, religious and political features of civilizations lived in both recent and ancient times.

Potteries are accepted as the first ceramic materials in history, because they have been used since very old times in which people have just began to discover functional and artistic features of these ceramics. Therefore, potteries have a significant place in both (art) history and archaeology. All forms, colors, patterns and even the simplest figures on a pottery act like a fingerprint in understanding special features (religious, artistic etc.) of the ware and especially in dating process. Except those visual data, there is now a branch of science called "archaeometry" which is related with all historical residues including ancient goods (made of clays, metals etc.), human bones and skulls. This science uses many different methods which basically contains chemical and phase analysis, amount of impurity, elemental distribution, surface/interfacial chemistry and thermal analysis (Loehman, 1993). Mostly used analysis methods are Atomic Absorption Spectroscopy (AAS), X-Ray Diffraction (XRD), X-Ray Fluorescence (XRF), Scanning Electron Microscopy (SEM) and Energy Dispersive X-ray Spectroscopy (EDS) or Wavelength Dispersive X-ray Spectroscopy (WDS), Transmission Electron Microscopy (TEM), Raman Spectroscopy, Fourier Transform Infrared Spectroscopy, ThermoGravimetric Analysis (TGA) and Differential Thermal Analysis (DTA) (Striova et al., 2006, Mangone et al., 2009, Issi et al., 2011). Additionally, there are some methods used for directly determining the ages of historical findings such as Radiocarbon (for materials consisting carbon), Dendrochronology (especially for trees), Thermoluminescence and Optically Stimulated Luminescence (for ceramics, fired earthenwares, brick&tile), Electron Spin Resonance (for limestone, coral, animal shells, teeth). Most of these methods have high technology and this proves that age determination of ancient relics is so important that people always tried to improve their existing technology for that purpose. This shows that since potteries are the first ceramic materials in history of mankind, it will not be wrong to accept them as the most valuable archaeological materials reflecting cultural, social, religious and politics information. So, there should be effective precautions to save ancient ceramics, otherwise many traces witnessed to numerous historical events would disappear.

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