

SOCIO-CULTURAL SUSTAINABILITY AND AN ASSESSING MODEL FOR REUSE ADAPTATION

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Summary

Between the sustainable design and historic preservation is a natural bond and an adaptation action to re-use has the social, cultural, economic and ecological benefits. Reuse is a superior alternative to new construction in terms of sustainability. When re-use is being analyzed with the sustainability concept, it can be said that the contribution level especially to social and cultural sustainability of the new function would be high in sustainability of function and the continuity of the building's life. In this study, have been adapted for re-use of a cultural heritage or architectural heritage, social and cultural contributions to sustainability can be put forward what has been attempted. By the means of the study the components of social and cultural sustainability is defined under two main titles such as (i) social, cultural components and (ii) components related to adaptation to the building and the new function. To evaluate these components in order to reveal the answers to the questions, re-use of buildings, social and cultural sustainability will create a data for the assessment of contributions.

Keywords: reuse, adaptability, sustainability and reuse, historic and cultural buildings

1 Concepts of sustainability and adaptive reuse

1.1 Cultural and social sustainability

Sustainability is the important concepts in 20.th century has defined "*meeting the needs of the present without compromising the needs of future generations*" by World Commission on Environment and Development [1]. "*Sustainability refers to the viability of socially shaped relationships between society and nature over long periods of time*" [2]. Sustainability relies on high efficiency and the uninterrupted functions of a continuing social, economic and ecological system in such a way that does not degrade and consume the resources used [3]. In terms of social development, sustainable settlements and societies should produce a high-quality lifestyle. Life quality is in relation to social spaces and the physical structure of human settlements. Physical structure, on the other hand, is shaped in relation to the social and cultural structure of societies. Changes, recorded particularly in the traditional patterns and in areas where buildings with historical and cultural importance are located, threaten social and cultural continuity and result in destruction of the documents pertaining to the past. The preservation and sustenance of these values will enable the continued existence of aesthetic values, social and cultural bonds.

The aims of sustainability is continual improvement and to achieve this, reuse of old buildings is one of the means. Adaptive reuse of buildings has an important role to play in

the sustainable development of communities, detouring the wasteful processes of demolition and reconstruction[4]. Reuse is the best alternative and positive strategy to new construction in terms of sustainability [5].

In this study, have been adapted for re-use of a cultural, historical or architectural heritage, social and cultural contributions to sustainability can be put forward what has been attempted. By the means of the study the components of social and cultural sustainability is defined under the after title.

1.2 Adaptation to reuse and socio cultural sustainability

Many buildings, which can no longer serve the original purpose for which they were constructed, can potentially be adapted for a new use and modern functions [6,7]. Adaptive reuse; i.can involve a change of use (but not necessarily); ii.involves improvement (upgrade of building performance)and iii. must meet new and or existing user/owner requirements [8].

In general, reuse of the existing building stock for new beneficial purposes provides environmental benefits because new buildings damage the environment during their construction phase. In the scope of optimal resource utilization and to ensure multi-dimensional returns, reuse is deemed an important attitude for sustainable development. Reuse of buildings is generally preferred as it is economical, ensures cultural and historical continuity, offers a labor-intensive process rather than energy-intensive process, decreases energy consumption in environmental terms and serves as an indicator of ecological approaches [9-15].

Reused buildings in the case of heritage and their aesthetic, spiritual, social, historical, symbolic, authenticity values that derive from cultural discourse about the significance of art and culture human affairs [16, 17], brings different benefits in this reuse process. Particularly old buildings are physical references giving information about the past. These references provide information reflecting lifestyle, building applications culture, construction technique and spatial order. Transfer of cultural accumulation to future generations is regarded as a conscious requirement of social responsibility and development. Neglected historical surroundings/buildings, failure of such structures to meet today's needs, unawareness, lack of conservation plans are the factors which turn such structures into ruins and which lead to structural wear that triggers further ruin. This means that cultural sustainability is threatened as well [6]. Revival of the old value of cultural entities means revealing "history" and turning it into a readable, visible, perceptible phenomenon [18]. According to Kincaid [19], sustainability and life quality of cities is measured based on the success/failure in adaptation of buildings to new purposes. When adaptation to reuse proves successful, it will be possible for the building to continue its existence by serving its new function; possible for the new users of the building to be satisfied with their life quality within the space; and possible for the building to meet urban requirements by serving a new function. Therefore, the right function assigned to the building will bring benefits and ensure sustainability from economic, socio-cultural and environmental aspects [6]. Moreover, buildings' utility will increase their value in proportion with their level of utility.

2 Assessing model for reuse adaptation by the means of socio cultural sustainability

Evaluation of new functions from a socio-cultural perspective;

- Contribution the building makes in its surroundings and pattern, thanks to its new function,
- Adaptation achieved without damaging the original structure,
- With regards to meeting new functional requirements, the building's contribution to society and settlement,
- With regards to new function and adaptation of the building, its utility and livability.

In this scope, the present study has defined two main titles to discuss the contributions of the reused buildings in socio-cultural sustainability:

- (i) New function, cultural and social components of the building (gains)
- (ii) Quality of the adaptation which aims to increase customer satisfaction so as to ensure continuity of the new function (requirements of the new function and facilities provided by the building).

Definitions have been made within the scope of the two titles specified in Table 1. Cultural sustainability gains importance for the unique distinctive buildings of historical value. Taking into consideration the future decisions to be made during restoration, special attention should be paid to prevent damage to original structures, architecture and structural integrity. Therefore, required steps should be taken not only to prevent the new function from making the old function obsolete, but also to make the new function known by all. When there is a social function, the building can be easily made known. When the building has a civic function, all through underlining its historical and cultural value will know it. Therefore, location, surrounding conditions, spatial organization and quality will be the concepts that have to be questioned during discernment of the renovated function. Table 2 shows some examples of the reused historical buildings in Turkey. All new functions are communal or semi communal of reused buildings in Table 2.

3 Conclusion

Reuse promotes the functional value of buildings. Reuse of buildings that constitute a part of the cultural and historical heritage is very important because their cultural sustainability has to be maintained during the reuse process. When it meets a settlement demand, the new function will bring social benefits and will become a beneficial tool for preservation. Any useful building that develops from ruins, thanks to the new function to be assigned, will potentially contribute to its surrounding as well. When buildings meet the needs of a function after a new arrangement and when users use a historical building, they will raise awareness of "conservation and adoption".

Tab. 1 The model components of reuse adaptation for social and cultural sustainability.

Social and cultural components	Components related to adaptation (the building and the new function)
<i>Cultural</i>	
Not forgetting the old function, with new function, With new function to be a reference point and to be known both old function and new function, Getting rid of the ruins of view by new function, Avoiding visual pollution, Contributing to the surrounding by the physical arrangement of new function, Compliances with functions in surroundings of new function. Supporting user activity and social communication by new function, Contributing to social and cultural life of the people by new function, Encountering social life with cultural and historical characteristics by new function, Awareness for conservation and appropriation.	Visual integrity of the environment, Accessibility for new use to building,
<i>Social</i>	
Meeting social needs by new function, To be known new function by the settlement residences, Creating an image of new function for old buildings, Contributing to the surrounding by the physical arrangement of new function, Compliances with functions in surroundings of new function. Supporting user activity and social communication by new function, Contributing to social and cultural life of the people by new function, Creating business for service providers and workers by new function.	Harmony new function needs and spatial organization New function and spaces character (size, height) New function action flow and space organization Spaces' characters for arrangement of equipments (space size proportion) Daylight or artificial light in spaces and proposals for solution Heating, ventilation and acoustics needs for new function and spaces' character Spaces' characters for arrangement of equipments (technical requirements)

Tab. 2 Examples of reused heritage buildings in Turkey.



Millet Bath in Afyonkarahisar. Bath is located in the historical texture. Bath is used as district and cultural home in the city.



Old educational buildings in Konya. School is located historical texture of city. School is used as a part of administration building of city.



Old air gas factory in Izmir. Franceman built building 150 years ago. Faundry, depots and other buildings are in the area. With new function cinema, exhibition area, café, recreation area is arranged in the area and has been used as a youth centre [20].

Tab. 3 Examples of reused heritage buildings in Turkey.

	
Old Soap Factory in Antakya. Factory is located historical texture of city.. Factory is used boutique hotel name is Savon Hotel. (Soap in French is “savon”)	
	
A historical house in Konya. House is located in the city centre around new construction. House is used as Chamber of Architects – Architect House.	
	
Konak Pier in Izmir. The building was built as a duty building in 1954. Building is using as an shopping mall. Café, restaurant and large or small store are in the Konak Pier [21].	

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