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A Study on Slow Landscape Design Guideline

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ABSTRACT: *The Slow City (Cittaslow) Movement, struggles against the devastating and transforming effects of capitalism. Seferihsar is the first slow city in Turkey and there has been significant progress since it joined the movement in 2009. Throughout this study the criteria's that leading the urban identity has been chosen regarding the Slow city movement and limited with the landscape architecture. In this context, nine titles were identified and photographs were taken in Seferihisar. These photographs were evaluated by design experts in terms of visual perception. After the expert evaluation, these photographs were visualized and the images assessed by different authorities who lives in Seferihisar and has knowledge about Slow City withsame design criteria's.According to results of the study, suggestions for the urban landscape design guidelines of Slow City Seferihisarwere developed.*

KEYWORDS: *Slow City Movement, Cittaslow, Seferihisar, urban design guidelines, visual perception*

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I. INTRODUCTION

Concept of Design Guideline

The concept of design guideline has recently found it's place specifically in urban practices. These design guidelines are significant tools in transforming cities to more liveable by developing solutions through various methods and approaches to facilitate urban life.

Utilization tools and implementation standards that suitable with distinctive texture of the cities are set in accordance with the design guidelines. Infrastructure of practices that facilitate living in the cities are prepared by combining correct material and color selection. The design guidelines are used for developing an architectural language for the city. Accordingly, design guidelines can be arranged to focus on items such as structures and their periphery, green infrastructure, urban furnishings, as well as creating unobstructed and accessible cities. Guidelines offer solutions to improve the quality of life in cities.

Place of Slow City Movement in Urban Design

"Twentieth century cities face numerous problems such as noise, pollution, unplanned housing developments, poverty and crime. These problems have led to questioning of liveability parameters such as local values, landscape, history, culture and excessive consumption of natural ecosystems in many cities, and locality has been rendered invaluable by its residents and visitors" (Elovich 2012).

The Slow City Movement was formed in Italy in 1999 which aims to protect the local fabric,as well as, to make life pleasant and meaningful in small towns. It is important for the movement to preserve the unique structure and identity of the cities. Moreover, to ensure high living standards and urban facilities to be accessible to everyone.

"There is concordance between people living in the artificial city who are looking for a niche within the ecosystem and those longing for a cleaner environment that is beyond reach because of overpopulation, air pollution, noise, and fatigue " (Cetin et al. 2018).

The Slow City Movement,offers solution regarding policies regulating urban life, urban design and planning by following almost 70 criterias which falls under seven main titles. The movement, also covers energy and environmental policies, urban infrastructure applications and policies that improves the quality of life.

II. METHOD OF STUDY

The method of study consists of multi-staged surveys. Primarily, the parameters of the Slow City Movement that addresses the urban identity and thus the urban design are determined; they are overlapped with design and application areas of landscape architecture.Throughout this study following titles have been identified;green spaces, reforestation and planting activities, pedestrian zones and urban squares, facades of buildings, bicycle and pedestrian lanes and streets. In order to create a design guideline for Seferihisar, identity objects and design elements of the town are photographed.

Within this scope, more than 400 photographs were taken across the city and from which the most suitable ones, for the area and the subject, were selected to survey subject matter experts. An online survey was created and photographs were presented to the experts to be evaluated in terms of 7 (seven) design criteria, which clearly determine the concrete effects of the identity notion on human perception: balance, continuity, simplicity, similarity, regularity, naturality and relevance.

Within this scope, more than 400 photographs were taken from various regions of Seferihisarand from which the most suitable ones, for the area and the subject, were selected to survey subject matter experts.An online survey was created and photographs were presented to evaluate the experts to clearly determine the concrete effects of the identity notion on human perception by using seven design criterias which are balance, continuity, simplicity, similarity, regularity, naturality and relevance.The objective of this survey is to determine the design criteria related shortcomings, in predetermined urban facilities according to variables of the Slow City Movement that guide the urban identity.

During the execution phase of the questionnaire experts, who are academics in various landscape architecture and/or design departments, evaluated the photographs based on three options (present-undecided-absent) to address predetermined criteria that mentioned above.

After receiving the design expert opinions, photographs were visualized by using Photoshop CS6 program as part of the visualization activities with the idea of "visualization offers a method for seeing the unseen" (Downes and Lange 2015)". These visualized images were presented to group of people who live in Seferihisar, work or involved directly with the Slow City Movement to determine the design adaptability of the application in Seferihisar.

III. FINDINGS

Results from the both surveys were compared, and a landscape guideline proposal was developed for Seferihisar, the Slow City, through the selections made during the visualization activities. Accordingly, the blue column represents balance, continuity, simplicity, similarity, regularity, naturality and relevance, and their percentage value; the orange column represents the extent of indecision; and the red column represents the percentage value of the negative perception about mentioned issues.

Green spaces

"Greenspacesareopenpublicspacesthatallowforeducational,cultural,andrecreationalactivitiesthatdemonstratethephysicalandsocialcharacters of cities" (Yuen1996, DüzgüneşandSaraç 2018). "Green spaces can improve well-being through increased personal identity by strengthening place attachment (Zhang et al. 2015, Southon et al. 2018), and increasing social interaction and cohesion (Mukerjee, 2013, Southon et al.2018), a recognised component of psychological well-being" (Ryff 1989; Ryffand Keyes1995, Southon et al.2018).

Fig. 1 Comparative charts of images for green spaces

According to the comparative survey results of the photo on green areas, there is a 1.1% decrease in the criterion of balance. The change observed in the quantitative values are as follows on the basis of other aspects; 28.4% decrease in continuity, 19.3% decrease in simplicity, 37.5% decrease in similarity, 36.4% increase in regularity, 87.5% increase in naturality and 29.5% increase in relevance.

Urban afforestation/planting efforts

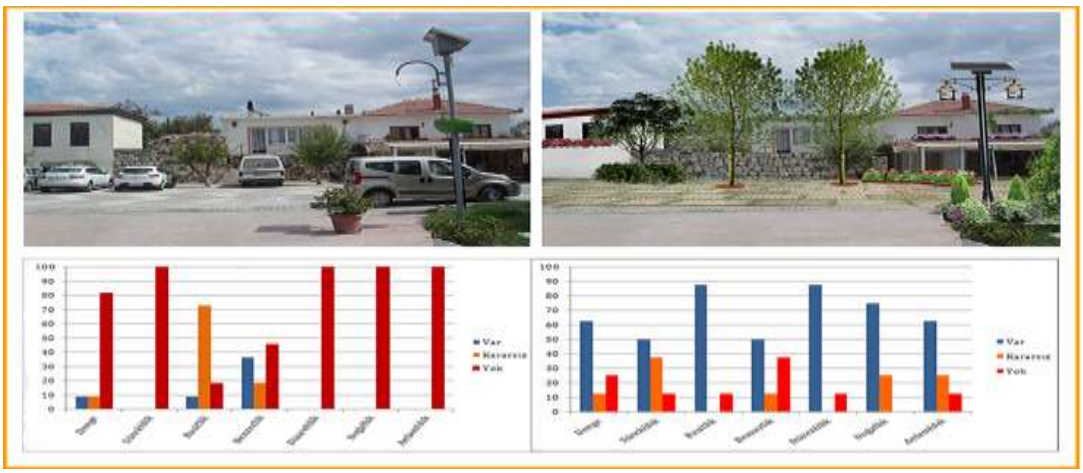

Fig. 2 Comparative charts of images for urban afforestation/planting efforts

According to the comparative survey results of the photo on urban afforestation/planting efforts, there is a positive increase of more than 50% in all the criteria between the original image and the visualized image, aside from the criterion of similarity. There is an increase of 13.6% in the similarity criterion.

Pedestrian zones and urban squares

Fig. 3 Comparative charts of images for pedestrian zones and urban squares

According to the results of the comparative survey of the photo on the pedestrian zones and the urban squares; There is an increase in all criteria of the visualized image. The highest quantitative change is with 75% increase for relevance, and further 62.5% increase for balance, 50% increase for regularity and naturality, 40.9% increase for simplicity, 37.5% increase for continuity and 10.2% increase for similarity.

Building facades

Fig. 4 Comparative charts of images for building facades

There is a general increase in the criteria of balance, continuity, regularity, similarity, naturality, and relevance according to the comparative survey results of the photo on building facades, for the original and visualized image, and there is a serious decrease in the criterion of simplicity. The highest quantitative change is for naturalityby 54.5%.In addition, there is a very low increase in other criteria such as; 27.3% for regularity, 2.3% for continuity, 5.7% for similarity and 9.1% for relevance.

Bicycles and pedestrian zones

Fig. 5 Comparative charts of images for bicycles and pedestrian zones

Three criteria received very low values in the positive sense and four criteria was assessed as 0 (zero) according to the results of the comparative survey of the photo on bicycles and pedestrian zones. There is an increase in all criteria for the visualized image. In this context, the increase is as follows in the visualized image; balance by 62.5%, continuity and similarity by 53.4%, simplicity by 56.8%, regularity, naturality and significance by 75%.

Streets

Fig. 6 Comparative charts of images for streets

General resultsshowed thatmost the criteria of the visualized imagehave increased. Balance, regularity and relevance criteria has an increase of 18.2% and naturality of 45.5%. In addition, continuity criterion got 100% positive response to both images, while simplicity and similarity decrased by 12.5%.

Slow Landscape Design Guideline Proposal for Seferihisar

Green spaces

- For Seferihisar region that enjoys sunlight most of the year, lighting poles operable by solar energy are the right choice so as to encourage the use of renewable energy which is an important criterion of Slow City Movement. However, different choices can be made in terms of color and texture (such as wood siding).
- Stand-alone use of flowering plant species is considered to have a negative impact on the continuity of the design in green spaces. Therefore, it would be appropriate to use bushes and tree species as plant material, which are taller and are not of high risk for children's playgrounds.
- In green areas, alfalfa (trifoliumsp.) or sedum (sedum sp., sedumacre) species with high ecological tolerance should be used instead of lawn.
- Selection of broad-leaved tree species with dense texture as plant material has decreased the simplicity of the design but increased the naturality in green urban spaces. Accordingly, using coniferious species (Abiesnordmanniana, Abiesnordmannianasubsp. "Bornmuelleriana", Cedrusatlantica, Cedrusdeodora, Cedruslibani, Chameacyparisnootkatensis, Chamaecyparislawsoniana, Cupressocyparisleylandii, Cupressusarizonica, Juniperusexcelsa, Piceaexcelsa, Piceaorientalis,Piceapungens, Pinussylvestrisetc) would be an approach that balances simplicity while protecting naturality.
- For walking trails, using brick dust or natural stone materials with water-permeablity (such as volcanic tuff etc) would serve to enhance continuity.

Urban afforestation/planting efforts

- The study area is in fact a pedestrian zone, but is used as a parking lot for numerous occasions. In this respect, using plants as a measure to prevent entry of the vehicles to this area would be favorable.
- As flooring material, natural stone plate pavement with grass as grout would be a suitable choice.
- Using seasonal flowers such as (*Celosiacrisdata*(oxcomb), *Primulaacaulis*(primrose), *Verbenaimagination* (verbena 'imagination'), *Portulacacupido* (moss-rose) etc.) in front of the windows and balconies on the facades, increases visual quality.
- Partly using tall trees (*Acer campestre, Acer platanoides, Aesculushippocastanum, Betulapendula,*
- *Koelreuteriapaniculata, Quercusfrainetto, Platanusorientalis, Salixbabylonica, Tiliatomentosa*) on

pedestrian zones would provide shade at certain hours of the day and would create a pleasant appearance.

- Planting creeping plant species (*Juniperushorizantalis, Juniperussabina, Juniperuschinensis, Cotoneasterdammeri, Cotoneasterhorizontalis, Cotoneastersalicifolia*) under the lighting equipment, would cover the intersection details of the flooring and increase the visual quality of the roadsides.

Pedestrian zones and urban squares

- Sunshades of various sizes that complement the urban fabric, are used to provide shade before sales units and food stalls.
- In order to present an authentic image to the town, stone facing is preferred on the facades of buildings.
- Outdoor seating areas of the food stalls are demarcated using plant materials.
- Clutching plants *(Campsisradicans, Hederahelix, Parthenocissusquinquefolia, Wisteriabrachy)* are preferred on the facades of buildings.

Building facades

- The building in the original image reflects the traditional architecture of the old Seferihisar houses. Accordingly, restoration and maintenance works should be carried out in order to ensure the sustainability of these buildings.
- Using pendulous pot flowers in front of windows and over the entrance door is preferred.
- Using a design including plants in some parts in harmony with the natural stone pavement with grass at flooring, would avoid monotony on the rigid floor and also would prevent the area from being used as a parking lot.
- Various types of pots are used on the facades to give dynamism to the area.
- Using creeper plants (*Campsisradicans, Hederahelix, Parthenocissusquinquefolia, Wisteriabrachy*etc.) on balconies and in front of windows would bring dynamism to the facades.
- It would be favorable to conceal the antennas located on the roofs as they cause visual pollution.

Bicycle and pedestrian ways

- For pedestrian ways, the pavement widths are designed to be approximately 150 cm, so as enable two people to walk conveniently at the same time. The use of tall and leafed tree types at regular intervals on the pavement is suitable so as to provide shade to people walking and to enhance the sense of naturality.
- The bicycle path is designed as a 130 cm wide single lane so as to allow a single bicycle to pass.
- The intermittent use of broad-leaved trees on the pedestrian way is important to provide shade to the people walking on the way at noon when the sun shine is intense.

Streets

- Using natural stone flooring material on the streets is suitable as it complements authentic urban texture.
- The choice of color is white tones for the facades and blue tone for the windows.
- The doors which are an important element of the urban texture, have been preserved and arranged authentically in accordance with the original textures.
- A variety of potted plants suitable for the climate (*Buxusmicrophylla, Buxussempervirens, Abelagrandiflora, Piceaalbertiana 'Conica', Taxusbaccata 'Fastigiata'*, etc.) are preferred to bring dynamism to design.

IV. DISCUSSION AND CONCLUSION

Throughout the study, two independent visual evaluation surveys were conducted and design guidelines were created based on the results of the comparative analyses. The comparison between the original and visualized images had been carried out based on design criteria and the results revealed the increase towards the visualized images.

Visualization studies have some negative effects on certain images as well. For example, the picture related to green areasreceived more positive responsesrelated to balance, continuity, simplicity and similarity. On the other hand, visualized images received more positive responses related to regularity, naturality and relevance. The reason of these results have been suspected to occur due to planting composition since no radical changes have been implemented.

To be able to achieve accurate results regarding design based studies, thorough and vigilant process have been implemented. These results could vary based on numerous circumstances, such as participants education, social statue and psychological state. Therefore, the relative structure of design phenomenon is an effective but at the same time restricting factor to accomplish distinct results.

Slow City Movement is an ecology based city movement that presents a development opportunity on design and planning scale forrural settlements or small-sizedcities. This movement should have been considered as an important guide to protect the urban identity based on the planning and design model

These design guideline suggestions should have been taken under consideration while conductingurban identity protection studiesfor Seferihisar. Thes suggestion that develop edaccording to questionnaires, could be consideredas a model while urban identity studies are planning to take place in othercities.

REFERENCES

[1]. Anonymous, (2014). International Cittaslow Charter. Web Sitesi: http://www.cittaslow.org/section/association/charter, Access date: 10.03.2014.

[2]. Cetin, M., Zeren, I., Sevik, H., Cakir, C., Akpinar, H. (2018). A Study On TheDetermination Of The Natural Park'sSustainableTourismPotential. *EnvironmentalMonitoringandAssesment*, Springer, (2018) 190:167

[3]. Downes, M. and Lange, E. (2015). What you see is not always what you get: A qualitative, comparative analysis of ex ante visualizations with ex post photography of landscape and architectural projects. *Landscape and Urban Planning*, 142 (2015), 136-146.

[4]. Durmuşkahya,C.(2006).EgeBölgesi'ndeDoğalYayılışGösterenAğaçveÇalılar. ÇevreveOrmanBakanlığıDoğaKorumaveMilliParklarGenelMüdürlüğüBiyolojikÇeşitlilikveDoğalKaynakYönetimiProjesi, 216, Ankara.

[5]. Düzgüneş, E., Saraç. E. (2018). Evaluation of urban transformationareas in terms of usersatisfaction: thecasestudy of ZağnosValley (Trabzon/Turkey). *EnvironmentalMonitoringandAssesment*, Springer, (2018) 190:11.

[6]. Elovich, M.A. (2012).Becoming Cittaslow A City's Journey To Becoming ACittaslow Member. Faculty of California Polytechnic State University, In Partial Fulfillment of the Requirements for the Degree Master of City and Regional Planning.

[7]. Orhan, M. (2015). KentselKaliteninGeliştirilmesiBağlamındaStratejikBirYaklaşım; KentselTasarımRehberiKavramsal Model Önerisi, Yıldız TechnicalUniversity, Graduate School of Natural and Applied Sciences, PhD Thesis, İstanbul, Turkey.

[8]. Polat, A.T., Güngör, S. (2013). Konya İli Kent ParklarıKullanıcıDemografikÖzellikleri İle Park ZiyaretiArasındakiİlişkiler. PeyzajMimarlığı 5. Kongresi / 14-17 Kasım2013 , Adana, 882-893.

[9]. Southon, G.E., Jorgensen, A., Dunnett, N., Hoyle, H., Evans, K.L.,Perceived Species-Richness In Urban Green Spaces: Cues, Accuracy and Well-being Impacts. *Landscape and Urban Planning*, 172 (2018), 1-10.

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