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AN ANALYSIS OF THE SLOW CITY MOVEMENT IN THE CONTEXT OF LANDSCAPE INDICATORS: A NEW CRITERIA PROPOSAL

Müge Tokuş Coşgun[1], Landscape Architecture PhD Program, Graduate School of Istanbul Technical University, Istanbul, Turkey
Meltem Erdem Kaya, Department of Landscape Architecture, Faculty of Architecture, Istanbul Technical University, Istanbul, Turkey

The research aims to identify new landscape indicators assessing the physical characteristics and structure of the "slow cities" identified by the Slow City (Cittaslow) Movement. The movement currently includes about 300 (297 in 2023) cities from all around the world, and agrees to work on a set of goals/criteria. Although these criteria mostly highlight the unique values of the cities, they are not enough to provide an accurate evaluation of the space/land. This situation puts slow cities, once they receive the designation, in a redundant position to compete with large cities in terms of their recognition, and tourism potential, and as a result of this it poses a threat to the cities' original values. The paper proposes new criteria based on landscape indicators (critical parameters to evaluate the physical conditions of the landscape) to assess the spatial characteristics of nominated cities in Turkey, using comprehensive surveys. The surveys were conducted both in Turkey and the US states of Washington and Oregon, with samples of expert studies in the spatial planning area. According to the surveys' strengths in the statistical power test, the index value of landscape indicators was determined, when the relevant landscape indicators were reviewed. As a result, new criteria at two different scales (macro and micro) were proposed to be included in the assessment system of the Cittaslow Movement.
***Key words*: landscape indicators, landscape index, Slow City Movement, Cittaslow Turkey.**

INTRODUCTION

The prediction that all the differences and local features in the world will one day no longer exist, and that the world will be a "global village with a single structure as a result of globalization" (Martens *et al.*, 2010), is a generally accepted point of view today. In these uniform global villages, which we call modern cities, the urban rhythm and pace of life always derive their strength from speed (Mayer and Knox, 2009). However, the increase in the pace of life is directly related to stress, illness, and mortality rates (Mayer and Knox, 2009). This negative situation created by speed is taken very seriously in Europe (Tomlinson, 2007; Mayer and Knox, 2009). France, for example, is known for its slow economy: short working hours, long vacations, and strong government protection in jobs/industries (Mayer and Knox, 2009). On the other hand, speed is dominant in the West, and it appears as a controlling element (Mayer and Knox, 2009).

Accordingly, with the impact of globalization, cities are transformed into living spaces that are non-self-sufficient (Zavalsiz, 2016); yet, sustainable planning principles emerge as convenient ways to improve cities (Pink, 2008). In this context, the concept of the Slow City Movement emerged from discussions that arose during the praise of slowness (Yurtseven *et al.*, 2010). The movement aims to prevent globalization from standardizing the nature, people, and lifestyles of cities and from destroying their local characteristics (Miele, 2008; Dogrusoy and Dalgakiran, 2011; Ball, 2015). One possible outcome of the Slow City Movement is the development of new principles that will contribute to urban sustainability, since it is closely related to measuring

[1] Ayazaga Campus 34496, Maslak, Istanbul, Turkey
mtokus@itu.edu.tr

urban sustainability (Parkins and Craig, 2006; Petrini, 2011; Knox, 2005). Slow cities are typically small towns with limited populations under 50,000 (Cittaslow Turkey, 2022). Membership in the Slow City network is based on criteria laid out in an application document prepared by local governments, which includes Cittaslow goals in 72 specific parameters divided into seven areas. These seven macro areas are (Cittaslow Turkey, 2022):

- Energy and environment policy (air-water quality conservation, public energy production etc.);
- Infrastructure policies (efficient cycle paths, bicycle parking zones, removal of architectural barriers, etc.);
- Quality of urban life policies (planning for urban resilience, urban livability, creation of productive green areas with productive plants, etc.);
- Agriculture-tourism and artisan polices (development of agro-ecology, use of local products, prohibiting the use of GMO in agriculture, etc.);
- Policies for hospitality awareness and training (health education, support for Cittaslow campaigns, etc.);
- Social cohesion (multicultural integration, childcare, etc.); and
- Partnership (support for campaigns and slow food activities).

Although the above-mentioned criteria mostly highlight the unique values of cities (Petrini, 2011), they do not include enough specific criteria to assess the spatial features of a town. For instance, the spatial green/grey infrastructure system of today's slow cities remains the same before and after receiving the official "Cittaslow" designation. According to the results of most studies conducted since 2018 in Turkey (Kıran Çakır *et al*., 2022; Ugurlu, 2019; Tural, 2018; Ozgeris, 2020; Ozgeris and Karahan, 2021), slow cities are considered as cities that need spatial improvement. However, studies based on worldwide/international cases, especially in Italy, have revealed that this is an effective urban life model for creating healthy spaces (Ece, 2021). This situation puts Turkish slow cities, once they receive the designation, in a position to compete with large cities in terms of recognition and tourism, and, as a result it poses a threat to the cities' original values. These tourist 'Cities' with undeveloped green and grey infrastructure systems create an extra burden for the city. Therefore, improving the city – especially in terms of its green and grey infrastructure system – should be essential in the Cittaslow assessment system.

In Cittaslow towns, most of the landmarks that gave the city the Cittaslow designation are organically evolved landscapes (Rössler, 2003). These "organically evolved landscapes result from an initial social, economic, administrative, and/or religious imperative and developed their present form by association with, and in response to, their natural environment" (Rössler, 2003, p. 11). Such landscapes reflect the process of evolution in their form and component features to highlight that physical and social total action of landscape indicators and contribute to the Cittaslow literature with this research.

From this point of view, this research paper proposes a set of criteria for assessing the physical structure of a town, which can be achieved by landscape indicators.

Here, landscape indicators, among the significant sustainable planning principles (Peano *et al*., 2011; Meadows, 1998) that are used for the assessment of the Cittaslow Movement covered in the study, attempt to respond to the main questions and sub-questions guiding the research:

- How can slow cities be used as a model for future urban areas? (Sub-question: How can slow cities contribute to spatial planning when they are explained by means of landscape indicators?);
- What are the landscape indicators that are effective in declaring cities as slow?; and
- Do the slow city criteria provide an evaluation opportunity for determining or measuring a city's landscape indicators? (Sub-question: What should be the new evaluation system of slow cities which include landscape indicators?)

This research paper is based on the hypothesis that the current Cittaslow criteria system does not provide a spatial assessment for the candidate cities to become Cittaslow-approved. In order to achieve an objective evaluation of the criteria system, it is necessary to reveal the parameters subject to spatial values and determine their qualitative equivalents.

In this research, the concept of landscape was used to represent a holistic approach to the spatial assessment of cities declared as Cittaslow. In this regard, landscape indicators were identified both in the literature review and in surveys constructed for the research, both in Turkey and in the USA. The latter was chosen to express the western/globalized point of view compared to Turkey as a developing Middle Eastern country, part of which lies in Southeastern Europe (World atlas, 2023). Turkey has a surface area on the European continent with a unique structure that acts as a bridge between regions and provides a transitional mosaic.

The identified landscape indicators were generalized to achieve new criteria for the spatial assessment of slow cities. The index value for each landscape indicator was identified to show the strength and validity of each indicator.

THEORETICAL FRAMEWORK: THE SLOW CITY MOVEMENT

Slow City Movement

The Slow City Movement is an international network of urban areas that prioritize the preservation of local customs and character in their urban planning and policies (Çakır *et al*., 2014). This includes the protection of traditional lifestyles, and food production with local distribution and consumption (Cittaslow International, 2023). These cities challenge the contemporary push towards urban globalization at the forefront of local and regional priorities. Slow cities are "cities that question themselves about how to transform into the globalized world with modernization and globalization without having them lose their original values" (Miele, 2008, p. 135).

On the other hand, The Cittaslow Movement is interested in the importance of space for individuals (Mayer and Knox, 2009), which originated in Europe in response to the fast pace of the West. In this sense, cities must "slow down" to revive the relationship between the urban environment and individuals, protect local values, develop environmental, cultural, and social potentials, and pass them on to future generations (Dogrusoy and Dalgakiran, 2011). With the implementation of slow city criteria, the "destroy and build" culture is abandoned, and a "rediscover and restore" approach is adopted (Dogrusoy and Dalgakiran, 2011). In praise of slowness, two new social movements emerged: slow food and slow cities (Mayer and Knox, 2006). The Slow Food Movement began in 1986 in Rome on the Spanish Steps against the fast-food culture (Petrini, 2011). Then in 1999, the Slow City Movement was established in Greve, Chianti in Italy with an original Italian name, "Cittaslow" (Petrini, 2011). The Slow City Movement spread across the world, first in Germany and then in England, and was introduced in Turkey in 2009. Now, in a network of 287 cities in 33 countries (Cittaslow International, 2022), Turkey has 21 cities in the movement's network (Cittaslow International, 2023).

Cittaslow is a network of cities that are not willing to be one of the homogeneous spaces created by globalization, thus preserving their local identities and characteristics while producing urban policies for themselves.

Besides a limitation on the application process of the Cittaslow candidate, the population of the city should be under 50,000 (Cittaslow Turkey, 2022). The candidate cities must fulfill at least 50% of the slow city movement criteria (see: Table 1) in the evaluation process. The first evaluation is held by the territorial office (Seferihisar, which is the first Cittaslow in Turkey). If the candidate city passes the first stage, the application documents are sent to the international Cittaslow secretariat (Cittaslow International, 2023). Then, if the candidate city passes the second evaluation, it is entitled to receive the Cittaslow certificate at the annual general assembly. The coordination team of each country can increase up the criteria by 20% (Cittaslow Turkey, 2022).

Slow City criteria assessment

Among the slow city criteria, there are a total of 21 criteria related to spatial planning and landscape architecture (Table 1: criteria with ® 10, 12, 13, 14, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 32, 34, 35, 38, 39, 42, and 48). This is a qualitative assessment, based on observation, review and the experiences of the authors. This ratio has a representative power of 29.1% within the total slow city criteria. The criteria directly related to the spatial values are highlighted in the list (with ® in Table 1). Although there are criteria for spatial values, they are not enough to provide a statistical evaluation of the space. With respect to all the criteria, they are inspired by a basis that focuses on infrastructure policies instead of spatial planning discipline. In particular, when the application documents of the slow cities in Turkey are reviewed (Gökçeada municipality, 2010; Halfeti municipality, 2015; Seferihisar municipality, 2008; Taraklı municipality, 2010; Vize municipality, 2011; Yalvaç municipality, 2011; Yenipazar municipality, 2011), the criteria examined are related to infrastructure policies, and values such as air pollution measurements, sea water cleaning rate, drinking water analysis, etc. that have already been evaluated in environmental engineering. In addition, urban design projects and renewable energy restoration projects are mentioned in the application documents (Gökçeada municipality, 2010; Halfeti municipality, 2015; Seferihisar municipality, 2008; Taraklı municipality, 2010; Vize municipality, 2011; Yalvaç municipality, 2011; Yenipazar municipality, 2011). As a consequence, those criteria included as verbal expressions are not sufficient to present an actual evaluation of the original identity and spatial values of the settlement. Ugurlu (2019) investigated the urban design projects in Cittaslow Vize and the effect of the Cittaslow criteria on urban design projects, and as a result of the study the effect of the criteria on urban design projects was determined as 17.42% of the entire 72 Cittaslow criteria. This leads to the conclusion that the slow city criteria are not directly related to urban design projects which contribute to the hypothesis of this research. Moreover, Tural (2018) examined the current situation of the slow city Eğirdir on maps and documented the problems in Eğirdir through photographs. The results of the study suggest that these slow cities as settlements are in need of urgent spatial improvement in their current situation (Tural, 2018). Therefore, the authors of this paper are critical of the existing spatial features among these criteria, and propose the improving landscape criteria, in order to to develop Cittaslow in the context of spatial planning. In order to achieve this, landscape indicators which are significant elements in spatial planning, are used to analyse the Cittaslow movement.

Landscape indicators

There are different perspectives on landscape indicators in the literature. Some definitions focus on the ecological aspects and define the landscape indicators as integral and essential parts for understanding, monitoring, and assessing ecosystems (Gergel, 2005; Sahin *et al*., 2014). On the other hand, some scholars approach from the socio-cultural and spatial perspectives and focus on the physical qualities and spatial changes of the landscape (Brink and Bruns, 2012; Uzun *et al*., 2015; Jones *et al*., 1997). The European Landscape Convention defines landscape as "the interaction and action of individuals with natural and/or human factors" (Council of Europe, 2000, p. 2) and indicators as a hybrid set of values consisting of both the structural and natural features in these landscapes.

There are different definitions according to the landscape indicators. Landscape indicators are important components for understanding and monitoring human impacts on terrestrial and aquatic ecosystems (Gergel, 2005). Measurements of ecosystem components and processes are to understand the entire ecosystem (Sahin, 2014). It is the physical space components with social and cultural connections that enable us to reveal what the landscape is capable of (Brink and Bruns, 2012). The landscape, which is "formed as a result of the interaction and action of individuals with natural and/or human factors", is a hybrid value as indicators, consisting of the combination of both structural and natural features (Council of Europe,

2000, p. 2). Landscape indicators are a synthesis product that expresses the formation of measurable and accessible data that contributes to the monitoring of temporal and spatial changes in landscapes, the definition of landscape analysis information in landscape and ecosystem units, the formation of landscape policies, strategies, and guides (Uzun *et al*., 2015).

Table 1. Slow City criteria
(Source: Adapted by authors using Cittaslow International data, Cittaslow Turkey, 2022)

	List of Slow City criteria
ENERGY AND ENVIRONMENT POLICY	1. Air quality conservation 2. Water quality conservation 3. Drinking water consumption of residents 4. Urban solid separate waste collection 5. Industrial and domestic composting 6. Purification of sewage disposal 7. Energy saving in buildings and public systems 8. Public energy production from renewable sources 9. Reduction of visual pollution, traffic noise **10. Reduction of public light pollution (®:Relevant to landscape architecture)** 11. Electrical energy consumption of resident families **12. Conservation of biodiversity (®:Relevant to landscape arc.)**
INFRASTRUCTURE POLICIES	**13. Efficient cycle paths connected to public buildings ®** **14. Length (in kms) of the urban cycle paths created over the total kms of urban roads ®** **15. Bicycle parking in interchange zones ®** **16. Planning of Eco mobility as an alternative to private cars ®** **17. Removal of architectural barriers ®** **18. Initiatives for family life and pregnant women ®** **19. Verified accessibility to medical services ®** 20. "Sustainable" distribution of merchandise in the urban centers 21. Percentage of residents that commute daily to work in another town
QUALITY OF URBAN LIFE POLICES	**22. Planning for urban resilience ®** **23. Interventions of recovery and increasing the value of civic centers (street furniture, tourist signs, aerials, urban landscape mitigation conservation) ®** **24. Recovery/creation of social green areas with productive plants and/or fruit trees ®** **25. Urban livableness (house-work, nursery, company hours, etc.) ®** **26. Requalification and reuse of marginal areas ®** 27. Use of information and communication technologies in the development of interactive services for citizens and tourists 28. Service desk for sustainable architecture (bio architecture, etc.) 29. Cable network of the city (fiber optics, wireless) 30. Monitoring and reduction of pollutants (noise, electrical systems, etc.) 31. Development of telecommuting **32. Promotion of private sustainable urban planning (passive house, mater. construction, etc.) ®** 33. Promotion of social infrastructure (time-based currency, free cycling projects, etc.) **34. Promotion of public sustainable urban planning (passive house, mater.construction, etc.) ®** **35. Recovery/creation of productive green areas with productive plants and/or of fruit within the urban perimeter ®** 36. Creation of spaces for the commercialization of local products 37. Protection/increasing value of workshops, creation of natural shopping centers **38. Meter cubes of cement (net infrastructures) in green urban areas ®**
AGRICULTURE, TOURISM AND ARTISAN POLICIES	**39. Development of agroecology ®** 40. Protection of handmade and labelled artisan production (certified, museums of culture, etc.) 41. Increasing the value of working techniques and traditional crafts **42. Increasing the value of rural areas (greater accessibility to residential services) ®** 43. Use of local products, if possible organic, in communal public restaurants (school canteens, etc.) 44. Education of flavors and promoting the use of local products, if possible organic, in the catering industry and private consumption 45. Conservation and increasing the value of local cultural events 46. Additional hotel capacity (beds/residents per year) 47. Prohibiting the use of GMO in agriculture **48. New ideas for enforcing plans concerning land settlements previously used for agriculture ®**
POLICIES FOR HOSPITALITY, AWARENESS AND TRAINING	49. Good welcome (training of people in charge, signs, suitable infrastructure, and hours) 50. Increasing the awareness of operators and traders (transparency of offers and practiced prices, clear visibility of tariffs) 51. Availability of the "slow" itineraries (printed, web, etc.) 52. Adoption of active techniques suitable for launching bottom-up processes in the most important administrative decisions 53. Permanent training of trainers and/or administrators and employees on the Cittaslow slow themes 54. Health education (battle against obesity, diabetes, etc.) 55. Systematic and permanence information for the citizens regarding the meaning of Cittaslow (even pre-emptively on adherence) 56. Active presence of associations operating with the administration on Cittaslow themes 57. Support for Cittaslow campaigns 58. Use of the Cittaslow logo in the web page and letterheads
SOCIAL COHESION	59. Multicultural integration 60. Political participation 61. Public housing 62. Hospitality 63. Integration of disabled people 64. Childcare 65. Status of young generation 66. Poverty 67. Social partnership/NGO 68. Minorities Discriminated 69. The availability of a youth center and an area where youth activities are carried out
PARTNERSHIPS	70. Support for campaigns and slow food activity 71. Collaboration with slow food and other organizations promoting natural and traditional food 72. Support for twinning projects and cooperation for the development of developing countries also covering the spread of slow philosophies, e.g., Cittaslow, slow food, etc.

® *Indicates the criterion that directly relates to the spatial values.*

METHODOLOGY

In the method of the study, the literature reviewed on the Slow City (Cittaslow) Movement is explained using the landscape indicators, in the context of the principles of physical planning (Figure 1).

Landscape indicators were quantified within the scope of spatial analysis to obtain an index value using multiple research methods. This is a four-step mix method that includes both qualitative and quantitative units. Statistical and quantitative data obtained from surveys and maps, and contextual data obtained from field studies and observations were included together. The mixed methods used in the study were a comprehensive literature review, survey studies, visual evaluation, and analysis methods that include spatial and morphological analysis.

The index values of the landscape indicators were determined according to the surveys' strength, using the statistical power test in the samples of experts studying the spatial planning area, and the relevant landscape indicators for the Cittaslow criteria were also reviewed. The index values of the landscape indicators were determined from a survey in Turkey and the meaning of the landscape indicators' strength was determined using a survey conducted in the USA. Thus, quantitative values were determined for the landscape indicators. An index value was determined for each new Slow City criterion, and a new criteria list was drawn according to the average of these quantitative values. As a result of this research, landscape indicators that can be used as addition criteria for the slow city assessment system were suggested.

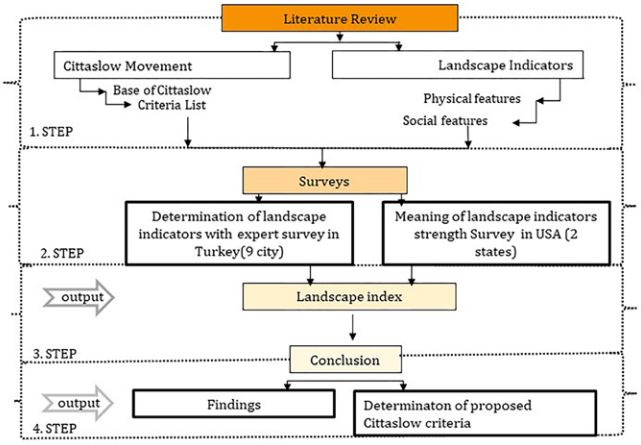

Figure 1. The method of the study
(Source: Authors, 2023)

In the context of the survey conducted in Turkey, one hundred and four valid survey responses were taken from 350 individuals (including academics, municipal urban area personnel, postgraduate students, private-sector employees, etc.) who work in the spatial planning field in Turkey. The first survey was implemented for the year 2018/19 in Turkey, using an online platform (Google documents). Twenty-nine people were reached in the first period, and 75 in the second period. The Statistical Power Analysis was performed twice. The purpose of this analysis was to reveal the representativeness of the minimum population required to generalize the responses to the survey questions. For this purpose, the statistical power analysis was conducted to prove the representation of the sample. The analysis of the survey was carried out by the frequency, factor, and chi-square analysis. The statistical power was obtained as Type 1 error and 68% accuracy at the level of 5% using data from the 29 participants analyzed in the first period. The statistical power was obtained as 82.8% accurate with the addition of 75 participants in the second term. This result indicates that the survey represents the population. Ellis (2010) states that the 80% ratio chosen for the adjustment of the power level needed in statistical studies is an acceptable agreement rate.

In the second survey conducted in the USA, 27 valid online responses were taken from 400 individuals who were academics, municipal-related department employees, and postgraduate students in 2018-2019 using Google documents. In this survey, the questions were not the same as those in the survey conducted in Turkey, and some modifications were made so as to be easily understood in the regional culture. The survey participant groups were different in each country. Thus, the elements for the landscape indicators were not comparable for the two different countries in the study. The aim of the survey conducted in the USA was to show another perspective regarding landscape indicators in other countries. The index value of the indicators was calculated from the survey conducted in Turkey for the representation of a wider group of participants. The Turkish results of the survey on the elements of landscape indicators were not given separately because the index result was calculated from these indicators.

In the analysis of the survey data, the IBM SPSS Statistics 20 program was used to analyze the closed-end questions. To determine the statistical data, frequency (n) and percentage (%) values were used. The statistical discrepancy was stated as $p < 0.05$. This value states that the comparison of the data is meaningful. With this analysis, the frequency of the results was determined, and according to the results the popular 6-point Likert scale model used (Point 0. No idea / I don't know / no answer, Point 1. Certainly not important, Point 2. Not important, Point 3. Neutral, Point 4. Important, Point 5. Highly important). According to 6 point each scale percentage value was calculated as 16.66%.

Some questions were revised specifically for the survey conducted in the USA. Firstly, some of the questions were eliminated to adapt the survey to the lifestyle of people in the USA. The questions were addressed through 34 landscape indicators in four different categories, which were originally 44 units, as seen in Table 2. This revision came to the fore in the system of the USA, since standardization was preferred over cultural values, history, and the locality.

Natural Environment elements were divided into five basic factors by generalizing them under limited main headings, so the natural environment element indicators (Table 2) 2, 6, 7, 9, and 10 were not included in the survey. Therefore, the natural environmental features were held in five basic parameters: topography, flora-fauna, water availability, land mosaic, and biodiversity indicators.

In the built-environment parameters, the questions adapted for the survey conducted in the USA were classified under two different categories: use and spatial. In addition, two different parameters, which are in the sociocultural indicators' openness features and variety of space features are among the spatial categories in the built environment elements. The differences between the historical, cultural, and social developments of the USA and Turkey have led to cities being shaped differently. The historical highlighting of USA towns is not predominant. Therefore, a total of 18 parameters were considered as built environment elements. The built environment use category is in Table 2 as the first eight elements, and after that the remaining elements are in the spatial category. Elements 8, 14 and 15 in the built environment section of Table 2 were not included in the survey carried out in the USA.

In parameter 4 of socio-cultural elements, "Existence of aesthetically qualified viewpoints" was excluded because it was answered with the topography questions in the environmental elements. In addition, the existence of cultural rituals (wedding ceremonies, festivals, etc.) parameter was included in the survey conducted in the USA to fit well with the US lifestyle. The sustainability value was evaluated in the instructional value (Table 2 section socio-cultural parameter elements 8 and 9). And the socio-economic elements were the same in both surveys.

In the study, the landscape indicators were held in two main categories: physical features and social features (Erdem Kaya *et al.*, 2018). In the physical features, the elements of the natural environment and built environment were subcategories, while sociocultural and socioeconomic elements were the subcategories of social features.

FINDINGS AND DISCUSSION

Survey results

According to the results of the demographic analysis of the survey completed in Turkey, the gender ratio was 71% female and 33% male. The age group with the greatest representation among the participants was 22 to 44, with young and adult status. The participants were from nine different cities in Turkey (Ankara 54.8%, Istanbul 26.9%, Düzce and Kırklareli 2.9%, Balıkesir 1.9% and Adana 1%). Most of the participants worked in the public sector (71.2%), whereas private sector representation was 19.2%. Most of the participants' professions were landscape architecture

Table 2. Landscape Indicators according to the survey results

LANDSCAPE INDICATORS			
Physical features		**Social features**	
Natural environment elements	**Built environment elements**	**Socio-cultural elements**	**Socio-economic elements**
NE 1. Land mosaic structure (patch, corridor, matrix) have the spatial equivalents. NE 2. Preference of vegetation (hedge, boundary elements, roof, etc.) instead of structural material. NE 3. Presence of biological diversity (diversity of living organisms; wildlife, marine life, etc.) NE 4. Dominant geographic features / topography status (mountains, plains, valleys, hills, shore) NE 5. Dominant flora, fauna type and distribution areas NE 6. Vegetation structures used in the city (types of plants, shrubs, trees, ground cover, trees, etc.) NE 7. Presence of the green-earth space / permeable surfaces in urban parks NE 8. The presence of water resources (wetland, basin, sources, lakes, streams, rivers) NE 9. The presence of life-providing areas (air, soil, water, etc.) kind basic materials production NE 10. Presence of green areas (parks, gardens, groves, semi open gardens)	BE 1. Open space types (squares, gathering areas, courtyards, places between buildings, etc.) BE 2. Existence of bicycle roads BE 3. Types of urban furniture (benches, pots, lighting elements, trash cans, mailboxes, orientation signs, unobstructed vehicles, manhole covers, etc.) BE 4. Areas used for parking (bicycles, motorcycles, car parking spaces) BE 5. Street structures (width, type, etc.) BE 6. Existing commercial centers in cities BE 7. Presence of pedestrianized areas and pedestrian paths BE 8. Permeable surfaces rate (buildings, roads, etc.) how long/how many square meters are they? BE 9. Pavement types/length, etc. BE 10. Physical details of the current buildings (features of roofs/eaves/chimneys, building entrances, window-door features, etc.) BE 11. Physical properties of current buildings (floor height, building density) BE 12. Presence of restored historical units BE 13. Presence of public buildings (administrative, artistic structures, etc.) BE 14. Periodic presence of architectural elements (such as khans, palaces, caravanserais, fountains, mansions, narrows, bedestens, etc.) BE 15. Skyline view of cities (horizontal view of architectural buildings) BE 16. Existence of elements describing the city boundaries (inter-city roads, coastal, rivers, railways, cliffs, city walls, etc.) BE 17. Existence of local architectural elements BE 18. Features of residential areas (detached houses, apartment buildings, housings, etc.)	SC 1. Presence of openness features (Perceiving space as a visible area that can move freely) (Appleton, 1975) SC 2. Existence of areas that provide easy access to local products SC 3. Variety and diversity of cultural landscape elements and landscape characteristics (Clay and Schmidt, 2004) SC 4. Existence of aesthetically qualified Viewpoints SC 5. Existence of healing landscapes (landscapes which physically and spiritually feel good to individuals) SC 6. The quality of cultural heritage (important sacred landscapes, crafts, architectural elements, etc.) SC 7. The purpose of the use of open spaces (gatherings, activities, sports, etc.) SC 8. Existence of the instructional values (obtaining information about the environment) SC 9. Existence of Sustainability Values (landscapes that make information accessible for future generations) SC 10. The quality of the historical heritage (landscapes with historical features) SC 11. Presence of cultural rituals (weddings, festivals, celebrations)	SE1. Educational profiles SE2. Household income levels SE 3. Population characteristics (density, seasonal changes, etc.) SE 4. Basic economic activities (agriculture, industry, trade, tourism, etc.) SE 5. Basic land uses on the neighborhood (agriculture, industry, forest, pasture, etc.)

at a rate of 47.1%, followed by an architectural background at a level of 14.4%, and urban-planning at the same level. In respect to the level of education, 36.5% held bachelor's degrees, 33.7% held master's degrees, and 29.8% held PhDs.

The outputs of the demographic analysis of the survey conducted in the USA are as follows: participants were nearly at the same level in terms of gender, but male participants predominated at a rate of 52%. The age scale between 35 and 44 had the highest level of participation at 34.6%, while the age groups between 25 and 34 and between 55 and 64 had the same participation level at 23.1%. The age group between 45 and 54 had the least participation, and there was no participant below 25 years old. Most participants in the survey were from the public sector (77.8%). The participants' educational level was the same for master's degrees and PhDs at 48%, but bachelor's degrees were almost entirely absent. Two cities were involved in the research: Seattle, Washington and Portland, Oregon. Academics had a greater representation (51.9%) than other professions. Five representation rates for professional disciplines included landscape architecture at 63%, which was the highest level, followed by landscape planning at 11.1%.

In the survey results found in Turkey most participants agreed with the definition of landscape indicators of Uzun *et al.* (2015). However, in the survey results found in the USA, most participants join the definition by the Council of Europe (2000).

In this study, landscape indicators are redefined according to the results of the survey as a combination of the most important values. They are the landscape products that contribute to the monitoring of temporal and spatial changes in landscapes, the definition of ecosystem units and the formation of landscape policies and strategies in the process of understanding, evaluating, and analyzing the physical and social features of the landscape "which is formed because of the interaction and action of individuals" with natural factors (Council of Europe, 2000, p. 2). Landscape indicators are the set of raw or analyzed data that allows us to reveal the effect of the landscape on the environment, ecosystem, and humans.

The results of the survey carried out in the USA to detect the landscape indicators are held in four main categories:

Natural environment: All the parameters were considered important as indicators of landscape. In the total amount of important and highly important scales, dominant topography (100%), flora-fauna (92.9%) and water resources (96.2%) were prominent components. The land mosaics (81.5%) and bio-diversity (66.6%) components followed, respectively.

Here, when we consider the neutral value, the biodiversity parameter appears to be significantly lower than the others. The possible cause is the difference in scale amongst the questions, because biodiversity is an element that needs to be studied on a regional scale, and the others mentioned above can be separated from the parameters. Moreover, the biodiversity parameter will be more challenging in the analysis of a natural space.

Built-environment: This parameter was held in two categories: uses and spaces. The results of the survey in the built environment parameters reveal that the evaluation of the scale is a priority. The parameters for the details of the urban/architectural design scale, which are among the micro-scale elements of the city, were found to be less important than the macro-scale elements among the landscape indicators.

Socio-cultural: In the analysis of the socio-cultural elements, it was seen that the outputs were nonphysical parameters, and therefore they were considered secondarily, respecting the prioritization. Since healing landscapes are good for people's mental health, instructional and sustainable landscapes are the factors that have outputs with regard to people's mental health. As a result of this fact, socio-cultural parameters are indirectly related with space. And it is also estimated that the neutral responses were concentrated because they were indirectly related with space.

Socio-economic: The basic economic activities and the basic land cover diversity also had the same percentage, which is 88.9% in the total calculation of the "important + very important" category, followed by population characteristics at 81.4%, then the household income level was 44.4%, and education level 40.7%. Accordingly, as the ratio of all parameters was higher than 70% when neutral responses were added, the acceptability of all five parameters as indicators was confirmed on the US scale.

Index calculation process

The indexes were calculated using a 6-point scale (1: Not at all important, 2: Not important, 3: Neutral, 4: Important, 5: Highly Important, 0: No idea/I don't know/no answer). The weighted result of each element in the landscape indicators were calculated using the 6-point scale. The calculation is shown in Tables 3 and 4 for one sample indicator in detail.

In the total survey, there were 104 valid responses. If everybody had said "Highly important" the score would be: 104 * 0.333 = 34.632. Therefore, the sample indicator score is 28.836. This sample index value (weighted effect) from 1 was obtained as (28.836/34.632) *1= 0.83264. The same calculation method was used for the other questions (Hirsch *et al.*, 2004).

The index level is shown between 0 and 1 in the results of the survey. The minimum index was calculated as 0.66, which means 66% in the percentage scale. This minimum level was around 70%, so it is a well-accepted validity number that all the landscape indicators in the study were approved as the valid elements. The landscape indicators and indexes are listed in the tables below (Table 3 and Table 4).

Findings from Slow City criteria and landscape indicators

In the research, landscape indicators were obtained through surveys conducted in the USA and Turkey. Since the participation rate in the survey results obtained in the USA was low, it was not used in the index calculations. However, since the corrections made in the USA survey questions contributed to the international validity of the research, the new slow city criteria proposals that emerged at the end of the study were evaluated with the working principles reconsidered in the USA in this context.

Table 3. The sample indicator index calculation process

Land mosaic structure (patch, corridor, matrix) have the spatial equivalents				
Answers	**Response number**	**Weighted questions**	**Question weighted value (weigh. quest. /15)**	**Total index score of quest. (number * weigh. quest.)**
No idea/I don't know/no answer	5	0	0	0
Not at all important	2	1	0.066 (1/15)	0.132
Not important	3	2	0.133 (2/15)	0.399
Neutral	6	3	0.202 (3/15)	1.212
Important	33	4	0.266 (4/15)	8.778
Highly important	55	5	0.333 (5/15)	18.315
TOTAL	**104**	**15**	**1**	**28.836**

Table 4. The index value of each landscape indicator

Natural environmentindicators	**Index unit**
Land mosaic structures (patch, corridor, matrix) have spatial equivalents	0.83
Preference of vegetation (hedge, boundary elements, roof, wall, etc.) instead of structural material	0.80
Presence of biological diversity (diversity of living organisms; wildlife, marine life, etc.)	0.80
Dominant geographic features/topography status (mountain, plain, valley, hill, shore)	0.73
Dominant flora, fauna type and distribution areas	0.79
Vegetation structures used in the city (types of plants, shrubs, trees, ground cover, etc.)	0.71
Presence of green-earth spaces/permeable surfaces in urban parks	0.80
The presence/nature of water resources (wetland, basin, source, lakes, streams, rivers)	0.74
The presence of life providing areas (air, soil, water, etc.) is the spatial projection of basic material production	0.70
Presence of green areas (parks, gardens, groves, semi-open gardens) have spatial equivalents	0.68
Built environment indicators	
Open space types (squares, gathering areas, courtyards, places between buildings, etc.)	0.81
Existence of bicycle roads	0.81
Periodic presence of architectural elements (such as khans, palaces, caravanserais, fountains, mansions, narrows, bedestens, etc.)	0.83
Permeable surfaces rate (buildings, roads, etc. how many square meters they are)	0.73
Pavement types/length, etc.	0.72
Presence of public buildings (administrative, artistic structures, etc.)	0.77
Types of urban furniture (benches, pots, lighting elements, trash cans, mailboxes, orientation signs, unobstructed access units, manhole covers, etc.)	0.76
Physical properties of current buildings (floor height, building density)	0.76
Areas used for parking (bicycles, motorcycles, car parking spaces)	0.70
Presence of restored historical units	0.77
Skyline view of cities (horizontal view of architectural buildings)	0.80
Existence of elements describing the city boundaries (inter-city roads, coastal, rivers, railways, cliffs, city walls, etc.)	0.78
Street structures (width, type, etc.)	0.73
Existence of commercial centers in cities	0.77
Physical details of current buildings (features of roofs/eaves/chimneys, building entrances, window-door features, etc.)	0.78
Presence of pedestrianized areas and pedestrian paths	0.72
Existence of local architectural elements	0.73
Features of residential areas (detached houses, apartment buildings, housing, etc.)	0.75
Socio-cultural elements	
Presence of openness features (perceiving spaces as visible areas that can move freely) (Appleton, 1975)	0.81
Existence of areas that provide easy access to local products Variety and diversity of cultural landscape elements and landscape characteristics (Clay and Schmidt, 2004)	0.77
Existence of aesthetically qualified viewpoints	0.77

Existence of healing landscapes (landscapes which physically and spiritually feel good to individuals)	0.71
The quality of cultural heritage (important sacred landscapes, crafts, architectural elements, etc.)	0.76
The purpose of the use of open spaces (gatherings, activities, sports, etc.)	0.70
Existence of instructional values (obtaining information about the environment and recognizing nature)	0.76
Existence of sustainability values (landscapes that make information accessible to future generations)	0.70
The quality of the historical heritage (landscapes with historical features)	0.78
Presence of cultural rituals (weddings, festivals, celebrations)	0.70
Existence of areas that provide easy access to local products	0.71
Socio-economic values	
Educational profile	0.75
Household income level	0.67
Population characteristics (density, seasonal changes, etc.)	0.66
Basic economic activities (agriculture, industry, trade, tourism, etc.)	0.73
Basic land uses of the neighbourhood (agriculture, industry, forest, pasture, etc.)	0.71

In order to obtain holistic and comparative data on the spatial values of the city, values that will handle the whole system and their quantitative equivalents are needed. For this reason, a set of criteria suggestions is listed by their index values (Table 4) obtained in the research from the physical and social landscape indicators.

Since the lowest percentage of index values obtained within the scope of the research was around 70%, a valid index value was calculated for all questions asked in the questionnaire. Thus, in the study, obtaining a valid index value for all indicators which were proven to be necessary with surveys was possible. Therefore, the indicators obtained that are not included in the slow city criteria system, are presented as newly proposed criteria.

The criteria and indicators are matched to analyse whether they provide each other with relevance or remain idle in some areas. The white area represents the unrelated sections (score 0), and the green areas (score 1) represent the relevant sections (Table 5). The total score, 3.168 units, of the calculated evaluation of the total row and column (Table 5) was determined by the authors, with the analysis obtained as a result of the evaluation of 44 landscape indicators (Table 2) and 72 slow city criteria (Table 1), one by one using qualitative methods. As a result of this analysis, the remaining values in the relevant field were 416 units, which is 13%. It was possible to interpret the table from two different perspectives; landscape indicators and slow city criteria.

The relevance is provided by 5.8% in energy and environment policy, 3.3% in infrastructure policy, 38.3% in quality of urban life policies, and 8.8% in agriculture, tourism, and artisan policies, but the other three policies are irrelevant when examined from the landscape indicator perspective, according to the natural environment indicators provided within the criteria. Moreover, the built environment indicators are provided at a rate of 35.2% in the quality of urban life policies. The other policies are mostly irrelevant. The representation rate of sociocultural indicators is 38.3% in the quality of urban life policies, 23.23% in agriculture, tourism, and artisan policies, and 18.18% in the policy for hospitality, awareness and training. But the other policies are mostly irrelevant.

When the indicators are examined by the criteria, four criteria under the title of urban quality of life policies have the highest provision rate, as follows: planning for the city's resilience (42), promotion of personal sustainable urban planning (42), support social infrastructure (43), and promotion of public sustainable urban planning (43). The following high rate is again the same policy criterion: programs for improving the values of the city and increasing the values of city centers and public buildings (31).

The rate of providing indicators for the criteria in urban life policies is higher than the other criteria. While it is seen that 6 out of 17 criteria listed here provide indicators at a very high rate, the same high rate is not dominant in other criteria. The provision rate in other policy headings is also quite low. In particular, in the criteria of social cohesion, hospitality, and partnerships, it is seen that there is almost no relevance.

Suggestions for new evaluation criteria

There is not enough input to provide the necessary analysis in terms of the landscape evaluation of the space in the system of slow city criteria, which includes 72 items consisting of seven main headings (Table 1). For this reason, the new criteria proposed to be used in the spatial evaluation of slow cities were categorized according to the settlement scale as landscape indexes. Thus, all spatial indicators are discussed under two separate scale titles. One of them is the macro (general) scale, which deals with the settlement area and its immediate surroundings. The other is the micro (detailed) scale, which deals with the interior of the settlement and its physical structure (Table 6). This new criteria proposal list has been adapted from the eliminated landscape indicators. The authors suggest that landscape indicators should be considered as spatial evaluation criteria, in addition to slow city criteria.

CONCLUSION

This research paper links the landscape architecture with the Cittaslow network in the evaluation of space. It is believed that all the parameters used in the survey can be used as

Table 5. The relevance analysis of landscape indicators and Slow City criteria

		LANDSCAPE INDICATORS																																										
		NATURAL ENVIRONMENT										BUILT ENVIRONMENT																		SOCIO-CULTURAL											SOCIO-ECONOMIC					
CITTASLOW CRITERIA		NE1	NE2	NE3	NE4	NE5	NE6	NE7	NE8	NE9	NE10	BE1	BE2	BE3	BE4	BE5	BE6	BE7	BE8	BE9	BE10	BE11	BE12	BE13	BE14	BE15	BE16	BE17	BE18	SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9	SC10	SC11	SE1	SE2	SE3	SE4	SE5	SUM
ENERGY AND ENVIRONMENT POLICY	1.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	2.	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	3.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	4.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5.	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
	10.	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	11.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
INFRASTRUCTURE POLICIES	13.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	14.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	15.	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	16.	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	17.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	18.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	3
	19.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	20.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
	21.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2
QUALITY OF URBAN LIFE POLICES	22.	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	42
	23.	0	1	0	0	0	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	0	0	0	1	31
	24.	0	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1	13
	25.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	26.	0	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	0	0	10
	27.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	28.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	29.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	30.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	31.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
	32.	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	42
	33.	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	43
	34	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	43
	35.	0	1	1	0	1	1	1	0	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	14
	36.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	0	1	0	0	0	0	1	17
	37.	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	0	0	0	0	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	0	1	0	0	0	0	1	17
	38.	0	1	1	0	0	0	1	0	1	1	0	0	0	0	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	39.	1	0	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
AGRICULTURE, TOURISM AND ARTISAN POLICIES	40.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	1	0	1	0	0	0	1	0	7
	41.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	1	0	5
	42.	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	43.	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
	44.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
	45.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
	46.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	47.	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1	1	0	0	0	0	1	9
	48.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	0	0	3
POLICIES FOR HOSPITALITY, AWARENESS AND TRAINING	49.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	50.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	0	0	0	0	4
	51.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	1	1	0	0	1	1	1	0	0	0	0	0	11
	52.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	53.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
	54.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	55.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	56.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	57.	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	0	1	0	1	0	1	0	0	0	10
	58.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
SOCIAL COHESION	59.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2
	60.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
	61.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2
	62.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	3
	63.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	64.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	65.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
	66.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2
	67.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3
	68.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
	69.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2
PARTNERSHIPS	70.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
	71.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
	72.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
	SUM	4	9	13	5	7	7	9	8	14	9	12	8	6	6	9	9	10	7	6	3	8	9	10	10	5	5	10	9	8	12	12	8	11	14	12	6	23	9	29	7	8	7	13	11	-

landscape indicators, related to the results of the research that was carried out to determine them. Thus, this fills in the gaps in the Cittaslow criteria system, which needs more spatial parameters in order to analyze the physical aspects of the cities. This is the significant aspect of the study, which improves the criteria system in terms of spatial evaluation.

When the analysis of the survey conducted in the USA was viewed, it was determined that the Cittaslow Movement is not common in the USA, because current philosophies such as urban sprawl-monocentric city models (Nechyba and Walsh, 2004), *fast urbanization,* and *vehicle dependent living* in the USA are in contrast with the Cittaslow Movement.

Table 6. New evaluation criteria proposal – landscape indicators

New spatial evaluation criteria based on landscape indicators	
Macro scale	**Micro scale**
1. Land mosaic structures (patch, corridor, matrix)	1. Vegetation (hedge, boundary elements, roof, wall, etc.) instead of structure
2. Deographic features / topography status (mountain, plain, valley, hill, shore)	2. Biological diversity (diversity of living organisms; wildlife, marine life, etc.)
3. Flora & fauna	3. Vegetation structure used in the city
4. Water resource	4. Presence of green-earth space/ permeable surfaces in urban parks
5. Ecosystem services	5. Open space types
6. Green areas (parks, gardens, groves, semi-open gardens)	6. Bicycle roads
7. Existence of areas that provide easy access to local products	7. Architectural elements
8. Vista points	8. Permeable surfaces rate
9. Cultural heritage	9. Public buildings
10. Existence of instructional values	10. Urban furniture
11. Existence of sustainability values	11. Physical properties of current buildings
12. Historical heritage	12. Pavement type/length, etc.
13. Cultural rituals	13. Parking lots
14. Land use	14. Presence of restored historical units
	15. Existence of commercial center in cities
	16. Physical details of current buildings
	17. Presence of pedestrianized areas and pedestrian paths
	18. Local architectural elements
	19. Residential areas
	20. Purpose of use of open spaces

The USA and Nations of Western Europe have experienced markedly different patterns of urban development (Nechyba and Walsh, 2004). Nevertheless, it is an attractive and exciting topic for the USA. Differences between the historical, cultural, and social developments of the two countries (USA and Turkey) have led the cities to be shaped differently. Historical areas in Europe and Turkey, known as "old towns," are referred to as "downtown" in the USA. These act mainly as cities' main centers, commercial units, business centers, and residential areas. Moreover, educational, and public buildings tend to be located in downtown areas. This contrasts with other living spaces, such as residential areas far from city centers, and the country's most common transportation method is the car. The survey was carried out using the revised questions (explained in the methodology) because of differences in lifestyle in the USA. However, it is important to collect worldwide responses about landscape indicators, in order to understand international acceptance of the topic.

Landscape indexes can be used to reveal the similarities and/or differences in the settlements defined as "slow cities", and indexes also have advantages that should be discussed to clarify to what extent the slow city criteria are sufficient for evaluating spatial qualities.

While the field studies within the scope of landscape indicators were examined, it became clear from the application documents of 7 cities (Gökçeada, Yalvaç, Seferihisar, Tarakli, Vize, Halfeti, Yenipazar) that are members of the slow city Turkey network, that there is no connection between the numerical equivalents of the places in the existing slow cities, or the slow city criteria (Gökçeada municipality, 2010; Halfeti municipality, 2015; Seferihisar municipality, 2008; Taraklı municipality, 2010; Vize municipality, 2011; Yalvaç municipality, 2011; Yenipazar municipality, 2011; Aydoğan, 2015). Moreover, there are some researchers (Demirant, 2022, Özgeriş and Karahan, 2021; Kıran Çakır *et al.*, 2022; Tural, 2018) who support the requirement of the missing methodology in spatial analysis for Cittaslow.

The above-mentioned research supports the requirement of the hypothesis of the study that the current Cittaslow criteria system does not provide a spatial assessment for the candidate cities to become Cittaslow-approved. It is necessary to reveal the parameters subject to the spatial characteristics and determine their qualitative equivalents so as to achieve an objective evaluation of the criteria system that proposes new criteria based on the landscape indicators (critical parameters to evaluate the physical conditions of the landscape).

Within the scope of the third research question that guides the research (Do the slow city criteria provide an evaluation opportunity for the determination or measurement of the cities' landscape indicators?), it is possible to respond with the power of the existing slow city criteria to provide landscape indicators determined at a rate of 13% (Table 5). Slow city criteria can provide limited information about the

texture and physical quality of the settlement. Numerical information (length of bicycle paths in km, etc.) required by the slow city criteria in environmental policies is not sufficient to declare the settlement to be a slow city. Hence, this information can give a very limited idea about the place, causing other important elements to be left unanswered. It is highlighted in the study that the slow city movement can be considered on macro and micro scale landscape indicators; thus, it is possible to make a more holistic assessment of spatial qualities. In addition, unlike the evaluation system used by the slow city movement, it is also necessary to have several evaluation criteria to understand the spatial quality, and these evaluation criteria are obtained by means of landscape indicators in the study.

This research was structured around a mixed methodology to find answers to the research questions. An in-depth literature review was conducted in order to understand the current conditions of the slow city concept, and to reveal the gap in the existing assessment system for the slow city network. To fill the gaps, new criteria were proposed based on landscape identity, in order to bring a new aspect to the evaluation of the spatial structure of slow cities, which was considered as one of the most important components of these cities, as they represent unique spatial settings. However, with the lack of a spatial approach to the assessment criteria, the concept of landscape was introduced as a holistic approach to assess the spatial setting of slow cities. This holistic approach comes from The European Landscape Conventions' landscape definition, as a result of the cultural interaction of people with the land. Landscape is a concept in which its components need to be both protected and used, in order to make a conceptually more holistic evaluation. In this regard, landscape indicators were identified both in the literature review and surveys, which were constructed for the research conducted both in Turkey and the USA. As a result of the survey, landscape indicators were defined and adapted to new criteria proposed for declaring cities as slow. The landscape indicators are listed in Table 2 as a response to the second research question. It was found that new current assessment criteria did not include landscape indicators and could not provide an objective evaluation for spatial character. Therefore, landscape indicators were identified and qualified with indexes to show the validity and dominancy of each criterion.

In conclusion, the slow city concept cannot be limited to the qualities of economic growth, population, type of production, energy budget, infrastructure and services. Slow cities also represent unique examples of physical settings in harmony with the surrounding nature. In order to protect and value their spatial character, a more comprehensive evaluation system is required. This research shows how landscape-based ideas can be utilized as spatial assessment tools by introducing landscape indicators that can be added as a new set of criteria to the existing evaluation system.

ORCID

Müge Tokuş Coşgun https://orcid.org/0009-0008-2231-797X

Meltem Erdem Kaya https://orcid.org/0000-0002-3272-3049

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