CONTEMPORARY METHODOLOGICAL APPROACHES IN LANDSCAPE ARCHITECTURE

EDITOR

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DOI:10.5281/zenodo.19128492

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Editor

Prof. Fürüzan Çelik, Ph.D.

Publisher
Platanus Publishing®

Editor in Chief
Prof. Fürüzan Çelik, Ph.D.

Cover & Interior Design
Platanus Publishing®

The First Edition
March, 2026

ISBN
978-625-8513-72-7

Platanus Publishing®
Address: Natoyolu Cad. Fahri Korutürk Mah. 157/B, 06480, Mamak, Ankara, Turkey.

Phone: +90 312 390 1 118
web: www.platanuspublishing.com
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CHAPTER 1

Public Space as Method: Democratic Practice, Participation, and Everyday Use in Urban Design and Planning

Hanife Vardi Topal[1]

1. Introduction

Public space has long been central to architecture and urban planning. It is not only a physical environment but also a critical space where social relations, power structures, and democratic practices become publicly apparent (Carr et al., 1992; Carmona, 2010; Hall & Tewdwr-Jones, 2010). In recent years, studies on public space have moved beyond questions of form and function. They now address broader issues such as governance, participation, inclusivity, and everyday use (Low, 1999; Miller, 2007; Mitchell, 2003). This chapter approaches public space not only as a design object or a place for social interaction. It considers public space as a field where democratic practices, planning processes, and everyday urban experiences can be analyzed and interpreted.

From a methodological perspective, public space offers a unique empirical and conceptual ground. It is one of the few urban environments where collective action, social diversity, and power relations appear in observable and spatially located forms (Whyte, 1980; Gehl, 2011). Decisions made in planning and design processes become concrete in public space. These decisions concern access, regulation, participation, and management. They determine who can be visible, who can stay, who can act, and who can demand visibility (Lefebvre, 1968; Franck & Stevens, 2006; Loukaitou-Sideris & Ehrenfeucht, 2009). For this reason, public space functions as a bridge between planning theory and practice. It makes it possible to observe how abstract ideals such as democracy, inclusivity, and participation turn into spatial outcomes (Carmona, 2010; Schneekloth & Shibley, 1995).

Democracy has become one of the most important themes in public space research. Many scholars have examined the complex relationship between public space and democratic life. They have focused on how public spaces enable or limit collective expression, negotiation, and political public presence (Low, 1999; Miller, 2007; Mitchell, 2003; Parkinson, 2009). In recent years, digital communication and social media have rapidly transformed public discourse. However, the importance of physical public space has not decreased. Instead, the

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growing literature on online and mediated public space has raised an important methodological question: What is the role of physical public space in democratic practice in the digital age? (Parkinson, 2012). This chapter takes this question as its starting point. It argues that physical public space remains essential because it offers spatial and performative qualities that cannot be fully reproduced online.

Democratic systems depend on the ability of citizens to express their interests, voice their demands, negotiate, and monitor power. Digital platforms make communication and organization easier and faster. Yet physical public spaces remain the places where democratic practices gain public recognition, legitimacy, and impact (Parkinson, 2009, 2012). The bodily presence of people in space, the occupation of streets and squares, and the collective use of public environments transform abstract political demands into concrete spatial events (Mitchell, 2003; Lefebvre, 1968). Methodologically, these practices allow democracy to be studied not only through institutions or discourse, but also through spatial behavior, visibility, and use.

Beyond democratic action, public space is also at the center of social and cultural life. Everyday practices such as sitting, standing, gathering, watching, and lingering show how different groups experience the city. They also reveal how people negotiate ways of living together (Whyte, 1980; Gehl, 2011, 2013; Stevens, 2007). These practices are shaped by planning decisions, design features, and management strategies. Such factors can either support or limit social and cultural diversity (Low et al., 2009; Thompson & Travlou, 2007). Therefore, issues of inclusivity and exclusion are not only social problems. They are also methodological entry points for understanding how public space is produced, regulated, and experienced (Loukaitou-Sideris & Ehrenfeucht, 2009; Cybriwsky, 1999).

This chapter positions public space at the intersection of democracy, participation, and everyday use. It treats public space both as a research subject and as a methodological tool for urban design and planning studies. By reviewing key theoretical debates and empirical studies, the chapter shows how public space can be read as an indicator of planning ideologies, participatory practices, and governance structures (Arnstein, 1969; Davidoff, 1965; Sanoff, 2000, 2006). With this approach, the chapter contributes to methodological discussions in architecture and planning. It demonstrates that abstract concepts such as power, citizenship, and participation can be systematically examined through spatial practices and lived experiences (Zeisel, 2006a, 2006b; Creswell, 2013).

To clarify this methodological position, Figure 1 conceptualizes public space as an analytical bridge. It connects democratic practice, participation, and everyday use within the context of urban design and planning. These dimensions are not treated as separate research areas. Instead, the figure shows how public space integrates them through spatial practices. Democracy is understood through collective presence and shared space. Participation is examined through decision-making processes and power relations. Everyday use is observed through practices such as staying in and occupying space. Together, these dimensions present public space as a field where planning ideals become lived spatial experiences and where design decisions can be empirically evaluated.

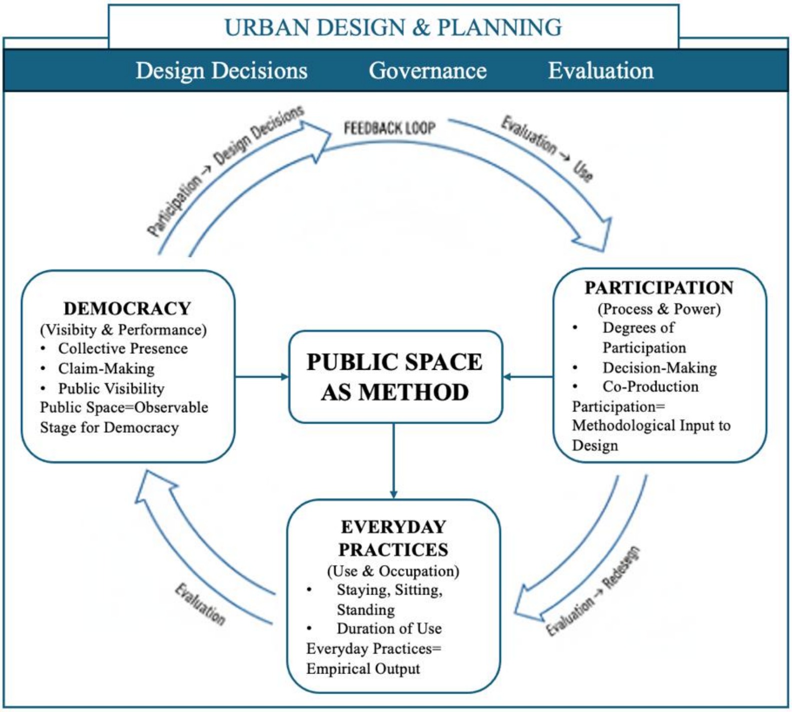

Figure 1. Conceptual framework illustrating public space as a methodological interface linking democratic performance, participatory processes, and everyday spatial practices within urban design and planning.

2. Public Space and Democracy: Visibility, Power, and Collective Claim-Making

Public space has long been theorized as a central stage of democratic life. These spaces have been understood as areas where citizens express their demands, negotiate differences, and expose power relations. In urban studies, democracy is not only seen as an institutional arrangement. It is also viewed as a practice performed spatially in streets, squares, and parks (Low, 1999; Mitchell, 2003; Parkinson, 2009). From a methodological perspective, public space provides a critical ground for observing how democratic ideals are realized, questioned, or limited through spatial practices.

Parkinson (2009, 2012) conceptualizes democracy as a collective decision-making system. This system involves expressing interests, presenting public demands, negotiating alternatives, and monitoring those in power. These processes can be carried out through formal political institutions. However, Parkinson emphasizes that physical environments are also needed where citizens can gather collectively and visibly. In this sense, public space functions as a performative field where democratic practices gain legitimacy through bodily presence and spatial occupation. Methodologically, this framework allows researchers to analyze democracy not only through discourse or policy, but also through observable spatial behaviors such as gathering, protesting, and occupying space.

The rise of digital communication technologies has led to debates about whether physical public space is still necessary for democratic practices. Online platforms enable the rapid spread of information and make organization across distances easier. However, these platforms lack the bodily and spatial dimensions that define collective presence in public space (Parkinson, 2012). As Mitchell (2003) argues, electronic communication alone cannot replace the political importance of physical occupation. Drawing on Lefebvre's (1968) concept of the production of space, Mitchell emphasizes that democratic rights, especially the right to the city, are realized through spatial practices that expose social struggles.

Empirical studies also demonstrate the continuing importance of physical public space for democratic action. Protests and social movements, including those initially organized through digital media, ultimately rely on the occupation of streets and squares to gain public prominence and momentum. The physical presence of crowds symbolizes collective power in ways that online expressions alone cannot achieve (Mitchell, 2003; Parkinson, 2009, 2012). From a methodological perspective, such events illustrate that public space functions as an empirical field where democratic performance can be observed, documented, and analyzed through spatial indicators such as forms of gathering, movement patterns, and the duration of occupation. By examining how public spaces are temporarily transformed through protest, assembly, and collective presence, researchers can empirically assess the relationship between public recognition, power, and democratic practice in urban environments (Mitchell, 2003; Parkinson, 2012). Some examples include the occupation of Tiananmen Square in 1989, Tahrir Square during the Arab Spring, and mass demonstrations in central urban spaces across Europe and North America, all of which relied on sustained physical presence to generate political attention and influence.

Visibility lies at the center of the relationship between public space and democracy. Public space allows political demands to be seen, heard, and recognized by both other citizens and authorities. As Parkinson (2009) argues, physical gatherings attract media attention and strengthen political messages, thereby reinforcing the performative dimension of democratic action. This dynamic is evident in large-scale demonstrations such as the Women's March, where the occupation of streets and squares transformed political claims into highly visible public performances. Empirical studies of the Women's March demonstrate how bodily presence in public space enabled diverse political demands to gain visibility through spatial concentration, collective symbolism, and media circulation (Fisher et al., 2017; Weber et al., 2018). Such events not only amplified political messages but also rendered underlying inequalities, exclusions, and conflicts apparent in spatial form. Methodologically, examining who becomes visible in public space, under what conditions, and with what outcomes provides critical insight into the democratic quality of urban environments (Parkinson, 2012; Mitchell, 2003).

The literature shows that public space remains essential for democracy because it enables democracy to be performed spatially. By analyzing patterns of visibility, spatial occupation, and collective claims, public space can be used as a methodological lens to examine how democratic ideals are translated into everyday urban life. This approach positions public space not merely as a background for politics, but as an active arena where democratic power is produced and contested.

3. Inclusion, Exclusion, and Governance: The Political Production of Public Space

Public space is often idealized as an area that is open and accessible to everyone. However, empirical research consistently shows that inclusivity and exclusion are actively produced through planning, design, and governance practices. Public space is shaped by regulatory frameworks, management strategies, and design decisions. These factors determine who can use the space, for what purposes, and under what conditions (Loukaitou-Sideris & Ehrenfeucht, 2009; Low et al., 2009). From a methodological perspective, processes of inclusivity and exclusion provide a critical entry point for analyzing the political dimensions of public space.

Low and colleagues (2009) argue that the increasing privatization of public space and the spread of controlled and surveilled environments reduce opportunities for social and cultural diversity. Design strategies developed to ensure order or security often function in ways that exclude certain groups, especially marginalized communities. These exclusionary practices are not always open or apparent. Instead, they are often embedded in subtle design elements, management rules, and cultural representations. Methodologically, identifying such mechanisms requires close attention to how space is organized and how it is experienced by different users.

The role of the state is central in shaping inclusivity and exclusion in public space. Loukaitou-Sideris and Ehrenfeucht (2009) document how municipal regulations targeting activities such as sitting, sleeping, or lingering are used to remove homeless individuals and other users considered “undesirable” from public areas. Legal tools such as “sit and lie” bans show how governance operates through spatial control. These practices reveal that public space is produced as a contested ground where the right to exist is distributed unequally. Methodologically, analyzing legal frameworks and their spatial consequences makes it possible to trace the intersection between policy, power, and everyday use.

Privately owned public spaces create additional layers in terms of governance and exclusion. In such spaces, decision-making authority shifts from public institutions to private actors. Rules that regulate access and behavior are set by private management (Miller, 2007). Whyte’s (1980) study of privately owned public plazas in New York shows that exclusion often results not from the presence of specific users, but from management practices aimed at controlling behavior. Whyte argues that designing spaces that attract diverse users is more effective than applying restrictive measures. This approach highlights that governance structures are as important as physical design in evaluating publicness.

Inclusivity and exclusion also operate through cultural representation. Low and colleagues (2009) show that when public spaces fail to reflect the histories and identities of different communities, marginalized groups may avoid using these areas. Their study on urban parks emphasizes that cultural representation is essential for developing a sense of belonging and ownership. Methodologically, this perspective demonstrates that the symbolic and representational dimensions of public space must be analyzed alongside issues of physical access and regulation.

Overall, inclusivity and exclusion in public space are not accidental outcomes. They are the result of deliberate political, managerial, and design choices. By examining governance structures, regulatory practices, and design strategies, public space can be analyzed as a politically produced environment. This approach allows researchers and planners to move beyond abstract ideas of “openness.” It makes it possible to evaluate how publicness is actively constructed, limited, or denied in everyday urban life.

4. Creating Public Space: Participation as a Method in Planning and Design

Public participation has been one of the main issues in planning and design practice for nearly sixty years. A wide body of literature shows that involving the public in decisions about the physical environment is not only a democratic right. It is also a critical component of effective urban planning and design (Davidoff, 1965; Arnstein, 1969; Sanoff, 2000). Public participation is often framed in normative terms as an ethical or democratic ideal. However, this chapter approaches participation as a methodological tool that shapes both planning processes and spatial outcomes.

In planning literature, public participation is frequently used interchangeably with terms such as community consultation, civic engagement, and participatory design. These concepts share a common democratic foundation. Yet they involve important differences in terms of influence and decision-making power (Potter, 2012; Lane, 2005). As Arnstein (1969) famously stated, participation without power is an empty ritual. Therefore, understanding participation as a method requires examining not only whether the public is involved, but also how, at what stage, and with what level of authority.

The emergence of participatory planning in the 1960s coincided with social movements that demanded civil rights, transparency, and inclusion in decision-making processes. Davidoff's (1965) model of advocacy planning challenged the idea of value-free planning. He argued that pluralism and the representation of different interests could improve the legitimacy and quality of planning outcomes. From a methodological perspective, advocacy planning transformed the role of planners. It shifted them from neutral experts to mediators among competing social interests and placed participation at the center of the planning process.

Arnstein's (1969) ladder of citizen participation remains one of the most influential frameworks for evaluating the depth and effectiveness of participatory processes. With its eight levels ranging from manipulation to citizen control, Arnstein's model offers a methodological tool to distinguish between symbolic participation and real power sharing. The lower levels of the ladder represent non-participation. The middle levels, such as informing and consultation, reflect "tokenism" without real influence on decisions. The upper levels—partnership, delegated power, and citizen control—represent the sharing or transfer of decision-making authority. These levels offer stronger methodological models for participatory planning.

Later studies built on Arnstein's framework and further developed the distinction between superficial and genuine participation. Deshler and Sock (1985) distinguished between pseudo participation and genuine participation, and this distinction was later expanded by Sanoff (2000). Pseudo participation includes situations where citizens are informed but excluded from meaningful decision processes. Genuine participation involves collaboration and citizen control. Methodologically, these distinctions show that participation is not a single technique. Instead, it is a range of approaches with different effects on power, responsibility, and spatial production.

Sanoff (2000) conceptualizes participation as a multi-stage process. This process includes the stages of awareness, perception, decision-making, and implementation. The implementation stage is often neglected, yet it is crucial for transforming public input into concrete spatial outcomes. This staged approach allows participation to be evaluated not only at the moment of consultation, but throughout the entire life cycle of a project.

The role of participation as a method is especially clear in the production of open public spaces. Successful public spaces are often shaped through processes that recognize local knowledge and everyday practices (Carr et al., 1992; Gehl, 2011). The Village Homes Community Play Area project described by Carr and colleagues (1992) shows how methods such as behavioral observations, interviews, and workshops informed design decisions. It also demonstrates how early participation strengthened the sense of ownership.

However, participation remains limited or ineffective in many projects. Hou and Rios (2003) argue that participation models focused on formal procedures often ignore social and cultural realities. They propose reframing participation as a dynamic, collective, and negotiation-based process.

Today, participatory techniques cover a wide range of tools. These include public meetings, design workshops, focus groups, and co-production activities (Sanoff, 2006). Yet the effectiveness of these tools depends on how power is distributed and how public input is reflected in final decisions. For this reason, treating participation as a method requires critically questioning who participates, what knowledge is considered valuable, and how participation shapes spatial outcomes.

In conclusion, the literature shows that participation in public space planning should not be seen only as a procedural requirement. It should be understood as a methodological approach that structures planning processes and produces specific spatial outcomes. Through Arnstein's ladder, Sanoff's staged model, and community-based approaches to space production, the democratic quality and effectiveness of participation can be evaluated more systematically.

Viewing participation as a methodological tool rather than a procedural obligation makes it possible to evaluate urban design not only by its intentions, but also by the results it produces in use. Participatory processes shape the assumptions embedded in design. Everyday practices reveal how these assumptions are realized, negotiated, or challenged in space. This relationship shows that participation and use should be understood together as parts of a complementary and iterative design process.

5. Occupying Public Space: Everyday Practices as Methodological Evidence

Using public space through everyday practices such as standing, sitting, gathering, watching, and lingering provides important clues about how urban environments are experienced. These practices are not simply ordinary behaviors. This chapter treats them as methodological evidence for evaluating the quality, inclusivity, and functionality of public space. Everyday use shows how planning decisions, design strategies, and management practices take concrete form in real life. It also reveals how they shape patterns of presence and absence in public space (Carr et al., 1992; Whyte, 1980).

Staying in public space is the basic condition of occupying it. Activities such as standing, sitting, eating, resting, socializing, or protesting often overlap with one another. For this reason, the duration and form of staying offer a valuable perspective for understanding how people relate to public spaces. Carr and colleagues (1992) state that public spaces that fail to respond to user needs are usually underused. According to them, functions such as comfort, relaxation, passive interaction, active interaction, and discovery are key elements that support staying in space. Methodologically, these functions provide criteria for evaluating the performance of public space.

Gehl (2011) also sees staying as one of the main indicators of public space quality. He distinguishes between necessary activities and optional activities. Necessary activities, such as waiting or briefly stopping, can occur regardless of the quality of space. However, optional activities such as lingering, sitting, or socializing are much more sensitive to spatial conditions. Therefore, the presence, distribution, and duration of optional activities provide important empirical evidence about how well a public space functions (Gehl, 2011).

Standing actions are usually short and momentary. Yet these moments are valuable for understanding micro-scale spatial dynamics. Gehl (2013) notes that people tend to stop when they encounter something interesting or when the space invites attention. Stevens (2007) argues that public space becomes lively when it creates situations that invite users to participate. Even brief pauses contribute to the social life of public space. Methodologically, observing where and why people stop offers clues about the opportunities provided by space and about social interactions.

Sitting is one of the most important forms of staying in public space and a strong indicator of space quality. Many studies show that the quality and amount of seating are directly related to the duration of stay and the intensity of use in public spaces (Whyte, 1980; Carr et al., 1992; Carmona, 2010; Gehl, 2011). Sitting enables many activities such as eating, reading, socializing, and resting.

From a methodological perspective, seating patterns reveal the extent to which design supports long-term use and social interaction.

Despite this, public seating has been subject to regulation and restriction in many cities. Especially due to concerns about homelessness and "disorder," sitting behavior has often been controlled (Loukaitou-Sideris & Ehrenfeucht, 2009; Thompson & Travlou, 2007). Design interventions such as divided benches or the removal of sittable surfaces show how design can be used as a tool of exclusion. These practices reveal that when everyday behaviors are restricted, governance strategies become clear indicators. Methodologically, examining where sitting is allowed and where it is restricted helps to clarify power relations in public space.

Whyte's (1980) well-known observation clearly illustrates this situation: "People sit most where there are places to sit." There is a strong relationship between the amount of sittable space and the level of use. Whyte's studies showed that even small increases in seating opportunities in small public spaces significantly increased use and social interaction. Gehl (2011) also emphasizes that well-functioning urban spaces offer various options for sitting in different forms and durations. In this sense, sitting can be seen as a measurable design variable for spatial performance and inclusivity.

The social and psychological dimensions of comfort also affect how space is used. Carr and colleagues (1992) note that people need to feel safe and comfortable in order to stay in public space. Visual access, the presence of other people, and the opportunity to watch others increase this sense of comfort. Linday (1978) and Whyte (1980) emphasize that watching people is one of the most common activities in public spaces. Gehl (2011) also states that people prefer to sit in places where they can see others. This shows that social life itself becomes an attraction factor.

The design of seating elements also directly influences patterns of use. Whyte (2012) criticizes fixed benches for often increasing social distance and limiting flexible use. Instead, he argues that movable chairs allow users to arrange space according to their own needs. Gehl (2013) also highlights the importance of secondary seating options such as stairs, ledges, and fountain edges, in addition to primary elements like benches and chairs. This variety supports different user groups and increases the inclusivity of space. Methodologically, the presence and use of different seating types can be examined as concrete indicators of spatial flexibility.

Everyday practices of occupying space also allow users to make temporary claims on public areas and to negotiate social boundaries. Carr and colleagues (1992) note that when seating arrangements respond to local needs, users can more easily develop a sense of ownership. Francis and colleagues (2012) emphasize that public spaces create a sense of community through repeated use and social interaction. Observing how people use space, how they organize it, and how they return to it over time provides valuable evidence for understanding belonging and social bonds.

In conclusion, everyday practices aimed at occupying public space—especially standing and sitting—are rich methodological sources for evaluating the quality of public space. Examining patterns of use, lengths of stay, and spatial ownership reveals how democratic, inclusive, and socially meaningful public spaces are. In this sense, everyday practices do not only take place in public space. They also actively produce and reveal the ways in which public space is planned, designed, and governed.

6. Conclusion: Public Space as a Methodological Bridge for Urban Design and Planning

Public space, when approached methodologically, offers more than a setting for urban life; it provides a way of reading the city itself. By attending to visibility, occupation, and participation together, it becomes possible to examine how democratic ideals and planning intentions materialize (or fail to materialize) in spatial practice. This perspective shifts attention from what public space is supposed to represent to how it is actually used, negotiated, and inhabited.

Understanding public space in this way requires moving between scales. Moments of collective public presence, such as large-scale gatherings, reveal how democratic performance depends on spatial presence. At the same time, small and seemingly ordinary practices such as sitting, lingering, observing offer equally important insight into comfort, accessibility, and inclusion. Both scales matter. Together, they bring into focus the relationship between design decisions, governance structures, and everyday urban experience.

The methodological implications of this approach are further elaborated in Table 1, which synthesizes key theoretical perspectives on public space and reframes them in relation to urban design and planning research. By organizing the literature around democracy, participation, and everyday use, the table highlights how different bodies of work contribute not only to theoretical debates but also to methodological tools for analyzing public space. This classification represents the argument that public space serves as a common analytical ground through which diverse planning concerns can be systematically examined.

Table 1. *Theoretical Perspectives on Public Space and Their Methodological Implications for Urban Design and Planning Research.*

Perspective	Key Authors	Core Focus	Methodological Reading of Public Space
Democracy	Mitchell; Parkinson; Lefebvre	Visibility, collective action, rights	Public space as a performative arena where democratic practices become spatially observable
Participation	Arnstein; Sanoff; Davidoff	Power, decision-making, inclusion	Participation as a methodological variable shaping design processes and outcomes
Everyday Use	Gehl; Whyte; Carr	Staying, sitting, occupation	Everyday practices as empirical evidence for evaluating spatial quality

For urban design, this approach suggests a more iterative and attentive mode of practice. Rather than assuming that spatial quality can be secured through design principles alone, it calls for ongoing engagement with how spaces function over time. Observing patterns of use, absence, adaptation, and conflict allows design to be understood as part of a broader social process rather than as a completed intervention. In this sense, public space becomes not only an object of study but a continuous source of empirical evidence.

Approaching public space as a methodological interface also highlights its political dimension. Questions of who becomes visible, who participates, and who remains marginalized are not abstract concerns; they are enacted spatially. By reading these dynamics through observable practices, researchers and practitioners can better assess the democratic quality of urban environments without reducing it to formal indicators or procedural checklists.

Ultimately, studying public space through this lens does not offer a fixed model or prescriptive framework. Instead, it proposes a way of looking; one that treats spatial occupation, participation, and visibility as interconnected dimensions of urban life. In doing so, it opens a path toward more grounded, reflective, and responsive approaches to urban design and planning.

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CHAPTER 2

Preparing a Management Plan Based on the Recreational Opportunity Spectrum Method for Yedigöller National Park (Bolu, Türkiye)

Hüseyin Samet Aşıkkutlu[1] & Osman Uzun[2] & Zeki Demir[3] & Bekir Kayacan[4] & Haldun Müderrisoğlu[5]

1. Introduction

The concept of recreation, defined as activities undertaken by individuals during their free time with the aim of physical or mental renewal, which can be characterized by the social, economic, and cultural characteristics of society (Koç, 1991), can be defined differently as an activity that individuals can engage in during their free time, outside of their work, household chores, and any other activities they are obliged to perform, such as a second or additional job (Baud-Bovy & Lawson, 2002; Aşıkkutlu, 2013). Recreational activities, which are a fundamental and universal need (Gulam, 2016; Birol & Aydın, 2020), can be categorized into two main heading based on the spaces where they take place as urban and rural recreational areas. While urban recreation areas are created through planning and design to serve users, rural recreation areas can facilitate recreational activities within the framework of their characteristics (Özkan, 2001; Aşıkkutlu, 2013).

Rural recreation areas offer individuals the opportunity to renew themselves and relax thanks to their natural beauty and richness. Today, with these qualities, they are the spaces that best meet the recreational needs of urban individuals (Korkmaz, 2001; Sarı, 2019). However, this intensive recreational use in rural areas can also bring with it the problem of pressure on natural resources (Liddle, 1997; Hammitt & Cole, 1998; Marion, 1998; Leung & Marion, 2000; Newsome, Moore, & Dowling, 2002; Aşıkkutlu, 2013).

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Natural resources, which are a fundamental component of the global ecosystem and are particularly important for human life and ecological balance (Shukla, 2025), have faced destruction that has made it clear that a conscious approach is necessary in conservation decisions (Taze, 2008; Aşıkkutlu, 2013). Management plans that are effective in the management phase of natural resources in protected areas are high-level plans that establish a logical relationship between how biological diversity will be protected, the management of natural resources, and the actions to be taken in the area. Furthermore, management plans involve all relevant parties in the planning process in order to achieve the specified objectives. Thus, management plans have a structure that takes into account factors threatening the sustainability of natural and cultural resource values and uses stakeholder participation strategies throughout the entire plan development process (Cırık, 2007).

Important studies carried out since the beginning of the 19th century have helped the number of protected areas to increase exponentially and become a central component of biodiversity conservation worldwide (Molina-Murillo, Otárola, & Shreeve, 2016), and today, the preparation of management plans for protected areas, which can be considered as important resource values for all countries, is a priority issue. Management plans ensure that natural resource values are transferred to future generations within the scope of sustainability criteria by determining protection and use decisions. However, it may be more appropriate to determine the management criteria to be applied in natural areas by following specific stages or processes. This stage or process can be shortly described as protected area managers identifying natural and cultural resources in the area, determining threats to these resources, and developing strategies and implementation plans for long-term conservation (Anonymous, 2013a). The processes followed in preparing management plans evaluated within the framework of National System Plans are classified into three main groups. These are expressed as the preparation of the plan, its implementation, the monitoring phase of the implemented plan, and its review (Demirel, Sarıkoç, Özdemir, & Pirselimoğlu, 2005; Aşıkkutlu, 2013).

Management plans prepared for protected areas ensure the long-term sustainable conservation of the area's resource values. Thus, these plans are important documents that outline management plans for the area, including strategies, policies, and impact assessments for protected areas, economic and financial planning, operational planning, and species improvement planning within a specific process. This entire process has resulted in the Long Term Progress Plan (LTPP), a comprehensive ecosystem-based plan that identifies and interrelates social, technical, administrative, and economic options in time and space to ensure, develop, and protect the long-term sustainability of the resource values of protected areas. The LTPP or Management Plan is a document that is constantly referred to and used to enable those responsible for protected areas and personnel in protected areas to work effectively and efficiently in line with defined objectives, and can serve as a guide, tool, and incentive (Koca, Güney, Altundal Öncü, & Somuncu, 2016).

In natural areas whose importance has become increasingly recognized as environmental degradation intensifies (Noss, Aplet, Comer, Enquist, Franklin, Riley, & Safford, 2024), the steadily rising demand for recreation and tourism has, in turn, made the concept of carrying capacity a fundamental element to be employed in area planning. Planning approaches for tourism and recreation in protected natural areas are related to two key points. The first is the identification and calculation of the threshold point at which adverse conditions begin to cause degradation in the natural and social environment, that is, the carrying capacity of this setting. The second is to ensure that these areas can also be used by future generations within a framework of sustainability, and to integrate environmental programs and strategies with economic objectives in a way that will sustain the benefits expected from tourism or recreation (Soykan, 2000; Aşıkkutlu, 2013).

From the early 1960s to the present day, numerous management models have been developed to shape management decisions for protected natural areas (Akten, 2009; Aşıkkutlu, 2013). For example, in his study, Wagar (1964) introduced the term "carrying capacity," which forms the basis of recreational management models, and stated that visitors to recreational areas not only impact resources but also affect the quality of recreational experiences. The term carrying capacity has evolved over time, changing into different recreational area management models. These methods and the main studies in which they have been used can be listed as follows (Farrell & Marion, 2002; Akten, 2009);

- Recreational Opportunity Spectrum (ROS) Method (Clark & Stankey, 1979)
- Limits of Acceptable Change (LAC) Method (Stankey, Cole, Lucas, Peterson, & Frissell, 1985)
- Visitor Activities Management Process (VAMP) Method (Graham, Nilsen, & Payne, 1988)
- Visitor Impact Management (VIM) Method (Graefe, Kuss, & Vaske, 1990)
- Visitor Experience and Resource Protection (VERP) Method (Hof & Lime, 1997).

The preliminary ideas on the topics of "Opportunity Planning" and "Recreational Opportunity Spectrum," which began in the 1970s, were formulated in studies conducted by two different groups of researchers: Driver and Brown (1978) together with Clark and Stankey (1979). To support planning and management decisions, both the Bureau of Land Management (BLM) and the Forest Service of the United States (US Forest Service) have developed principles and guidelines for the ROS method (Xiao, Jia, & Jiang, 2012). For example, the Forest Service of the United States has defined ROS classes into six categories: "Urban, Rural, Roaded natural, Semi-primitive motorized, Semi-primitive nonmotorized, Primitive" (Driver, Brown, Stankey, & Gregoire, 1987). Following the establishment of principles related to the ROS method, a ROS method guide was created by several forest services and organizations. This guide enabled the preparation of maps and the adoption of more objective planning decisions by varying the number of opportunity classes (Xiao et al., 2012). With its newly acquired features, the ROS method has become a tool used in recreational planning and management decisions worldwide (Kaltenborn & Emmelin, 1993; Butler & Waldbrook, 2003; Dawson, 2008; Aşıkkutlu, 2013).

Within this scope, the aim of the study is to prepare a management plan for Yedigöller National Park (YNP) using the ROS method. Additionally, this study investigated the validity of the following hypotheses:

- Hypothesis 1: The opportunity class distances specified in the basic sources prepared in the United States under the ROS method are not suitable for our country.
- Hypothesis 2: Stakeholders have similar expectations regarding recreational experiences and activities.
- Hypothesis 3: The distance criteria for recreational opportunity classes determined under the ROD method can be applied to national parks in the Black Sea Region, Western Black Sea Section.
- Hypothesis 4: The current state of recreational opportunity areas in the Western Black Sea Region of the Black Sea Region is sufficient.

2. Materials and Methods

2.1. Materials

In this study, which aims to create a recreational management plan using the ROS method, the main material is YNP. Ilgaz Mountain National Park (IMNP) and Kastamonu-Bartın Küre Mountains National Park (KBKMNP) are the areas where controls were performed in the study. Therefore, the study focuses on YNP.

YNP was declared a national park on April 29, 1965, and is located within the borders of Bolu Province, at an average altitude of 900 m and coordinates

40°50'41.80"N - 31°35'26.16"E (Anonymous, 2013b). Figure 1 shows the location of YNP.

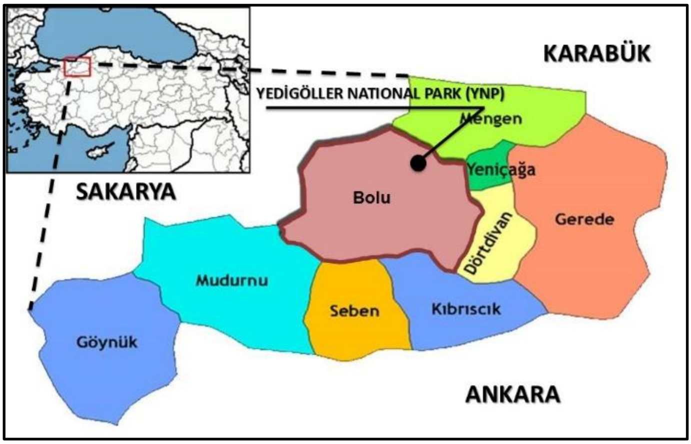


Figure 1. Location of YNP (Adapted from URL-1, 2025)

The main tree species found in the national park, which contains many plant species, are *Fagus spp.*, *Carpinus spp.*, *Qercus spp.*, *Alnus spp.*, *Acer spp.*, *Ulmus spp.*, *Populus tremula*, *Pinus sylvestris*, *Pinus nigra*, *Abies spp.*, *Corylus spp.*, *Tilia spp.*, and *Fraxinus spp.*. *Taxus spp.* is also found in the area (Anonymous, 2013c; Aşıkkutlu, 2013).

In the national park, wild animals include *Ursus spp.*, *Sus spp.*, *Canis spp.*, *Vulpes spp.*, *Martes spp.* or *Vormela spp.*, *Sciurus spp.*, *Cervus spp.*, *Capreolus spp.*, and *Lepus spp.*, as well as bird species including *Tadorna spp.*, *Columba spp.*, and *Alectoris spp.*. In addition, over 100 bird species have been identified within the area. The lakes are home to *Salmo lacustris* and *Salmo trutta labrax* (Anonymous, 2013c; Aşıkkutlu, 2013).

The area offers recreational activities such as picnicking, relaxing, taking photos, playing sports, and camping. Visitors can stay in bungalows in the area. Camping in tents or caravans is also possible. The best time to visit the park is between April and November (Anonymous, 2013c). Sample images of the uses in the area are presented in Figures 2-4.

Figure 2. A view of the picnic area (Aşıkkutlu, 2013)

Figure 3. A view of the campsite (Aşıkkutlu, 2013)

Figure 4. A view of the bungalows (Aşıkkutlu, 2013)

The area is 24,895 m², and its deepest point is 15 meters. Deringöl (15,063 m²), located southeast of Büyükgöl, is connected to Büyükgöl by a 20-meter-long flowing section. Seringöl (1,758 m²) is located north of Büyükgöl. The largest lake on the plateau, 100 meters above the other plateau, is Nazlıgöl (15,780 m²). The abundant water seeping from Nazlıgöl emerges on the surface in the northeast of the lake, forming a waterfall, hence it is also called “Waterfall Lake.” Three more lakes, Sazlıgöl (5,950 m²), İncegöl (1,036 m²), and Küçükgöl (2,170 m²), are also located on the same plateau (Anonymous, 2013d; Aşıkkutlu, 2013).

2.2. Methods

This section outlines the steps followed in preparing the study. These steps consist of 8 headings, namely: Survey Application, Filling Out Field Observation Forms, Transfer of Data to a 1/25,000 Scale Map Sheet Using ArcGIS 9.3 Software, Determination of Opportunity Class Distances, Control of Opportunity Class Distances, Determining the Distance Classes of Urban and Sub-Urban Opportunity Areas Related to Building Areas, Development of Alternative Recreational Management Plans and Gathering Stakeholder Opinions, Evaluation of Alternative Recreational Management Plans. In this context, the flowchart of the method followed in preparing the study is presented in Figure 5.

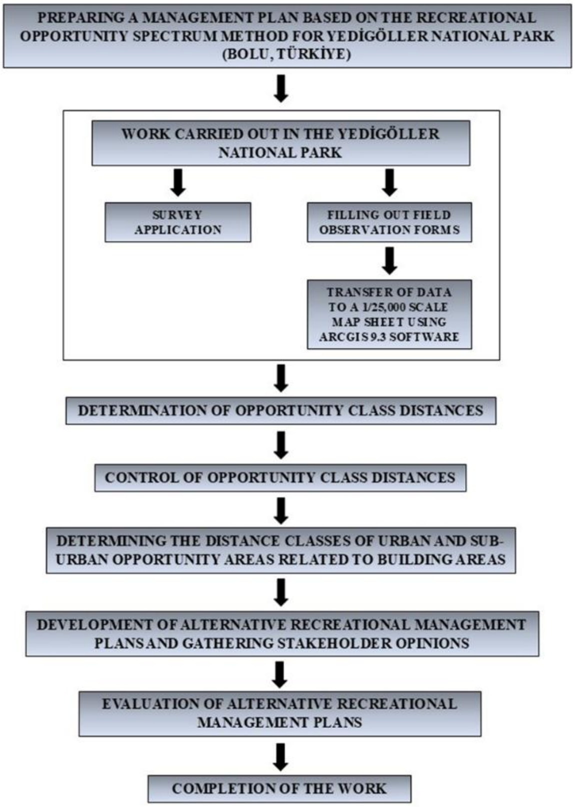


Figure 5. Method flowchart (Adapted from Aşıkkutlu, 2013)

2.2.1. Survey Application

The survey form, which includes open-ended and closed-ended questions along with user characteristics, consists of four sections. The three-point “Likert Scale” was used for the closed-ended questions. In determining the survey questions, the studies of Anonymous (2012a), and Aukerman and Haas (2011), who used the ROS method, were utilized. The surveys were administered face-to-face to a total of 895 stakeholders, including 813 “Users,” 52 “Experts and Managers,” and 30 “Tourism Companies” stakeholders, during the spring, summer, and fall seasons of 2011-2012-2013. The data were analyzed using the SPSS 19 (Statistical Package for the Social Sciences 19) software package. The frequencies of the responses given by the stakeholder groups were calculated as percentages, and the “Anova test” was used to determine whether there were differences between the responses of the stakeholder groups, and the “Tukey test” was used to explain the identified differences. In both analyses, the ranges for the “Significance Level (Sig.)” were determined (*$p<0.05$; **$p<0.01$; ***$p<0.001$).

2.2.2. Filling Out Field Observation Forms

In order to determine recreational opportunity classes through field studies conducted in YNP, control points of a fixed nature were required in the area, as well as reference points for checking the determined opportunity classes. Within this scope, a total of 86 reference points and 86 control points were determined in the field studies conducted in YNP.

The control and reference points marked in the area have different meanings. Control points are primarily marked in the area to determine the distances of recreational opportunity classes in that area according to the type of land use (picnic area, campground, road, etc.). However, another purpose of marking control points in the area is to determine the recreational opportunity class of the activities in the area. Reference points, on the other hand, are marked in the area to determine which opportunity class (Urban, Sub-Urban, Rural Developed, Rural Natural, Semi-Primitive, Primitive) the area and its immediate surroundings belong to. Figure 6 shows an example image of a reference point marked in the area, and Figure 7 shows an example image of a control point.

Figure 6. A view from reference point (Aşıkkutlu, 2013)

Figure 7. A view from the control point (Aşıkkutlu, 2013)

An "Area Observation Form" was created to be filled out at the control and reference points determined in the area, and Aukerman and Haas (2011)'s study was used in preparing the form.

The forms filled out at control and reference points were completed by experts who had worked on protected areas during different seasons, and the aim was to determine whether there were seasonal differences in the specified areas. Different procedures were applied when filling out the forms at control and reference points. At control points, participants walked 10 meters in the same direction from the edge of the area they were in towards the natural area, and filled out a field observation form every 10 meters. 86 control points were marked in the field. At these points, experts filled out field observation forms at 404 points. Field observation forms were completed by experts at 86 reference points indicating the opportunity class of the region and its immediate surroundings. After the data from the forms were transferred to an MS Office Excel file, the arithmetic mean values of the data related to physical, social, and administrative characteristics were calculated.

The data obtained from filling out the field observation forms at the control points were transferred to MS Office Excel, and the data were analyzed using the SPSS 19 package program. As part of the analysis, the data of each expert who filled out the field observation form were tested, and the relationship between their answers was analyzed.

2.2.3. Transfer of Data to a 1/25,000 Scale Map Sheet Using ArcGIS 9.3 Software

To observe the control points and reference points on a 1/25,000 scale map, data transferred to the MS Office Excel program was used. The data related to the control points and reference points presented in the previous stage was transferred to the ArcGIS 9.3 program.

2.2.4. Determination of Opportunity Class Distances

To determine the distances of usable opportunity classes in national parks located in the Western Black Sea Region, six alternative map sheets were developed, and the strengths and weaknesses of each sheet were identified.

2.2.5. Control of Opportunity Class Distances

To determine whether the control points within the opportunity class defined under the YNP are consistent with field observations, data for the 87 points identified in the IMNP and the 73 points in the KBKMNP were analyzed using the "T-test" in the SPSS 19 software package.

2.2.6. Determining the Distance Classes of Urban and Sub-Urban Opportunity Areas Related to Building Areas

In the field studies conducted in the YNP, since the opportunity classes based on recreational opportunity quality start from the rural developed area (Anonymous, 2011; Aukerman & Haas, 2011), the distances for the urban and sub-urban opportunity classes could not be determined. To determine these distances, field studies were conducted in the hotel area within the IMNP, and site observation forms were completed to determine the distances for the urban and sub-urban opportunity classes.

2.2.7. Development of Alternative Recreational Management Plans and Gathering Stakeholder Opinions

To gather stakeholder opinions, a current situation map and two alternative maps have been prepared. The table prepared for the current situation map shows the uses and facilities in the area within the opportunity classes. The other two alternative plans were created by considering the users' expectations regarding the area, activities, and experience, as well as the distribution of ROS opportunity classes in the region, the terrain topography, and the vegetation cover. In general, Alternative 1 plan differs from the current situation in terms of the added activities, while Alternative 2 plan differs in terms of the development of current uses.

In line with these maps, a "Management Plan Evaluation Form" has been created to gather the opinions of stakeholder groups. This form contains data related to the current situation map and two alternative maps, as well as a "Matrix for Evaluating Alternative Management Plans" consisting of 10 questions. The questions were prepared using Aukerman and Haas (2011)'s study.

2.2.8. Evaluation of Alternative Recreational Management Plans

During the summer of 2013, a total of 171 stakeholders were reached through face-to-face interviews, including 138 individuals from the "User Stakeholder Group," 18 individuals from the "Expert and Manager Stakeholder Group," and 15 individuals from the "Tourism Companies Stakeholder Group." The data was transferred to the SPSS 19 software package and the frequencies of the responses were evaluated in percentage terms. The analyses conducted determined the relationship between the responses given by each stakeholder group to each question and the current situation and alternatives. The "Anova test" was performed to identify differences in the responses given by the stakeholder groups, and the "Tukey test" was performed to explain these differences.

3. Results and Discussion

3.1. Analysis of Survey Data

A "Frequency Analysis" was performed on the responses given by stakeholders to questions regarding "Socio-Economic Characteristics," and "Percentage Distribution" values were obtained. According to these analyses, it was determined that the majority of stakeholders participating in the survey were in the "21-30 Age Group" at a rate of 40% and consisted of "Male" participants at a rate of 58%. On the other hand, it was determined that the majority of stakeholders had "Less than 2 Years" of work experience (72%) and were "Freelancers" (28%).

Based on the "Percentage Distribution" values obtained from the "Frequency Analysis" of the responses provided by stakeholder groups regarding the activities they would like to see in national parks, it was determined that they unanimously want "Educational camps," "Hiking," "Photo safaris," and "Photography" activities to be available in the area. Furthermore, an Anova test was conducted to identify differences in stakeholder groups' responses based on their recreational activity preferences, and a Tukey test was performed to explain these differences. According to the findings, it was determined that the responses of stakeholder groups to the questions about the activities they wanted to see in the area, namely “Organized Camp,” “Tent Camp,” “Picnicking,” “Horseback Riding,” and “Wildlife Observation,” showed statistical differences.

Based on the “Percentage Distribution” values obtained from the “Frequency Analysis” of the responses provided by stakeholder groups regarding the experiences they wish to gain in national parks, it was determined that they unanimously want the activity of “learning about nature and culture” to be included. Additionally, an Anova test was conducted to determine the differences in the responses of stakeholder groups to questions regarding the experiences expected to be gained from the area, and a Tukey test was performed to explain these differences. According to the findings, “Learning About Nature and Culture,” “Increasing Adventure and Challenge Experience,” “Socializing,” “Meeting New People,” “Experiencing Nature and Silence,” “Having a Comfortable Vacation,” “Feeling Safe in a Rural Area,” “Experiencing Struggle with People,” “Having a Good Time with Family and Friends,” and “Escaping Daily Routines.”

Based on the “Percentage Distribution” values obtained from the “Frequency Analysis” of the responses provided by stakeholder groups regarding the situation in which they wish to view the area according to ROS classes, it has been determined that they all wish to view the area as “Natural.” Additionally, an “Anova test” was conducted to determine the differences in stakeholder groups' responses regarding their desired perception of the area within the scope of opportunity class questions, and a “Tukey test” was performed to explain these differences. According to the findings, it was determined that the responses of stakeholder groups to their expectations for “Primitive” “Semi-Primitive” “Rural Developed” and “Urban” areas showed statistical differences.

3.2. Filling Out Field Observation Forms

In the field studies conducted in YNP, 86 control points were marked to determine opportunity class distances, and 86 reference points were marked to determine which opportunity class the regions belonged to, and the “Field Observation Form” was filled out at these points. To check whether there were any differences in the opinions of 7 different experts from the fields of Landscape Architecture and Forest Engineering regarding the physical, social, and administrative characteristics they filled out on the forms, an “Anova test” was performed using the SPSS 19 program. According to the findings, no difference was found in the experts' assessments.

3.3. Determination of Opportunity Class Distances

Six methods have been developed to determine the distance classes of available opportunities in the national parks of the Western Black Sea Region within the Black Sea Region. To this end, six maps were created using ArcGIS 9.3 software (ROS Classes Based on Distances Specified in the Source in the US; ROS Classes Based on the Farthest Distance; ROS Classes Based on the Average Distance; ROS Classes Based on the Proportional Reduction of Distances Used in the US; Opportunity Class Map Based on the Scaling of Distances According to Similar Studies; ROS Classes According to the Spatial Analysis Model). Considering the strengths and weaknesses of the six methods tested, each has its pros and cons in terms of usability. However, Method 2 (ROS Classes Based on Farthest Distance) offers the possibility of verification after the opportunity class distances have been determined. This also facilitates the adaptation of the method to the national park. On the other hand, since it is based on fieldwork, it offers distance intervals similar to the farthest and closest distances specified in the primary sources. This facilitates the observation of the distances of each opportunity class and their transfer onto the map. Another factor influencing the selection of this method is that the data is based on actual measurements in the field and can be verified. However, distance criteria related to building areas could not be determined for YNP due to the absence of building areas. The farthest distance criteria determined to be applicable in national parks in our country are presented in Table 1.

Table 1. Distance of opportunity classes determined based on field characteristics (Adapted from Aşıkkutlu, 2013)

Field Characteristic	**Distances to National Park First-Class Roads**	**Distance Criteria Related to Paved Roads (Second-Class Road)**
Urban	There is no distance criterion.	There is no distance criterion.
Sub-Urban	Up to 10 m from a asphalt road.	There is no distance criterion.
Rural Developed	Up to 25 m from a asphalt road.	Up to 25 m from the paved road.
Rural Natural	Up to 40 m from a asphalt road.	Up to 40 m from the paved road.
Semi-Primitive	Up to 70 m from a asphalt road.	Up to 70 m from the paved road.
Primitive	70 m from the asphalt road and beyond (there is no distance value.)	70 m from the paved road and beyond (there is no distance value.)

Distance Criteria Related to National Park Picnic Areas	Distance Criteria Related to Caravan Camps and Tent Camp Sites	Distance Criteria Related to Pathways (3rd Degree Road)
There is no distance criterion.	There is no distance criterion.	There is no distance criterion.
There is no distance criterion.	There is no distance criterion.	There is no distance criterion.
There is no distance criterion.	There is no distance criterion.	There is no distance criterion.
Up to 40 m from the national park picnic	Up to 55 m from the border of the national park caravan	Up to 20 m from the pathway.
Up to 55 m from the national park picnic areas.	Up to 70 m from the border of the national park caravan camp and tent camp area.	Up to 45 m from the pathway.
55 m from the national park picnic areas and beyond (There is no limit distance value.)	70 m from the border of the national park caravan camp and tent camp area and beyond (there is no distance value.)	45 m from the dirt road and beyond (there is no distance value.)

In accordance with Table 1, the "Current State Map" representing the current zoning study prepared within the scope of opportunity class distances is presented in Figure 8.

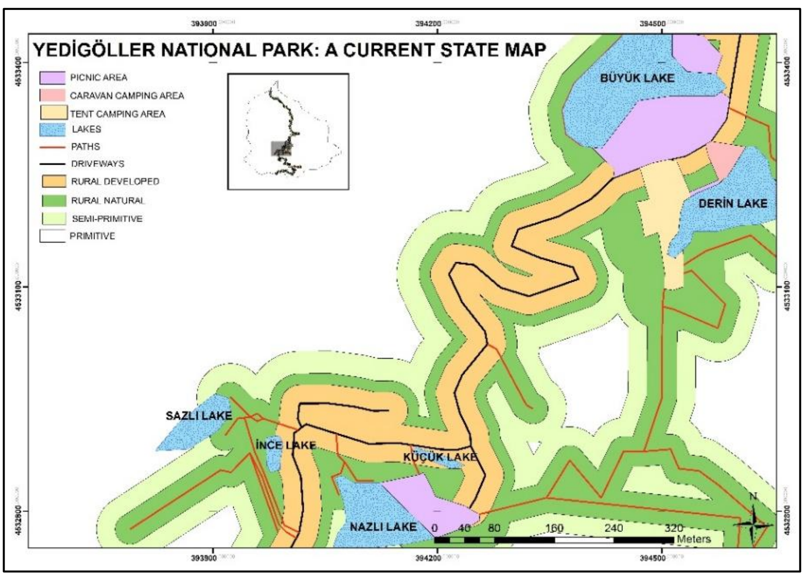


Figure 8. Current state zoning study (Adapted from Aşıkkutlu, 2013)

3.4. Control of Opportunity Class Distances

To verify whether the opportunity class distances identified through field studies conducted in YNP are suitable for the national parks in the Western Black Sea Region, field studies were carried out in IMNP and KBKMNP. Control points were determined in areas such as picnic areas, campsites, vehicle roads, and trails in these two national parks. The forms filled out at these control points were analyzed using the "T-test" to check whether they were similar to the opportunity classes in YNP. According to the findings, it was determined that the opportunity class distances determined within the scope of YNP were suitable for IMNP and KBKMNP.

3.5. Determination of ROS Classes for Dense Building Areas

Due to the absence of dense built-up areas in the YNP, the "Area Observation Form" was applied in the field studies conducted within the IMNP boundaries, where there are seven accommodation facilities. Within the scope of the analyses conducted, the 'Urban' and "Sub-Urban" opportunity classes associated with built-up areas were identified (Table 2).

Table 2. Distance criterion based on building areas (Adapted from Aşıkkutlu, 2013)

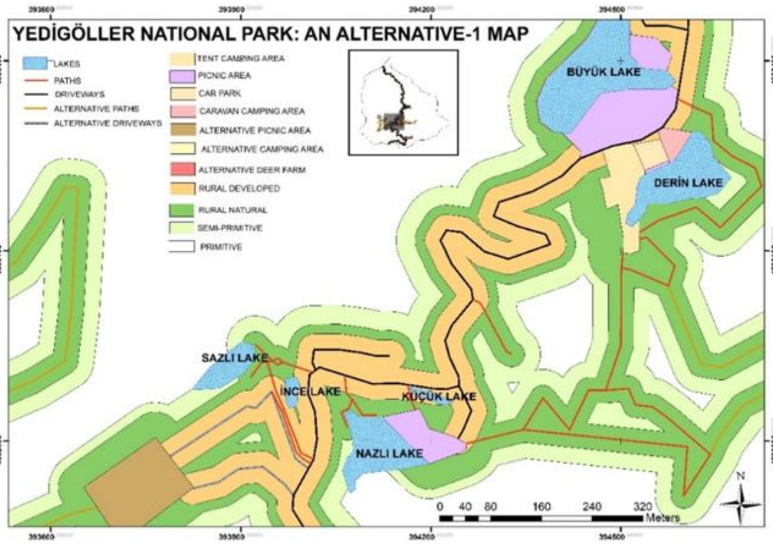
Distances Related to Building Areas					
Urban	**Sub-Urban**	**Rural Developed**	**Rural Natural**	**Semi-Primitive**	**Primitive**
Up to 30 m from built-up areas.	Up to 40 m from built-up areas.	Up to 70 m from built-up areas.	Up to 80 m from built-up areas.	Up to 90 m from built-up areas.	90 m and beyond from development areas (There is no limit distance value.)

3.6. Gathering Stakeholder Opinions for the Purpose of Creating a Management Plan

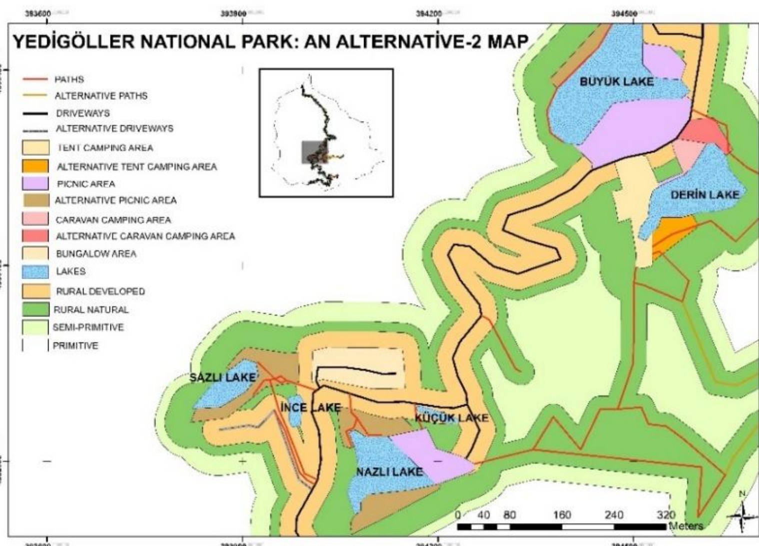
An alternative management plan based on stakeholder group opinions was developed, and survey data was analyzed to gather stakeholder group opinions. Using the analysis of survey data and drawing on the work of Aukerman and Haas (2011), the importance of the recreational activity preferred by each stakeholder group and the opportunity class in which the activity is located, the preferred recreational opportunity class and the preferred recreational experiences, and the preferred recreational experience and the opportunity class in which the experience is located were identified.

Accordingly, within the framework of the ROS method, zoning maps based on Alternative 1 and subsequently on Alternative 2 were generated for YNP using ArcGIS 9.3 software. Figure 9 presents the visual representations of the alternative plans, together with their contents and characteristics, and comparatively illustrates the existing condition plan and the differences between the alternatives.

a)



b)



a) Alternative 1 plan exhibits a different configuration in terms of activity areas compared to the existing condition plan of YNP. According to Marion and Cole (1996), Leung and Marion (2000), Therrell, Cole, Claassen, Rayn, and Davies (2006), Aşıkkutlu, 2013, dispersing use areas rather than concentrating them in a single location causes less damage to natural ecosystems. Therefore, in order to reduce the use pressure in YNP, additional activity areas were proposed within the scope of this plan.

b) Alternative 2 plan differs from the existing condition plan of YNP in terms of the expansion of activity areas. Through this approach, it was aimed to reduce user density within the currently designated activity areas in order to prevent environmental degradation, and to address spatial insufficiencies in terms of capacity during peak-use periods.

Figure 9. Zoning maps of YNP Alternative 1 (a) and Alternative 2 (b), with a comparative evaluation of their differences based on content and spatial characteristics (Adapted from Aşıkkutlu, 2013)

Within the scope of these data, an "Alternative Management Plan Evaluation Matrix" was created to gather the opinions of stakeholder groups. This matrix was developed based on the work of Aukerman and Haas (2011) and aimed to gather stakeholder opinions on the current situation and two other alternative plans. The questions included 10 items regarding the legality of the prepared plans, their seasonal usability, economic contribution to the region, ability to meet future recreational expectations, and management of the area. By applying this matrix, the arithmetic mean values of the responses were obtained to reveal the numerical values of the opinions of each stakeholder group and all stakeholders in general. Based on the arithmetic mean values of the responses provided by 171 (User Stakeholder Group; Expert and Manager Stakeholder Group; Tourism Companies Stakeholder Group) stakeholders to the "Alternative Management Plan Evaluation Matrix," it was determined that stakeholders selected Alternative 1.

An Anova test was conducted to identify differences in stakeholders' responses to the "Alternative Management Plan Evaluation Matrix." According to the analysis, no difference was found in the responses of stakeholder groups regarding the current situation and alternative plans. This finding indicates that stakeholders think similarly. Another finding was that stakeholders selected Alternative 1, which did not develop existing areas but created additional activity areas. Marion and Cole (1996), Leung and Marion (2000), and Therrell et al. (2006) stated in their studies that the fragmentation of areas led to more positive results in the conservation of natural resources. When both findings are evaluated together, Alternative 1 was selected because it was chosen by all stakeholders and because it has an ecologically based approach that meets the stakeholders' expectations for activities and experiences.

4. Conclusions

The objective of "developing a recreational management plan for YNP" was achieved and the validity of the hypotheses identified was determined in the preparation of this study, which utilized the ROS method and selected YNP as the material. The studies conducted in line with the objective of the study and the findings related to the hypotheses are presented below.

The study demonstrated the applicability of the ROS method in the Western Black Sea region. The ROS method is a technique developed in the US and used to create recreational management plans for protected areas there. Within the scope of the stated objective, field studies conducted during the spring and summer seasons of 2011, 2012, and 2013 ensured the adaptation of this method to our country's national parks. According to this objective, the validity of "Hypothesis 1 (The opportunity class distances specified in the basic sources prepared in the United States under the ROS method are not suitable for our country.)" has been established. The ROS method is a method developed in the 1980s through its use in national parks in the US. However, the national parks in question are considerably larger in area than the national parks in our country. To determine this hypothesis, field studies were conducted in YNP and the distances of the opportunity class available in the Western Black Sea were determined. As a result, it was determined that the opportunity class distances specified in the basic sources in the USA were not suitable for the Western Black Sea. In addition, the recreational management plan and regulations for YNP were developed using the ROS method. First, the opportunity class distances were determined through field studies. Using these distances, the opportunity class distances belonging to the National Park Recreational Opportunity Spectrum (NPROS) have been determined as a usable method in the Western Black Sea region. The aim is to create a recreational management plan for YNP using these data. As indicated in Table 3, the NPROS method has been developed as a usable method in national parks located in the Western Black Sea Region of the Black Sea Region. Within the scope of the data presented in Table 3, the validity of Hypothesis 3 (The distance criteria for recreational opportunity classes determined under the ROD method can be applied to national parks in the Black Sea Region, Western Black Sea Section.) has been established.

Table 3. Opportunity class distances determined based on the NPROS method (Adapted from Aşıkkutlu, 2013)

Field Characteristic	**Urban**	**Sub-Urban**	**Rural Developed**	**Rural Natural**	**Semi-Primitive**	**Primitive**
Distances to National Park First-Class Roads	There is no distance criterion.	Up to 10 m from a asphalt road.	Up to 25 m from a asphalt road.	Up to 40 m from a asphalt road.	Up to 70 m from a asphalt road.	70 m from the asphalt road and beyond (there is no distance value.)

Distance Criteria Related to Building Sites	Distance Criteria Related to National Park Picnic Areas	Distance Criteria Related to Caravan Camps and Tent Camp Sites	Distance Criteria Related to Pathways (3rd Degree Road)	Distance Criteria Related to Paved Roads (Second-Class Road)
Up to 30 m from built-up areas.	There is no distance criterion.	There is no distance criterion.	There is no distance criterion.	There is no distance criterion.
Up to 40 m from built-up areas.	There is no distance criterion.	There is no distance criterion.	There is no distance criterion.	There is no distance criterion.
Up to 70 m from built-up areas.	There is no distance criterion.	There is no distance criterion.	There is no distance criterion.	Up to 25 m from the paved road.
Up to 80 m from built-up areas.	Up to 40 m from the national park picnic areas.	Up to 55 m from the border of the national park caravan camp and tent camp area.	Up to 20 m from the pathway.	Up to 40 m from the paved road.
Up to 90 m from built-up areas.	Up to 55 m from the national park picnic areas.	Up to 70 m from the border of the national park caravan camp and tent camp area.	Up to 45 m from the pathway.	Up to 70 m from the paved road.
90 m from the built-up areas and beyond (There is no limit distance value.)	55 m from the national park picnic areas and beyond (There is no limit distance value.)	70 m from the border of the national park caravan camp and tent camp area and beyond (there is no distance value.)	45 m from the dirt road and beyond (there is no distance value.)	70 m from the paved road and beyond (there is no distance value.)

The study also revealed the distribution of recreational opportunity spectrum in the national parks located in the Western Black Sea Region of the Black Sea Region. Within this scope, field studies were conducted to analyze the suitability of opportunity class distances in IMNP and KBKMNP, and these distances were found to be suitable for national parks. The distribution of Recreational Opportunity Classes has been determined through zoning studies. Surveys have also been analyzed, revealing that stakeholders primarily desire natural areas. This data confirms the validity of Hypothesis 4 (The current state of recreational opportunity areas in the Western Black Sea Region of the Black Sea Region is sufficient.).

Regarding Hypothesis 2 (Stakeholders have similar expectations regarding recreational experiences and activities.), the survey conducted as part of the study revealed that stakeholders want activities and experiences that bring them closer to nature to be available in the area. Based on the data obtained, Hypothesis 2 was found to be correct.

Within the scope of this study, which determined the management provisions for YNP, stakeholders were surveyed and field observation forms were administered. Based on the data obtained, examples of the proposed management provisions for YNP's physical, social, and administrative characteristics, developed using field observations and scientific publications, are presented in Table 4 (Clark & Stankey, 1979; Butler & Waldbrook, 2003; More, Bulmer, Henzel, & Mates, 2003; Aukerman & Haas, 2011; Anonymous, 2012b; Yerli, Aşıkkutlu, & Demir, 2012; Xiao et al., 2012; Anonymous, 2013e; Aşıkkutlu, 2013).

Table 4. Examples of recommended management provisions for physical, social, and administrative characteristics of YNP (Adapted from Aşıkkutlu, 2013)

		ROS CLASSES					
		Urban	**Sub-Urban**	**Rural Developed**	**Rural Natural**	**Semi-Primitive**	**Primitive**
PHYSICAL CHARACTERISTICS	Feeling of detachment from society (Users' appearance in the area, sounds, and smells)	Very intense or very dominant	Frequent or intense	Obvious, widespread, frequent	Periodic, infrequent, occasionally	Secondary, minor, occasionally	Very little, very secondary, rare
	Water quality standards	Meeting or exceeding legal standards	Meeting or exceeding legal standards	Meeting or exceeding legal standards	Meeting or exceeding legal standards	Exceeding legal standards	Exceeding legal standards

SOCIAL CHARACTERISTICS						
Percentage of users revisiting the site who heavily or excessively impact resources	Percentage of users who feel crowded or overcrowded	Percentage of recreational groups causing noise pollution	Being alone and level of isolation (Being alone, staying away from society in the wilderness)	Human structures and activities	Visual quality	Air quality standards
20%	25%	10%	Very little	It may be necessary and comprehensive.	Extremely changed	Meeting or exceeding legal standards
20%	20%	10%	Little	It may be necessary and very comprehensive.	Extremely changed	Meeting or exceeding legal standards
20%	20%	10%	Rare	It may be necessary and ordinary.	Changed	Meeting or exceeding legal standards
20%	10%	5%	Widespread	It may be necessary and rare.	Partially fixed	Meeting or exceeding legal standards
10%	5%	1%	Very widespread	It may be necessary and infrequent.	Remained unchanged	Exceeding legal standards
10%	5%	1%	Dominant or intense	No evaluation criteria.	Protected	Exceeding legal standards

MANAGEMENT CHARACTERISTICS				
Fully equipped rest areas	Regulated camping area	Maximum noise level	The degree of management presence (management personnel, signs, equipment, lighting, accommodation areas, restricted areas, speed zones, rules, security lighting, administrative offices, construction areas, etc.)	Percentage of users complaining about the same issues
It may be necessary and comprehensive.	It may be necessary and comprehensive.	65-75 decibels	Very intense or very dominant	10%
It may be necessary and very comprehensive.	It may be necessary and very comprehensive.	65-75 decibels	Frequent or intense	10%
It may be necessary and ordinary.	It may be necessary and ordinary.	55-65 decibels	Obvious, widespread, frequent	10%
There is no evaluation criterion.	It may be necessary and rare.	55-65 decibels	Periodic, infrequent, occasionally	5%
There is no evaluation criterion.	It may be necessary and infrequent.	45-55 decibels	Secondary, minor, occasionally	5%
There is no evaluation criterion.	It may be necessary and very little.	35-45 decibels	Very little, very secondary, rare	5%

	Wildlife area management	Necessary	Necessary	Necessary	Necessary	It is necessary but not mandatory.	It is necessary but not mandatory.

Today, Long-Term Development Plans are being implemented in national parks to protect resource values and control usage. However, these plans must be integrated with landscape planning methods. The rationale for this is that species-based conservation approaches in the management of protected areas are being replaced by process-based conservation approaches in the 21st century. In this context, conducting landscape planning studies using the NPROS method developed within the scope of this work is a necessary element for the sustainable use of resource values in management decisions taken in national parks and their surrounding areas.

In summary, it can be said that studies should be conducted on management models developed in protected areas and management decisions, and the data obtained should be shared with administrators. Management plans and Long-Term Development Plans can be updated by evaluating this data and scientific publications related to the subject. This makes it possible to protect national parks or areas with similar status and ensure the overall satisfaction of stakeholders with the area.

Acknowledgments

This study was supported by Düzce University TÜBİTAK (ÇAYDAG) project number 109Y327. In addition, the study was prepared using data from the doctoral thesis titled "Determination of a Recreational Management Plan for Yedigöller National Park".

This book chapter is an expanded version of a paper presented and published at the 9th International Sinan Symposium (April 21-22, 2015).

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