

# AN INVESTIGATION AND APPLICATION OF THAI SACRED LANDSCAPE TRANSFORMATION PATTERNS

Kattika Kittiprasan

Faculty of Architecture, Silpakorn University, Thailand

## ABSTRACT

**Corresponding author:**  
Kattika Kittiprasan  
[kittiprasan\\_k@silpakorn.edu](mailto:kittiprasan_k@silpakorn.edu)

**Received:** 18 October 2021  
**Revised:** 8 March 2022  
**Accepted:** 18 March 2022  
**Published:** 30 November 2022

**Citation:**  
Kittiprasan, K. (2022). An investigation and application of Thai sacred landscape transformation patterns. *Humanities, Arts and Social Sciences Studies* 22(3): 673-685.

This paper represents the outcome of a research titled “Interrelationship of Sacred Landscapes and Urban Changes in the Bangkok Metropolitan Area and Vicinity Region,” emphasizing “transformation pattern investigation” of Thai sacred landscapes within the greater Bangkok region and how they can be applied in the urban planning process. The three primary methods of the study included landscape morphology, land use and surrounding observations, and behavior mappings of eight case studies during daily and festive events. The findings comprised 20 patterns of sacred landscape transformation. With regard to the degrees and characteristics of cultural interventions, perception of sacredness, and stakeholders involved, the 20 patterns derived can be consolidated into five states, namely, Pristine state, Profane state, Pageantry state, Permanent Products state, and Professional state. These states could assist in the management or conservation of sacred sites and their surrounded areas and related activities affecting city growth. The study findings acknowledge the intangible significance of sacred landscapes and could integrate the inhabitants’ sense of place, memories, and well-being into the modern urban planning process. Furthermore, with more cultural concerns, they could effectively regain citizen participation and confidence, which help to restrain top-down planning practice. Possible outcomes include recommendations for cultural zones, urban farming zones, public-transportation policy, road-pattern framework, vital public spaces, and implementation tools such as design guidelines, conservation regulations, and management and restoration standards.

**Keywords:** Religious practice; cultural landscape; sacred landscape; landscape transformation; urban planning process

## 1. INTRODUCTION

Developed through empiricism, secularism, co-evolution, adaptation, and transformation over periods of time, sacred landscapes have encompassed religious, historical, social, geographical, archaeological, architectural, landscape architectural, and planning domains. Since the 1990s, cultural landscapes have been internationally recognized in cultural heritage conservation, planning, and management (Deacon, 2004; Verschuuren et al., 2008; United Nations Alliance of Civilizations (UNAOC), 2019; United Nations Educational, Scientific and Cultural Organization (UNESCO), 2019). Consequently, sacred landscapes have increasingly

changed and attracted development, tourism, entertainment industries, urban planning, and interdisciplinary studies (Gale, 2019; Huang, 2019). Besides religious studies, related research in sacred landscapes in social sciences vary from the incorporation of the landscapes into the cultural and archaeological study (Karr, 2005; Johnson, 2012; Moonkham, 2018), traditional knowledge (Atreya et al., 2018), architecture, landscape design and urban planning, sacred geometry, and conceptual ideals and their symbolic representation in relation to sacred beliefs (Bühnemann et al., 2003; Doxtater, 2009; Foster, 2012; Svamivastu, 2018). Several research studies discuss the entailment of natural landscape elements and cultural interventions, together with spatial experience and perception of the sacred, in sacred spaces (Koh, 2004; Australia ICOMOS, 2013; Dora, 2018). However, some other research studies have described sacred landscape transformation (Parcero-Oubiña et al., 1998; Kittiprasan, 2017; 2018; Hodor and Fekete, 2019; Huang, 2019). Furthermore, current research studies related to urban sacred landscape, city identities, and integration of sacred landscape with environmental and eco-diversity conservation, heritage conservation, and planning have gained wider attention in various fields (Bendlin, 2013; Ortsin, 2015; Müller-Karpe, 2015; De Boeck, 2016; Geel and Beyers, 2018; Rambukwella, 2018). Recent studies have investigated the concept and perception of sacredness to shape urban forms and character of the city and construct intangible values in urban areas and modern cities (Greed, 2017; Rimaz, 2018; Hodor and Fekete, 2019). Notwithstanding, the significance of sacredness as the structure of European cities and the spiritual needs of humanity seemed to decline since the 19<sup>th</sup> century (Hodor and Fekete, 2019). The contemporary movement shows that sacred landscapes could be applied in modern cities to pervasion, preserve cultural and social values, and shape modern urban areas to make them vibrant and unique (Rimaz, 2018). However, from the reviews of the research mentioned above, it can be concluded that the intangible significance of sacred landscapes in the urban environment integral to the place and inhabitants' well-being has been disregarded in modern planning practices.

Thai sacred landscapes are complex due to multifarious beliefs—Buddhism, Hinduism, Animism, and superstition (Anuman Rajadhon, 1968; Kesten, 1988)—and have formed an inseparable part of the Thai cultural landscape for over a thousand years. However, rapid economic development, expanded urbanization, and changes in modern lifestyle, accompanied by stakeholder involvement, alienate Thai laypeople increasingly from religious practices. Unavoidably, Thai sacred landscapes have been changed, damaged, and endangered. As reflected by their adaptations and transformations to survive, Thai sacred sites have been affected by modern lifestyles, economic activities, ill-considered urban planning, developers' unawareness, and lack of landscape conservation policies.

## 2. PURPOSES

As a part of a research titled “Interrelationship of Sacred Landscapes and Urban Changes in the Bangkok Metropolitan Area and Vicinity Region” funded by Thailand Science Research and Innovation (TSRI) [MGR6280039], this article is meant to disseminate the findings of transformation patterns of Thai sacred landscapes and their applications through eight case studies. Another objective of this study is to demonstrate how those patterns can help improve the process of urban planning at various phases to complement its future development with a philanthropic dimension.

## 3. CONCEPTUAL FRAMEWORKS

Four conceptual frameworks were adopted: Hunt's *Concept of three natures* (2000), Kohr's *Landscape typologies* (2008), Kittiprasan's *Three sacred natures* (2017), and *Landscape changes in relation to surrounding contexts* (Tantinipankul, 2007; Neamnapa, 2014; Kittiprasan, 2017).

Originated in garden history, the first concept considers the relationship between cultural evolution and the physical environment. The second concept, which originated in landscape history, deals with sacred landscapes through history. Based on the cultural landscape and environmental psychology theories, the third concept deals with abstract transformation and sacredness with instinctive, functional, and imaginary views. Finally, the fourth concept, based on research of Thai sacred landscape practices, involves Thai sacred landscapes and their surroundings in terms of physical linkage, social collaboration, and activities such as linkage to the city, spatial expansion of sacred spaces, temporal activities, and cooperation of the surrounding communities or general public. Figure 1 illustrates the details of the conceptual frameworks as mentioned above.

The first and second concepts are applied to analyze sacred landscape transformation patterns by studying landscape changes at the site scale. The third concept is used to study artifacts and symbols, spatial organization, and perception of sacredness at the elementary scale. In contrast, the fourth concept helps to

study and analyze landscape changes and their influences on the urban development process due to their relationship with surroundings and activities at the settlement scale. These four conceptual frameworks work jointly with certain factors and criteria to identify sacred landscape transformation, as shown in Table 1.

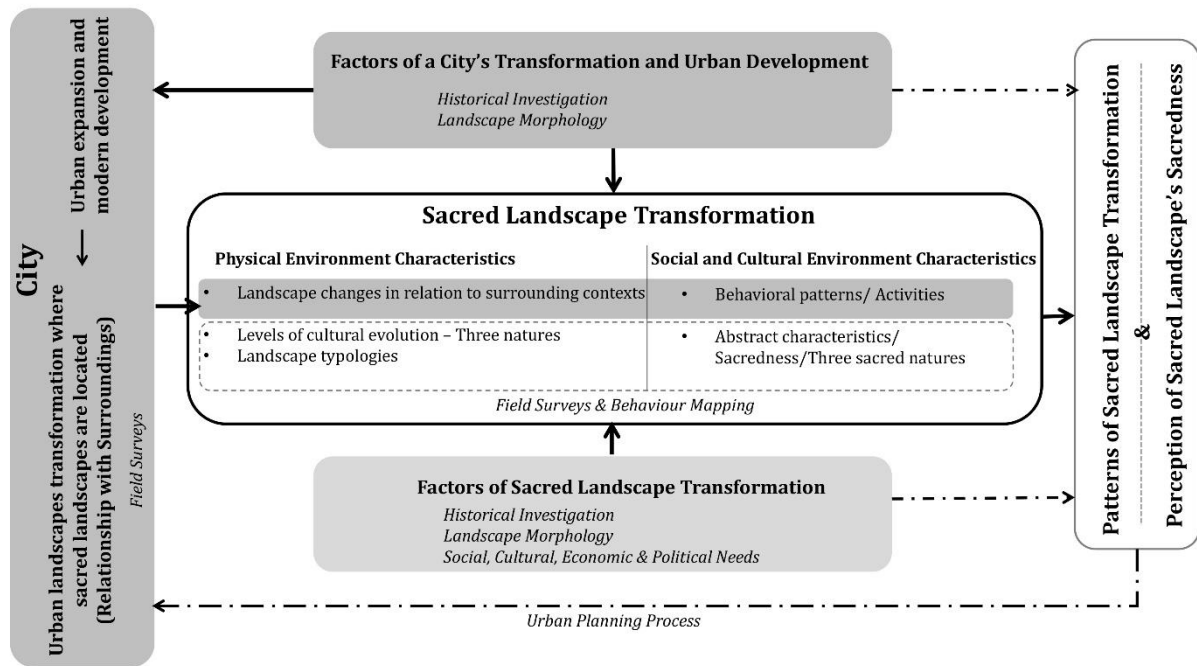


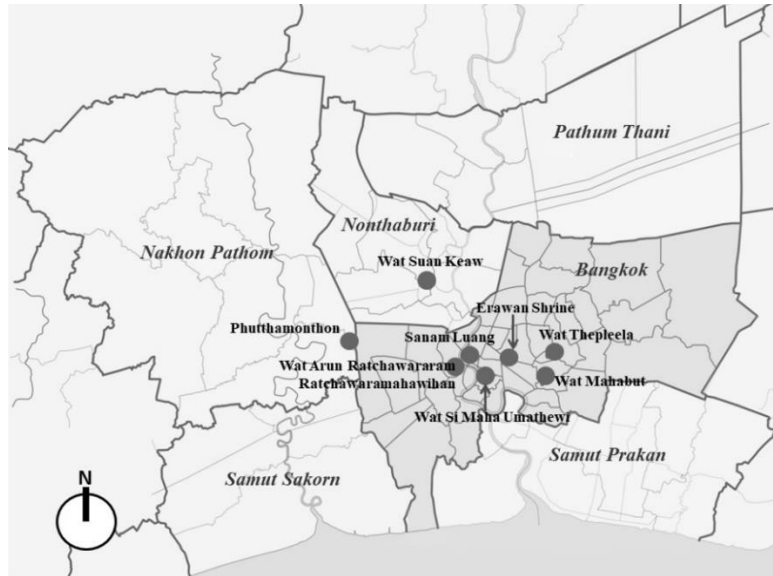
Figure 1: The Conceptual Frameworks (Illustration by the author)

#### 4. METHODS

This research applied mixed methods in transformation pattern investigation based on the three approaches, namely morphology study, case study, and ethnographical approaches. The mixed methods included documentation and archival review, mapping, observations, and interviews. The history of case studies and their surroundings and urban development were also investigated. To explore spatial changes and spatial organizations over time, landscape morphology analysis using the mapping method based on historical investigations of eight case studies from the Thonburi Period (1767-1782) to 2019 was carried out. Also, field surveys of land use and behavior mapping of daily and festive activities in the case studies were executed between February 2019 and January 2020 to observe changes in functions, activities, and relationships with surroundings. Lastly, interviews of all stakeholders in the case studies were conducted in 2020 to understand their intentions, needs, and desires.

Eight case study areas were chosen. Six out of eight case studies consisting of *Sanam Luang*, *Wat Arun Ratchawararam Rajvoramahawihan*, *Erawan Shrine*, *Wat Si Maha Umathewi*, *Wat Thepleela*, and *Wat Mahabut* are located in Bangkok's built-up area, while the rest lie within the neighboring city limits: *Phutthamonthon* in Nakhon Pathom, and *Wat Suan Keaw* in Nonthaburi (Figure 2). Four criteria in selecting the case study areas consist of (i) representing three Thai sacred landscape typologies typically founded in the Bangkok Metropolitan Area and Vicinity Region—constructed sacred landscape, festive landscape, and ceremonial landscape; (ii) representing three practices in Thai sacred landscapes (local, royal, and state practices); (iii) being dynamic as shown by continually holding religious and festive activities, having historical significance to the city, being spiritual centers or supporting well-being, and adapting to modern changes; and (iv) located in four districts regarding different characters of urban development—historical area, Central Business District, suburban area, and metropolitan area.

To analyze and synthesize sacred landscape transformation patterns, various methods were employed. First, all physical changes (plans, urban environment, behavioral patterns, and architectures) were analyzed by mapping overlay. Data from historical evidence, observations, and interviews were synthesized together to understand factors and criteria prior to the process of physical and intangible changes analysis having resulted in the finding of the 20 sacred landscape transformation patterns. The final method deals with the analysis and synthesis of stakeholders' interview data to discover their proper roles in the urban development process.



**Figure 2:** Locations of Eight Case Studies of Thai Sacred Landscapes in the Bangkok Metropolitan Area and Vicinity Region (Illustration by the author)

## 5. FACTORS AND CRITERIA

Based on historical pieces of evidence and field surveys, eight factors changed Thai sacred landscapes: *physical* (natural factors, boundary and land area, natural disaster, safety, comfort, increasing activities, and beautification), *social* (expansion of social groups and occupancy), *economic, political* (linkage to the city and surrounding areas, city development concept, formalization, and secularization), *cultural, wellness, modernization* (or improved conditions), and *universal values*.

Twelve criteria for identifying sacred landscape transformation include *natural transformation for basic needs, natural transformation for higher needs, spatial expansion, linkage to the city and the surrounding, invention, factor in the modern context, occupancy, tradition, formalization, secularization, revitalization, and expertise conservation*.

The relationship of the four conceptual frameworks, eight factors, and 12 criteria are elaborated in Table 1.

**Table 1:** Relationship of the Conceptual Frameworks, Factors, and Criteria That Have Changed Thai Sacred Landscapes

Criteria in Identifying Thai Sacred Landscape Transformation	8 Factors Changing Thai Sacred Landscapes	The Conceptual Frameworks				Stakeholders
		Three Natures	Landscape Typologies	Three Sacred Natures	Relationship with Surroundings and Activities	
Natural transformation for basic needs	Physical Social	1 <sup>st</sup> Nature 2 <sup>nd</sup> Nature	Cultural Landscape Festive Landscape	Instinctive Sacredness Functional Sacredness	Surrounding Community	Local
Natural transformation for higher needs	Physical Economic Social Cultural Wellness	2 <sup>nd</sup> Nature 3 <sup>rd</sup> Nature	Festive Landscape Ceremonial Landscape Constructed Sacred Landscape	Functional Sacredness Imaginary Sacredness	Surrounding Community City	Local State Royal
Spatial expansion	Physical Economic Social Political	3 <sup>rd</sup> Nature	Constructed Sacred Landscape	Imaginary Sacredness	Surrounding Community City	Local State Royal
Linkage to the city and the surrounding	Physical Economic Political (City Development Concept)	2 <sup>nd</sup> Nature 3 <sup>rd</sup> Nature	Ceremonial Landscape Constructed Sacred Landscape	Functional Sacredness Imaginary Sacredness	City	State Royal

**Table 1:** Relationship of the Conceptual Frameworks, Factors, and Criteria That Have Changed Thai Sacred Landscapes (continued)

Criteria in Identifying Thai Sacred Landscape Transformation	8 Factors Changing Thai Sacred Landscapes	The Conceptual Frameworks				Stakeholders
		Three Natures	Landscape Typologies	Three Sacred Natures	Relationship with Surroundings and Activities	
Invention	Physical Economic Social Cultural Wellness	2 <sup>nd</sup> Nature 3 <sup>rd</sup> Nature	Festive Landscape Ceremonial Landscape	Functional Sacredness Imaginary Sacredness	Community City	Local State Royal
Factor in the modern context	Socioeconomic# Sociocultural# Sociopolitical# Wellness	2 <sup>nd</sup> Nature	Festive Landscape Ceremonial Landscape	Functional Sacredness	Community Surrounding City	Local State
Occupancy*,**,***	Physical Social Political Universal Values##	2 <sup>nd</sup> Nature 3 <sup>rd</sup> Nature	Ceremonial Landscape Constructed Sacred Landscape	Functional Sacredness Imaginary Sacredness	Community Surrounding City	Local State Royal##
Tradition*	Physical Cultural	2 <sup>nd</sup> Nature 3 <sup>rd</sup> Nature	Festive Landscape Ceremonial Landscape Constructed Sacred Landscape	Functional Sacredness Imaginary Sacredness	Community City	Local Royal
Formalization**,***	Physical Political	2 <sup>nd</sup> Nature 3 <sup>rd</sup> Nature	Ceremonial Landscape Constructed Sacred Landscape	Functional Sacredness Imaginary Sacredness	Surrounding City	State Royal
Secularization***	Social Political Modernization	3 <sup>rd</sup> Nature	Constructed Sacred Landscape	Imaginary Sacredness	Community Surrounding	Local
Revitalization	Economic Social Cultural Modernization	2 <sup>nd</sup> Nature 3 <sup>rd</sup> Nature	Ceremonial Landscape Constructed Sacred Landscape	Functional Sacredness Imaginary Sacredness	Community Surrounding	Local State Royal
Expertise conservation	Cultural Universal Values##	3 <sup>rd</sup> Nature	Constructed Sacred Landscape	Imaginary Sacredness	Surrounding City	State Royal## Expert

Note: \* Tradition related to occupancy

\*\* Formality influenced by occupancy

\*\*\* Secularization related to occupancy and formalization

# 2 - 3 Factors interacting with each other and becoming factors in the modern context

## Universal values related to royal sacred landscapes and often assessed by experts

## 6. DEFINITION AND FINDINGS OF SACRED LANDSCAPE TRANSFORMATION PATTERNS

The “patterns of sacred landscape transformation” are defined as permanently or temporarily physical and abstract changes in a sacred landscape, its surrounding, and its city by certain factors and stakeholders involved. These changes may affect the perception of sacredness, the role of sacred landscape, or urban development. The patterns are thus classified by the combination and complexity of criteria, key stakeholders, sacred landscape typologies, and characteristics of changes.

The findings reveal 20 patterns of sacred landscape transformation in the Bangkok Metropolitan Area and Vicinity Region:

The 1<sup>st</sup> pattern is the early state of transformation from wilderness conditions to vernacular landscapes since the Ayutthaya Period (14<sup>th</sup>-18<sup>th</sup> century), where nature itself was sacred due to animistic belief and instinctive understanding.

The 2<sup>nd</sup> pattern is the evolution of agricultural or cultural landscapes from the Ayutthaya Period to the early Rattanakosin Period (1782-1851). Natural landscapes in all case studies were transformed into paddy fields, orchards, or grazing pastures. As a result, agricultural rites and festivals took root and formed festive landscapes.

The rise of civilization, construction of places such as shrines, temples, tombs, and other cultural imprints to observe rituals have produced the 3<sup>rd</sup> pattern. It thus reveals the imaginary views of sacredness with regards to art, architecture, and cultural manifestations.

The 4<sup>th</sup> pattern has resulted from the expansion of constructed sacred landscapes by increased population and extensive land development.

Royal occupancy of Thai sacred landscapes constitutes the *5<sup>th</sup> pattern* in the form of royal buildings, i.e., palaces and temples, based on the concept of kings as divine beings or incarnations of gods (Suksamran, 1976). They eventually led to dramatic sacred landscape transformation in terms of grandness and sophistication and expansion of boundaries and change of users.

Since before the 14<sup>th</sup> century, religious and traditional festivals have generated festive landscapes temporarily on static landscapes. This is the *6<sup>th</sup> pattern* that has resulted from changes in the physical environment, behavioral patterns, and activities. The Buddhist Lent Festival is a good example featuring processional routes that link the city to a festive landscape with decorations and secular activities.

The *7<sup>th</sup> pattern* is the product of restoration, modification, modernization, and beautification of sacred landscapes conducted by government officials, monks, or craftsmen who did not serve the royal institution. Some products are results of rapid modernization and development, such as the uses of unusual materials, for example, Aluminum plates, lotteries, animal skulls, and Hi Lo cups, to restore and beautify sacred architecture or the failure to control high-density buildings in sacred landscapes, most of which damaged the designs and styles of the sacred landscapes themselves.

The *8<sup>th</sup> pattern* emerges from changes in behavioral patterns, festive practices and traditional activities modernized to serve current issues and expressed by temporary decorations and new constructions in the sacred landscapes. Differently from the 6<sup>th</sup> pattern, social and environmental problems are integrated into religious festivals. The Loy Krathong Festival is a case in point symbolizing colorful ritual spaces to perform a unique ceremony expressing apologies to the Mother River with beautiful floating *krathongs* along with the waterways as a redemption gesture for causing water pollution.

The *9<sup>th</sup> pattern* is brought about by an annual agricultural activity run by the government called the “royal plowing ceremony.” It has long been performed since the Sukhothai Period (13<sup>th</sup>-15<sup>th</sup> century) as a spiritual rite for farmers hoping to have fruitful rice cultivation. On such day, an everyday landscape site, Sanam Luang, was converted to a temporary agricultural sacred landscape to perform plowing rituals after Brahman’s creed, featuring a forecast of crop fertility for that year.

The *10<sup>th</sup> pattern* results from modern-day expert conservation of royal spaces and sophisticated construction of sacred and ceremonial landscapes. After adopting significant international charters such as the Athens Charter and the Venice Charter, the Department of Fine Arts has retained an absolute legal power to grant permission to any conservation, alteration, or restoration of all registered historic buildings and sites in the whole kingdom.

Traditional royal ceremonies held at particular places on certain auspicious occasions for more than a hundred years generate the *11<sup>th</sup> pattern*. Unlike the 6<sup>th</sup> pattern, spatial occupancy and processional routes in traditional royal ceremonies, e.g., royal cremation, have only been reserved for the kings and royal family members. Consequently, royal rituals, behavioral patterns, manners, dress codes, and atmosphere are strictly formal.

The *12<sup>th</sup> pattern* is the reversal of sacred landscapes back to everyday landscapes. As a result of modern-day needs and economic and political factors, sacred landscapes also serve secular activities, mainly recreational, exercising, and commercial. Historically, Sanam Luang was occasionally turned into a public park and weekend marketplace.

The *13<sup>th</sup> pattern* is caused by abandoned constructed sacred landscapes resulting from war or political turmoil that drove the people away, thus leaving behind deteriorating conditions of artifacts. The non-physical transformation includes lack of sacredness, reduced meaning, lack of sense of belonging and maintenance, and becoming “placelessness.” Wat Suam Keaw, previously named Wat Keaw, is a case in point being deserted after the Burmese-Siamese War by the end of the Ayutthaya Period.

The *14<sup>th</sup> pattern* emerges from changes in sacred back to profane landscapes. For example, during the Siamese-Vietnamese War of 1841-1845, King Rama III transformed Sanam Luang into a paddy field to boost food supplies for his subjects and thus deconsecrating the sacred ceremonial ground.

Thai ceremonial landscapes were renovated, modernized, and beautified by King Rama V to survive colonization by the Western powers during the 16<sup>th</sup>-17<sup>th</sup> century. The *15<sup>th</sup> pattern* resulted from such a phenomenon that made the Temple of the Emerald Buddha and the Grand Palace more elegant and majestic.

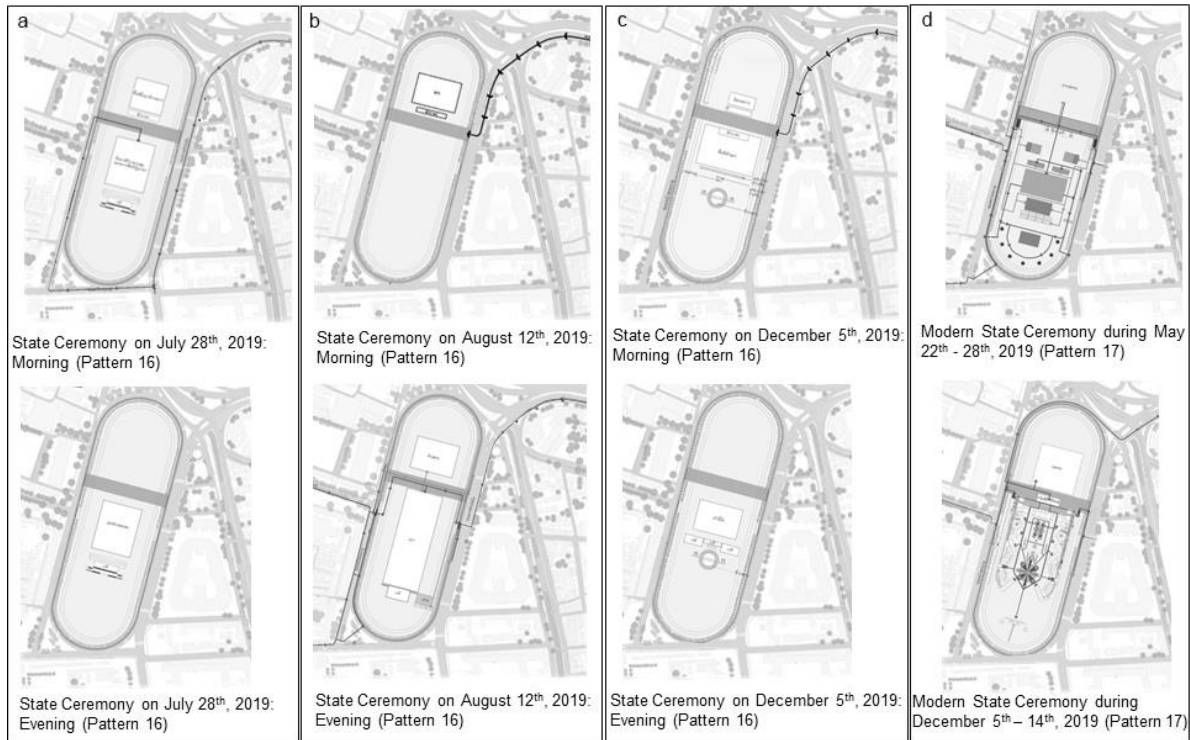
The *16<sup>th</sup> pattern* emerged when the Thai government hosted state ceremonies to celebrate auspicious occasions for Thai kings and queens (see Figure 3a-3c). The events usually converted a sacred landscape into the temporary ground to perform commemorative activities. Cultural displays and concerts, which are similar to but less formal than the 11<sup>th</sup> pattern, were allowed to operate until late nights for the general public.

The *17<sup>th</sup> pattern* is generated by changes in state ceremonies to serve modern-day economic, social, and political contexts (see Figure 3d). Although rituals and ceremonial activities are similar to those in the 16<sup>th</sup> pattern; collaborations with the private sector have given birth to an exposition of food products, tourist

information centers, displays of royal barge replicas, royal projects, and sufficiency economy concept as well as light-and-sound shows.

The 18<sup>th</sup> pattern is found in more recent religious festivals to serve the modern-day economic, social, and cultural aspects such as arts and crafts markets, walking streets, games pavilions, and shows. Furthermore, new festive activities such as the Lantern Festival and Watchnight Service on New Year's Eve have been invented. This pattern highlights the importance of stakeholders' roles in sacred landscape transformation.

The 19<sup>th</sup> pattern is filled with contemporary events such as half-marathon races, fun runs, and other entertaining activities. Moreover, new functions aimed at addressing environmental and social issues—including waste, water pollution, poverty, unemployment, illiteracy, drugs, stray dogs, abandoned elderly citizens, and the homeless—emerged for sacred landscapes.



**Figure 3:** a)-c) State Ceremonies at Sanam Luang Generating the 16<sup>th</sup> Pattern of Sacred Landscape Transformation; d) Modern State Ceremonies Generating the 17<sup>th</sup> Pattern (Illustration by the author)

Lastly, the 20<sup>th</sup> pattern is the result of the renewal or revitalization of the modern constructed sacred landscape. In contrast to the design of traditional Thai sacred landscapes based on Buddhist Cosmology and religious concepts, the newly constructed landscapes, particularly Phutthamonthon, were designed in the same styles as English, French, or Italian landscapes. Phutthamonthon compound and its road network were planned to commemorate the 2,500-years anniversary of the Buddhist Era, a part of urbanized area expansion for Greater Bangkok. Evidently, this pattern came entirely under control of unselfconscious designers and inconsiderate officials by that time.

Noticeably, some patterns, particularly the 7<sup>th</sup>, 12<sup>th</sup>, 15<sup>th</sup>, and 20<sup>th</sup> patterns, reveal damages on sacred landscapes due to the rapid modernization of urban development. Two broad types of damages are physical and intangible damages. The former is caused by modern design and changes in architectural style, Western style of site planning, isolation of sacred landscapes from local communities, and alienated urban environment that deteriorate local identity and sense of place. The latter entails loss of social interaction due to absolute and legal control over registered heritage sites and declined social and cultural values caused by globalized tourism. These damages have been brought by particular stakeholders; these stakeholders have been outsiders—such as government officials or committees of designers—as well as insiders, including abbots and unprofessional practitioners. Naturally, each stakeholder has a different intention, needs, and desires. For example, experts usually focus on professional techniques to conserve sacred landscapes physically. Simultaneously, local government officials consider sacred landscapes as places to attract tourists, whereas clergypersons spiritually try to conserve sacred landscape sites as destinations for pilgrimage.

In most cases, the locals are concerned with the perception of sacredness, sacred landscape values, and how to disseminate them. Without local participation, conflicts often appear in the form of visual pollution of modern development and adverse effects of tourism on sacred landscapes. Therefore, advocates for a robust participatory model in the development, conservation, and management of sacred landscapes and the restoration of the desirable urban environment are indispensable.

Because the overall patterns are hard to comprehend due to their multiplicities, it helps to consolidate these patterns into five states based on the degrees and characteristics of cultural interventions, perception of sacredness, and stakeholders involved. These five states are as follows: First, *Pristine state* refers to the state of sacred landscapes perceived by natural sacredness shaped by the natural environment and the locals' animistic beliefs without any cultural intervention or physical imprints on the landscape. Next, *Profane state* refers to the state that sacred landscapes are transformed by locals, governments, or kings with essential cultural interventions for the secular activities. Third, *Pageantry state* refers to the state of sacred landscapes perceived by functional sacredness temporarily when holding festivals and ceremonies. In this state, both primary and complex cultural interventions are temporarily conducted and performed by various stakeholders, including locals, artisans, government authorities, royal family members, or kings. Fourth, *Permanent Products state* refers to the state of sacred landscapes perceived by imaginary sacredness and shaped by complex cultural interventions, such as arts, architecture, and symbols depending on the stakeholders who constructed them (locals, aristocrats, kings, or experts). The higher the social class constructed, the more sophisticated and more beautiful constructed sacred landscapes are. Lastly, *Professional state* refers to designed sacred landscapes by professionals, architects, landscape architects, or urban designers. Such designs result in imaginary sacredness through complex cultural interventions and linking sacred landscapes to the urban environment.

These five states are here called the five Ps. Each covers the different number of patterns as follows:

- (I) *Pristine state*, consisting of the 1<sup>st</sup> pattern only
- (II) *Profane state*, consisting of the 2<sup>nd</sup>, 12<sup>th</sup>, and 14<sup>th</sup> patterns
- (III) *Pageantry state*, consisting of the 6<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 11<sup>th</sup>, 16<sup>th</sup>, 17<sup>th</sup>, 18<sup>th</sup>, and 19<sup>th</sup> patterns
- (IV) *Permanent Products state*, consisting of the 3<sup>rd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 7<sup>th</sup>, 10<sup>th</sup>, and 13<sup>th</sup> patterns
- (V) *Professional state*, consisting of the 15<sup>th</sup> and 20<sup>th</sup> patterns

Undoubtedly, these patterns of sacred landscape transformation could theoretically assist in the management/conservation of sacred sites and the research in landscape history, human geography, cultural landscape, and heritage conservation. But best of all, they are essential for the improvement of urban redevelopment if integrated with the end-to-end process of planning.

## 7. THE RELATIONSHIP BETWEEN SACRED LANDSCAPES AND URBAN DEVELOPMENT

The early evolution of settlements in the West, from Greek to Medieval, was influenced by certain beliefs, as manifested by the construction of the Parthenon on the Acropolis for worshiping gods and goddesses. At the same time, cathedrals in medieval cities reflected faith in God and the spiritual power of Christianity for over a thousand years. However, sanctification in Western cities has decreased since the 19<sup>th</sup> century as the focus has shifted to secular developments such as housing and sanitation (Steinhoff, 2008). In contrast, settlements in the East have been shaped either by Mahayana Buddhism and Geomancy; Feng-Shui (Lynch, 1981); Hinduism, Mandala, and Vāstu-Purusa (Begde, 1978; Lynch, 1981); Buddhist Cosmology; Triphum (Jumsai, 1988; Rod-Ari, 2009). Imprints of these sacred beliefs influenced the design of ancient cities such as Beijing, Madurai, Angkor Wat, Pimai, and Sukhothai. Historic cities have also introduced the "sacred landscapes" role to urban design through the concept of *genius loci* or "spirit of place," later developed into "sense of place" so as to create the city's character and respond to local existence (Norberg-Schulz, 1980). By contrast, most modern cities, such as Bangkok, have not been sacralized by professional planners' top-down approach since the 1920s.

It is conceivable that sacred landscape transformation could be incorporated into the urban planning process since a city needs to provide a biogenic environment to serve biological needs and a sociogenic environment to serve mental and spiritual well-being with regards to sociocultural needs (Lang, 1994). For example, applying the cosmic model based on Hindu-Buddhist cosmology or Feng-Shui to assure safety and security needs can unify a city and gain its citizens' confidence (Trancik, 1986). To serve sociocultural needs, religious festivals become significant activities to provide economic vibrancy in major cities, such as the Holi Festival in Delhi, Gion Festival in Kyoto, Buddhist Lent in Ubonratchathani, Yee Peng Lantern Festival in Chiang Mai, and Songkran Festival in Bangkok. It is also possible to create a "sense of place" in the city physically and socially by planning sacred landscapes with distinct concentration and enclosure along the axis to represent the cosmic order vertically (such as heaven and universe), create the image of cosmos on the land, establish



the city's image structure, and constitute the meaning of a city's culture and history (Norberg-Schulz, 1980; Lynch, 1981; Yiran, 2009).

## 8. APPLYING SACRED LANDSCAPE TRANSFORMATION PATTERNS IN THE URBAN PLANNING PROCESS

A typical urban planning process consists of five significant phases (Urban Learning, 2020). Applications of sacred landscape transformation patterns in each phase can yield benefits to the planner as follows (Figure 4).

(I) *Preparatory Planning Phase*: Sacred landscape transformation patterns can provide basic data for environmental analysis (e.g., natural and biophysical system, landscape value, and pollution), economic analysis (e.g., economic activities, employment, demography, transportation, and urban system), and sociocultural and urbanistic analysis (e.g., cultural/traditional values, settlements, festivals, and celebrations). Besides, additional data of land use, building uses, and cultural imprints and temporary data of behaviors and processional routes during festivals and ceremonies held in the city throughout history would help understand the whole picture of urban phenomena.

(II) *Feasibility and Master Planning Phase*: Sacred landscape transformation patterns can help understand spatial impacts caused by the flow of people, transportation, and activities during festivals and ceremonies. Therefore, they can assist in the proper planning of civic spaces, roads and public transport systems, proper density of built environment, and spatial characters in various parts of the city.

(III) *Formal Planning Phase*: Sacred landscape transformation patterns can identify clusters of sacred landscapes needed to be conserved or restored as special cultural zones with appropriate protective codes. Apart from assistance in transportation and public space planning, as mentioned earlier, specific patterns can be applied to avoid conflicts with local inhabitants and businesses caused by congestions. Furthermore, if sustainability plays a key role in urban development, urban farming zones could also be identified in the master plan to enhance future food security.

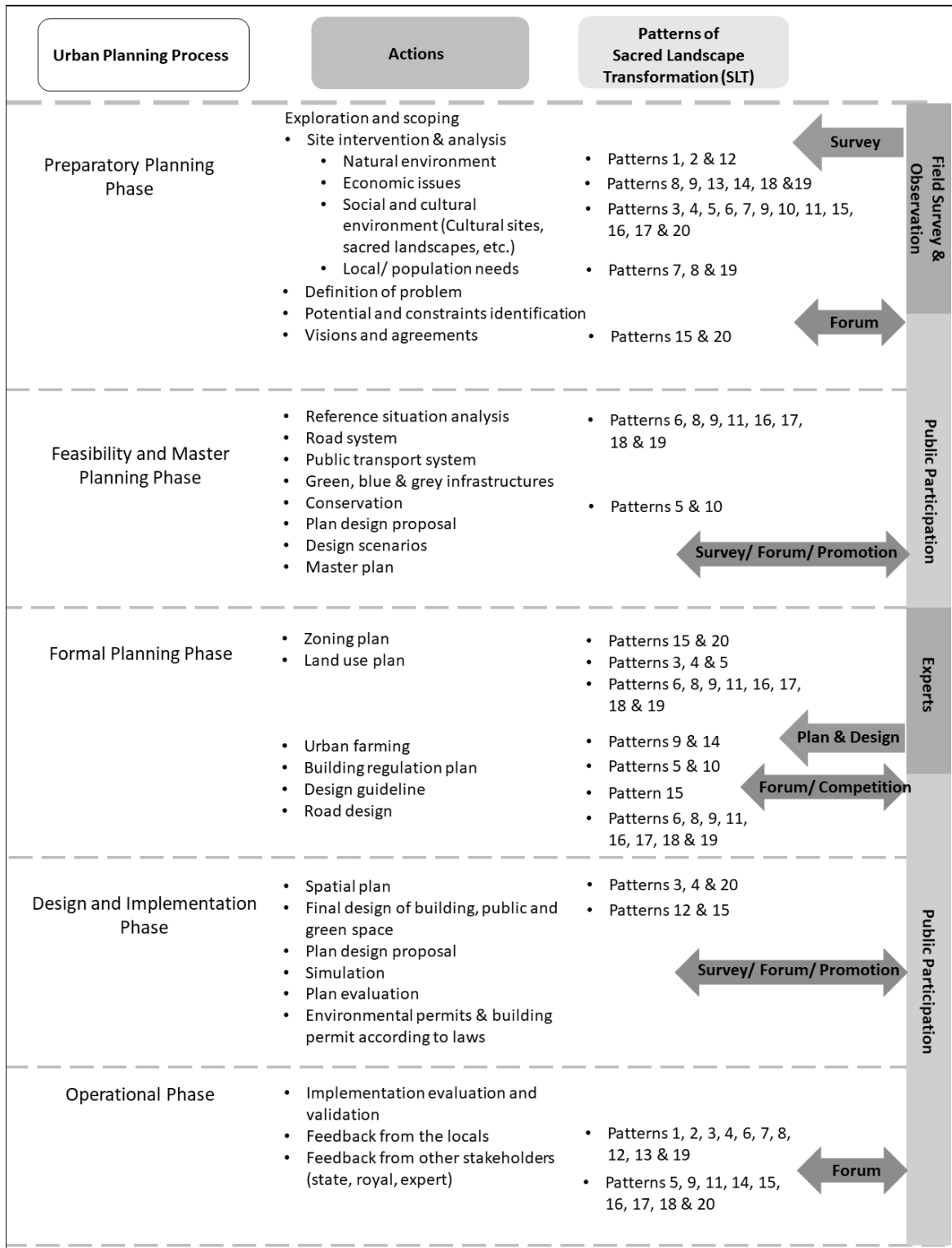
(IV) *Design and Implementation Phase*: Sacred landscape transformation patterns can guide the design of building plans, forms, and shapes in response to community density, solar and wind exposure, biophysical environment, and sense of place—apart from promoting flexible uses of sacred landscapes as public and green spaces. It is crucial to make sacred landscapes more resilient regarding adaptations to modern values, trends, and future urban needs.

(V) *Operational Phase*: When people participate, all stakeholders, particularly the local citizens, monks, and craftsmen, should collaborate in the maintenance, restoration, and conservation of sacred landscapes. Besides, agencies involved in the organization of state and royal ceremonies and other festivals should play critical roles in decision making so that a bottom-up approach could help narrow down the top-down attitudes and practices of unthoughtful officials.

Figures 4 and 5 exemplify how sacred landscape transformation patterns can be integrated into the major phases of the urban planning process and stakeholders' roles.

## 9. CONCLUSION

Applying sacred landscape transformation patterns in the urban planning process could support the intangible significance of sacred landscapes in shaping modern urban areas, permeating and preserving social and cultural values, and strengthening unique identities for modern cities through the place, people, and time. Therefore, the strong participatory model in the urban planning process involving all stakeholders' roles is essential because such a model could generate a sense of place and promote inhabitants' well-being. To respond to the roles and needs of all stakeholders and a variety of sacred landscape transformation patterns, further study should investigate the bottom-up model of sacred landscape conservation and management deeper to sustain sacred landscapes in the modern context



**Figure 4:** Application of Sacred Landscape Transformation Patterns in Each Phase of the Urban Planning Process (Illustration by the author based on Amado et al., 2009: 599 and Urban Learning, 2020)

Urban Planning Process	Stakeholders in Sacred landscapes				
	Locals	King	State/ Decision Makers	Experts	Other Stakeholders
<b>Preparatory Planning Phase</b>	<ul style="list-style-type: none"> <li>Providing basic data of uses, behaviors, local needs</li> <li>Shared vision of the city and sacred landscape</li> </ul>	<ul style="list-style-type: none"> <li>Shared vision of the city and sacred landscape</li> </ul>	<ul style="list-style-type: none"> <li>Shared vision of the city and sacred landscape</li> <li>Policies and strategies</li> </ul>	<ul style="list-style-type: none"> <li>First assessment, analysis of inventory data</li> <li>Multidisciplinary research</li> <li>Field survey &amp; observation</li> <li>Collecting visions</li> <li>Defining criteria</li> </ul>	<ul style="list-style-type: none"> <li>Shared vision of the city and sacred landscape</li> <li>Role and involvement in sacred landscape</li> </ul>
<b>Feasibility and Master Planning Phase</b>	<ul style="list-style-type: none"> <li>Fundraising</li> <li>People participation</li> </ul>	<ul style="list-style-type: none"> <li>Funding</li> </ul>	<ul style="list-style-type: none"> <li>Feasibility study</li> <li>Budget</li> <li>Holding forum &amp; promotion</li> </ul>	<ul style="list-style-type: none"> <li>Suggesting assessment models</li> <li>Reference situation analysis</li> <li>Suggesting design scenarios</li> <li>Master plan</li> </ul>	<ul style="list-style-type: none"> <li>Fundraising</li> <li>People participation</li> </ul>
<b>Formal Planning Phase</b>	<ul style="list-style-type: none"> <li>Social networking helps experts identify design issues</li> <li>Design participation</li> </ul>	<ul style="list-style-type: none"> <li>Suggestions to experts or decision makers</li> </ul>	<ul style="list-style-type: none"> <li>Holding forums and competitions</li> <li>Approve zoning plan by city council or local authority</li> </ul>	<ul style="list-style-type: none"> <li>Design specifics for each area</li> <li>Land use plan</li> <li>Zoning plan</li> <li>Building regulation plan</li> <li>Road design</li> <li>Design guideline</li> </ul>	<ul style="list-style-type: none"> <li>Design participation</li> </ul>
<b>Design and Implementation Phase</b>	<ul style="list-style-type: none"> <li>Design participation</li> </ul>	<ul style="list-style-type: none"> <li>Comments to experts or decision makers</li> </ul>	<ul style="list-style-type: none"> <li>Holding forums and promotion</li> <li>Environmental permit, building permit according to laws</li> </ul>	<ul style="list-style-type: none"> <li>Spatial design</li> <li>Final design of building, public &amp; green space</li> <li>Plan design proposal</li> <li>Simulation</li> <li>Plan evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Design participation</li> </ul>
<b>Operational Phase</b>	<ul style="list-style-type: none"> <li>Maintenance, management &amp; restoration</li> <li>Providing feedback</li> </ul>	<ul style="list-style-type: none"> <li>Royal patronage</li> </ul>	<ul style="list-style-type: none"> <li>Management &amp; restoration</li> <li>Policies</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring</li> <li>Implement evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Maintenance &amp; restoration</li> <li>Providing feedback</li> </ul>

**Figure 5:** Integration of Stakeholders' Roles in the Urban Planning Process (Illustration by the author based on Urban Learning, 2020)

**REFERENCES**

Amado, M. P., Santos, C. V., Moura, E. B. and Silva, V. G. (2009). Public participation in sustainable urban planning. *World Academy of Science, Engineering and Technology* 53: 597-603.

Anuman Rajadhon, Phya. (1968). *Essay on Thai Folklore*. Bangkok: Duang Kamol. [in Thai]

Atreya, K., Pyakurel, D., Thagunna, K. S., Bhatta, L. D., Uprety, Y., Chaudhary, R. P., Oli, B. N. and Rimal, S. K. (2018). Factors contributing to the decline of traditional practices in communities from the Gwallek-Kedar area, Kailash sacred landscape, Nepal. *Environmental Management* 61(5): 741-755.

Australian International Council on Monuments and Sites (Australia ICOMOS). (2013). *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance, 2013*. Burwood: Australia ICOMOS.

Begde, P. V. (1978). *Ancient and Medieval Town-Planning in India*. New Delhi: Sagar Publications.

Bendlin, A. (2013). The Urban Sacred Landscape. In *The Cambridge Companion to Ancient Rome*, edited by P. Erdkamp, pp. 461-477. Cambridge, MA: Cambridge University Press.

- Bühnemann, G., Brunner, H., Meister, M. W., Padoux, A., Rastelli, M. and Törzsök, J. (2003). *Mandalas and Yantras in the Hindu Traditions*. Leiden: Brill.
- Deacon, H. (2004). Intangible heritage in conservation management planning: The case of Robben Island. *International Journal of Heritage Studies* 10(3): 309-319.
- De Boeck, F. (2016). The Sacred and the City: Modernity, Religion, and the Urban Form in Central Africa. In *A Companion to the Anthropology of Religion*, edited by J. Boddy and M. Lambek, pp. 528-548. West Sussex: Wiley Blackwell.
- Dora, V. D. (2018). Infrasecular geographies: Making, unmaking and remaking sacred space. *Progress in Human Geography* 42(1): 44-71.
- Doxtater, D. (2009). Rethinking the sacred landscape: Minoan palaces in a georitual framework of natural features on Crete. *Landscape Journal* 28(1): 1-21.
- Foster, M. T. (2012). Sacred space in the city: Adapting to the urban context. *Journal of the Interfaith Forum on Religion, Art and Architecture* 47(3). [Online URL: <https://faithandform.com/feature/sacred-space-city-adapting-urban-context/>] accessed on March 3, 2021.
- Gale, R. (2019). *In search of common ground: Building relationships in the field of religion and planning*. [Online URL: <https://berkeleycenter.georgetown.edu/responses/in-search-of-common-ground-building-relationships-in-the-field-of-religion-and-planning>] accessed on September 16, 2021.
- Geel, L. and Beyer, J. (2018). The apparatus theory: Religion in the city. *HTS Theological Studies* 74(4): 4927. [Online URL: <https://doi.org/10.4102/hts.v74i4.4927>] accessed February 9, 2021.
- Greed, C. (2017). Sacred spaces in urban environments. In *Gender: God*, edited by S. M. Hawthorne, pp. 335-350. Farmington Hills, MI: Macmillan Cengage.
- Hodor, K. and Fekete, A. (2019). The sacred in the landscape of the city. *Technical Transaction* 116(1): 15-22.
- Huang, W. (2019). Urban Restructuring and Temple Agency—A Case Study of the Jing'An Temple. In *Buddhism after Mao: Negotiations, Continuities, and Reinventions*, edited by A. Laliberte, pp. 251-270. Hawaii: University of Hawaii Press.
- Hunt, J. D. (2000). *Greater Perfections: The Practice of Garden Theory*. London: Thames & Hudson.
- Johnson, M. H. (2012). Phenomenological approaches in landscape archaeology. *Annual Review of Anthropology* 41: 269-284.
- Jumsai, S. (1988). *Naga Cultural Origins in Siam and the West Pacific*. Singapore: Oxford University Press.
- Karr, S. M. (2005). Quarries of culture: An ethnohistorical and environmental account of sacred sites and rock formations in Southern California's Mission Indian Country. *American Indian Culture and Research Journal* 29(4): 1-19.
- Kesten, S. (1988). Study of Thai Life. In *Thai Customs and Beliefs*, edited by C. Manilerd and S. Kesten, pp. 2-4. Bangkok: Office of the National Culture Commission, Ministry of Education, Thailand.
- Kittiprasan, K. (2017). *Sustaining Living Sacred Landscapes in Phetchaburi City, Thailand*. Doctoral dissertation. University of Melbourne, Australia.
- Kittiprasan, K. (2018). Transformation of Thai ceremonial sacred landscape from the past to the present: Religious and royal Significance to socio-political realm. Paper presented at *the 5<sup>th</sup> Landscape Archaeology Conference*. Newcastle and Durham, UK. September 17-20. [Online URL: [https://www.ncl.ac.uk/media/wwwnclacuk/mccordcentre/files/LAC2018\\_ConferenceBooklet.pdf](https://www.ncl.ac.uk/media/wwwnclacuk/mccordcentre/files/LAC2018_ConferenceBooklet.pdf)] accessed on August 27, 2021.
- Koh, V. (2004). *Feng Shui for the New Millennium: A Practical Guide to Harmonious Modern Living*. Singapore: Asiapac Books.
- Kohr, A. D. (2008). A Terrace Typology. In *Exploring the Boundaries of Historic Landscape Preservation*, edited by C. Goetcheus and E. MacDonald, pp. 138-153. South Carolina: Clemson University Digital Press.
- Lang, J. (1994). *Urban Design: The American Experience*. New York, NY: John Wiley & Sons.
- Lynch, K. (1981). *A Theory of Good City Form*. Cambridge, MA: MIT Press.
- Moonkham, P. (2018). Changing landscape and sacred myth: Ethnohistorical archaeology of the Baga in Northern Thailand. Paper presented at *the 5<sup>th</sup> Landscape Archaeology Conference*. Newcastle and Durham, UK. September 17-20. [Online URL: [https://www.ncl.ac.uk/media/wwwnclacuk/mccordcentre/files/LAC2018\\_ConferenceBooklet.pdf](https://www.ncl.ac.uk/media/wwwnclacuk/mccordcentre/files/LAC2018_ConferenceBooklet.pdf)] accessed on September 2, 2021.
- Müller-Karpe, A. (2015). Planning Sacred Landscape: Examples from Sarissa and Hattusa. In *Sacred Landscapes of Hittites and Luwians*, edited by A. D'Agostino, V. Orsi and G. Torri, pp. 83-92. Florence: Firenze University Press.
- Neamnapa, C. (2014). *Landscape conservation and development guidelines for Kham-Chanot, Amphoe Ban Dung, Changwat Udon Thani*. Master's thesis, Chulalongkorn University, Thailand. [in Thai]
- Norberg-Schulz, C. (1980). *Genius Loci towards Phenomenology of Architecture*. New York, NY: Rizzoli.

- Ortsin, G. (2015). Ecological and Socio-Cultural Resilience in Managing Traditional Sacred Landscapes in the Coastal Savannah Ecosystem of Ghana. In *Conserving Cultural Landscapes: Challenges and New Directions*, edited by K. Taylor, A. St. Clair and N. J. Michell, pp. 129-143. New York, NY: Routledge.
- Parcero-Oubiña, C. Criado-Boado, F. and Santos-Estévez, M. (1998). Rewriting landscape: Incorporating sacred landscapes into cultural traditions. *World Archaeology* 30(1): 159-176.
- Rambukwella, C. (2018). Creators as destroyers: Salvage of archaeological landscape of sacred city of Kandy Sri Lanka. Paper presented at *the 5<sup>th</sup> Landscape Archaeology Conference*. Newcastle and Durham, UK. September 17-20. [Online URL: [https://www.ncl.ac.uk/media/wwwnclacuk/mccordcentre/files/LAC2018\\_ConferenceBooklet.pdf](https://www.ncl.ac.uk/media/wwwnclacuk/mccordcentre/files/LAC2018_ConferenceBooklet.pdf)] accessed on August 15, 2021.
- Rimaz, H. (2018). *Application of Sacred Landscapes in Modern Cities*. [Online URL: [https://radar.brookes.ac.uk/radar/items/1aa24c52-814d-4c2f-8476-12dc6bd260f6/1/viewcontent/79d5031c-2e52-4b40-8ba2-32b1e6f55e19?\\_sl.t=true](https://radar.brookes.ac.uk/radar/items/1aa24c52-814d-4c2f-8476-12dc6bd260f6/1/viewcontent/79d5031c-2e52-4b40-8ba2-32b1e6f55e19?_sl.t=true)] accessed on January 15, 2022.
- Rod-Ari, M. (2009). Thailand: The symbolic center of the Theravada Buddhist world. *Explorations: A Graduate Student Journal of Southeast Asian Studies* 9: 55-64.
- Steinhoff, A. (2008). *The Gods of the City: Protestantism and Religious Culture in Strasbourg, 1870-1914*. Leiden: Brill.
- Suksamran, S. (1976). *Political Buddhism in Southeast Asia: The Role of the Sangha in the Modernization of Thailand*. New York, NY: St. Martin's Press.
- Svamivastu, V. (2018). Architectural landscape of Phra Nakorn Khiri Palaces: A replica of Buddhism heavens on earth. Abstract presented at *The 5<sup>th</sup> Landscape Archaeology Conference*. Newcastle and Durham, UK. [Online URL: [https://www.ncl.ac.uk/media/wwwnclacuk/mccordcentre/files/LAC2018\\_ConferenceBooklet.pdf](https://www.ncl.ac.uk/media/wwwnclacuk/mccordcentre/files/LAC2018_ConferenceBooklet.pdf)] accessed on August 20, 2021.
- Tantinipankul, W. (2007). *Modernization and Urban Monastic Space in Rattanakosin City: Comparative Study of Three Royal Wats*. Doctoral dissertation. Cornell University, USA.
- Trancik, R. (1986). *Finding Lost Space: Theories of Urban Design*. New York, NY: Van Nostrand Reinhold.
- United Nations Alliance of Civilizations (UNAOC). (2019). *The United Nations Plan of Action to Safeguard Religious Sites*. [Online URL: <https://www.un.org/sg/sites/www.un.org.sg/files/atoms/files/12-09-2019-UNAOC-PoA-Religious-Sites.pdf>] accessed on September 2, 2021.
- United Nations Educational, Scientific and Cultural Organization (UNESCO). (2019). *The Operational Guidelines for the Implementation of the World Heritage Convention*. [Online URL: <https://whc.unesco.org/en/guidelines/>] accessed on September 1, 2021.
- Urban Learning. (2020). *Toolbox: Planning Process*. [Online URL: <http://www.urbanlearning.eu/toolbox/planning-process/>] accessed on September 15, 2021.
- Verschuuren, B., Mallarach, J. M. and Oviedo, G. (2008). Sacred Sites and Protected Areas. In N. Dudley and S. Stolton (Eds.), *Defining Protected Areas: An International Conference in Almeria, Spain, May 2007*, pp. 163-168. Gland: IUCN World Commission on Protected Areas (WCPA).
- Yiran, Z. (2009). *Pieces of Time and Perception of Place — From the View of Genius Loci and Contextualism*. Master's thesis. Blekinge Institute of Technology, Sweden.