

Combining the Traditional and Modern Architecture in Taman Samarendah Plan, Samarinda City, East Kalimantan Province, Indonesia

Andrew Stefano^{a*}, Sri Endayani^b, Ronggo Sadono^c

^aAgriculture Management School, Samarinda State Agricultural Polytechnic, Geomatics Research Program, Samarinda, 75131, Indonesia

^bFaculty of Agriculture, Forestry Study Program, Universitas 17 Agustus 1945, Samarinda. 75123, Indonesia

^cFaculty of Forestry, Gadjah Mada University, Yogyakarta 55281, Indonesia

Corresponding author: *andrew.stefano@politansamarinda.ac.id

Abstract—The planning and design of "Taman Samarendah" in Samarinda city to mix the traditional to modern architecture aim to facilitate educational activities, worship places for Muslims, and cultural and religious destinations in the field of architecture. The Taman Samarendah located in the ex-land of Junior High School 1 and Senior High School 1 were built in a 2.5-hectare area, specifically around 1.4 hectares is for the park area. The construction began in July 2014 and finished in 2016 and made Samarinda city a Green Open Space. Taman Samarendah is located in the middle of town, so the community can easily access it. This park has bins, lighting, seating, jogging tracks, and other facilities. This study applied the concept formulation approach under a qualitative descriptive method. This study applied a related theoretical foundation technique, either architecture or non-architecture. The data collection was validated for accurate data processing to prepare the concept of planning and design of Taman Samarendah. The planning and design of the Taman Samarendah in Samarinda City with the concept of combining traditional and modern architecture is expected to become a tourist site that has educational value to cultural heritage in terms of architecture and non-architecture and accommodate the Islam worship activities in Samarinda City. The existence and sustainability of traditional houses must be maintained. The traditional houses may disappear faster than we thought. Therefore, further research should review the combination of modern and traditional houses set out in local regulations and laws.

Keywords— Tourist park; Taman Samarendah; Samarinda icon; architecture; Regional Spatial Planning; Green Open Space.

Manuscript received 15 Mar. 2019; revised 11 Oct. 2020; accepted 2 Feb. 2021. Date of publication 30 Apr. 2021.

IJASEIT is licensed under a Creative Commons Attribution-Share Alike 4.0 International License.



I. INTRODUCTION

The Kutai Kingdom is an essential figure in the history of Islam's entry in Indonesia, many historical relics and a tourist destination in Indonesia that tourists often visit, such as a traditional mosque building with traditional Dayak culture style [1]–[3]. Many Indonesian people currently carry out religious tourism activities to some places due to educational and historical value about Islam to deepen their knowledge and insight and to conduct worship activities [4]–[6]. The Kutai Kingdom site is the most popular tourist destination to have much historical knowledge and Islamic culture [7]–[9]. The kingdom of Kutai ended when the Kutai King named Maharaja Dharma Setia was killed in battle at the 13th King Kutai Kartanegara. Kutai (Kutai Martadipura) is different from the Kutai Kartanegara State, which capital city was first in Kutai Lama [10]–[12].

Kutai Kartanegara was first mentioned in Javanese Negerakertagama literature; it subsequently becomes an Islamic kingdom called the Sultanate of Kutai Kartanegara. Based on the above phenomena, the authors proposed to plan and design the Taman Samarendah in Samarinda City with a combining concept of traditional and modern architecture. The concept aims to create a modern design by conserving the traditional architecture [13]–[15].

The name of Taman Samarendah is taken from Samarinda city, which was formerly called Samarendah [16]–[18]. According to the Office of Tourism, all community activities are equally low, and also occupations and jobs are equally low [19]–[21]. However, many people think that the Samarendah word comes from the equation of the height measurement of the Mahakam river with the land on edge, which is equally low [22]–[24].

Taman Samarendah is located on Bhayangkara street, Bugis Sub-District, Samarinda City, built in July 2014 and completed in 2016 [25]–[27]. Initially, the area was occupied by a soccer field that was once a swamp and was used to welcome Soekarno, then become a Junior High School 1 and Senior High School 1 of Samarinda. The area was demolished and built as Taman Samarendah to extend the Green Open Space from 10% to be 30% as the minimum requirement for each city [28]–[30].

The Taman Samarendah is 2.5 hectares, and the 1.4 hectare is the garden area. According to Samarinda city's government, the real meaning of Taman Samarendah is a park that looks vaguely from a distance, but it has beautiful view [31], [32]. Taman Samarendah has facilities such as jogging tracks, seating, lighting, trash bins, trees, and therapeutic paths [30]. The Department of Housing and Settlements of Samarinda city invites the industry to share Corporate Social Responsibility (CSR) funds [27]–[29].

Right in the middle of the Taman Samarendah, a 26-meter-high light tower is currently built by utilizing funds obtained from a private company. However, this is not the first time a CSR program has been involved in Taman Samarendah [24]–[26]. Previously, the local government received CSR assistance in providing lamps for lighting the museum yard [23]. The Taman Samarendah's presence is intended to increase tourist destinations for the community in Samarinda city, East Kalimantan province, to let the community come for relaxing, jogging, studying, and any other exciting activities [20]–[22]. Therefore, this study aims to plan and design the Taman Samarendah with a concept of combining the traditional and modern architecture that facilitates educational facilities, worship activities, and tourism [17]–[19].

II. THE MATERIALS AND METHOD

A. Data Collection

Primary data collection where data collection includes:

- Field observations include observations of similar areas (precedent studies) and site locations to be designed.

- Interviews with workers and employees to find the needs for space and facilities in the location.
- Documentation using a smartphone camera as a recording medium, books, and stationery for sketching visualization of the region and writing important information as a reference in research.

Secondary data collection was obtained by reviewing related literature. The data also were obtained from architecture-related books and social media usage.



Fig. 1 Site map location

III. RESULTS AND DISCUSSION

A. Site Location

A research location is where researchers obtained accurate research data, especially in capturing phenomena or objects. The research was conducted at Taman Samarendah, Samarinda city in the East Kalimantan province. The area surrounding the Taman Samarendah has a high population density; there are permanent and non-permanent buildings. There are many suitable facilities in this location, such as hotels, hospitals, places of worship, schools, and government facilities not far from this location.



Fig. 2 Condition of existing Site: (a) Main Entrance (Basuki Rahmat street), (b) Side Entrance (Bhayangkara street), (c) Service Entrance (Milono street)



Fig. 3 Access site

Figure 3 above shows the access of Taman Samarendah as follows:

- (A) Main Entrance is the site's primary gateway to the building.
- (B) Side Entrance, an alternative entrance with a position on the other side of the building, supports circulation comfort.
- (C) Service Entrance, i.e., accesses to Service Support activities on the site.

B. Site Circulation

Circulation arrangement aims to regulate the circulation to create circulation conditions that are safe, comfortable, and not crowded [14]–[16]:

- Circulation Visitors need circulation paths that are easily reached and from the entrance gate directly towards the receiving plaza (Lobby). Entrance paths should also be readily visible, attainable, safe, and comfortable.
- Circulation Manager requires an easy path and is not interrupted by the circulation of users of other facilities.
- Pedestrian circulation requires a convenient path through the pedestrian path so as not to interfere with vehicle circulation.
- Service Circulation requires unique service lines and does not interfere with the movement of users of other facilities.

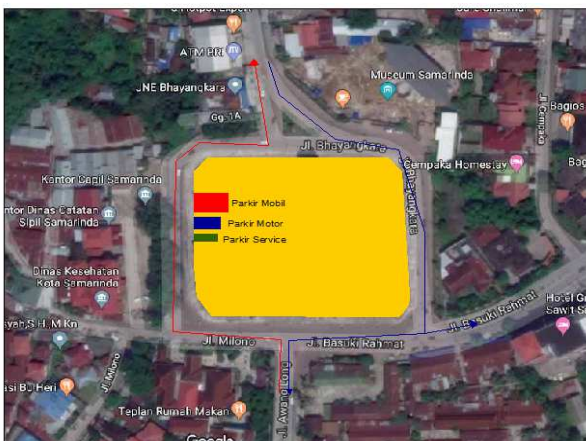


Fig. 4 Circulation site



Fig. 5 Tread zoning

C. Site Zoning

Based on the analyzes conducted in the preceding points, zoning for the center area of the traditional child-friendly game tourism concept was found [10]. The following zoning was done, and zoning grouping will be developed on this site, including [11]–[13]:

- Blue Zone (Public) This is a public area planned for Samarendah Mosque building and open areas such as recreation tours and plazas.
- Orange Zone (Semi-Public) Is a zone that allows provisions to enter the area; this zone is planned for museums, auditoriums, and libraries.
- Red Zone (Private) This zone can only be input by individual users; in this zone, it is planned for the manager's office related to the Taman Samarendah's user manager.
- Green Zone (Service) Is a zone that is used for all users who want to carry out activities such as shopping, resting, worshipping, and others; in this zone, it is designed, a souvenir center, food court, and mosque.

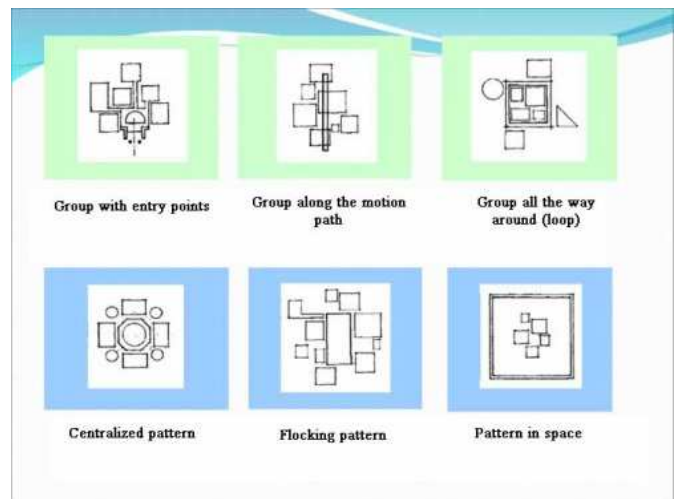


Fig. 6 Schematic of building orientation

D. Building Orientation

Building orientation is directly related to the site's circulation and can reach between attractions, with the Central Space pattern, where the central area is usually a square that connects a tourist building with tourist buildings.

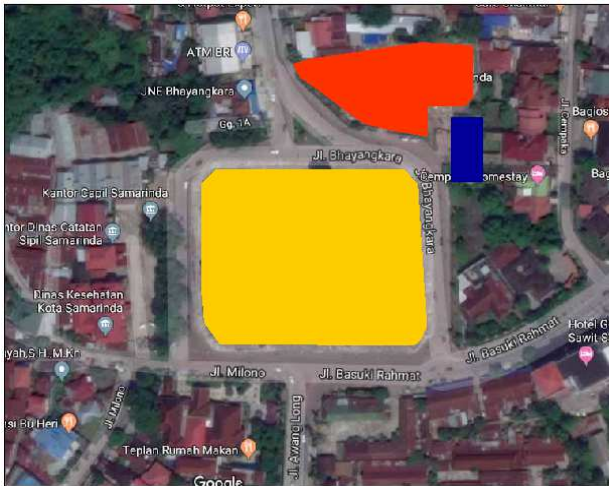


Fig. 7 View in exit

The integration between each mosque (in blue), with no constraints between the buildings, while the building (Pink) is a building with museum and auditorium function to be integrated. Moreover, there is a path with scenery connecting the Taman Samarendah zone. Emphasis on the concept of combining traditional and modern architecture. Traditional architecture is an architectural form that has been passed down from one generation to the next. Studying traditional buildings means studying society's traditions, which are more than a physical building tradition. Traditional communities are bound by the custom, which is living together becomes a concession. Given the present norms, rules, and values, there are still many possibilities to change, so that it is suggested as follows to find a cultural identity that can be applied to new constructions. Architecture has an identity that is influenced little or no by changes in values norms.

Those features are applied to new buildings in Traditional Architecture. Climate is a factor not altering (relative) Indonesia's tropical climate is hot and humid. The sun fall angle is perpendicular throughout the year because it is located between the northern and southern latitudes around the equator, which results in hot temperatures. Traditional architecture is identical to a warm climate architecture, such as a roof with a not too gentle angle. In addition to these open spaces, where the wall does not close tightly to the lower plane or ceiling, free ventilation is permitted, which increases space comfort. Excessive wall or glass area particularly unprotected from direct sunlight and rain is not suitable for tropical weather. We often use air conditioning for spaces that do not need it if planned correctly.

Excessive wall or glass area particularly unprotected from direct sunlight and rain is not suitable for tropical weather. We often use air conditioning for spaces that do not need it if planned correctly. The energy required for air conditioning is relatively large. The use of air conditioning should also be limited to a country that advocates energy saving. Traditional Javanese and Balinese Houses are open-air dwellings.

Architecture refers to the art and science of designing and constructing buildings or bridges. Modern architecture should meet some other circumstances [7]–[9]:

- A session in the development of architecture where space becomes the main object.

- The building design comprises the results of new thoughts about a more human view of life.
- The architecture covers all power, effort, and work resulting in modern notion, characterized by a mental attitude that is always new, progressive, tremendous, and contemporary.
- The architecture involves scientific, artistic, and aesthetic elements.

This mixture of traditional and modern architecture arises from the criticisms that modern architecture principles distinguish from traditional design. The combining of traditional and modern architecture can balance this modern era by not leaving a pre-existing culture and by harmonizing the ideology of modern architecture with the existing culture so that the existence of this combining concept can minimize the problems of criticism that exist in modern architectural concepts [4]–[6].

- Emphasize aesthetic aspects, history, simple design, and technology.
- The material according to shape
- Buildings can be seen traditionally, even though the building is part of today's design and technology.
- Modern structures, portals, rigid frames, wall columns, implementation using precast.
- Functions and needs of modern space.

The perception of the visitor is expected to develop the Taman Samarendah. In this research, one hundred participants gave responses on some issues, such as comfort, safety, cleanliness, and accessibility; they are categorized based on gender, as in Table 1 below.

TABLE I
GENDER OF RESPONDENTS

| Gender | Respondents | Percentage (%) |
|--------|-------------|----------------|
| Female | 60 | 0.6 |
| Male | 40 | 0.4 |
| Total | 100 | 1.0 |

Source: data processed in 2018

Table 1 shows data of participants based on gender, where sixty percent were female. This result shows that women have more free time to travel to Taman Samarendah together with their family and relatives. Table 2 below presents the data on accessibility.

TABLE II
VISITOR PERCEPTIONS ABOUT ACCESSIBILITY OF TAMAN SAMARENDAH

| Category | Respondents | Percentage (%) |
|-------------|-------------|----------------|
| Very Good | 0 | 0.00 |
| Good | 15 | 0.15 |
| Fairly Good | 18 | 0.18 |
| Not Good | 38 | 0.38 |
| Very Bad | 29 | 0.29 |
| Total | 100 | 1.00 |

Source: data processed in 2018

Table 2 above shows the analysis of visitors' perceptions Taman Samarendah's access. Thirty-eight percent of participants think that Taman Samarendah is not good. This is might be caused by the roads are made of paving blocks. Indeed, uneven, and bumpy road areas make visitors tense.

E. Effectiveness

Taman Samarendah is currently open to the public, equipped with free facilities that attract local communities and tourists to visit. Taman Samarendah also has advantages as an oxygen buffer zone in the middle of the city. Besides, Taman Samarendah functions as traffic control. This is according to the original purpose and idea of utilization of vacant land formerly the location of Junior High School 1 and Senior High School 1 to become a Green Open Space [33].

Based on the results of the interview, it can be said that the development carried out by the Samarinda city government was based on the Green Open Space rule as a guide for planning development. In the rules [34], the green open space has been set in spatial planning law, where each regional head (and the apparatus) in planning development is obliged to follow the green open space respective region. If the development planning disobeys the green open space rules, this could result in sanctions from the lightest administrative sanctions reprimand up to the heaviest criminal body imprisonment and or a fine of 500 million.

The Samarinda city regional spatial planning has been legalized since 2014 and valid until 2034 [33] when the regional spatial planning lays down rules and guidelines for spatial planning within the Samarinda city administrative area. In the spirit of regional autonomy, Samarinda city is an inseparable part of the Republic of Indonesia's Unitary State. The territorial space must be managed and organized to improve social justice's general welfare by the constitutional foundation of the Constitution of 1945 [34].

F. Equity

Equity is a policy capable of bringing justice to the public [35]. This public policy implies that policymakers must put the public interest as the primary consideration. Public policy should not make it hard for people in their company to do so [34]. To obtain the needed services and products, public policies need to provide people with broad and fair access to public services and the products they need to be of the best quality. In the fourth paragraph of the 1945 Constitution, which states that the Indonesian State's function and purpose are to promote public welfare, equitable development has been outlined [36]. One of the achievement processes is through growth. Development is intended to bring about positive changes in all areas, both economic, social, cultural, infrastructure, and other aspects. The ultimate objective of development itself is the achievement of community welfare.

The Samarinda city government should provide equitable development outcomes for all parties in terms of development, and even when the Green Open Space is compiled. This is the essential point that should be fulfilled, including constructing a low-lying Taman Samarendah, whether the development in Samarinda city can meet the community's expectations [36].

G. Responsiveness

The organization's ability to respond or capture power identifies community requirements, prioritizes needs, and develops them into different service programs. Responsiveness measures an organization's responsiveness to the hopes, desires, aspirations, and demands of service users [37]. The existing leadership paradigm addresses the

administration as a servant of the government and a society servant [34]. Therefore, the government apparatus is becoming good servants and facilitators, particularly to achieve the Indonesian nation's national goals, including safeguarding the community, educating, and prosper. For this reason, the government apparatus is always required to be responsive to the community's expectations so that development outcomes will have a positive impact on improving the community's quality of life.

The regional spatial planning drawn up for the development of Samarinda city was felt equally by all Samarinda City members [36]. In 2019, the local government scheduled the plan review due to the high development rate following the rapid development of Samarinda city. The review of the existing regional spatial planning is subject to determine whether it is still possible to use the current regional spatial planning until 2034.

This study used cases of regional spatial planning in Kotamobagu as a comparison. The Kotamobagu spatial planning used the guidelines from the Minister of Agrarian and Spatial Planning Regulation No. 9 of 2017 concerning monitoring and evaluation of space use. From the evaluation results, the level of suitability of the Kotamobagu area spatial planning showed the poor-quality category by 74.18%. Thus, based on the guidelines, the recommendation is that it is necessary to revise part of the Kotamobagu Regional Spatial Planning [36]. The regional spatial planning must be reviewed at least every five years from the regional spatial planning promulgation. It is based on the provisions of the Minister of Agrarian Affairs and Spatial Planning [38]. Reconsideration can be carried out more than once in 5 years if conditions exist: large-scale natural disasters; changes to the country's territorial boundaries provided by law; changes to the law-determined regional boundaries.

The review procedure is carried out in several phases:

- identify the implementation of the review
- the implementation of the review
- the formulation of recommendations on the results of the review.

All these phases must take place within one year of the decision to determine the review's implementation ('Decision on the Implementation of a Review') being issued. Decisions on the implementation of a review are issued some parties:

- The Minister of Agrarian and Spatial Planning ("Minister") for reviewing the national regional spatial planning
- The Governor for a review of the Provincial regional spatial planning
- The Regent / Mayor for a review of the Regency / City regional spatial planning.

The minister, governor, or Regent/Mayor also appoints an Implementing Team to conduct a review. The Implementing Team members come from government elements in the spatial planning sector, academia, and research institutions.

The evaluation is carried out to ensure that spatial planning for development needs is implemented [38]. The Implementing Team will evaluate data and information collection and preparing a conformity matrix. As consideration for the assessment source, the Implementing Team will look at the development's actual condition. After the Implementing Team has obtained the results of the

evaluation phase, the Implementing Team will evaluate to measure the capacity of the regional spatial planning as a development reference as follows:

- The quality of the regional spatial planning.
- Compliance with laws and rules
- Implementation of spatial use.

Also, the results of the evaluation will be used to determine the formulation of recommendations for the results of the implementation carried out using both quantitative and qualitative methods aim to:

- determine the level of quality of the regional spatial planning
- investigate the level of compliance with statutory rules
- find out the level of suitability of the spatial use implementation.

A decision of the Minister, Governor, or Regent/Mayor ('Recommendation Decree') stipulates the formulation of recommendations for implementation results as follows:

- it is unnecessary to revise the regional spatial planning if the results are obtained. The review assessment is declared suitable,
- if the outcome of the assessment is declared wrong, it is necessary to revise the regional spatial planning.

If the recommendation decision is declared good, the regional spatial planning will remain in force on a time-limited basis. However, if the recommendation decision is declared immoral, it will remain in effect on a time-limited basis [39].

H. The Right on Target

In this case, the right on target implies that provision is about the target, free from error, a shorter period, quality assurance, and financial transparency. Besides, right on target also means whether the findings can benefit society [40]. The Taman Samarendah aims to develop the landmarks of Samarinda city adjacent to several existing landmarks. The government's development is expected to have a significant impact on the community's well-being. The Taman Samarendah area is divided into two zones based on its function for the community. Zone A includes the main area designed as an urban forest at the beginning of development planted with tree species native to East Kalimantan. As an urban forest, Samarinda is expected to function as a central buffer zone for oxygen and a center for history education on native East Kalimantan flora. Zone B functions as a public open space for some purposes, such as sports or other community activities.

The Mayor of Samarinda has initiated the utilization of the former Junior High School 1 and Senior High School 1 land as a Green Open Space to meet the obligations of the Samarinda City government on the allocation of Green Open Space as much as 30% of the total area of Samarinda [39]. Besides, the Taman Samarendah development is also expected to help solve the congestion problem every afternoon and evening. After the Taman Samarendah open for the public, the community has an alternative to outdoor tourism destinations. Many residents have used Taman Samarendah for jogging, cycling, or just for family gatherings and or with friends every day. Also, with the large number of locations available in Zone A and Zone B, some people use it

as a meeting place. Thus, the meeting runs without a traffic jam.

IV. CONCLUSION

Taman Samarendah functions as a tourist destination, educational activities, a place of worship, and a relaxing open space spot. Park planning and designing refers to a concept that combines traditional and modern architecture. Thus, the combination of classic and modern concepts is believed to preserve old buildings with modern concepts. The existence and sustainability of traditional houses must be maintained. Traditional houses may disappear faster than we thought. Therefore, it is necessary to review the combination of traditional and modern houses set out in local regulations and laws for further research.

ACKNOWLEDGMENT

The authors are grateful to the Ministry of Cultural Education for providing support through the Sertifikasi funding of The Samarinda State Agricultural Polytechnic Lecturer for research activities.

REFERENCES

- [1] A. Alawad, "Using the Architectural Style of heritage Buildings as a Tool to Avoid Health risks-An Analytical Study of Rowshan in Traditional Houses in the City of Jeddah," *Procedia Environ. Sci.*, vol. 37, pp. 604–613, 2017, doi: 10.1016/j.proenv.2017.03.047.
- [2] N. Ali and Z. Qi, "ScienceDirect Defensible citadel: History and architectural character of the Lahore Railway Station," *Front. Archit. Res.*, no. xxxx, 2020, doi: 10.1016/j.foar.2020.05.003.
- [3] N. Benslimane and R. W. Biara, "The urban sustainable structure of the vernacular city and its modern transformation: A case study of the popular architecture in the saharian Region," *Energy Procedia*, vol. 157, pp. 1241–1252, Jan. 2019, doi: 10.1016/j.egypro.2018.11.290.
- [4] H. K. Aytuğ and M. Mikaeili, "Evaluation of Hopa's Rural Tourism Potential in the Context of European Union Tourism Policy," *Procedia Environ. Sci.*, vol. 37, pp. 234–245, 2017, doi: 10.1016/j.proenv.2017.03.039.
- [5] S. Bahga and G. Raheja, "Complexities of practicing architectural regionalism in India: An interview study," *Front. Archit. Res.*, vol. 9, no. 3, pp. 568–578, Sep. 2020, doi: 10.1016/j.foar.2020.03.003.
- [6] E. C. Bassas, J. Patterson, and P. Jones, "A review of the evolution of green residential architecture," *Renew. Sustain. Energy Rev.*, vol. 125, no. February, p. 109796, 2020, doi: 10.1016/j.rser.2020.109796.
- [7] M. A. Chauhan, M. A. Babar, and Q. Z. Sheng, "A Reference Architecture for provisioning of Tools as a Service: Meta-model, Ontologies and Design Elements," *Futur. Gener. Comput. Syst.*, vol. 69, pp. 41–65, 2017, doi: 10.1016/j.future.2016.12.002.
- [8] C. Cherry, C. Hopfe, B. MacGillivray, and N. Pidgeon, "Homes as machines: Exploring expert and public imaginaries of low carbon housing futures in the United Kingdom," *Energy Res. Soc. Sci.*, vol. 23, pp. 36–45, 2017, doi: 10.1016/j.erss.2016.10.011.
- [9] M. Ghosh, F. Shermin, and W. Bengal, *Material Culture and Sustainability: Traditional Versus Modern in a Case of Northeast India*. Elsevier Ltd., 2019.
- [10] N. C. Idham, "Javanese vernacular architecture and environmental synchronization based on the regional diversity of Joglo and Limasan," *Front. Archit. Res.*, vol. 7, no. 3, pp. 317–333, 2018, doi: 10.1016/j.foar.2018.06.006.
- [11] T. Jashari-kajtazi and A. Jakupi, "Interpretation of architectural identity through landmark architecture: The case of Prishtina, Kosovo from the 1970s to the 1980s," *Front. Archit. Res.*, vol. 6, no. 4, pp. 480–486, 2017, doi: 10.1016/j.foar.2017.09.002.
- [12] J. Jiao, Q. Xia, and F. Shi, "ScienceDirect Nondestructive inspection of a brick e timber structure in a modern architectural heritage building: Lecture hall of the Anyuan Miners'," *Front. Archit. Res.*, vol. 8, no. 3, pp. 348–358, 2019, doi: 10.1016/j.foar.2019.06.005.
- [13] G. Kabir, D. Abdu, A. Ahmed, and A. M. Usman, "The practice of Hausa traditional architecture: Towards conservation and restoration

- of spatial morphology and techniques,” *Sci. African*, vol. 5, p. e00142, 2019, doi: 10.1016/j.sciaf.2019.e00142.
- [14] K. Kiruthiga and K. Thirumaran, “Visual perception on the architectural elements of the built heritage of a historic temple town: A case study of Kumbakonam, India,” *Front. Archit. Res.*, vol. 6, no. 1, pp. 96–107, 2017, doi: 10.1016/j.foar.2016.10.002.
- [15] S. Kumar, M. Kumar, R. Kukreja, and S. Kumar, “Comparative study of thermal comfort and adaptive actions for modern and traditional multi-storey naturally ventilated hostel buildings during monsoon season in India,” *J. Build. Eng.*, vol. 23, no. October 2018, pp. 90–106, 2019, doi: 10.1016/j.jobe.2019.01.020.
- [16] Z. Li *et al.*, “Using design space exploration for finding schedules with guaranteed reaction times of synchronous programs on multi-core architecture,” *J. Syst. Archit.*, vol. 74, pp. 30–45, 2017, doi: 10.1016/j.sysarc.2016.12.003.
- [17] M. E. Mallea, L. E. Igiñiz, and M. D. L. G. De, “Passive hygrothermal behaviour and indoor comfort concerning the construction evolution of the traditional Basque architectural model. Lea valley case study,” *Build. Environ.*, 2018, doi: 10.1016/j.buildenv.2018.06.041.
- [18] W. Merzoug, S. Chergui, and M. C. Zouaoui, “Journal of Building Engineering The impact of reinforced concrete on the modern - day architectural heritage of Algeria,” *J. Build. Eng.*, vol. 30, no. January, p. 101210, 2020, doi: 10.1016/j.jobe.2020.101210.
- [19] A. F. Mohamed, “Case Studies in Construction Materials Comparative study of traditional and modern building techniques in Siwa Oasis , Egypt Case study : Affordable residential building using appropriate building technique,” *Case Stud. Constr. Mater.*, vol. 12, p. e00311, 2020, doi: 10.1016/j.cscem.2019.e00311.
- [20] M. Nabil, K. M. Dewidar, S. M. Kamel, and M. F. Iscandar, “Semiotic analysis of contemporary Coptic Orthodox church architecture ; A case study of Virgin Mary and Saint John the Baptist church in Bab El,” *Ain Shams Eng. J.*, vol. 9, no. 4, pp. 3093–3101, 2018, doi: 10.1016/j.asej.2018.03.006.
- [21] M. Parsaee, P. Motealleh, and M. Parva, “An investigation into the former consulate of Britain as one of the first samples of modern architecture in Iran,” *HBRC J.*, vol. 13, no. 1, pp. 61–71, 2017, doi: 10.1016/j.hbrj.2015.01.002.
- [22] F. Roberz, R. C. G. M. Loonen, P. Hoes, and J. L. M. Hensen, “Ultra-lightweight concrete: Energy and comfort performance evaluation in relation to buildings with low and high thermal mass,” *Energy Build.*, vol. 138, pp. 432–442, 2017, doi: 10.1016/j.enbuild.2016.12.049.
- [23] H. Rodrigues, M. Correia, and P. B. Lourenc, “architecture and local seismic cultures : A literature review,” 2017, doi: 10.1016/j.culher.2017.02.015.
- [24] M. Rosselló, “The kitchen in urban dwellings in Barcelona , 1920 – 1950 : Out of step with modern architecture,” *Front. Archit. Res.*, vol. 7, no. 3, pp. 347–366, 2018, doi: 10.1016/j.foar.2018.05.001.
- [25] H. S. Saleh and S. Z. Saied, “Green Architecture as a Concept of Historic Cairo,” *Procedia Environ. Sci.*, vol. 37, pp. 342–355, 2017, doi: 10.1016/j.proenv.2017.03.064.
- [26] D. G. L. Samuel, K. Dharmasastha, S. M. S. Nagendra, and M. P. Maiya, “Thermal comfort in traditional buildings composed of local and modern construction materials,” *Int. J. Sustain. Built Environ.*, vol. 6, no. 2, pp. 463–475, 2017, doi: 10.1016/j.ijsbe.2017.08.001.
- [27] E. I. Samuel, E. Joseph-Akwara, and A. Richard, “Assessment of energy utilization and leakages in buildings with building information model energy,” *Front. Archit. Res.*, vol. 6, no. 1, pp. 29–41, 2017, doi: 10.1016/j.foar.2017.01.002.
- [28] C. Sun and C. Q. L. Xue, “ScienceDirect Shennan Road and the modernization of Shenzhen architecture,” *Front. Archit. Res.*, vol. 9, no. 2, pp. 437–449, 2020, doi: 10.1016/j.foar.2019.11.002.
- [29] A. C. Sutandi, P. P. Rahardjo, A. T. Mulyono, and S. G. Alavi, “Pedestrian facilities as a part of road infrastructure resilience in large cities in Indonesia,” *Int. J. Adv. Sci. Eng. Inf. Technol.*, vol. 9, no. 5, pp. 1556–1562, 2019, doi: 10.18517/ijaseit.9.5.8502.
- [30] A. Tuan, N. Song, H. Truong, D. P. J. Verne, and T. Innovantes, “ScienceDirect Studies on sustainable features of vernacular architecture in different regions across the world : A comprehensive synthesis and evaluation,” *Front. Archit. Res.*, vol. 8, no. 4, pp. 535–548, 2019, doi: 10.1016/j.foar.2019.07.006.
- [31] X. Wei and Z. Si, “Fully exploring traditional Chinese culture and promoting organic development of green city,” *Procedia Eng.*, vol. 180, pp. 1531–1540, 2017, doi: 10.1016/j.proeng.2017.04.315.
- [32] X. Zhao, “Game of capitals: Production of influential online architecture,” *Front. Archit. Res.*, vol. 9, no. 3, pp. 670–680, Sep. 2020, doi: 10.1016/j.foar.2020.03.002.
- [33] A. M. Hersperger, S. Gradinaru, E. Oliveira, and S. Pagliarin, “Understanding strategic spatial planning to effectively guide development of urban regions,” *Cities* 94, 2019, doi: 10.1016/j.cities.2019.05.032.
- [34] Peraturan Daerah Kota Samarinda Nomor 2 Tahun 2014 Tentang Rencana Tata Ruang Wilayah (RTRW) Kota Samarinda Tahun 2014 – 2034.
- [35] Zulkarnain, I. Prawira, and O. J. Djamaludin, “Determination of Spatial Planning Area Criteria in the Perspective of Regional Autonomy to Ensure Sustainability of Land Resources (Case Study in the Province of East Kalimantan and North Kalimantan Province),” *International Journal of Multicultural and Multireligious Understanding (IJMMU)*, vol. 7, no. 7, August 2020, pp. 463–679, doi: 10.18415/ijmmu.v7i7.1702.
- [36] Peraturan Daerah Kota Samarinda Nomor 4 Tahun 2016 Tentang Pembentukan dan Susunan Perangkat Daerah Kota Samarinda (Lembaran Daerah Kota Samarinda Tahun 2016 Nomor 4)
- [37] A. M. Hersperger, M. Burgi, W. Wende, S. Bacau, and S. R. Gradinaru, “Does landscape play a role in strategic spatial planning of European urban regions?,” *Landscape and Urban Planning* 194, 2020, doi: 10.1016/j.landurbplan.2019.103702.
- [38] Peraturan Walikota Nomor 25 Tahun 2016 Tentang Susunan Organisasi Dan Tata Kerja Dinas Pekerjaan Umum dan Penataan Ruang Kota Samarinda
- [39] D. McGuinness and J. Mawson, “The rescaling of sub-national planning: can localism resolve England’s spatial planning conundrum?,” *TPR.*, vol. 88, 2017, doi: 10.3828/tpr.2017.19.
- [40] K. Granqvist, A. Humer, and R. Mantysalo, “Tensions in city-regional spatial planning: the challenge of interpreting layered institutional rules,” *Regional Studies*, 2019, doi: 10.1080/00343404.2019.1707791.