JOURNAL OF WORLD SCIENCE
https://jws.rivierapublishing.id/index.php/jws
Volume 3 No. 10 October 2024
P-ISSN: 2828-8726
E-ISSN: 2828-9307

REVITALISATION DESIGN OF NORTH COASTAL BORDER IN LEMAHWUNGKUK SUB-DISTRICT WITH URBAN DESIGN ELEMENT ANALYSIS

Difa Farhan Fauzi[1], Iqra Yudhistira A. F[2], Nurulllah Budisiswanto[3], Dinar Oktaria S K[4]
Universitas Swadaya Gunung Jati Cirebon, Cirebon, West Java, Indonesia

difafarhanfauzi375@gmail.com[1], alfarishiyudhistira8@gmail.com[2], budisiswanto@ugj.ac.id[3], dinaroktaria@ugj.ac.id[3]

ABSTRACT
Cirebon is one of the cities in West Java province. The city is located in the lowlands on the north coast of Java. The low topography factor is closely related to urban problems, such as slums in the Lemahwungkuk sub-district of Cirebon City. This research aims to solve urban problems because, according to the Mayor's Regulation No. 663/Kep.421-DPRKP/2021, Lemahwungkuk sub-district includes Cangkol coastal and Kesunean coastal areas among the eleven slum locations in Cirebon city. In addition, there is a plan to revitalize the coastal border area. The method used in this research is qualitative, using urban design analysis and site analysis. The data sources were obtained through interviews with 20 informants and mapping using ArcGIS 10.8 software. The concept of an environmental approach with an orientation towards the community in the design of the revitalization of the north coast area in Lemahwungkuk District emphasizes the physical environment, infrastructure, economy, socio-culture, disaster, and collaboration between the government and the community. The results of this revitalization design can also be a recommendation for development in Cirebon, West Java. In addition, it recommends conservation and tourism activities on the north coast of Cirebon, West Java. Efforts to overcome the phenomenon of urban sprawl at the research site by changing the pattern of settlements and building layout to improve the quality of the community environment and increase public space and green open space for conservation, tourism, and aesthetic functions of the region.

Keywords: coastal revitalization, Cirebon, coastal tourism, north coast

Corresponding Author: Difa Farhan Fauzi
E-mail: difafarhanfauzi375@gmail.com

INTRODUCTION

City design is one of the parts of forming a city related to physical quality and overcoming problems in the town (Nurhijrah et al., 2021). Urban design functions to solve urban issues such as slums in Lemahwungkuk district, according to the Mayor's Decree Number 663/Kep.421-DPRKP/2021 concerning the Determination of Slum Housing Locations and Slums in Cirebon City (Koroso, 2023). There are 11 slum locations in the city of Cirebon, these places include Kampung Baru Samadikun, Kebon Baru, Pesisir, Cangkol, Sitimulya, South Gambirlaya, Kesunean, Peguyuban, Harmony, Kejawanan, West Kriyan, Pegongan, Pekalangan, Petratean, Kanoman, Cucimanah, Karanganyar, Argapura, Surapandan, North Kedungkrisik, Cibogo, Lebakngok.

This design will make city development more planned, especially in coastal areas. The main problem is uneven population growth (Mabin & Harrison, 2023; Onyszkiewicz & Sadowski, 2022). The application of this concept in the urban planning of Lemahwungkuk District is expected to reduce the problem of urban expansion to anticipate the impact that will occur in the future and make the urban development system, mainly the coastal of Lemahwungkuk District, more focused on the development of coastal areas. Settlements in coastal areas are very closely related to the risk of disasters that can occur anytime. Such as tsunamis, storms, and even flash floods that destroy

coastal communities. One of the worst disasters from 1621 to the present, flash floods, is the rising sea level caused by the highest sea tides. In addition, there are components, some components elements, and wave fields (Muzakki et al., 2022).

According to the Minister of Public Works Regulation No. 18 of 2010, the Revitalization Area Revitalization Guidelines are an effort to increase the value of land or areas by rebuilding areas that can improve their previous functions. Because Cirebon is a northern coastal city located at the eastern tip of West Java province, its coastal area needs to be revitalized (Yanuarto, 2022). Therefore, to improve the quality of slums around the research site, recommendations on revitalization ideas in the northern coastal area of Lemahwungkuk District, Cirebon City, are needed. Revitalizing this concept also aims to improve the quality of analysis of uneven population development problems at the research site. Applying this concept in the urban planning of Lemahwangkuk District aims to reduce the problem of urban sprawl and anticipate its effects in the future. In addition, it is hoped that the urban development system, especially in the coastal area of Lemahwungkuk District, will focus more on the development of its coastal regions (Chen & Dong, 2024; Dadashpoor & Sajadi, 2024; Perez-Moreno, 2024).

Basically, in building coastal recreational destinations, the use of resources can be adjusted to the potential of resources and the conditions of their use so that their utilization is balanced (Mohamed et al., 2025; Tian & Zhang, 2023). Therefore, conducting a tourism suitability analysis is essential to ensure that the potential of coastal tourism resources can be developed more optimally. Consequently, it is essential to conduct a tourism suitability analysis to ensure that the potential of coastal tourism resources can be developed more optimally (Estradivari et al., 2024; Hasanah et al., 2020; Rifai et al., 2024; Suhartanto et al., 2021). The use of resources and environmental conditions for tourism varies depending on the tourist destination. It is necessary to study the extent to which tourism combines coastal activities with optimal recreational purposes to develop sustainable tourism areas. To maximize the natural potential for recreational or tourist activities, this recreational park is an area with a beach recreational object. Visitors can relax and enjoy the available facilities, such as entertainment facilities, games, and a souvenir shop (Riskiani et al., 2019).

Previous studies have explored similar issues in coastal cities. Muzakki et al. (2022) examined tidal flood impacts and proposed infrastructural improvements, while Yanuarto (2021) highlighted the need for coastal revitalization to reduce disaster risks. Riskiani et al. (2019) focused on integrating ecological principles into coastal park designs to boost community well-being. While these studies offer important insights, they often focus narrowly on technical solutions or policy changes, needing a holistic community-centered approach.

The novelty of this research lies in its comprehensive approach. It integrates urban design analysis, community engagement, and sustainable tourism into the revitalization plan, distinguishing it from previous works focusing primarily on infrastructure or policy. This study also includes disaster risk reduction measures and promotes socio-economic growth through tourism and conservation. This research is necessary because it addresses the urgent need for revitalization in one of Cirebon's most vulnerable coastal districts, where slum conditions and disaster risks persist. It also provides a sustainable coastal urban development model that can be applied in similar areas, offering long-term solutions that balance environmental preservation with economic growth.

The problem is further compounded by uneven population growth and urban expansion, which negatively impact the quality of life in these coastal settlements. The risk of natural disasters such as floods, tsunamis, and sea-level rise adds another layer of vulnerability to the residents in

this region. Over the years, these issues have persisted but have yet to be improved, making it critical to explore sustainable urban development strategies that can revitalize and improve living conditions in the area.

This research aims to design a revitalization plan for the northern coastal border of Lemahwungkuk Sub-District, utilizing urban design principles to address environmental and socio-economic concerns. The research seeks to develop a comprehensive strategy combining urban planning with environmental conservation, infrastructure development, and community involvement to enhance residents' overall quality of life. Specific objectives include reducing the effects of urban sprawl, increasing public space, improving infrastructure, and introducing sustainable tourism and conservation activities to the region. These objectives align with local government regulations and broader urban development goals for sustainable coastal city management.

By addressing the pressing issue of slum development and proposing a revitalization plan for the coastal area, this research aims to contribute to the broader discourse on urban sustainability and disaster risk reduction in coastal cities like Cirebon. Through a qualitative analysis supported by urban design tools such as ArcGIS mapping and community engagement, this study will propose actionable solutions that can serve as a model for similar regions facing comparable challenges.

METHOD

The researcher uses qualitative methodologies, especially urban design analysis. Qualitative research was carried out in natural conditions (natural setting). Because of this, this method is often referred to as the naturalistic method or ethnographic method, as they were initially used for research on cultural anthropology and qualitative approaches because the data collected and analyzed are more qualitative (Cutler et al., 2023). In this study, data collection was carried out using a purposive sampling technique, which means placing data source informants into consideration (Pratikno, 2020). This technique was chosen because it is considered the most appropriate for the research problem to be researched by the researcher. That is, the subject is based on the assumption that the individual is deemed to have the broadest knowledge of the subject to be studied, or perhaps as a public figure, which makes it easier for the researcher to explore the object or social situation to be studied.

Data sources were collected through interviews with 20 informants and mapping using ArcGIS 10.8 software—the Concept of a Community-Oriented Environmental Approach in the North Coast Area Rehabilitation Design, Lemahwungkuk District. The data from interviews were analyzed using thematic analysis. This method involved transcribing the interview recordings and coding key themes and patterns from the participant's responses. These themes were categorized based on their relevance to the research objectives, such as infrastructure needs, environmental challenges, and community engagement. Triangulation was applied to ensure the validity of the data, comparing insights from multiple informants and cross-referencing them with field observations and mapping data.

In addition to thematic analysis, the interview data was integrated with the spatial analysis from ArcGIS to provide a more comprehensive understanding of the research area's physical, social, and environmental conditions—this combination of qualitative and spatial data allowed for a more detailed and contextually accurate design plan.

RESULTS AND DISCUSSION

According to Sugiyono (2018), the analysis of this study was carried out by collecting data through field observation. In addition, the validity of the data is checked by triangulation of sources and techniques. Researchers looked at and compared data from different informants for source triangulation, but the same interview guidelines were used for informants one, two, and three with the same questions. The triangulation of techniques used by the researcher also includes reviewing information based on observations, conducting interviews with the Chairman of the RW and the Head of the RT, and documenting the current field conditions. Then, the mapping will be performed using ArcGIS 10.8 software to create design concepts to improve the research area. This study examined the northern coastal area of Cirebon City, which is located in the Lemahwungkuk district. This area is north of Cirebon (Putra et al., 2022).

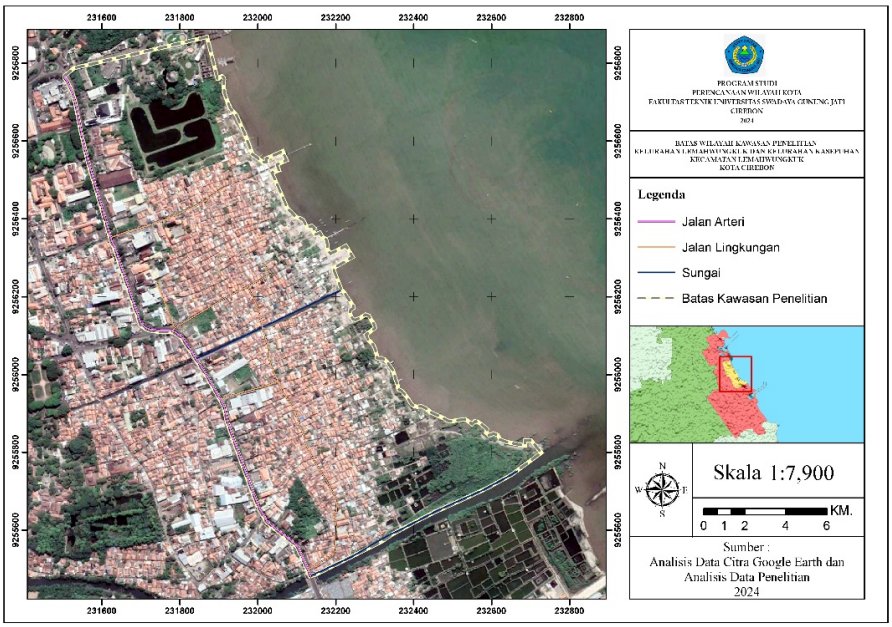


Figure 1.
Definition of Research Area

This figure delineates the specific zones within the research area, including residential neighborhoods, coastal borders, and commercial spaces. It highlights the areas targeted for revitalization and identifies critical environmental and infrastructural issues, such as drainage challenges and slum conditions. The figure serves as a foundational reference for understanding the spatial context and the scope of urban design interventions proposed in the study.

1. Physical analysis of the environment

   The research area still needs to meet the standards of physical comfort, but the community considers it comfortable because they are used to being in the environment. Both immigrants and residents have lived there since childhood. However, a healthy environment is free from waste and maintains its ecosystem. The physical environmental conditions at the research site became worse because there were no residential areas, and household waste was disposed of into drainage channels that were still directly connected to the sea and disposed of at the coastal border. As seen in the drainage at the research site, the water is still black, and there are many domestic waste deposits on the beach border. Therefore, it is necessary to revitalize the environment physically.
2. Socio-cultural analysis

In the research area, there are still changes in the social and cultural conditions of the community at the research location that have a positive impact (A temporal dimension). Negative consequences are also felt due to physical changes in the environment and applicable norms (A material dimension and A symbolic dimension).

3. Economic analysis

   The economic conditions at the research site impact the community, especially the fishing profession. Natural coastal conditions provide benefits for fishermen, but they still depend on other factors.

4. Infrastructure analysis

   The results of the analysis of the research area demand the development of infrastructure that is livable, environmentally friendly, and meets health, comfort, and safety standards. This includes sports fields, good roads, sound drainage systems, and adequate health and public facilities. The current research location does not have supporting facilities because the land is no longer suitable for settlement. Therefore, researchers designed coastal border areas to help people with activities. They will create sports fields for gymnastics and other sports mothers, parks to relax and unwind, food shops to enjoy MSME food, and improve roads and drainage systems.

5. Collaboration analytics

   Collaboration is a form of social process where the involvement of the community and the government as policyholders is needed to improve the quality of the environment for the local community.

6. Climate change disaster analysis

   The results of the analysis of the research area show that people feel changes in weather temperature due to physical changes in the Earth's atmosphere. To reduce the temperature rise, the researchers plan to add more green areas in the study area because there are currently few trees and green open areas, which causes the conditions in the research area to be very hot, and not enough land to absorb the overflow of the ROB flood so that when the flood comes, it will take a long time to recede. However, by planning green open spaces and replanting trees, temperatures in the area can be reduced, and flooding in the research area can recede more quickly.

7. Analysis of urban design elements

   Urban design elements are an essential part of distinguishing identities and facilitating the identification of each city to identify city (Wicaksono, 2022). Several elements are important to determining a city's image.

   1) Path

      In the existing condition, the main road to the research area does not have pedestrian and road access that can only be passed by one car.

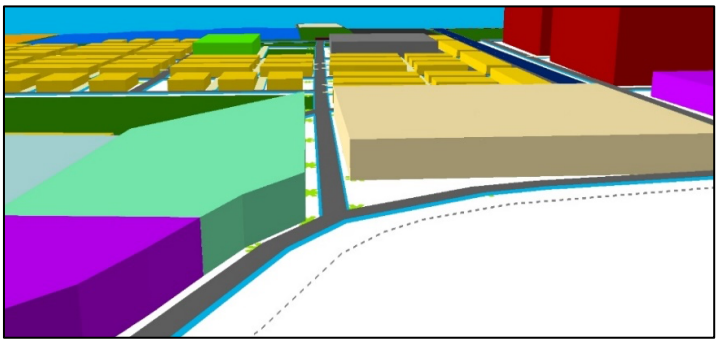


Figure 2.
Planning of the Entrance Area of the Research Area

The figure highlights the main entrance routes and how they connect to different zones within the revitalization plan. It shows three primary access points: the main entrance, the east entrance, and the west entrance. Each entrance leads to different parts of the area, such as residential zones, recreational spaces, and the mangrove conservation area. The design aims to ensure smooth traffic flow and enhance accessibility for both residents and visitors.

2) Edge

In the existing location, nothing can be used as an edge. Researchers made an edge on its distinctive feature, namely the welcome monument of the Lemahwungkukuk coastal area, which was designed by applying iconic to local wisdom such as red snapper ornaments and others.

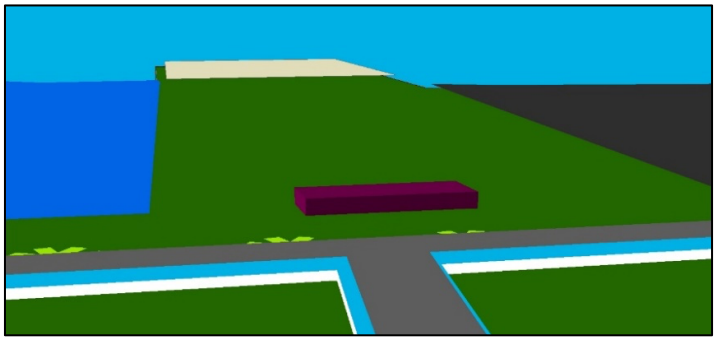


Figure 3.
Coastal Welcome Monument Design

3) District (area)

At the research location, the entrance area is divided into three because each entry to the north coast area of the Lemahwungkuk sub-district has different access. The main entrance passes through residential areas that are prone to the number of small children playing but are directly focused on the mangrove area and the food court area. The east entrance will pass more through the park and closer to the mangrove area. The west door will pass through the flats and get closer to the sports and food court areas.

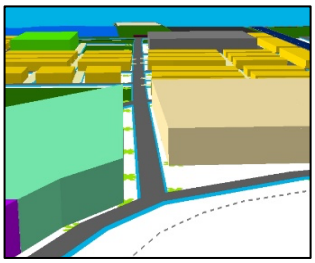


Figure 4. Main Entrance

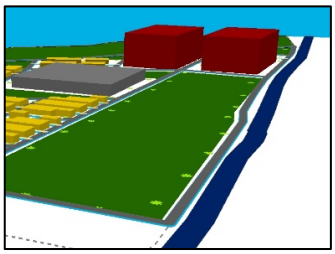


Figure 5. East Entrance

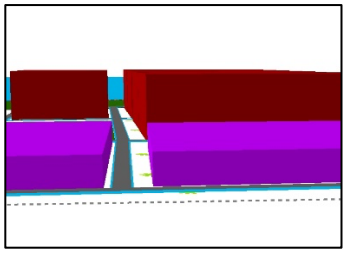


Figure 6. West Entrance

4) Nodes

The existing nodes are located in the BAT (British America Tobacco) building and the old town area in Cirebon is included in the research area. The researcher plans the Nodes in the research area to be at the welcome monument because, at that monument, the people who come can choose where to go. To the left will lead to the food court area and play area, and the right will lead to the mangrove conservation area

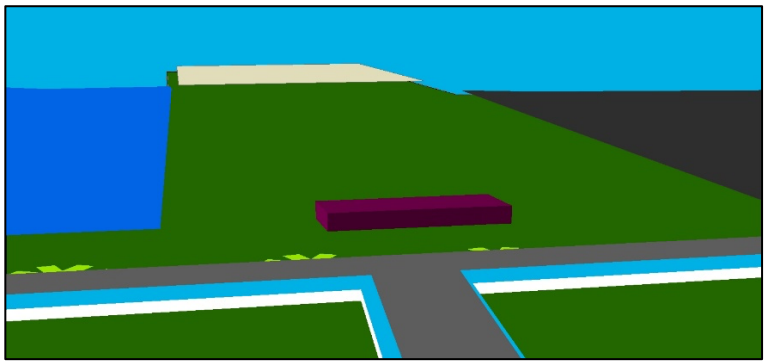


Figure 7.
Coastal Welcome Monument

5) Landmark (pendant)

Landmarks or tourist attractions are a reference point. At this location, the researcher designed a new tourist area, namely a mangrove conservation area and a coastal tourist area where the city of Cirebon still needs to be created for the people of Cirebon City and its surroundings.

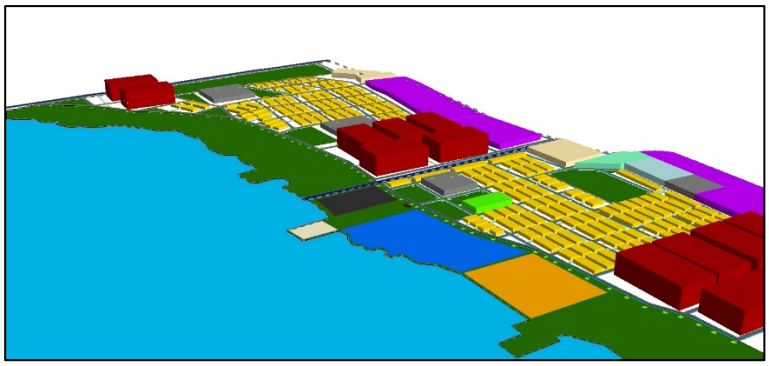


Figure 8.
Landmarks of the planning area

8. Scalable analytics

The analysis of measurable criteria includes calculating building height, the distance between buildings, and building boundary lines. The calculation will produce an envelope for the research area's building (Nugroho et al., 2019). The following results from a measurable

analysis calculation or a basic building coefficient (KDB) of 99.6 %, which can be interpreted as the building is complete and does not have a houseyard. The height measured by FAR (Floor Area Ratio) is 1.00, which means that the maximum building height at the location of the design area is six floors / 24 meters from the floor base.

9. Unmeasured analytics

The non-measurable analysis, as described by Aditya et al. (2021), includes several components, which are outlined below:

1) Access

Access in existing conditions can be passed by cars and motorcycles, but only pedestrian paths and public street lighting.

2) Compatibility

Compatibility or compatibility around the planning area does not indicate contrasting or harmonious buildings; many are created on the coast.

3) View

The research site has a beautiful view of the north coast. However, the beach boundary could be better organized, and much garbage is scattered, so researchers will revitalize the scene to make it a comfortable and fun place for families.

4) Identity

The identity of the current research site does not have any icons or distinctive features that can be used to indicate it. To restore the identity of the research location, the researcher will plan a recreation place with characteristics different from those of other research locations.

5) Sense

The revitalization of the northern coastal area of Lemahwungkuk sub-district, Cirebon City, is needed to increase the area's impression and aesthetic value and make it a distinctive feature.

6) Livability

The researcher uses zoning to facilitate activities for the surrounding community and visitors. This concept is known as the comfort of living, meaning that the surrounding community and visitors feel comfortable in the research area.

10. Site Analytics

According to Fadlina et al. (2023) plan the site area, several analyses must be carried out, that is, there must be several analyses carried out in carrying out site planning, namely:

1) Environmental analysis

The environment around the research site is still a mixture of public (office and commercial) and non-public activity areas. Therefore, the researcher plans to divide the three areas so the surrounding residents can live comfortably. The area's public activity zone (red) is intended for office and shop areas. The area's residential zone (yellow) is intended for community settlements such as housing, flats, and worship facilities. The Green Open Space Zone (light blue) is designed for playgrounds, food courts, and mangrove ecosystem areas.

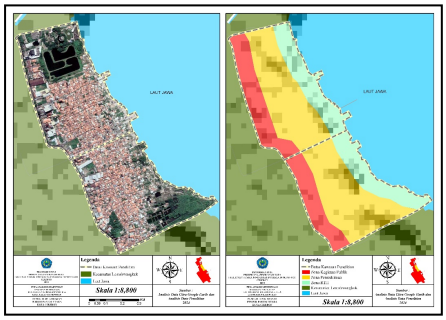


Figure 9.
Environmental Analysis in the Planning Area

2) Topographic analysis

Topographic conditions In the urban design area, there are two slope classes between 0 - 2% with a difference in elevation (height) between 0-5 m. This indicates that the area has a flat and not steep slope calcification. Below is the map from the topographic analysis and the map from the ground figure analysis, which shows the areas that were built and those that were not.

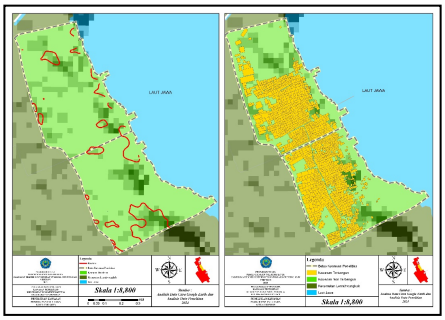


Figure 10.
Topographic Analysis in Planning Areas

3) Noise analysis

For noise analysis in the planning area, the existing conditions are divided into 2: high noise analysis and low noise analysis. In this study, the researcher divided the accessibility zone into three zones, namely the high noise zone (red), which is intended for office and shop areas. The area's private noise zone (yellow) is designed for people not disturbed by the crowds caused by road noise and activity noise from playground areas, food courts, and mangrove ecosystem areas. The noise will affect this location's semi-public noise zone (pink) because of the many activities around the playground area, food court, and mangrove ecosystem area. The change in the zone is expected to make the people in the research zone area comfortable so that they are not mixed with each other's activities.

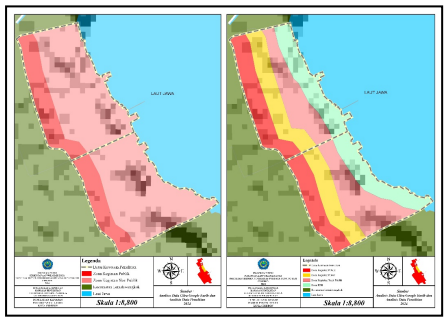


Figure 11.
Noise Analysis in Planning Areas

4) Accessibility analysis

For accessibility in the planning area, the existing conditions are divided into 2: high accessibility and low accessibility. In this study, the researcher divided the accessibility zone into three zones, namely, a high accessibility zone (dark green) in the area intended for office and shop areas. The private (green) accessibility zone in the area is designed for people who are not disturbed by the crowds caused by road noise and activity noise from playground areas, food courts, and mangrove ecosystem areas. The semi-public accessibility zone (light green) at this location will be affected by the noise because of the many activities around the playground area, food court, and mangrove ecosystem area. The change in the zone is expected to make the people in the research zone area comfortable so that they are not mixed with each other's activities.

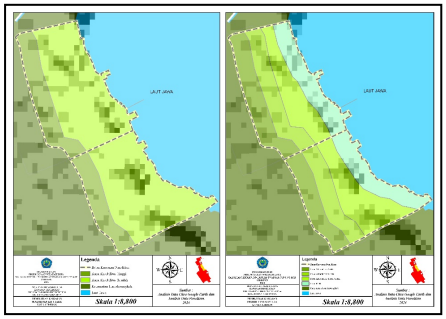


Figure 12. Accessibility Analysis in Planning Areas

5) Analysis of solar and wind trajectories

The sun's direction is also a concern in the design because it affects the comfort and needs of the people in the area at the research site. The urban sprawl phenomenon requires better organization of the condition of buildings at the research site, which causes maximum exposure to sunlight for the community (Dadashpoor & Shahhoseini, 2024; Sátyro et al., 2021). Therefore, researchers have designed most residential buildings to face north and south so that all people's houses can feel the heat of the morning sun.

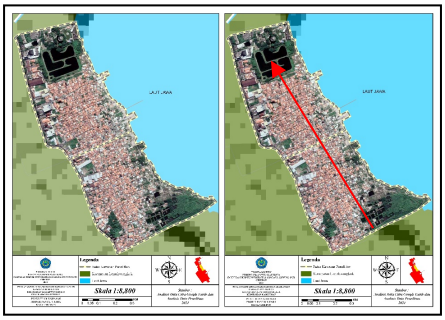


Figure 13.
Accessibility Analysis in Planning Areas

6) Drainage analysis.

The river that flows along the design area is a primary network, and its condition is very concerning. Therefore, the researcher added drainage channels on each road so that they do not become a pile of household waste sediment, and when it rains, the water will flow downstream.

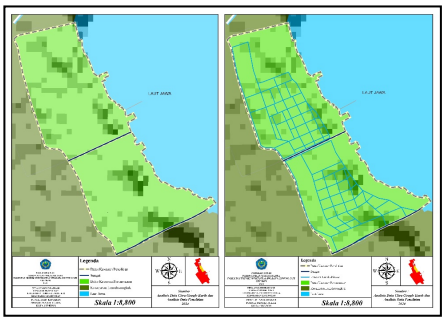


Figure 14.
Drainage Analysis in the Planning Area

7) Analyze the view

Recently, only one scene has been in the design area, which is at the fishing boat pier. However, in this study, the researcher will add other scenes so that the people of Cirebon City, especially the surrounding community, can enjoy more scenery in the research area, such as playground areas, food courts, and mangrove ecosystem areas.

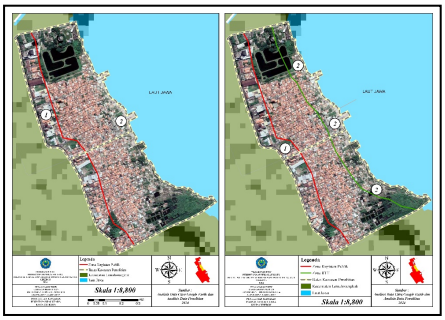


Figure 15.
Analysis of Views in Planning Areas

8) Vegetation analysis

The weather conditions at the research site became hotter because no trees could ward off or protect from the sun. Therefore, this study aims to increase RTH and plant trees along the road of the research site to make the conditions more shady and add to the area's aesthetics.

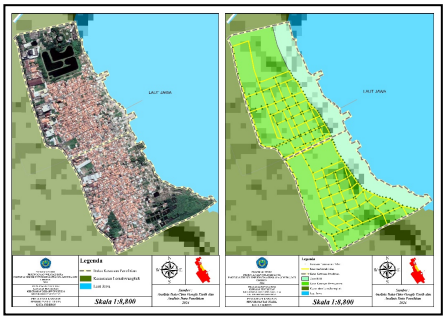


Figure 16.
Vegetation Analysis in Planning Areas

11. Design

To revitalize the northern coastal area in Lemahwungkuk and Kasepuhan sub-districts, Lemahwungkuk District, Cirebon City, the researcher made a site plan and building envelope. Restoring the function of coastal and river boundaries is a goal that helps deal with and reduce frequent disasters, such as flash floods and river overflows. Then, the phenomenon of urban sprawl at the research site can be overcome by changing the settlement pattern and building layout to improve the quality of the community environment and add green space as the area's aesthetic value. However, the findings of this study make the recession option more attractive to people in the Cirebon 3 region, especially the city of Cirebon.

❖ Site Plan Design

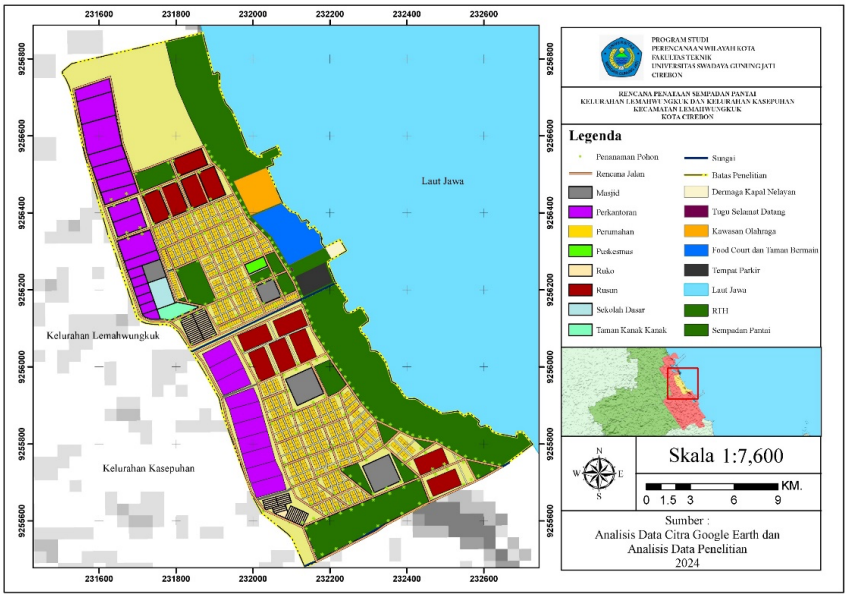


Figure 17.
Results of Design analysis

❖ Building Block Design

In the design of this building block, the researcher designed the criteria for the building type and height by SNI and the calculation of KDB (basic coefficient of the building) and FAR (Floor Area Ratio), which had been analyzed in advance. In this revitalization plan, the researcher designed three zones: a mixed zone, a residential zone, and an RTH zone or recreational zone.

1) Mixed Zone.

The researcher designed a general area in this mixed zone, such as offices, trade or shops, and education. As shown in the picture of the building block below.

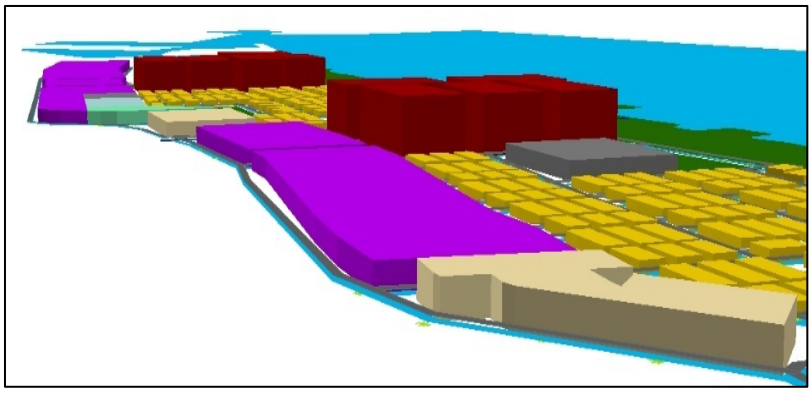


Figure 18.
Mixed Zone Area Picture

- Office zone.

The researcher maintains the existing conditions of the office zone, such as an office area with banks and other offices.

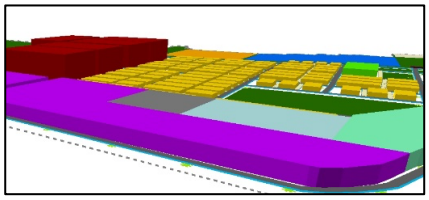


Figure 19. Cangkol office zone

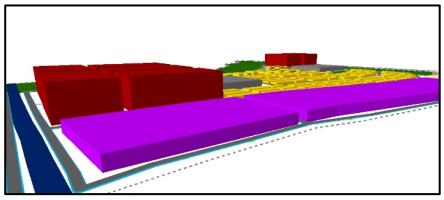


Figure 20. Kesunean office zone

- Trade zones.

This zone is used for the local community's buying and selling activities. It is not too far from the settlement located on the side of the main road, which aims to facilitate community accessibility; in this trade zone. The researcher provides two trading zones at the research location.

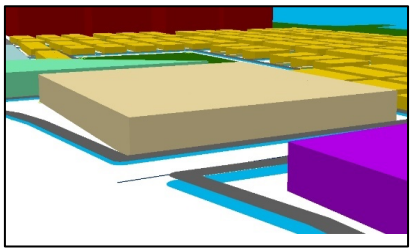


Figure 21. Cangkol trade zone

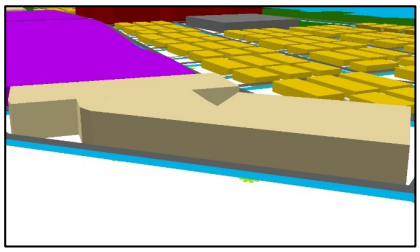


Figure 22. Sunean trade zone

- Education zone.

In this education zone, the researcher designed an elementary school and a kindergarten next to it to organize the design area and make it easy for the community to access.

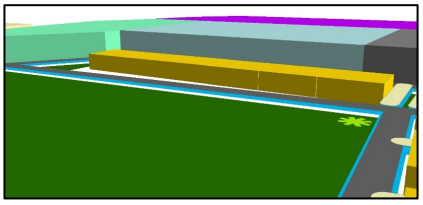


Figure 23. Elementary School building plan

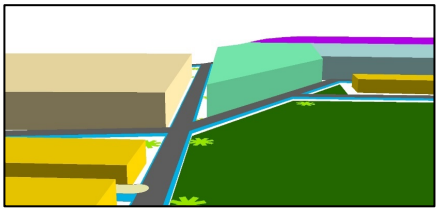


Figure 24. Kindergarten building plan

2) Residential Zone

In this residential zone, the researcher designed a semi-private area that is devoted to residents' settlements; this zone is designed for medium-sized houses by being equipped with the use of paving blocks on environmental roads so that waterlogging does not occur with the aim that water can be absorbed by the soil and flow into the drainage system during the rainy season and flash floods. Then, to provide comfort in the residential zone, it is complemented by vegetation along the road that functions as shade, pollutant absorber, and aesthetics. As shown in the picture of the building block below.

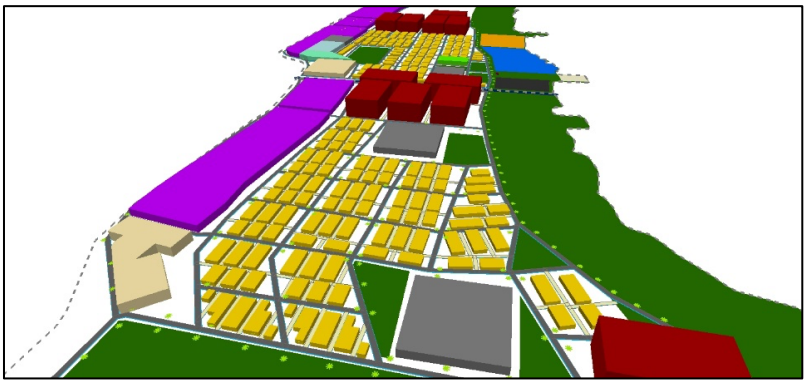
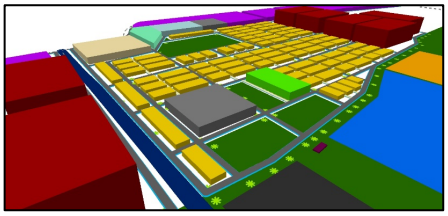


Figure 25.
Pictures of Residential Zone Areas

- Housing

A geographer and urban planner described housing as a physical and social environment. Housing is a group of houses that are part of urban and rural settlements equipped with infrastructure, facilities, and public utilities as part of efforts to ensure livable homes (Law (Law) Number 1 of 2011 concerning Housing and Residential Areas, 2011).



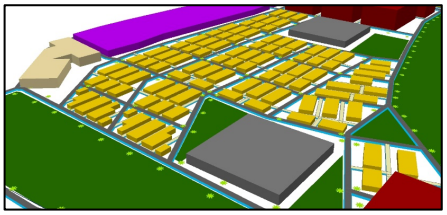


Figure 27.
Cangkol residential area

Figure 28.
Kesunean residential area

- Flat

Flats can be built on Hak Milik (HM), Hak Guna Bangunan (HGB), or other common land. Flats are also defined as multi-story buildings constructed in an environment divided into functionally structured parts in horizontal and vertical directions. These parts are usually owned and used separately as residences. (Law (Law) Number 20 of 2011 concerning Flats, 2011)

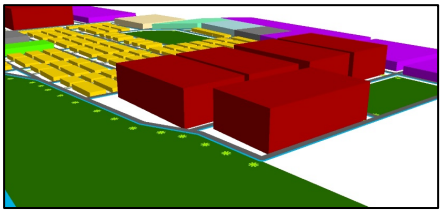


Figure 29.
Cangkol Flat Area

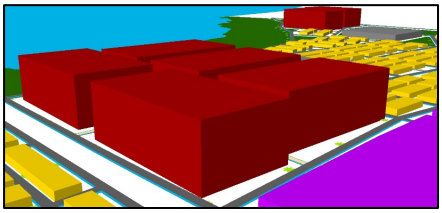


Figure 30.
Kesunean Flat Area

- Worship

The research site's original number of worship facilities remains, with two mosques in Kampung Cangkol and two in Kesunean village. However, only one has been moved, so the community is closer to the place of worship.

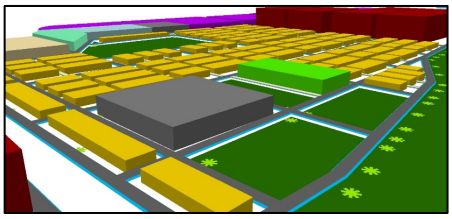


Figure 31.
Cangkol worship area

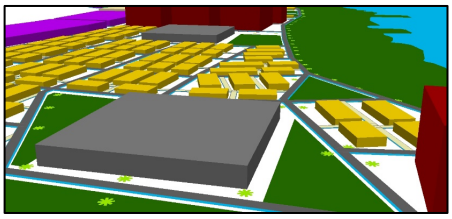


Figure 32.
Sunean worship area

- Road

In the research area, there are two types of roads, namely Environmental roads (black color) and Paving block roads (cream color), which are used so that puddles can absorb into the ground and flow into the drainage system. In addition, the streets are decorated with vegetation to make them comfortable and to avoid the hot sun, as shown in the image below.

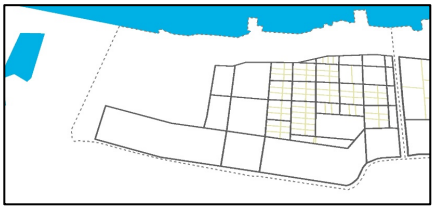


Figure 33.
Cangkol village road

Figure 34.
Kesunean village road

- Drainage

The river that flows along the design area is a primary network, and the condition of the river in the design area is very concerning. Therefore, the researcher added drainage channels on each road so that they do not become piles of household waste sediment, and when it rains, the water will flow downstream.

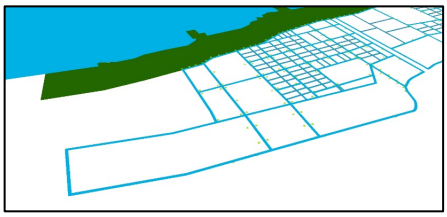


Figure 35.
Drainage of Cangkol village

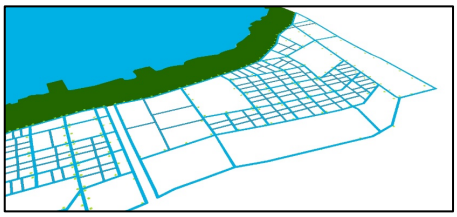


Figure 36.
Drainage of Kesunean village

3) Green Open Space Zone (RTH)

In the Green Open Space (RTH) zone, the researcher designed a public space that includes a mangrove conservation area, a food court area, and a playground in the northern coastal border area, Lemahwungkuk District, Cirebon City. Apart from being a conservation function and public space, it is expected to attract tourists for recreation and improve the community's economy around the design area.

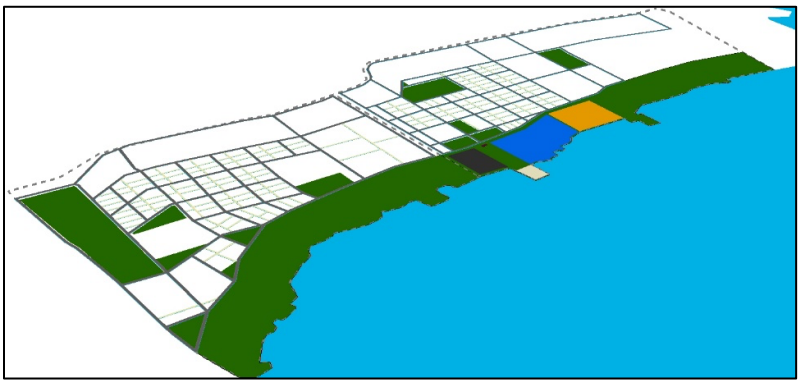


Figure 37.
Picture of the Green Open Space Zone Area

- Mangrove conservation.

In addition to being a conservation effort that functions as a barrier against seawater waves during the high tide, researchers maintain the existing mangrove ecosystem and increase the area of the mangrove area to be used as a recreation area and tourist destination in Cirebon City.

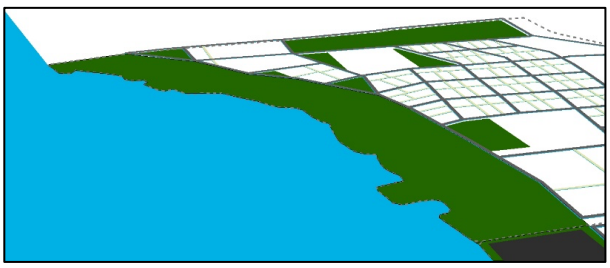


Figure 38.

Plans for the conservation of Kasunean mangroves

- Playground and food court.

The playground and food court area are expected to increase the number of open areas at the design location. In addition, it will attract tourists as a Cirebon City recreation site and improve the community's economy around the design location.

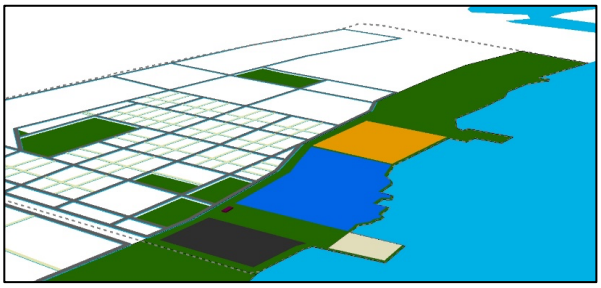


Figure 39.
Cangkol Playground and food court plan

CONCLUSION

This study aimed to develop a revitalization plan for the northern coastal border of Lemahwungkuk Sub-District, focusing on several key objectives. First, it sought to improve the area's physical infrastructure, particularly drainage systems and public spaces, to enhance living conditions for residents. Second, the research aimed to mitigate environmental risks associated with coastal disasters, such as floods and rising sea levels, by integrating green spaces and effective coastal defenses into the urban design. Third, the study promoted sustainable tourism and economic growth by developing recreational and conservation areas that attract visitors and benefit local communities. Lastly, it emphasized community engagement throughout the revitalization process, ensuring that the design reflects the needs and cultural values of the residents.

The findings from this research indicate significant potential for enhancing the quality of life in the Lemahwungkuk district. The proposed design interventions address immediate urban challenges and foster community involvement, promoting sustainable economic activities through tourism. By introducing green spaces and improving infrastructure, the study aims to create a more resilient urban environment that minimizes the risks posed by natural disasters. However, this study also has certain limitations. The reliance on qualitative data from a limited number of informants may only partially capture the diverse perspectives of all community members. Additionally, the findings are specific to the Lemahwungkuk district and may not directly apply to other coastal areas with different socio-economic and environmental contexts.

The implications of this research extend beyond the local community, contributing to the broader discourse on sustainable urban design in coastal areas facing similar challenges. The integrated approach to revitalization serves as a model for other cities looking to enhance resilience and improve living conditions in slum areas. Future research should consider conducting quantitative studies with larger sample sizes to gather more comprehensive data on community needs and perceptions. Longitudinal studies could assess the long-term impacts of revitalization interventions on quality of life and environmental sustainability. Additionally, exploring public-private partnerships in implementing the proposed designs may yield valuable insights for future urban development projects.

REFERENCES

Aditya, T., Santosa, P. B., Yulaikhah, Y., Widjajanti, N., Atunggal, D., & Sulistyawati, M. (2021). Validation and collaborative mapping to accelerate quality assurance of land registration. *Land Use Policy*, *109*, 105689.

Chen, Z., & Dong, H. (2024). Exploring urban and agricultural land use planning. *Results in Engineering*, 103093. https://doi.org/10.1016/J.RINENG.2024.103093

Cutler, N. A., Halcomb, E., & Sim, J. (2023). Using naturalistic inquiry to inform qualitative description. *Nurse Researcher*, *31*(3).

Dadashpoor, H., & Sajadi, A. (2024). Principles of just urban land use planning. *Land Use Policy*, *141*. https://doi.org/10.1016/j.landusepol.2024.107132

Dadashpoor, H., & Shahhoseini, G. (2024). Defining urban sprawl: A systematic review of 130 definitions. *Habitat International*, *146*. https://doi.org/10.1016/j.habitatint.2024.103039

Estradivari, Kartika, I., Adhuri, D. S., Adrianto, L., Agung, F., Ahmadia, G. N., Bejarano, S., Campbell, S. J., Fachri, F. R., Kushardanto, H., Marlessy, C., Pane, B., Puebla, O., Purnama, R. C., Santiadji, I. W. V., Suherfian, W., Tillah, M., Widodo, H., Wild, C., & Ferse, S. C. A. (2024). Prospective ecological contributions of potential marine OECMs and MPAs to enhance marine conservation in Indonesia. *Ocean and Coastal Management*, *258*. https://doi.org/10.1016/j.ocecoaman.2024.107411

Fadlina, S., & Sanjaya, M. R. F. B. (2023). Analisis Tapak Kawasan Situs Kutai Lama Dalam Perencanaan Kawasan Strategis Pariwisata Kabupaten Kutai Kartanegara. *Journal of Tourism Planning and Economic Development (JOTPED)*, *1*(1).

Hasanah, N. A. I., Maryetnowati, D., Edelweis, F. N., Indriyani, F., & Nugrahayu, Q. (2020). The climate comfort assessment for tourism purposes in Borobudur Temple Indonesia. *Heliyon*, *6*(12). https://doi.org/10.1016/j.heliyon.2020.e05828

Koroso, N. H. (2023). Urban land policy and urban land use efficiency: An analysis based on remote sensing and institutional credibility thesis. *Land Use Policy*, *132*. https://doi.org/10.1016/j.landusepol.2023.106827

Mabin, A., & Harrison, P. (2023). Contemporary planning and emergent futures: A comparative study of five capital city-regions on four continents. *Progress in Planning*, *169*. https://doi.org/10.1016/j.progress.2022.100664

Mohamed, A. G., Alashkar, F., Akindeinde, A. S., & Daoud, A. O. (2025). Building resilience: A holistic approach for revitalizing existing infrastructure assets. *Alexandria Engineering Journal*, *110*, 116–131. https://doi.org/10.1016/J.AEJ.2024.10.008

Muzakki, A., Rizky, A. C., & Nafisah, A. S. (2022). Analisis Banjir Rob Dan Penanggulangannya Di Kota Semarang. *Indonesian Conference of Maritime*, *1*(1), 13–25.

Nugroho, H. N., Alfibrian, N., Sabana, M. R. D., Labiba, D., Mintiea, T., Gunawan, S. E., Ulfa, A. M., Perwitasari, N., Sinaga, I. N., & Samosir, N. M. (2019). Mitigasi Permukiman Tepi Sungai Di Kelurahan Mlatiharjo. *Ruang*, *5*(2), 94–103.

Nurhijrah, N., Fisu, A. A., Marzaman, L. U., & Hafid, Z. (2021). Konsep Penataan Kawasan Lalebbata Sebagai Kawasan Heritage Di Kota Palopo. *Jurnal Arsitektur ZONASI*, *4*(1), 62–72.

Onyszkiewicz, J., & Sadowski, K. (2022). Proposals for the revitalization of prefabricated building facades in terms of the principles of sustainable development and social participation principles. *Journal of Building Engineering*, *46*. https://doi.org/10.1016/j.jobe.2021.103713

Perez-Moreno, O. (2024). Urban inequality and the social function of land value capture: The credibility thesis, financing tools and planning in Latin America. *Land Use Policy*, *146*. https://doi.org/10.1016/j.landusepol.2024.107285

Pradipta, B. Q., Hirawan, F. B., & Ragamustari, S. K. (2021). Evaluation of policy in the vocational education system revitalization in Indonesia: Examining the teaching factory readiness of the industry. *Jurnal Pendidikan Vokasi*, *11*(1). https://doi.org/10.21831/jpv.v11i1.37693

Pratikno, A. S. (2020). *Penyajian Data, Variasi Data, dan Jenis Data*.

Putra, M. A. H., Handy, M. R. N., Subiyakto, B., Rusmaniah, R., & Norhayati, N. (2022). Identifikasi Nilai Budaya Masyarakat Sungai Jelai Basirih Selatan Sebagai Sumber Belajar IPS. *Publikasi Berkala Pendidikan Ilmu Sosial*, *2*(2).

Rifai, H., Lukman, K. M., Quevedo, J. M. D., Francis, P., Sjafrie, N. D. M., Triyono, Mckenzie, L., Hidayat, R., Nugraha, A. H., Kuriandewa, T. E., Suryawati, S. H., Prayudha, B., Suraji, S., Risandi, J., & Hernawan, U. E. (2024). Understanding stakeholders' perception on developing seagrass-associated tourism: Evidence from marine protected areas of Bintan Island, Indonesia. *Marine Pollution Bulletin*, *209*. https://doi.org/10.1016/j.marpolbul.2024.117063

Riskiani, N., Suastika, M., & Pitana, T. S. (2019). Penerapan Material Ekologis pada Desain Taman Rekreasi Pantai di Kabupaten Kolaka Utara, Sulawesi Tenggara. *Senthong*, *2*(1).

Sátyro, Z. C., Farias, C., Candido, L. A., & Veiga, J. A. (2021). Urban sprawl can inhibit convection and decrease rainfall over an Amazonian city during a squall line type phenomenon. *Urban Climate*, *40*. https://doi.org/10.1016/j.uclim.2021.101023

Sugiyono, P. D. (2018). Quantitative, qualitative, and R&D research methods. *Bandung:(ALFABETA, Ed.)*.

Suhartanto, D., Gan, C., Andrianto, T., Ismail, T. A. T., & Wibisono, N. (2021). Holistic tourist experience in halal tourism evidence from Indonesian domestic tourists. *Tourism Management Perspectives*, *40*. https://doi.org/10.1016/j.tmp.2021.100884

Tian, G., & Zhang, Z. (2023). Exploring the impact of natural Resource utilization on human capital development: A sustainable development perspective. *Resources Policy*, *87*. https://doi.org/10.1016/j.resourpol.2023.104207

Wicaksono, J. (2022). Identifikasi Elemen-elemen Visual Kota Lama Banyumas. *Representasi: Jurnal Ilmu Sosial, Seni, Desain Dan Media*, *1*(2), 1–11.