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Building Sustainable Mitigation Through Adaptive Green Open Space on Tanjung Mas Sub District

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Introduction

- Tanjung Mas Village is located in the northern coastal area of Semarang City. Tanjung Mas village is one of the subdistricts that is predicted to be affected by permanent tidal flooding in 2031 with a height of around 12.4 cm [1].
- Tanjung Mas sub-district has a productive coastal area and a dense population. Many green open spaces have been converted into buildings.
- Apart from that, in terms of disaster mitigation, green open space can be used for temporary escape when a disaster occurs [2].
- This research will analyze the open space conditions in the Tambak Lorok area, Tanjung Mas Village, to help with the evacuation process.



Method

- In this research, data community preferences about the importance of green open spaces will be obtained by distributing questionnaires and asking relevant respondents.
- This research will be carried out using a mixed method where the data is quantitative and qualitative.
- The data that has been obtained, will be interpreted and presented using descriptive statistical analysis techniques.
- Space Syntax analysis is used to analyze the conditions of open space accessibility in the research area.

Result and Discussion

Analysis of the existing open space conditions in the Tambak Lorok area, Tanjung Mas Village.



- There are two open space locations in the Tambak Lorok area.
- The existing open space has several facilities to support people's socializing.
- The community also uses the open space in this area to carry out evacuations when floods occur.

Result and Discussion

Analyze the importance of open space based on community preferences

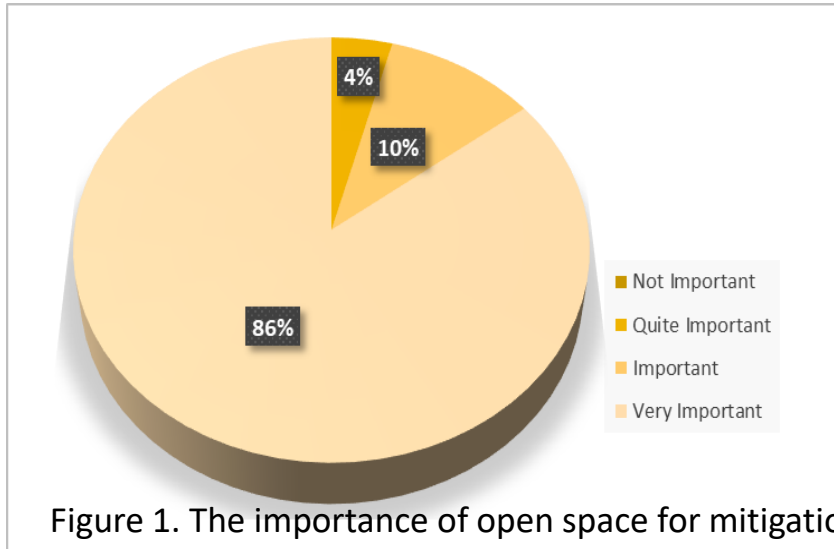


Figure 1. The importance of open space for mitigation

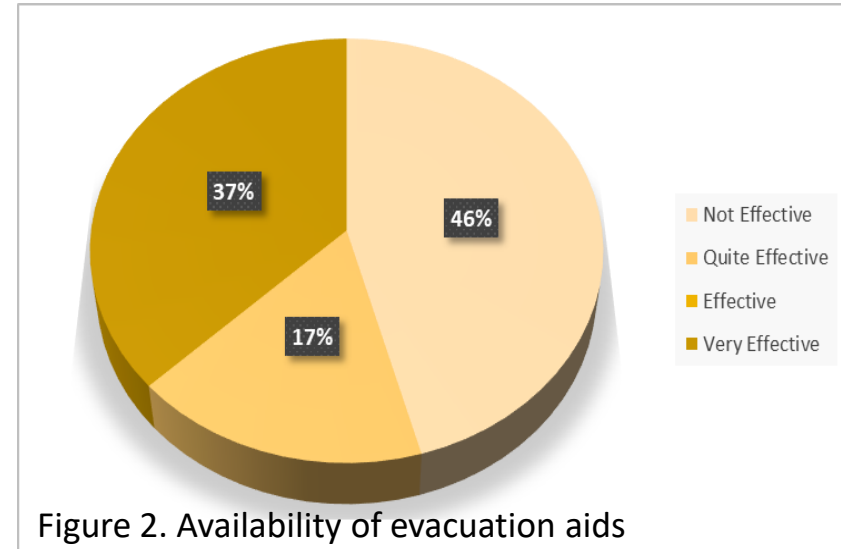
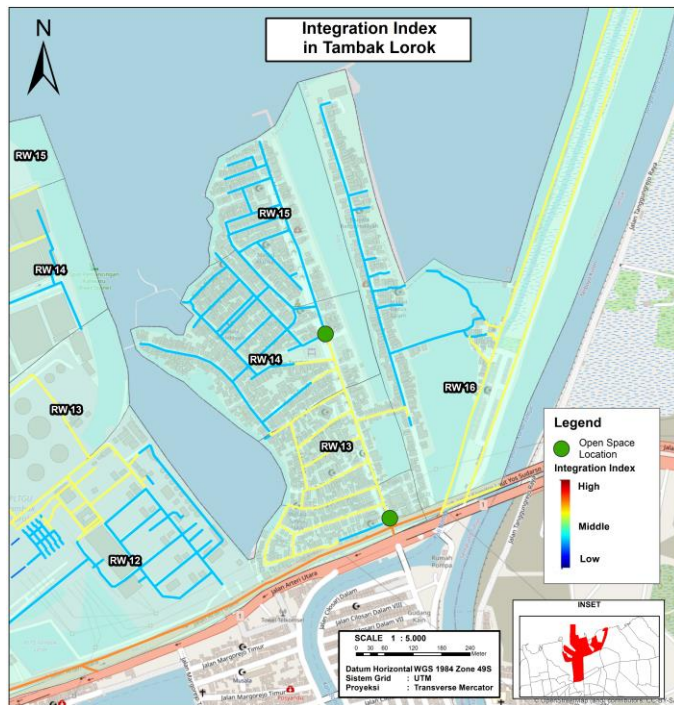
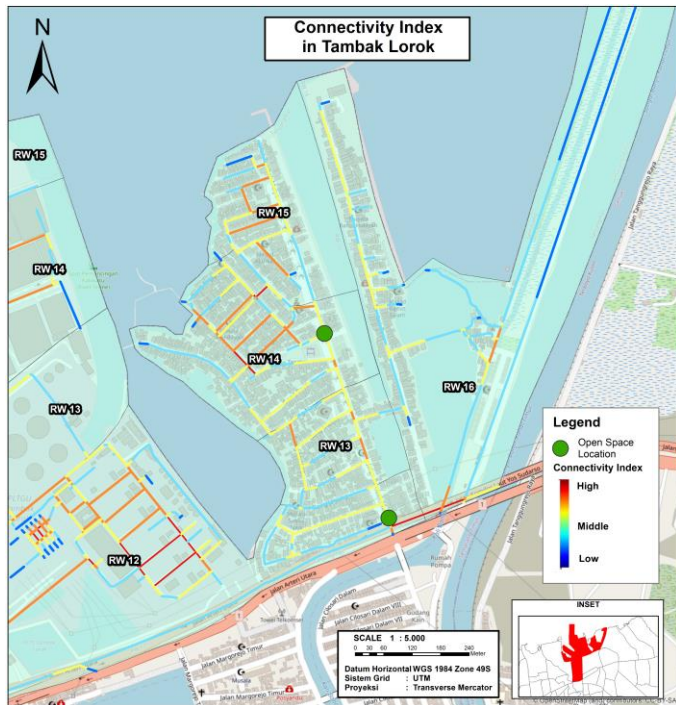


Figure 2. Availability of evacuation aids

- Figure one shows that the community feels open space is very important in the mitigation process carried out in the Tambak Lorok area.
- However, based on figure two, the community feels that the existing facilities are ineffective in helping the community when a disaster occurs.

Result and Discussion

Analysis of the accessibility of the Tambak Lorok area using a space syntax approach



- The open space location in the Tambak Lorok area has moderate connectivity and integration.
- One important aspect for developing open space and regional resilience is accessibility.
- The existing open space can channel the community towards the main route that connects to the final evacuation point Tanjung Mas Village Office.
- However, there are no route markers or evacuation points yet.



Conclusion

- Open space in Tambak Lorok area can be used as a temporary evacuation space for tidal flood disasters
- According to the community, open space is crucial in disaster evacuation. However, it is not yet supported by adequate facilities
- The open space location in the Tambak Lorok area has moderate accessibility. The open space location is connected to the main road, which makes it easier for people to evacuate
- Existing open space locations need to improve evacuation support facilities, such as ropes, buoys, lighting aids, and signage for evacuation routes, to help facilitate the evacuation process for the community and increase the resilience of the Tambak Lorok area.



Reference

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