Analysis of Node in Wain River Protected Forest

Nadia Almira Jordan[1], Budiani Fitria Endrawati[2], Ariyaningsih[3], Healty Susantiningdyah[4]
[1]Urban and Regional Planning, Kalimantan Institute of Technology, Balikpapan. Email:*nadiajordan@itk.ac.id*
[2]Industrial Engineering, Kalimantan Institute of Technology, Balikpapan. Email:*wati@itk.ac.id*
[3] Urban and Regional Planning, Kalimantan Institute of Technology, Balikpapan. Email:*ariyaningsih@itk.ac.id*
[4]Language Center, Kalimantan Institute of Technology, Balikpapan. Email:*susan@itk.ac.id*

Abstract
HLSW is a natural tourist attraction that presents the scenery and experience of natural tropical rainforest exploration. The existing space in the HLSW area is not well ordered, especially in the public zone as the zone visited by more diverse visitors. This can be seen from main routes and some attraction nodes that are not in good condition. Node is the concentration of the area, which is the intersection of HLSW main pathway, the tracking post and attraction area as the activity center. A node must show the indigenous character and accommodate the visitor's activity. It is necessary to analyze the HLSW node to obtain the type of activity and the condition of physical elements. Observation of the node by mosaic technique, which is to combine several single photographs to get the picture in a wide scope and to understand the role of each node. Results of this research are (i) All three types of nodes are exist in natural condition with very minimal facilities, (2) The number of facilities such as signage and other supporting furniture are not good in quality and not many in quantity, (3) The whole elements does not show HLSW character yet. This causes the concentration of the area to be less attractive and does not show its identity.

Keywords: protected areas, node analysis, forest characteristic

Abstrak
HLSW merupakan objek wisata alam yang menyajikan pemandangan dan pengalaman eksplorasi hutan hujan tropis alami. Ruang yang ada di kawasan HLSW tidak tertata dengan baik, terutama di zona publik sebagai zona yang dikunjungi oleh pengunjung yang lebih beragam. Hal ini bisa dilihat dari jalur utama dan beberapa jalan kecilnya yang tidak dalam kondisi baik. Node adalah konsentrasi daerah, yang merupakan persimpangan jalur utama HLSW sebagai pusat aktivitas. Node harus menunjukkan karakter asli dan mengakomodasi aktivitas pengunjung. Hal ini diperlukan untuk menganalisis simpul HLSW untuk mendapatkan jenis aktivitas dan kondisi unsur fisik. Pengamatan simpul dengan teknik mosaik, yaitu menggabungkan beberapa foto tunggal untuk mendapatkan gambar dalam lingkup yang luas dan untuk memahami peran masing-masing simpul. Hasil dari penelitian ini adalah (i) ketiga jenis node tersebut ada pada kondisi alam dengan fasilitas yang sangat minim, (2) jumlah fasilitas seperti signage dan perabot penunjang lainnya tidak berkualitas baik dan tidak banyak jumlahnya, (3) seluruh elemen belum menunjukkan karakter HLSW. Hal ini menyebabkan konsentrasi daerah menjadi kurang atraktif dan tidak menunjukkan identitasnya.

Keywords: protected areas, node analysis, forest characteristic

1. Introduction

Protected Forest is a forest area that has a basic function as a protection of life buffer system to regulate the water system, prevent flooding, control erosion, prevent seawater intrusion, and maintain soil fertility. One of the existing protected forest in Balikpapan is Wain River Protected Forest (HLSW), located in Karang Joang, North Balikpapan.

HLSW is a natural tourist attraction that presents the scenery and experience of natural tropical rainforest exploration. Saudah (2006) said HLSW has a diversity of habitats plays an important role in the economic development of Balikpapan. HLSW visited by many researchers and tourist from local and abroad for research, tracking and to observe the flora and fauna.

Based on a survey conducted in 2017, it is known that the existing space in the HLSW area is not well ordered, especially in the public zone as the zone visited by more diverse visitors. This can be seen

from main routes and some attraction nodes that are not in good condition. Node is the concentration of the area, which is the intersection of HLSW main pathway, the tracking post and attraction area as the activity center. A node must show the indigenous character and accommodate the visitor's activity. However, the physical character of the nodes has not maximized its potential as the concentration of the area. HLSW specific characters are not visible nor are there any variation of activity that can increase visitor's social interaction.

Based on the description that has been described, it is necessary to analyze the HLSW node to obtain the type of activity and the condition of physical elements. The analysis results are used as a reference in the arrangement of the attraction area and the physical elements to define the specific character of HLSW.

2. Methods

Observation of the node by mosaic technique, which is to combine several single photographs to get the picture in a wide scope and to understand the role of each node. It is done by taking a photo from the corner of the road in the opposite direction. This way can be seen covering two corners at once or even get photos that include the three branches and corner of the road.

The results of the observation is presented in the form of documented picture which are equipped with key map and observer movement directions to show the point of where the photo area taken in the intended location. On observation of the nodes, the results are presented in the form of visual data than can illustrate the connection of the path and outer space the node of the main path of the area.

3. Result and Discussion

Wain River Protected Forest (HLSW) is located in Km. 15 Karang Joang. It is adjacent to Kutai Kartanegara and Penajam Paser Utara. HLSW has an area of 11,245.95 Ha. Agusdin (2017) said value and benefits of HLSW area for Balikpapan is as a source of clean water and potential for tourism and research where the sustainability of Balikpapan water supply is highly dependent on HLSW ecosystem condition. HLSW is the latest example of Kalimantan's lowland forest with complete flora and fauna condition around Balikpapan / Samarinda.

HLSW as one of the tourist attractions in Balikpapan, trying to fulfill people need for recreation place. HLSW has been divided into several blocks, namely: (1) main block, (2) utilization block, (3) botanical block and (4) special religious block so the block used as the ecotourism zone is only the utilization block. Utilization block is divided into 3 zones are public zone, limited zone and exclusive zone. This public zone is usually used as an area for tracking ecotourism.

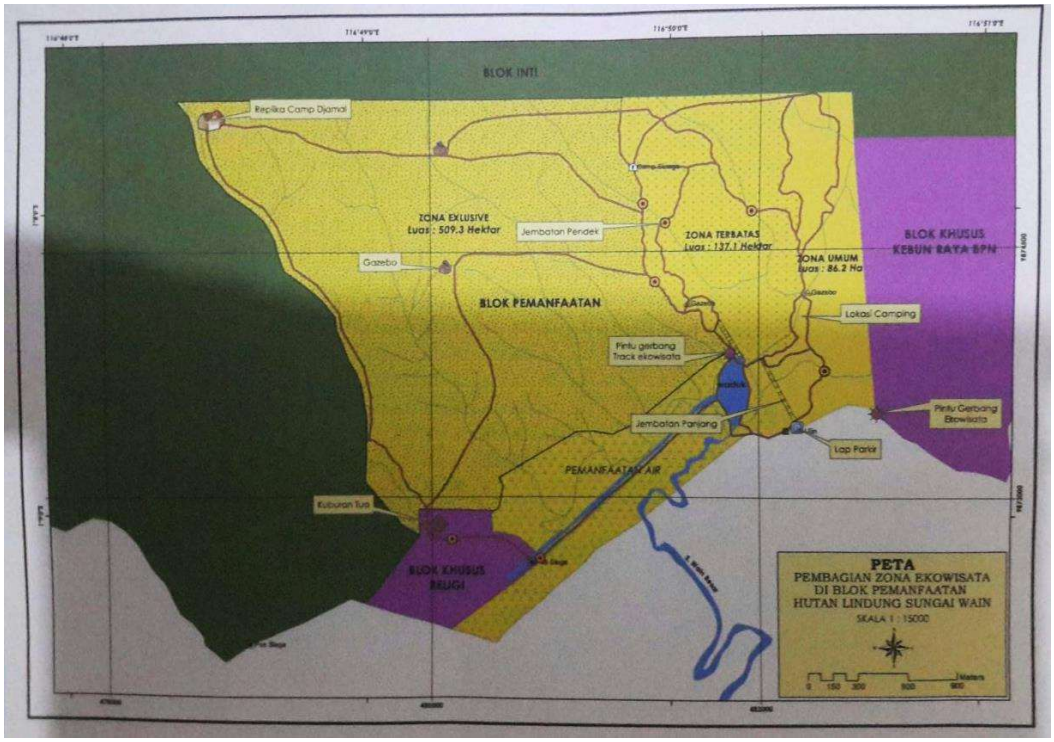

Figure 1. HLSW Block

Node analysis is employed to get visual description either around the activity center or in the path intersection. Through the node, the researcher was also able to evaluate shape congruity facilitating observation spots and the occurring social interaction. During this study, the data collection was gained through direct survey by documenting the surrounding environment at real time in the middle of the node.

A. Intersection Tracks

The first intersection track passed by the visitors from the main gate is a track heading to wain river as well as a camping ground. This track has a clear route inasmuch as it used wood material as its route track. There was a direction board in this intersection, yet it was set up one metre above the ground and unfortunately it was hardly read.

High lighting and low vegetation density on this spot made clear visibility towards detour process. The environment surrounding the intersection had few trees, so that a small empty space was still available as a layover post located between previous and the next track. The atmosphere of openness could be felt on this spot where visitors could casually pay attention on the three tracks.

Figure 2. Intersection Track

B. Sei Wain Post

The second node was the spot used by the visitors as a resting point. Beside the Wain River, there was a wooden hut covered in tarpaulins, equipped with some wooden desks and chairs. This area was used by the visitors to take some rest before continuing their next route and enjoying Wain River. The condition of the hut was very modest and it accommodated only few people. There was none of supporting facilities at the resting area. Based on the information given by the management staff, when the Wain river overflew, the hut was floated at least one metre above the ground. This incident made the physical condition of the hut looked poor.

To be precise, the location of the hut was at two kilometres from the entrance main gate. This hut was taken into a significant advantage by the visitors especially for serving tourism purposes since there was no other resting points on the previous tracks. The physical condition of the hut was generally less attractive and less safe, so that the overall condition seemed to be less comfortable. The minimal environmental supervision at the surrounding area of the hut made the Wain river area less attractive to enjoy in terms of its vegetation diversity as well as its natural landscape.

Node, an activity spot, has a pivotal role to add experiences on hiking activities for visitors. Beside being a resting point, node area also has a function of improving visual branding of Wain River. The more naturally ethnic design can be applied to the hut to provide an attraction object that accommodates local custom. Natural view theme can be chosen by using the native vegetation of the protected forest or by simply applying modest natural hut design to blend accordingly with the surrounding environment. Moreover, the existing hut's furniture and facilities such as roof cover, desks and chairs, need to be set up comfortably and safe and give the ultimate visual sense of goodness. Landscape management on the surrounding environment is also needed to give more available resting area for visitors in a big group. Landscape management can be focused on to develop potential photo area for visitors. Furthermore, attraction and route board are the two supporting elements that need to be given to give information.

Figure 3. Sei Wain Post

C. Camping Ground

Wain River Camping ground, an activity point characterized with flat slope area having few trees around, is one of attractions in the Wain River Protected Forest. The camping ground was located in the middle of three routes. This area can be used as an activity hub for both small and big groups.

Unfortunately, there was no board indicating the existence of the camping area neither there was a direction board leading to this area. The physical sign that can be recognized by the visitors leading to the area was a relatively wide grassland where people can build tents. The surrounding camping area consisted of tall trees and there was not much bush so that the visibility towards other areas was not hindered. Moreover, the camping ground also offered open space area and a natural camping experience where tents were set on relatively hilly ground.

Node has a huge potential for an activity hub for visitors due to its strategic function and position. Its location was at the middle of public zone and its relatively high utilization made camping ground become the integral part. The visual appearance was made to be natural in order to give natural camping experience for the visitors. Besides, the sign board could be provided and it could be used as photo property attraction leading to the camping ground.

Figure 4. Camping Ground

D. Wain Reservoir

Wain reservoir was located at the borderline of Wain river. The river and the reservoir were separated by a wood bridge and a wood gate. Wain reservoir was under Pertamina Management and it was supported using pump house. This reservoir was one of water resources for Pertamina. Despite being under Pertamina management, this reservoir was not totally closed so that HLSW visitors and their guide could trot around in the surrounding area. There were still a lot of local inhabitants made use of it for fishing. However, there was a route heading to restricted area of the forest, which was fully covered with grass. Moreover, the surrounding area of the reservoir was facilitated with gazebos and bridges.

4. Conclusion

Based on the observation of HLSW's nodes, the type of concentration of the area is the path intersection, the post as resting point and the forest attraction. All three types of nodes are exist in natural condition with very minimal facilities. The number of facilities such as signage and other supporting furniture are not good in quality and not many in quantity. The whole elements does not show HLSW character yet. This causes the concentration of the area to be less attractive and does not show its identity. The use of natural or eco friendly material for the gazebo and other elements such as existing ones can be used to support the natural theme of HLSW. Strengthening the HLSW character can be done by applying a specific physical form for the gazebo, furniture, signage and other supporting elements of the forest attraction.

Figure 5. Wain Reservoir

References

Arentze, T. A. and Timmermans,H. J. P. (2003) 'Modelling agglomeration forces in urban dynamics: a multi-agent approach' in *Proceedings of the Computers in Urban Planning and Urban Management Conference*, Sendai, Japan: CUPUM.

Cross, M. (2004) 'A graphic glimpse of urban planning', *The Guardian*, available from - http://www.guardian.co.uk/society/2004/jan/28/regeneration.epublic?INTCMP=SRCH

Hamnett, S. (2000) 'The late 1990s: Competitive versus sustainable cities' in S. Hamnett and R. Freestone (Eds.) *The Australian Metropolis: A Planning History*, pp: 168-188, Crow's Nest (NSW): Allen and Unwin.

Harper, T. L., Hibbard, M., Costa, H. and Yeh, A. G. (Eds.) (2010)*Dialogues in Urban and Regional Planning* (Volume 4), London: Routledge.

Yaakup, A., Bakar, Y. A., Kadir, M. N. A. and SulaimanS. (2004)'Computerised development control and approval system for City Hall of Kuala Lumpur',*Geo-Spatial Information Science*, Vol.7, No. 1: 39–49.

Agusdin. 2017. Pengelola HLSW Yayasan Pro Natura.

Urban Design Toolkit, (2006), Ministry for the Environment, New Zealand. www.mfe.govt.nz