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RIVER CORRIDOR SPATIAL PLANNING FOR URBAN ECOTOURISM DEVELOPMENT AT CILIWUNG RIVER - JAKARTA¹⁾

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Abstract

River in the urban area is a nature resource which has high environment and visual value. But, this value cannot be created since the upstream and river bank are not in proper arrangement. Some of the river banks in urban area have been covered by houses which generally from lower economic social life or categorized as poverty area. This research has purpose to arrange and develop the river corridor in urban area to be an urban ecotourism area. Through this arrangement, we hope that besides there will be an income increase for river bank community and also will increase the quality of water environment and its corridor to be better.

To analyze the data we use the qualitative descriptive method by scoring and spatial method by using technical overlay. The data has been categorized by biophysical data, tour and support data of community that has been collected in 11 locations along the river. The result is shown that most of (73%) river plain has medium classification, 18% is medium and the rest is lower. Next area has been zoned with natural ecotourism concept, semi natural and support.

Keyword: corridor of river, spatial planning, urban ecotourism

INTRODUCTION

Ciliwung is the longest river in West Java that passing through in the middle of Jakarta. The river that curves naturally and the flood plain topography is hilly on the headwaters is a potential place to be developed as tourism resources. As we may aware that river in urban area can be a *focal point* or a complete element that can increase the landscape quality. The culture social activities and community economics have developed along the river bank. Ciliwung has also important history value when in XVI century this river had became the gate and as a main transportation from Sunda Kelapa Harbour to Pakuan Padjajaran Kingdom in Bogor. (Santosa 2006).

The aspect of biophysical and the history of Ciliwung are a high tourism potential to be developed. Besides as a tourism area, the development of Ciliwung can give some economics opportunities for the community and increase the Territory Government income.

Eventough, the work to develop the river as a tourism area found many obstacles, especially connected to the dirtiness in the area of the river, such as population density and cleanliness. Together with community development and their necessity, there are many lands near the flood plain that have changed their functions to be some locations for residents, business, garbages etc. These conditions give some negative impacts to the physical environment condition, water quality and river environmental aesthetics quality. Reducing of water quality and bad condition of the environment along the river corridor, especially the density and slum residents, will give bad image to Jakarta.

Until now the Central Government and Territory Government can do for Ciliwung is only searching some concepts of management that related to physical repairing, community involvement and physical treatment in season such as cleaning the river from the garbage on some certain areas.

The main objective of this research is planning Ciliwung corridor spatial for urban ecotourism development. Specifically it covers (1) potential identification of resources area for ecotourism development, (2) potential analysis tourism resources area and community support. We hope that with the existence of ecotourism activities on Ciliwung corridor will be increasing the

community economics. This also can impact the increasing of environment quality and manage the river environment well.

METHOD OF RESEARCH

The research was done along the river corridor (\pm 55 km) in Jakarta started from Srengseng Sawah (upstream) to Marina Ancol (downstream). The Border of research area was \pm 250 m on left side and right side of the river counted from river as (PROKASIH 2005). The field observation has been done for two months from January to February 2007.

This research used the quantitative descriptive method that consisted of three Phases as follow:

1. Phase of Collecting and Clasification Data

This phase is a data collection and classification. The collected data is devided in two sections which is Primary Data, collected through field observation and some interviews by using questioners on stake holder. Second, the received Secunder Data based on book study. Observation was done in 11 locations along the river corridor in Jakarta, sistematically determined in every 5 kms. The interviews were made to 100 local people, 20 people from 8 related instistutions, 4 people from Non Government Organization (NGO) and 4 people from Travel Agent.

2. Phase of Analysis

This phase is an area potential evaluation for ecotourism development and devided in three sections which are local community development potential evaluation, river biophysical condition evaluation and tourism object and existing attraction potential evaluation.

2.1. Local Communities Development Condition Potential Evaluation

The Community development potential is evaluated from community acceptability level to ecotourism development in their area, and local community preferences to economical opportunities in a planned ecotourism area. The evaluation was done by respondents (n=100) that chosen by random in every observation location with modification formula by Yusiana (2007). The result was very potential, potential, and not potential zone. [Table 1](#) and [Table 2](#) show the community development potential evaluation.

Table 1. Community Acceptability Evaluation to the Ecotourism

Criteria	Category	Value	Score
Development area as a tourism area.	• Sure	4	S1
	• Fair -	3	S2
	• Not sure	2	S3
	• Don't Know	1	S4
	• Sure	4	S1
Ecotourism at Ciliwung river can increase the enviroment quality	• Enough Sure	3	S2
	• Less Sure	2	S3
	• Not Sure	1	S4
	• Very Sure	4	S1
Ecotourism at Ciliwung river can increase the Community prosperity.	• Sure	3	S2
	• Less Sure	2	S3
	• Not Sure	1	S4
	• Very Sure	4	S1
Ecotourism at Ciliwung river can increase the fasilities and the infrastucture.	• Enough	3	S2
	• Less Sure	2	S3
	• Not Sure	1	S4
	• Very Sure	4	S1
Community desire to be participated.	• High	4	S1
	• Medium	3	S2
	• Low	2	S3
	• None	1	S4

Source : Yusiana (2007); modification.

Table 2. Type of Participate the Community Desired.

Participation of Tourism Direct	Participation of Supporter Tourism
a. Become employees, tour guide	e. Tourism products supplier
b. Opening shop, restaurant, lodging	f. etc
c. Developing tourism objects and attractions	
d. becoming farmer, breeder	

source: Yusiana (2007), modification.

2.2. River Biophysical Condition Evaluation

River biophysical Evaluation covers PROKASIH river structuring border area which is 250 meters width to the left and right from river as. Ciliwung River Biophysical Condition Evaluation is based on modification parameter that source to USDA (1968) and BPLHD Prov. DKI Jakarta (2005), as written on Table 3.

Table 3. Parameter in Analyzing Ciliwung River Biophysic Condition

Criteria	Weight (%)	Sub Criteria	Value	score
River Floor Plain				
Landslide Factor (Fbl)	25	• 0 – 8%, not potential to slide	4	S1
		• 8 – 15%, less potential to slide	3	S2
		• 15 – 30%, enough potential to slide	2	S3
		• > 30%, very potential to slide	1	S4
Flood Factor (Fbb)	25	• Never	4	S1
		• Flood 1x within 5 years	3	S3
		• Flood >1x within 5 years - < 1x within 5 years	2	S3
		• Flood >1x within 5 years	1	S4
Land Use Factor (Fpl)	25	• Suitable, good condition	4	S1
		• Suitable, less condition	3	S2
		• Not suitable, less condition	2	S3
		• Not suitable, bad condition	1	S4
Water Quality				
Water Colour Factor (Fwa)	30	• Clear brown	4	S1
		• Brown	3	S2
		• Dark brown	2	S3
		• Black	1	S4
Water Debit Factor (Fda)	30	• No fluctuation during rain season and dry season	4	S1
		• Small fluctuation during rain and dry season	3	S2
		• Medium fluctuation during rain and dry season	2	S3
		• High fluctuation during rain season and dry season	1	S4
Sedimentation Factor (TDS, TSS) (Fsed)	20	• Material Quality I	4	S1
		• Material Quality II	3	S2
		• Material Quality III	2	S3
		• Material Quality IV	1	S4
Chemistry Quality Factor (COD, BOD, DO) (Fka)	20	• Material Quality I	4	S1
		• Material Quality II	3	S2
		• Material Quality III	2	S3
		• Material Quality IV	1	S4

Note : Score (S1=very suitable, S2=suitable, S3=less suitable, S4=not suitable)

Sources : BPLHD and ASDEP urusan SARPEDAL KLH (2005); USDA (1968); modification.

River Flood Plain Condition Classification Enumeration =

$$(\Sigma \text{ Fbl} \times 25) + (\Sigma \text{ Fbb} \times 25) + (\Sigma \text{ Fpl} \times 25)$$

Note : $\Sigma = 1$ to 11 locations

River Flood Plain Quality Level divided in high (226 – 300), medium (150 – 225), low (75 – 149).

Water Condition Classification Enumeration =

$$(\Sigma \text{ Fwa} \times 30) + (\Sigma \text{ Fda} \times 30) + (\Sigma \text{ Fsed} \times 25) + (\Sigma \text{ Fka} \times 25)$$

Note : $\Sigma = 1$ to 11 locations

River Flood Plain Quality Level divided in high (300 – 400), medium (200 – 299), low (100 – 199).

The result of river flood plain condition evaluation and water condition Evaluation is merged to get a potential biophysical level from every observation location to be developed as ecotourism area. Potential classification level ecotourism area is created in zone map; Very Potential (526–700), Potential (351–525), and Not Potential (175–350).

2.3. Ecotourism Object and Attraction Potential Evaluation

The ecotourism object and attraction potential evaluation has done in 2 Phase. The first phase, evaluated object potential level and existing tourism attraction. This evaluation was done by 11 respondents from BAPPEDA Provinsi DKI Jakarta, Dinas Pariwisata DKI Jakarta, and travel agent

using parameter modification result from Inskip (1991) and Umar (2005). The first phase result evaluation, then continue to the second phase, is a tourism object and attraction feasibility level evaluation. This evaluation uses the parameter of modification result Inkeep (1991), Yusiana (2007), and Bappeda Kabupaten Malang (2006) dalam Prasasti (2008), shown on Table 4.

Table 4. Parameter For Tourism Object and Existing Attraction Feasibility Evaluation

Criteria	Weight (%)	Sub Criteria	Value	Score
Tourism Object and Attraction Factor (Foa)	30	• All tourism attractions value are high (H).	4	S1
		• Existing tourism attractions value are Medium (M) - High (H).	3	S2
		• Existing tourism attractions value are low (L) - Medium (M).	2	S3
		• No object and no attraction.	1	S4
River Ecology Factor (Fek)	30	• Endemic, good Ecology unit	4	S1
		• Semi endemic, good Ecology Unit	3	S2
		• Destroyed Ecology Unit	2	S3
		• No Ecology unit	1	S4
Accessibility Factor (Faks)	20	• Primary road, easy access, good condition, various public transportation.	4	S1
		• Secondary road, medium condition, limited public transportation.	3	S2
		• Tersier road, medium condition, no public transportation.	2	S3
		• No access, no public transportation.	1	S4
Main road Location factor (Fjl)	10	• Close by (<1 km)	4	S1
		• Medium (1 – 3 km)	3	S2
		• Far Enough (3 - 5 km)	2	S3
		• Very Far (>5 km)	1	S4
Available Tourism Facilities factor (Ffas)	10	• Available, complete, good quality and well maintenance.	4	S1
		• Some, enough maintenance.	3	S2
		• Some, less maintenance.	2	S3
		• Not available.	1	S4

Note : Score (S1=very suitable, S2=suitable, S3=less suitable, S4=not suitable)

Resources : Inkeep (1991); Yusiana (2007); Badan Perencana Kabupaten Malang (2006) in Prasasti (2008); modification.

Object Feasibility Condition Classification and Tourism Attraction Enumeration = $(\sum Foa \times 40) + (\sum Fek \times 20) + (\sum Faks \times 20) + (\sum Fjl \times 10) + (\sum Ffas \times 10)$

Note : $\sum = 1$ to 11 locations.

Classification of Feasibility Object and Tourism Attraction is Very Potential (300 – 400), Potential (200 – 299) and Not Potential (100 – 199)

3. Ecotourism Spatial Development Planning

The latest is a synthesis phase which is grouping the local community development potential zone, the river biophysical potential zone and the tourism object and attraction potential zone. The group of those zones is using overlay method with *software Arcview ver 3.3* so it produces a potential ecotourism spatial development planning. The integration result is a spatial planning that has high, medium and low category for Ciliwung river corridor ecotourism development in Jakarta.

CILIWUNG RIVER CONDITION IN JAKARTA

Ciliwung river in Jakarta is part of Satuan Wilayah Sungai (SWS) Ciliwung-Cisadane that has 117 kms length, and river basin (DAS) that has $\pm 337 \text{ km}^2$ width (BPLHD Prov. DKI Jakarta 2001; Departemen Pemukiman and Prasarana Wilayah & Dutch Government in 2004). The upstream Ciliwung is in Gunung Pangrango, Jawa Barat, dan its downstream is Laut Jawa, Jakarta.

Based on research result of Departemen Pemukiman and Prasarana Wilayah in cooperation with Dutch Government (2004), Ciliwung river of downstream was divided in three areas; the upper side of the downstream covered Depok to Manggarai with condition that dominated population economy is service, tradings, small industry (tofu, cassava crispy and bread) and fabrica. Next is middle Ciliwung started from Manggarai to Pasar Baru with condition that dominated population economy is informal sector (workers, scavengers, etc) and home industry (tofu and tempe). Last is lower Ciliwung started from Pasar Baru to Teluk Jakarta, dominated with formal sector and trading.

Next, this research also revealed that bad physical condition of Ciliwung river is influenced by change of land utilization at DAS Ciliwung headwaters, and also because of change of land use on Garis Sempadan Sungai (GSS) on the downstream area. The most dominant is green land area had changed to be a place of houses. With those changes, the river physical environment become dirty and had bad quality.

The population density along Ciliwung corridor in Jakarta generally is quite high, especially in the middle of downstream area. Based on Badan Pusat Statistik (BPS 2006) that rate level of population density in every district that passed by Ciliwung is 14.791,49 pax/km² which is the ideal density standard in urban area is 130.000 pax/km².

RESULTS AND DISCUSSION

1. Acceptability of Local Community

In developing urban ecotourism at Ciliwung corridor as improvement slum environmental quality, we need local community involvement. Refer to Kodhyat (1998) statement that ecotourism is a tourism activity event that responsible to natural places and/or resorts based on natural rules in supporting environmental conservation and increasing local community prosperity.

Evaluation to community is divided in two parts, first is to see community acceptability to ecotourism development in their area. Second is kinds of participants needed by community in the ecotourism area. Community involvement is very important in developing ecotourism as Nasikum (2000) has said that tourism development on community basic has an opportunity to survive as the existing object and attraction development in a small scale that managed by community and local business so it is easy to be organized and not give much negative impact.

Based on acceptability evaluation and participations of local community preferences, generally we got some positive responses. High community interest could be seen from community preferences to some kinds of participations that related to ecotourism activities such as be an employee and a tourist guide, shop business, hotel, restaurant, arts and other tourism attractions (Figure 1).

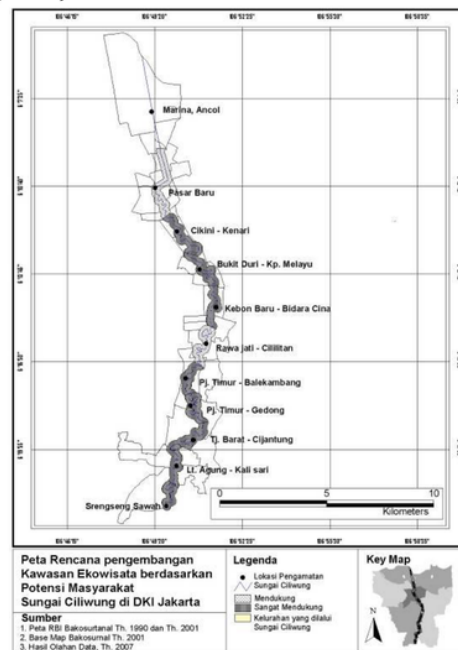


Figure 1. Map of Ecotourism Development Pursuant to Community Condition.

2. River Biophysical Condition

Biophysical is one of important aspect that needs to be noted in developing ecotourism area. Biophysical evaluation on Ciliwung river corridor is useful to know the potential level and the

damage in every element. From the evaluation, we can make a planning of improvement program and environment management. From the joining result for river flood plan and water quality evaluation, we know that 73% of that area is a potential location. In this location, we need to do some improvements for environment quality. The rest is 27% is not a potential area. This area needs a high level of improvement. (Figure 2).

Generally, the main rehabilitation of Biophysical along the river corridor is improvement program and used land restructuring along GSS. This program automatically also can increase water quality and reduce the flood. With the improvement, the environment will be good, then it will give some comforts to the visitors, safety and prosperity of local community.

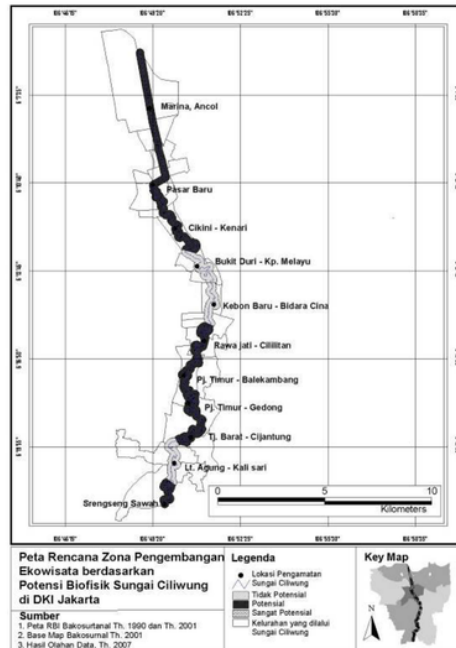


Figure 2. Map of Ecotourism Development Pursuant to Biophysical Condition.

3. Potency of Existing Tourism Object and Attraction

One of factor that become a center point for a succesful tourism event is the availability of potential tourism source. Inskeep (1991) said that motivation and desire are support factors for tourists to do their travelling, which the attracted factor can be a unique resort or places that provides tourism object and attraction. From the field observation and book study, we know that there is 23 objects and attraction along Ciliwung corridor that divided in 65% is building structural objects and 35% is natural tourism objects and cultural. After some evaluations, we got that 96% is a potential that can be developed as tourism object and attraction (Figure 3).

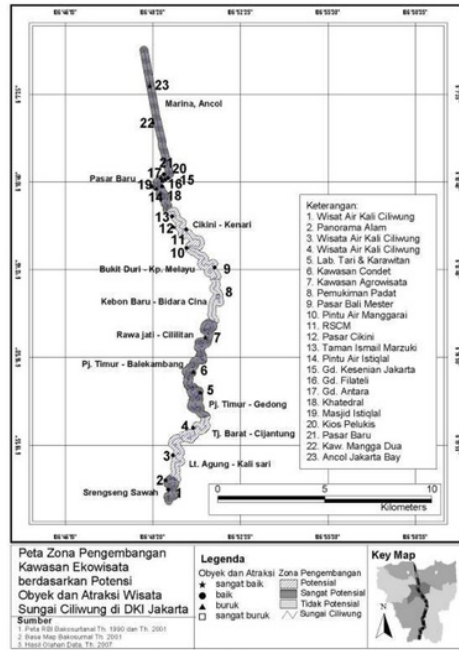


Figure 3. Map of Ecotourism Development Pursuant to Object and Attraction Condition.

4. Ecotourism Spatial Planning

To get spatial planning for potential developing is based on arranging result of biophysical condition, existing tourism object and attraction potential, and local community support. This classification zone has a purpose to determine ecotourism development area center. The result shown that most of locations (73%) is classified medium, two locations (18%) is classified high and only one location in the middle is classified low (9%). Figure 4 shown ecotourism potential spatial area.

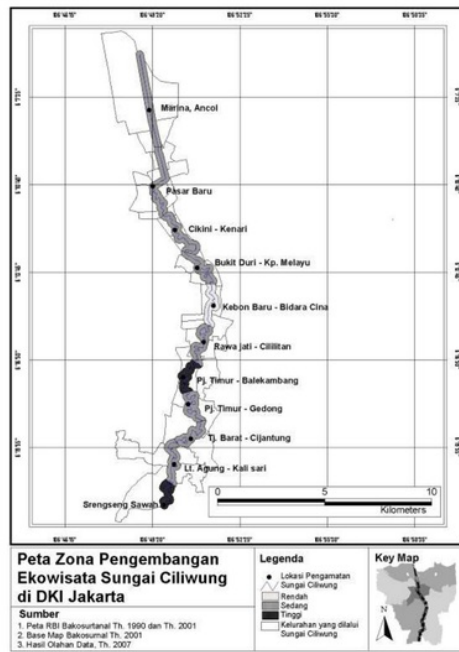


Figure 4. Spatial Planning for Developing Ecotourism Map on Ciliwung River

CONCLUSION

In spatial planning development at Ciliwung corridor to be an ecotourism area, community support, environmental condition and the existing tourism resources have the important role. Acceptability and community involvement will help the ecotourism persistence in this area. Besides that, they also get the benefits that can increase their prosperity in economical way and environmental improvement. Good condition of river be able to be developed as ecology tourism. Meanwhile, tourism resource that is tourism object and attraction can be a power of attraction for tourists to visit this area.

From overlay evaluation result, we know that with some improvement programs, most of the area (91%) at the river corridor is quite potential for urban ecotourism development. The improvement program more preferably on increasing the river environmental quality and management. So ecotourism development at Ciliwung river corridor can be sustainable and in good management.

REFERENCES

- [BPLHD] Badan Pengelola Lingkungan Hidup Daerah Propinsi DKI Jakarta, ASDEP Urusan SARPEDAL Kementerian Lingkungan Hidup [KLH]. 2005. Laporan Pemantauan Kualitas Air Sungai Ciliwung Tahun 2005. Jakarta: BPLHD.
- [BPLHD] Badan Pengelola Lingkungan Hidup Daerah Propinsi DKI Jakarta. 2001. Rencana Kerja Daerah Prokasih visi 2005 Ciliwung. Jakarta: BPLHD. (unpublished).
- Husein H. 2001. Urban recreational riferfronts. Di dalam: *Successful Revitalisation Elements. Conference Proceedings on 38th IFLA World Congress*; Singapore, date: Jun 26-29th 2001. p 88-96
- Inskeep E. 1991. *Tourism Planning: An Integrated and Sustainable Development Approach*. VNR Tourism and Commercial Recreation Series. New York. Van Nostrad Reinhold.
- Prasasti ND. 2008. *Developing Interpretation Program of Agrotourism (Case Study: Malang Regency, East Java Province)*. Bogor: *Master of Science in Information Technology for Natural Resources Management, Bogor Agricultural University*.
- Santosa I. Kompas. Feb 23rd 2006. Gerbang Pajajaran itu menjadi jalur sampah. Kompas:28 (1-5 column).
- Umar F. 2005. Rencana Pengembangan Koridor Sungai Kapuas sebagai Kawasan Interpretasi Wisata Budaya Kota Pontianak [tesis]. Bogor: Program Pascasarjana, Institut Pertanian Bogor.
- USDA. 1968. *Soil Interpretation for Recreation: soil memorandum 69*. Washington: SCS-USDA.
- Yusiana LS. 2007. Perencanaan Lanskap Wisata Pesisir berkelanjutan di Teluk Konga, Flores Timur, Nusa Tenggara Timur [Tesis]. Bogor: Program Pascasarjana, Institut Pertanian Bogor.

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