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Pemberdayaan Peran Serta Profesi Arsitek Lanskap
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Bencana Alam Melalui Pendekatan Konservasi dan
Penataan Ruang

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SAMBUTAN KETUA UMUM PN IALI

SIMPOSIUM ILMIAH NASIONAL IKATAN ARSITEK LANSEKAP INDONESIA TAHUN 2010

Bismillahirahmanirahim
Assalamu'alaikum warahmatullah wabarakatuh
Salam sejahtera untuk kita semua dan selamat pagi

Yang terhormat

Direktur DP2M,Direktorat Penelitian dan Pengabdian kepada Masyarakat, Direktorat Jenderal Pendidikan Tinggi - Kementerian Pendidikan Nasional RI

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Para Dekan dan perwakilan dari 23 Universitas di Indonesia, baik Negeri maupun Swasta yang mempunyai program Pendidikan Arsitektur Lanskap

Ketua Forum Pendidikan Arsitektur Lanskap Indonesia (FPALI)

Para pembicara, Prof Tong Mahn Ahn dari Seoul National University dan dari Kementerian Lingkungan Hidup RI

Para Undangan dan Peserta Simposium Nasional yang berbahagia

Pertama tama marilah kita bersama sama memanjatkan puji dan syukur kehadiran Allah SWT, Tuhan Yang Maha Esa, atas segaia karunia yang dilimpahkan Nya kepada kita semua sehingga dapat hadir di tempat yang sejuk ini, di IPB International Convention Center dalam keadaan sehat walafiat.

Pada kesempatan yang terhormat ini perkenankanlah saya menyampaikan apresiasi yang tinggi serta ucapan terimakasih kepada Pemerintah Indonesia,dalam hal ini Direktorat Penelitian dan Pengabdian kepada Masyarakat, Kementerian Pendidikan Nasional RI, yang telah memberikan untuk pertamakalinya Bantuan Pengembangan Himpunan Profesi kepada Ikatan Arsitek Lansekap Indonesia (IALI)

Bantuan Pengembangan Himpunan Profesi ini kami peroleh dalam bentuk Hibah dengan mengajukan proposal untuk menyelenggarakan Simposium Ilmiah Nasional, Ikatan Arsitek Lansekap Indonesia (IALI) tahun 2010, dengan tema "**Pemberdayaan Peran Serta Profesi Arsitektur Lansekap dalam mengatasi Masalah Kerusakan Lingkungan dan Bencana Alam Melalui Pendekatan Konservasi dan Penataan Ruang**". Dituangkan dalam SURAT PERJANJIAN PENUGASAN, Dalam Rangka Program Hibah Bantuan Pengembangan Himpunan Profesi, nomor 018/SP.SIP/DP2M/VI/2010, pada tanggal 28 Juni 2010 dan berakhir pada tanggal 1 Desember 2010.

Simposium Ilmiah Nasional ini,dipandang penting untuk diselenggarakan guna menampung, menggalang Naskah Ilmiah, Konsep, Pemikiran-pemikiran dan Hasil Rekayasa serta Perencanaan dari para professional dalam bidang Arsitektur Lanskap di seluruh Indonesia, yang bertujuan untuk meningkatkan kepedulian dan peran serta para peneliti, akademisi dan para profesional di bidang Arsitektur Lanskap dalam upaya mengatasi permasalahan kerusakan lingkungan dan bencana alam melalui pendekatan konservasi dan penataan ruang.

Dalam Penyelenggaraan Simposium Ilmiah Nasional Ikatan Arsitek Lansekap Indonesia tahun 2010 ini, kami bermitra dengan Departemen Arsitektur Lanskap dan Lingkungan Fakultas Pertanian, Institut Pertanian Bogor. Untuk itu kami Pengurus Nasional Ikatan Arsitek Lansekap Indonesia, sangat menghargai dan menyampaikan penghargaan yang tinggi atas kerjasama yang baik ini.

Bapak, Ibu dan peserta Simposium Nasional yang saya hormati,

Tema dari Simposium Ilmiah Nasional ini sangat tepat, yaitu penekanannya kepada pemberdayaan peran serta dari profesi Arsitektur Lanskap, maka kami sebagai insan Arsitek Lanskap Indonesia, sebagai profesi yang turut bertanggung jawab terhadap pengelolaan sistem ruang luar, merasa perlu untuk memberikan kontribusi pemikiran yang sampai saat ini belum sepenuhnya diikuti tertakan dalam tahap kebijakan-kebijakan dan selama ini pula lebih banyak mempunyai kesempatan pada tahap pelaksanaannya saja.

Keberadaan Arsitek Lanskap masih dianggap sebagai pelengkap, hanya menjadi kebutuhan yang bersifat tersier dengan paradigma beautyifikasi sebagai konsep pengembangan bentang alamnya.

Untuk itu melalui berbagai seminar, workshop dan simposium, kami berusaha merebut posisi profesi ini guna lebih dapat memberikan sumbangan pemikiran secara universal, makna dari pentingnya keberadaan suatu lansekap di Indonesia, pentingnya penataan ruang luar yang mewujudkan ruang-ruang di nusantara yang nyaman, produktif dan berkelanjutan sesuai yang diamanatkan oleh International Federation of Landscape Architecture (IFLA) dalam World Congress di Suzhou - China pada bulan Juli 2010, dimana intinya adalah Arsitek Lanskap didorong untuk terlibat langsung dalam upaya pengurangan pemanasan global.

Melalui delegasi IALI, serta beberapa anggota IALI yang turut serta dalam kongres dunia ini, juga telah menyampaikan isu-isu strategis termasuk menyangkut keberadaan profesi lansekap di Indonesia.

Bapak Ibu dan peserta Simposium Nasional yang saya hormati,

Didalam penyelenggaraan Simposium Nasional ini, kami membentuk gugus tugas termasuk didalamnya membentuk tim reviewer dan editor serta mengundang pembicara dari dalam dan luar negeri. Makalah yang telah diterima adalah merupakan pemikiran alternatif untuk penyelesaian masalah kerusakan lingkungan dan budaya. Para kontributor makalah terdiri dari para profesional dan akademisi, termasuk juga yang sedang menyelesaikan program magister dan program doktor, yang berasal dari komunitas dalam organisasi institusi pendidikan tinggi bidang Arsitektur Lanskap yang tergabung dalam Forum Pendidikan Arsitektur Lansekap Indonesia (FPALI), maka pada kesempatan ini kami sangat menghargai upaya dan karya dari seluruh kontributor yang telah menyampaikan makalahnya. Atas kerjasama yang baik ini dan sesuai dengan waktu yang telah ditentukan, maka tim Simposium Nasional ini telah berhasil menjaring serta selanjutnya dapat menyeleksi 58 Naskah Ilmiah yang layak diterbitkan pada berkala ilmiah pada tingkat nasional, internasional, atau beraspirasi internasional..

Dengan adanya kerjasama berupa Penugasan dari DP2M Direktorat Pendidikan Tinggi Kementerian Pendidikan Nasional RI kepada Ikatan Arsitek Lansekap Indonesia, maka kami dari Asosiasi Profesi menyatakan bahwa ini adalah momentum awal dari kiprah profesi Arsitek Lanskap untuk lebih memberikan kontribusi kepada bangsa dan negara guna menjaga alam Nusantara "agar tidak salah urus" yang dapat mengakibatkan kerusakan alam yang akhirnya menjadi masalah bersama yang sulit dikendalikan, karena evaluasi lanskap harus dimulai dari aspek manusianya, sehingga definisi apapun tentang lanskap harus sudah mencakup dimensi sosial didalamnya.

Kenyamanan suatu lingkungan selain dapat terjadi karena karakteristik ruang yang sudah ada "given", tetapi juga harus tetap mengutamakan azas manfaat seperti berguna, ekonomis, sehat, aman, serta bersinergi dengan aspek produktif dan pembangunan berkelanjutan.

Bapak Ibu dan peserta Simposium yang saya hormati,

Demikianlah sambutan Simposium Ilmiah Nasional Ikatan Arsitek Lansekap Indonesia tahun 2010. Semoga Simposium ini menjadi pemacu semangat bagi IALI -organisasi profesi kita- untuk dapat menyelenggarakan secara rutin kegiatan semacam ini pada tahun-tahun mendatang.

Sedikit catatan dari profesi:

Para arsitek lanskap hendaknya dapat menjadi pionir dalam upaya konservasi, preservasi dan perencanaan sistematis dari pemanfaatan sumber daya alam, sehingga manusia dan karyanya dapat dibawa pada keharmonisan dengan sistem alami. Rasa bahagia akan timbul dari kesederhanaan, ambil secukupnya dari alam, maka kita akan hidup damai, nyaman dan ceria.

Semoga Allah SWT, Tuhan Yang Maha Esa senantiasa memberikan bimbingan dan karunia kepada kita semua.

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LANDSCAPE PLANNING OF TOURISM AREA AND FORMULATION OF TOURISM PROGRAMMED ALTERNATIVES IN GRAMA TIRTA JATILUHUR, PURWAKARTA DISTRICT, PROVINCE OF WEST JAVA

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ABSTRACT

Grama Tirta Jatiluhur (GTJ) is tourism area which is located in the eastern of Ir. H. Djuanda water reservoir. This tourism area is one of potential tourism destination in Purwakarta which has many objects and attractions. The purpose of this research are to identify and analyze natural tourism resources, to analyze land suitability of tourism area, to analyze ecological value of green open space, to analyze characteristics and perceptions of tourists in GTJ, to decide touring plan based on objects and attractions. This research use qualitative and quantitative descriptive method. The qualitative descriptive method consists of potentials and constraints of biophysical aspects, technical aspects, and social aspects. Whereas, the quantitative descriptive method consist of Geographic Information System (GIS) processing by: (1) overlaying thematic maps of physical-biophysical aspects, objects and attractions potentials variables using software ArcView 3.2 and (2) calculating the value of nature by using extention CITYgreen 5.4. The results of this research are Landscape Planning of Tourism Area and Formulation of Tourism Programme Alternatives with ecologically sustainable development. The landscape plan consists of touring plan, space, vegetation, circulation, activities, facilities, and tourism programmes. There are two kinds of tourism programme alternatives, such as daily and incidental tourism programmes.

Keyword: Landscape Planning, Tourism Area, Land Suitability, GIS Processing, Touring Plan

PREFACE

Background

Purwakarta District is one of region which has natural potentials such as range of hills and famous tourism object, Ir. H. Djuanda Reservoir which is developed as tourism area in the eastern of it and called as Grama Tirta Jatiluhur. Grama Tirta Jatiluhur (GTJ) has landscape nature resources and good potentials such as diversity of object and tourist attraction, topography, vegetation, and easy in accessibility. Resources in tourism activity according to Gold (1980) are destination place for people who tour and do tourism activity which is the unity of space and attract them to make a tour.

According to Holden (2000), tourism development in destination place includes using of physic dan natural resources and then causes economy, culture, and ecology impact in tourist destination place which is developed. The existence of Ir. H. Djuanda Reservoir as one of tourism objects that has a tight relationship with the impact of tourism activities around it. The increase of reservoir volume is

caused by environmental degradation in upercourse, sedimentation that entered the reservoir, and not friendly - tourism activity or over carryingcapacity.

In order that nature continuance in tourism area is guarded and sustainable, so it is needed landscape planning and formulation of tourism programme. Tourism programmed, especially nature tourism is made to create physic environment or landscape which support users recreational activity, needs, satisfaction and their comfort, which planning process start from personality and characteristic comprehension and also policy in using the site for tourism area (Knudson, 1980).

Objectives

The purpose of this research are:

1. to identify and analyze natural tourism resources,
2. to analyze land suitability and ecological value of green open space of tourism area,
3. to analyze characteristics and perceptions of tourist in GTJ, and

4. to decide touring plan based on objects and attractions.

Benefit

The result of this research is as input for local government of Purwakarta District in tourism development in Purwakarta District, especially for GTJ manager and also another tourism areas. Besides that, landscape plan that is made can support conservation effort water catchment area around Ir. H. Djuanda Reservoir.

METHODOLOGY

Time and Location of Research

This research is done in Gramatirta Jatiluhur Tourism Area, Jatiluhur Subdistrict, Purwakarta District, Province of West Java (Picture 1). This research took place from March until July 2010.

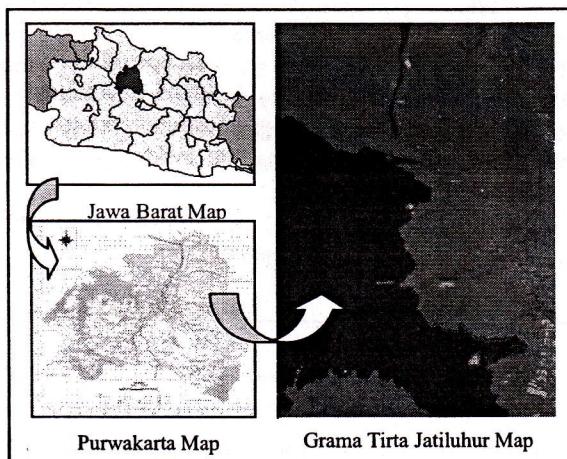


Figure 1. Research Location Map

Material dan Tool of Research

The material that is used in research are orientation map, masterplan, questionnaire, and literature. Meanwhile, tools which is used are Global Positioning System, digital camera, sketching tools, and computer in data processing by using software Arc View 3.2, Ekstension CITY green 5.4, AutoCAD 2006, Adobe Photoshop CS4, Microsoft Word 2007, and Microsoft Excel 2007.

Phase and Method of Research

This research use systematic approach methode who is described by Gold (1980). Methode consists of preparation, inventarization, analysis, synthesis, and planning. Research is done until planning phases:

Preparation. Preparation phase includes setting the purpose of research and searching general information about existing condition in research location.

Inventariation Data interpretation include biophysical, tourism resources, social, and technical aspects. The way of data collection includes field surveying, questionnaire distributing, interviewing with tourist and GTJ manager, studying literature.

Analysis Biophysical, tourism resources, social, and technical aspects that are collected then done by processing and arranging. Analysis which is done are:

- a. Biophysical aspect potentials evaluation analysis in tourism area by using qualitative descriptive method.
- b. Tourism object and attraction aspect potentials evaluation analysis are to analyze of tourism object and attraction potentials spatially have scored by GIS processing based on the standard by Inskeep (1991).
- c. Land suitability analysis is to analyze land suitability of 5 variables have scored by GIS processing based on the standard by USDA (1968), Hardjowigeno, et al. (1968), and Direktorat Jenderal Perlindungan Hutan dan Konservasi Alam in Mulyati (2007).
- d. Ecological value analysis is to identify landcover, to observe the character of green open space spatially, and to analyze ecological benefit of green open space (carbon storage, air pollution removal, storm water control) by GIS processing.
- e. Characteristic, perception, and tourists preferences analysis are to analyze the result of questionnaire about characteristic, perception, and tourist preferences of tourism area by using qualitative descriptive method.

Synthesis This result of this phase is zoning based on land suitability for tourism area. The form of this zoning is block plan that is will be planned.

Planning This phase is produced a landscape plan of nature tourism area that consider the concept. The landscape plan consists of touring plan, space, vegetation, circulation, activities, facilities, and tourism programmes

GENERAL CONDITIONS

Grama Tirta Jatiluhur Tourism Area (GTJ) is located in the western of Purwakarta District, Jatiluhur Sub District, Province of West Java.

Site boundaries of GTJ are:

1. North :Kutamanah and Cikao Bandung Village.
2. South : Ir. H. Djuanda Reservoir
3. East :Jatimekar, Jatiluhur, Cilegong, and Kembang Kuning Village.
4. West :Ir. H. Djuanda Reservoir

Biophysical Aspect

a. Topography

GTJ Tourism Area is undulating area with slope 3-70%. The highest levation (271 m) is in the southern of site which is adjacent to Cilegong Village. The lowest elevation (100 m) is in the southwestern to northern of site which is adjacent to Ir. H. Djuanda Reservoir.

b. Geology dan Soil

Based on Cianjur Geological Map, West Java which is published by Direktorat Geologi 1972, geology structure in Jatiluhur area are: (1) Miosin Stone (quartz sand stone and members of limestone), (2) Old Volcanic Stone (sand stone, tuff, dan conglomerate), and (3) another Terobosan Stones. This area composed of soil varieties based on type of source stone: (1) association of yellowish gray Grumosol, grayish Regosol, and grayish yellow Mediterranean include area of the southern site; (2) association of yellowish red Latosol and Litosol include area of the middle site; and (3) gray alluvial includes covers a fraction of the northern site.

c. Climate

The monthly temperature average of GTJ Tourism Area from 2005 until 2009 is obtained the highest monthly average 26.7 °C and the lowest monthly average 25.9 °C. Air humidity is obtained the highest monthly average 90.1 % and the lowest monthly average 88.4%. Rainfall is the highest monthly average 21.17 mm/day and the lowest monthly average 14.35 mm/day. The highest monthly wind speed average at noon 5.81 km/hour dan the lowest 3.02 km/hour. The highest monthly wind speed average at night 2.06 km/hour and the lowest 0.72 km/hour.

d. Hydrology

GTJ Tourism Area is located in Citarum and Cikao River Basin Region. Water needs for tourism area is obtained from Citarum River then pumped into Biki Baru Pump to be cleared, then pumped into Biki Lama. From Biki Lama, water is pumped into Cimumpit Reservoir and Pos Gereja that is distributed to consumer and tourism area. Tourism area uses Ir. H. Djuanda Reservoir as main tourism object. This reservoir has average volume 1.825.400.000 m³ and reservoir water level average 98,66 m.

e. Vegetations dan Animals

Vegetations in tourism area grow up naturally or cultivated. Grouping of vegetation types: (1) forest vegetation, such as mixed forest, production forest, and protected forest, (2) shrub vegetation, (3) talun, mixed garden, and yard, (4) shifting vegetation, and (5) ekoton vegetation. Ekoton is transition area between aquatic and terrestrial that has biota diversity and it is very sensitive to disturbances or changes from the outside. Animals in tourism area such as insect, reptile, livestock (goat and cock), cat, and bird.

Tourism Aspect

Based on the result of Rencana Induk Pengembangan Pariwisata Daerah (RIPPPDA) Kabupaten Purwakarta Tahun 2001 studies, tourism area in Jatiluhur, especially GTJ has tourism object and attraction potentials in Purwakarta District. There are tourism objects and attractions: (1) main dam, (2) floating dock (dermaga apung) and kampung air dock (dermaga kampung air), are the place for boat to dock and recreation area, (3) land tourism object, (4) Jatiluhur Water World and open stage, are water recreation mode area, (5) fishing pond, (6) servis/ fish auction, (7) floating net fish farming area, this area is rented and managed by Jatimekar Village communities, and (8) operational building, consists of bangunan PLTA Division, Forth Division, Dam Sub Division and Loka Riset Pemacuan Stok Ikan.

Social Aspect

a. History and The Objectives of Tourism Area Establishment

The location of Jatiluhur tourism area project development took a part of local community's land, Perum jasa Tirta II's land,

plantation land, Perhutani's land, and Ir. H. Djuanda Reservoir. Pembangkit Listrik Tenaga Air (PLTA) and its irrigation tools were finished-built in 1967, it became main tourism object that motivated tourism development in Purwakarta District. After looking nature potentials where was existed around Ir. H. Djuanda Reservoir, so Perum Jasa Tirta II Tourism Unit started to expand its tourism assets.

b. Demography of Jatiluhur Sub District

Jatiluhur Sub District has width 6.011 Ha which is consists of farming land 725 Ha, land fishery/ pond 12 Ha, settlement and garden 2.755 Ha, and industrial area 478 Ha. Jatiluhur Sub District consists of dari 10 villages. Based on inhabitants census in 2009, the number of communities in Jatiluhur Sub District are 63.847 people. The most of communities in Jatiluhur Sub District are worker 10.508 people, then farmer 4.515 people, seller 2.836 people, civil employee 952 people, home industry 376 people, and TNI POLRI 87 people.

Tourist

The most of GTJ tourists are family groups and businessman. There is the number of tourists who visit tourism area in 2005 until 2009 (Picture 2).

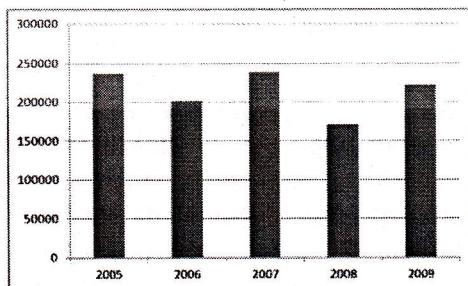


Figure 2. Graph of Tourist in 2005-2009

Technical Aspect

Based on President Decision Number. 32 year 1990 about Management of Protected Area, divides the protected area into: (1) area that provide protection to the bottom of its area, (2) local protected, (3) nature and cultural reserves, and () disturbed-disaster area

Local protected area includes border river, the area around the lake or reservoir, and the area around spring water. The criteria of border river based on President Decision Number 32 year 1990 is at least 100 meters on either side of major rivers and 50 meters on

either side of creeks outside the settlement. For the river in the settlement, border river which is estimated enough to build the inspection road 10-15 meters.

Tourist

The most of GTJ tourists are family groups and businessman. There is the number of tourists who visit tourism area in 2005 until 2009 (Picture 2).

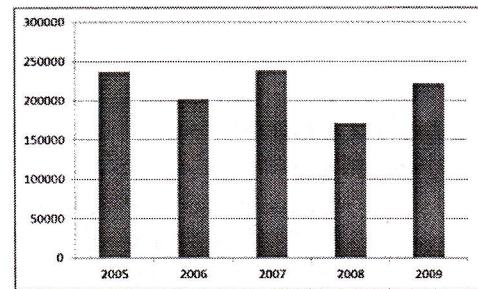


Figure 2. Graph of Tourist in 2005-2009

The criteria in the lake or reservoir is land along the edge of the lake or reservoir that its width is proportional to the shape and physical condition of the lake or reservoir between 50-100 meters from the highest tide point landward.

ANALYSIS

Biophysical Aspect Analysis

a. Potentials Evaluation Analysis

Potentials evaluation analysis uses qualitative descriptive method is to analyze potentials and constraints of biophysical aspect in tourism area, so the existing potentials can be used and the constraints will be solved well.

b. Land Suitability Analysis

Land suitability analysis uses quantitative descriptive method by GIS processing with scoring landscape resources variables (soil, slope, vegetation, landcover, and landuse). Then the thematic maps are combined by overlay technique. The result of land suitability analysis is zoning of suitability area for tourism area from marginally suitable, moderately suitable, and highly suitable area.

c. Ecological Value Analysis

Economic benefit and landcover distribution of existing and GTJ planning area in 2009 (Google Earth Plus tahun 2009) can be observed and analyzed. From spatial and

attribute data that is analyzed with GIS method by using Arc View 3.2, ekstension CITY green 5. obtained the following results:

E isting Area

Annual Air Pollutant Removal Saving:

3.511 is equivalent to
Rp. 3.1.5 .000,-

Annual Stormwater Saving: 8,15 is equivalent to Rp. 33.31.000,-

Total Annual Saving: 1,0 is equivalent to Rp. 825.030.000,-

Planning Area

Annual Air Pollutant Removal Saving:

1 2,02 is equivalent to
Rp 1.5 8.2 1.000,-

Annual Stormwater Saving: 1 ,8 is equivalent to Rp. 1.5 2.883.000,-

Total Annual Saving: 3 ,01 is equivalent to Rp. 3.1 1.1 .000,-.

Through the image projection the benefit of tourism area is obtained quite high economic benefit. Green open space 5 (325.28 ha) of total area is important to be maintained and preserved in order that tourism area can be sustainable.

Tourism Resources Aspect Analysis

Tourism Object and Attraction Potentials Evaluation Analysis

The analysis which is used is tourism object and attraction potentials evaluation analysis through scoring and then overlayed with landscape resources potentials. Evaluation is classified use five criterias according to Inskeep (1 1). This evaluation is based on a tourism object and attraction value, accessibility that are available to reach tourism objecy and attraction, location of tourism object and attraction from main road, tourism facilities, and environment impact.

The result of evaluation shows that there are high potentials of tourism object and attractions and 1 medium potentials of tourism object and attraction.

Social Aspect Analysis

a. Tourists Characteristic Analysis

Based on visit data which is obtained from GTJ manager, the number of tourists for the five last years (2005 until 200) with the average number of tourists is 222.13 people. Domestic tourists who visit it come from

Jakarta, Bogor, Depok, Bekasi, and Bandung, meanwhile the most of foreign tourists come from Japan, Korea, Netherlands, America, and Australia.

b. Tourists Perception Analysis

A great number of tourists is employee, (51 respondents). That tourist group is 20 until 30 years old (respondents). They visit tourism area to refresh. The most frequently visited tourism object is Jatiluhur Water World selected by 32 respondents with visit time 1- hours.

c. Tourists Preferences Analysis

There are tourists preferences to landscape planning, almost of respondents want outdoor tourism activities (8 respondents) that is supported by supporting tourism facilities. Besides of that, the most of respondents agree with sport facilities development (83 respondents). They also agree with pedestrian path (respondents) and bicycle path development (5 respondents).

d. Technical Aspect Analysis

Based on Regulation of Purwakarta District Number 8 year 1 1 and President Decision Number 32 year 1 0, the using of the area around the reservoir is as a recreation or tourism area with the river border within 50-100 meters to the mainland, so the type of tourism developed is classified as semi-intensive tourism. In addition, the using of the river border area is as a tourism area with the border line is 100 meters to mainland, the rest of area is directed to conservation function.

SYNTHESIS

In synthesis phase is determined block plan based on the analysis. This Block plan is used as basic in landscape planning. Based on the result of analysis is obtained three zones are yaitu highly potential, moderately potential, and marginally potential zone (Tabel 1).

Tabel 1. Planning in Synthesis Phase

one	Space/Function	Description
Marginally Potential one	Welcome area Service and tourism supporting area	Area is used as conservation area and conditional construction. It needs soil compaction because the clay soil has poor permeability and landscape engineering with retaining wall (slope over 15). This space is directed to service area where is used as active and passive activity area

- one	Space/Function	Description
Moderately Potential one	Agrotourism, Water tourism, technology tourism, (Supporting tourism area)	Area is suitable for use as farming, plantation area and conditional construction. It needs soil compaction because the sandy clay soil has poor permeability. This space can be used as active and passive activity area
Highly Potential one	Nature tourism (main tourism area)	Area is suitable for use as picnic area, campground, trail, and conditional construction. It needs restriction of tourists because of the variety of topography from 3 until 5 and natural vegetation have to be preserved as a primary resource.

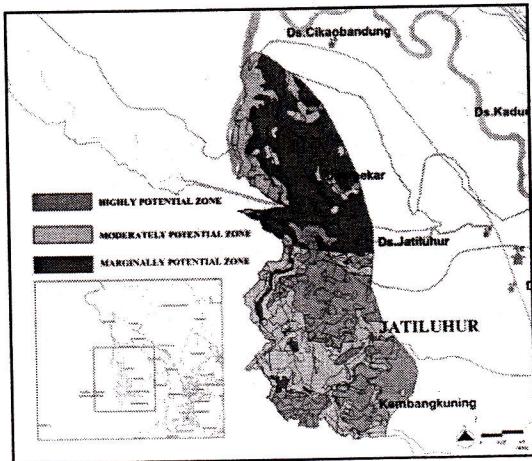


Figure 3. Composite Map

CONCEPT

Basic Concept

Planning concept developed in GTJ Tourism Area is nature tourism area integrated with its supporting tourism. The concept application of landscape such as a model of development plan that is adjusted to character of landscape resources, tourism object and attraction potentials associated with the challenge level of tourism.

Spatial Concept

The area is divided into si spaces, such as welcome, service and tourism supporting, main tourism, supporting tourism, buffer, and conservation area.

Vegetation Concepts

This vegetation concept is divided into four zones, such as main, development, buffer, dan conservation zone. Vegetation concepts planned in main zone are timber plants,

agricultural plants, and food crops zone. Development zone is directed to the plant which has good architectural form. Buffer and conservation zone are directed to the plant with ecological function.

Circulation Concept

Circulation concept of tourism area is divided into three paths, such as primary, secondary, and tertiary circulation path. The primary circulation path is a path which connects to main area, whereas the secondary circulation path connects to the groups of tourism object and attraction in tourism area. The function of tertiary circulation path is to connect to a tourism facility with another tourism facilities in each groups of tourism object and attraction.

Activity and Facility Concept

Tourism activity concepts planned are such as high (nature tourism), medium (water tourism and technology tourism), and low level of tourism challenge (agro tourism). Facility concept is divided into two kinds of facility, such as main and complement facility. The main is facility for using of tourism activity, while complement is public facility, sign system, and site furniture.

LANDSCAPE PLANNING

Landscape planning is based on nature based tourism concepts: (1) educative value, (2) recreation value, (3) benefit to local communities, manager, tourists, and local government, () increasing the participation of local communities (5) orientation on the conservation interest of tourism area.

The approach in this research is resources and tourist activity approach, so it produces space necessity and touring plan that connects to tourism areas with certain use and different types of tourist groups.

Space Plan

Based on landscape planning concept of GTJ Tourism and the data has been analyzed spatially, observed from potentials and constraints. The area is divided into si spaces, such as:

Welcome area, is main entrance for tourists to enter GTJ Tourism Area.
Service and tourism supporting area, planned in order to get information about GTJ and the services provided by GTJ manager at a glance.

Main tourism area, is tourism area developed as semi intensive tourism area. There is the main tourism object, such as forest with various attractions.

Supporting tourism area, consists of semi intensive and intensive tourism sub area located in border reservoir area, main dam, wetland area, and plantation area.

Buffer area, is area with its function to support tourism areas in GTJ Tourism Area from the outside interference.

Conservation area, is area with its function to protect GTJ Tourism Area from damage and conserve soil and water.

Vegetation Plan

Green space division is divided into four zones, such as main development, buffer, and conservation zone. Main zone is divided into timber plants zone, agricultural plants, and food crops zone. Timber plants are directed to support nature tourism activity. Food crops (paddy) and agriculture plants (kind of fruit plants) are directed to strengthen physical character of agriculture area.

Development zone is directed to artistic and architectural function, such as plants which have good canopy form, flowers, leaves, trunk, fruit, and seed. Buffer zone is directed into ecological function that ameliorate the climate and protect tourism area from the outside interference. Conservation zone is directed to develop area which has a slope over 25 , border reservoir area for ecological function.

Circulation Plan

Circulation plan of GTJ Tourism is divided into three paths such as primary, secondary, and tertiary circulation path. The primary circulation path is planned for Two-wheeled vehicle users, Four-wheeled vehicle users, and pedestrian with its function is connect to main areas, while the secondary circulation path connects to the groups of tourism object and attraction in tourism area. The tertiary circulation path is accessed by pedestrian that connects to a tourism facility with another tourism facilities in each groups of tourism object and attraction.

Activity and Facility Plan

Activity plan of tourism area is divided into active and passive activity. Tourism activity plan planned such as high (nature tourism), medium (water tourism and technology

tourism), and low level of tourism challenge (agrotourism).

Main facilities planned in GTJ Tourism Area such as (1) accommodation, (2) public service facilities and office, (3) restaurant, (4) water tourism, (5) nature tourism, (6) tourism transportation, and (7) souvenir shop. Besides of that, there are tourism supporting facilities such as interpretation board, bench and picnic table, workshop place, restroom, public phone, post office, children playground, sport arena, swimming pool, and another facilities.

The Implementation Plan of Tourism Programmed

Development and increase of existing tourism object and attraction is aim to attract tourists interest to explore kind of tourism activities in GTJ Tourism Area. The implementation of tourism object and attraction is planned on weekdays and certain days.

Tabel 2. The Implementation Plan of Tourism Object and Attraction

Program me	Tourism Object and attraction	Time
Daily	Information center	Every working time
	Hiking trails, canopy trails, bungee jumping camp site, picnic lawn (nature tourism)	0 .00-1 .00 (except camp site)
	Floating dock (dermaga apung), kampung air dock (dermaga kampung air), JWW, fishing pond (water tourism)	0 .00-1 .00 (except JWW, 0 .00-1 .00) 08.00-1 .00
	Main dam, museum (technology tourism)	0 .00-1 .00
	Nursery, floating net fish farming, agricultural, and plantation area (agrotourism)	
Incidental	Rowing race	PON Anniversary
	Ornamental boat festival	Porseni Anniversary
	Cultural event	Purwakarta Birthday
	Technology and environment workshop Hidup	National Education Day
	Tree planting in reservoir border area	Earth Day
	Folk event	Republic of Indonesia Independence Day

Touring Plan

Touring plan is based on accessibility and type of attractions in accordance to tour package selection, such as touring circuit and longer stay. Touring plan is planned into touring plan map.

CONCLUSION AND RECOMMENDATION

Conclusion

Based on biophysical, tourism object and attraction potentials, social, and technical aspect, GTJ Tourism Area has great potentials for tourism development which is the most of tourism object and attraction have high potential value. The highly potential zone has width 1 .0 ha (30.8), the moderately potential zone 20 .8 ha (3 .2), and the marginally potential zone 18 . ha (32. 2). Economic benefit from green open space of existing area with total annual saving Rp. 825.030.000,-, while total annual saving of planning area Rp. 3.1 1.1 .000,-. Tourism concept that is developed is nature tourism with landscape resources and also tourism object and attraction potentials to maintain landscape resources and tourism sustainability.

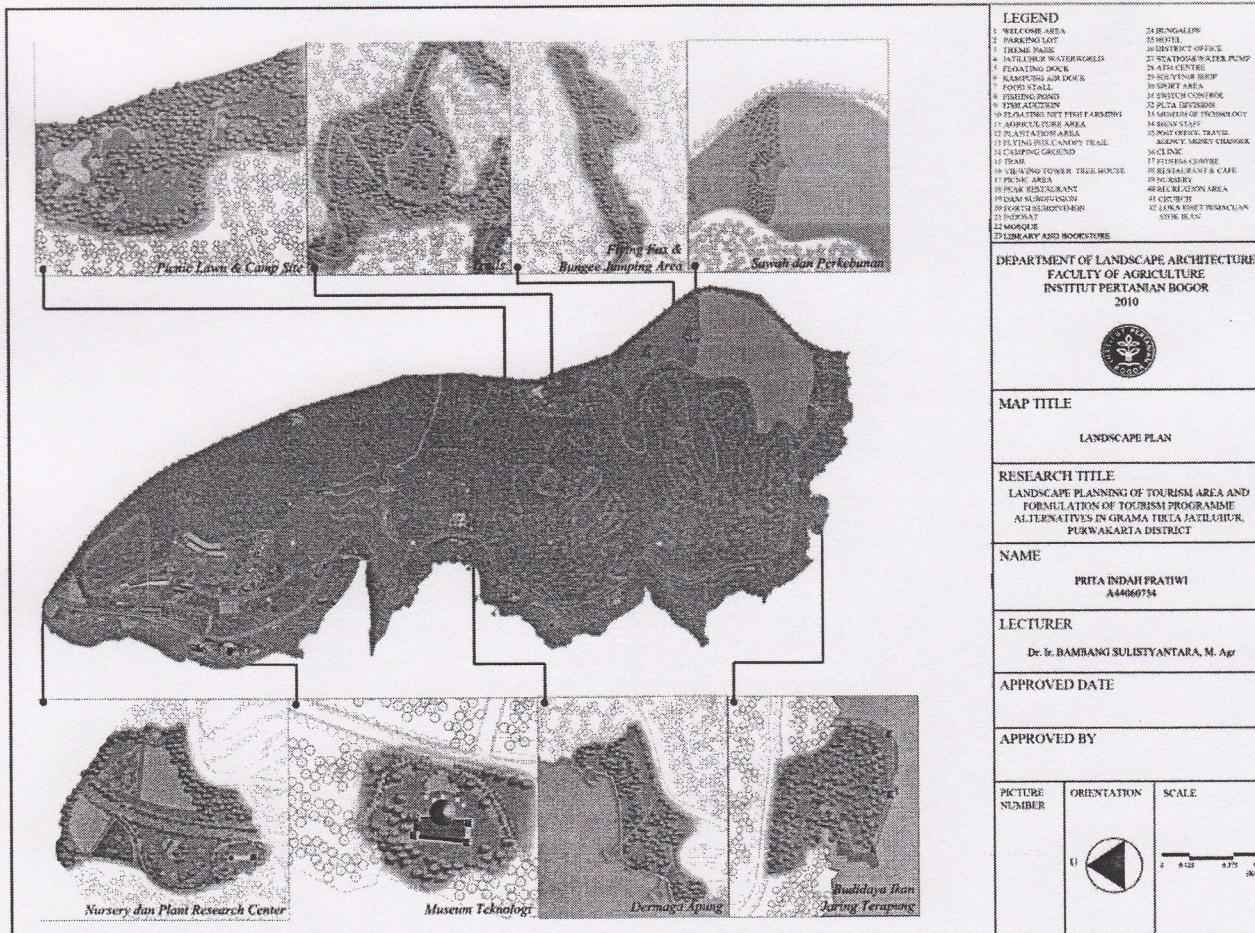
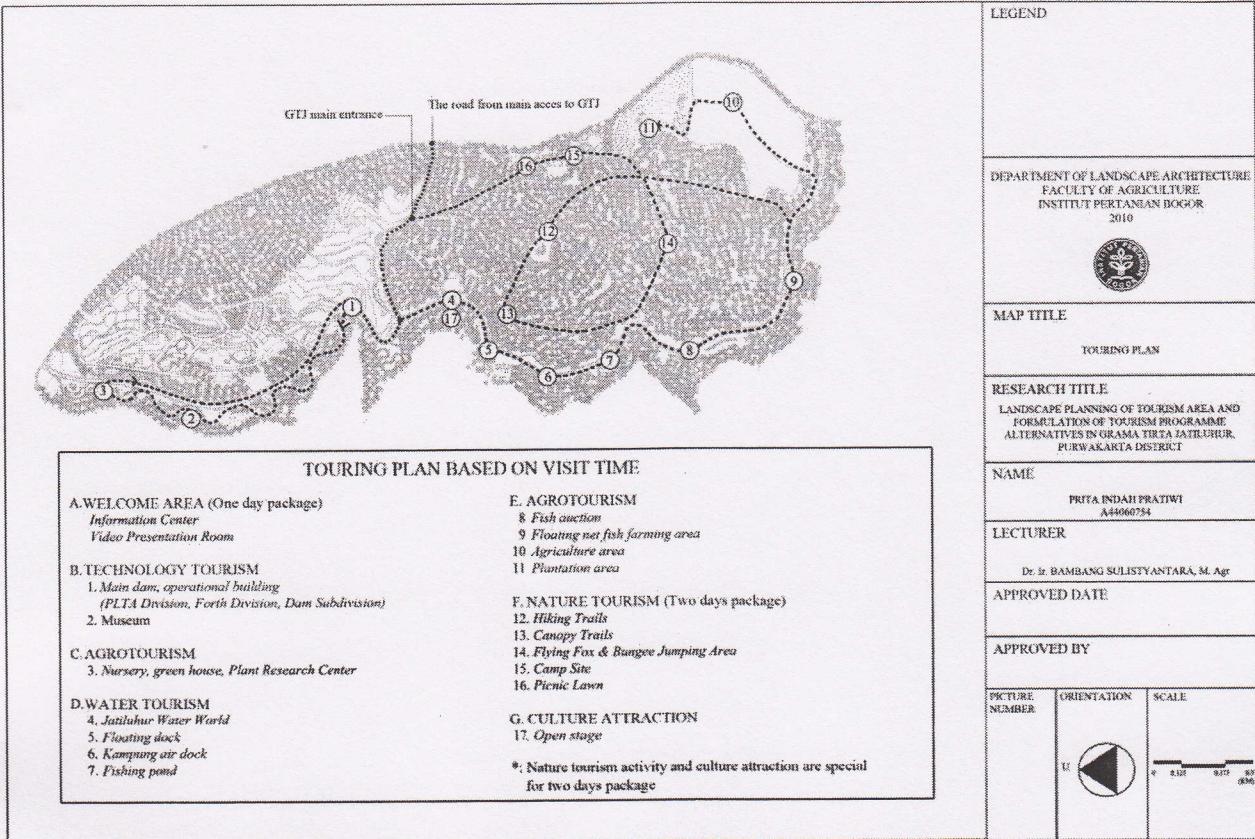
Recommendation

The following are suggestions that can be applied:

1. This landscape planning uses landscape resource approach, the research can be done by using social approach to local communities in order that communities can participate in achieving sustainable tourism.
2. The main strategy of landscape planning is maximizing the allocation of green open space around tourist attraction, such as planting of green ways, corridors, and parks. This strategy can be implemented by local government to increase green open space that serves as a recreation or tourism.

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