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Research Article

BALURAN NATIONAL PARK ECOSYSTEM SITE PLAN AS SUPPORTING FACTOR OF WILDLIFE-BASED TOURISM

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ABSTRACT

Baluran National Park has various nature potentials ranged from species to ecosystem level. Existing ecosystems in Baluran National Park are including coastal forest, mangrove forest, seasonal forest, evergreen forest, and savanna. The existence of savanna has named Baluran National Park as Little Africa in Java Island and also as the main attraction for both domestic and foreign tourists to come to this area. The main aims of this research is to formulate an effective management system for national park through (1) ecotourism landscape identification, (2) analysis of any potentials and obstacles of future developing of Baluran National Park as ecotourism destination and ecotourism site plan as the main key of supporting factor in the way of development in order to achieve an ideal and cognial management system with the natural environment. To attain the aims, this research used ecotourism site plan interpretation method through these stages: 1. Data gathering, 2. Data analyzing, 3. Data synthesizing, and 4. Result Planning. The gathered data were analysed through descriptive and spatial and then also scored through physical and tourism aspects. The main result of this research is an ecotourism site plan which is covers three touristm spatial distributioning of Baluran National Park area: circulation zone, activities zone, and facilities zone. All of the zones are adapted to high, medium, and low level of tourist's involvement intencity.

INTRODUCTION

Background

Baluran National Park (BNP) is a nature conservation area which constituted as a national park through 1980's National Park Conggress in Bali, BNP also known as one of the oldest national parks in Indonesia. On 1997, through the Minister of Agriculutre Decreement No. 279/Kpts-VI/1997 24 May 1997, BNP was officially established as a national park with ± 25.000 ha coverage of wildlife area.

BNP has various nature potentials ranged from species to ecosystem level. To date, there are around 217 species of birds (155 of them are rare species like needle tail swallow, and peacock) and 26 mammal species (wild buffalo, deer), and 444 floral species (one of them is WidoroBukol, is one of the endemic flora of BNP) can be found in the area. The BNP area is consists of several ecosystems: coastal forest, mangrove forest, seasonal forest, evergreen forest, and savanna. Most of the area has the characteristic of typical dry forest in Java Island. Savanna area of BNP is the most visited area by tourists. In order to increase the level of tourist's satisfaction, the focus must be set on comfort level and the supporting facilities on the site. Ecotourism is identic with nature scenery, landscape, wildlife, and local culture. Generally ecotourism is a tourism activity based on natural environment and local culture conservation. In Indonesia, this kind of tourism activity has been awared by many people or organization, either for charity or commercial, or even in religious side. Because ecotourism is concenrned with natural conservation, ecotourism is more like a long term economical source. UNEP in 2012 recorded there are 33.000 conservation sites worldwide and roughly around 700.000.000 tourists went to ecotourism sites, yearly. UNEP also stated the income from ecotourism worldwide is around 2.4 million dollars per day.

There are five main criterias in ecotourism aspect: first, there must be an educational experience for the tourist; second, the tourists must have awareness to not making any negative impacts to the environment and the local culture, before the trip or during the trip; third, there must be involvement from local community in the planning, managing, and implementation stages of the ecotourism area; fourth, there must be an ideal business plan which is in the future can bring positive impacts and economic benefits to the local community and also for the sustaining of the ecotourism area; fifth, ecotourism must have the quality of sustaining for both natural and cultural environments.

Aside of the main function of BNP as a conservation or sanctuary area to the abundant natural resources (floran and fauna), BNP also bring positive impacts both tangible (limited scale impacts: tourism services) and intangible ones (environmentally products: landscape scenery, clear air, natural ambiences, etc). For those two positive impacts are in the same site space, an ideal and cognital site plan is needed in order to managing the allocation of natural and human resources that is linked to the compliance of local communities needs around the

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site. Several places in BNP area are being favorite places for tourists and frequently visited: GuaJepang, CurahTangis, SumurTua, Bekol evergreen forest, Bekol savanna, Semiang savanna, Bama beach, Manting, Dermaga, Kramat, Kajang, BalananLempuyang, Talpat, Kacip, Bilik, Sejileh, Air Tawar Bay, BatuNumpuk, Pandean, and Bang Temple. From places stated before, only GuaJepamg, CurahTangis, Bang Temple, Semiang savanna, Bekol savanna, Bekol evergreen forest, and Bama beach are being developed as ecotourism sites.

literature review

landscape site plan

Forman and Godron (1986) stated landscape as a heterogenous area that is composed of clusters of cycle of ecosystems interactions which are happening in every parts of the area. Simonds (1983) considered landscape can be categorized to a beautiful landscape (if the landscape has a good harmony on the landscape's components) and ugly landscape (if the harmony on the landscape's components is not good). In short, Simonds (1983) stated that landscape is a certain natural span with its own certain characteristic that can be apprehend with human senses.

The characteristic of certain landscape to another landscape is completely different and has its own special characteristic that is naturally formed. The formation is cosists of rock formation, vegetation formation, and also the animals that live in the landscape. A tropical forest also one of the landscape. Tropical forest can bring benefits to human being as the source of wood, watershed, preservation, and open air recreational area. Tropical forest also one of the landscapes which is also a cluster of a ecosystem and as a natural habitat and as immigrate trails for some animals. This landscape can be labeled as a low contrast landscape where the elements variation of the landscape is few and has large transition coverage.

Landscape site planning is a land-based planning in order to making a long term decision (which is the result of decision is a landsape model), as a key to solve a certain spatial problem that is in hope can comprehend the functional, aesthetical needs and the value of wealthiness and comfortness of people and natural environment. On the planning stage, a concept is needed referring to the function and the aims of the landscape planning (Avenzora, 2008). Muhamad and Sumidi (2014) also stated that landscape planning is to gather and interpreting existing data, projecting it in possible future predictions, identifying the obstacles, and giving some logical approaches to solve the problems in the planning. Gold (1980) considered the planning acitivity should be systematic, and can be done in several approaches

Tabel 1 Landscape site planning approaches

No	Approach	Concept and activity in the landscape planning
1	Natural resources approach	The landscape planning concept, main and alternate tourism activities are based on the consideration of natural resources condition on site.
2	Activity approach	The landscape planning concept, main and alternate tourism activities are based on the consideration and selection of existing or past activities that might be able to recreate in the future.
3	Economic approach	The landscape planning concept, main and alternate tourism activities are based on the consideration of economy condition on site.
4	Behavior approach	The landscape planning concept, main and alternate tourism activities are based on the consideration of human behavior condition on site.

Source: Simond, 1983

To achieve a well-planned tourism landscape site plan, there are several factors that have to be in the focus, to be learned, and analysed: existing potentials and possible obstacles, tourist's potencies, existing rules and policies of sources, forecast of any possible impacts of existing activities, and the evaluation of existing results (Muhamad and Sumidi, 2014).In addition, Fandeli and Muhamad (2009) expressed that another important factors that have to be in focus are: 1) the relations between the site with other surrounding areas; 2) making the site as an attractive tourism destination; 3) the past history of the site should be still remaining during the planning and the operating time of the site as a tourism destination. Landscape site planning for ecotourism is made for making an outdoor physical environment (man-made, natural, or mixture of both) that can bolster the recreational activities, level of tourist's satisfaction, where the object of the planning is a natural environment as the tourism site (Knudson, 1980). Caring capacity of the ecotourism site also has to be well-planned in order to prevent natural environment degredations and to minimalize the negative impacts to the local culture (Nurisjah, *et al*. 2003). Hendee, Stakey, and Lucas (1978) stated caring capacity as a maximum measurement of exploiting activities in a certain area based on the tolerant level of the environment to those activities.

The caring capacity factor also linked with the ecosystem spaces. In ecotourism context, the caring capacity of ecosystem spaces on ecotourism site must be in a condition where it can maintain the function and the quality of the sources, and in the same time can create the wanted recreational experiences for the tourists, and benefits to local community in a sustainable way (Constitution of the Republic of Indonesia No. 23, 1997). Pilgram (1983) also stated that the caring capacity quality of an ecotourism site has to be set as the maximum level of exploiting the site through recreational activities to prevent the environmental degredations. Fragile and unrenewable ecosystems are the most concerned points to decide the maximum caring capacity. Based on WTO and UNEP observations done on 1992, there are natural sources and environmental factors that affecting the caring capacity of an ecotourism site:

1. The size and shape of the ecotourism site;
2. Environmental fragility level;
3. Topographical shape and type of vegetation;
4. Wildlife issues (spread range of the animals, number and variety of the wildlife species, key species);
5. Sensitivity level of certain species toward human activities.

Tourism Route (Trails)

Tourism route is an interpreted recreational route that is designed for tourists to interpret the information on site with informations from guides, signs, brochures, and electronic devices. The main function of this route to tourist is to get knowledges and informations about natural environment through empirical experiences of being in the middle of the nature itself. The ideal form of this route is on the form of trails, it could be interior trails (indoor circulation paths), exterior trails (semi outdoor/natural, outdoor path to another building) or pure natural trails (stone trails, forest trails, mountain trails) (Douglas, 1975). Trails can be used for tourist to see and enjoying the atmosphere of surrounding landscape. The trails can be desigined so the tourists can interpret the sceneries around the trails. Trails on a ecotourism site must be design

based on nature conservation motive: minimalizing the negative impacts of the trails and the activities on trails, also in the same time the trails must be safe, informative (has information signs), has a special aestethic aspect (nature scenery, special place like waterfall, cave, etc), and has several shelter spots like gazebo along the route. The distances of trails can be customized depends on the size and shape of ecotourism site. The ideal trails is a circle-shaped and has start and finish point in an ideal circulating route.

RESEARCH METHODS

Location and Acces

BNP is administratively located in sub-district Banyuputih, District Situbondo, East Java Province. The BNP area is adjoining with Madura Strait on the north side, Bali Strait on the east side, Bajulmati River of Wonorejo Village on the south side, and Klokoran River of Sumberanyar Village. On governal administrative context, the BNP area is adjoining with Banyuwangi District. The location of BNP is in easy-to-reach level. The main entrance is located next to cross-provincial road between Situbondo – Banyuwangi which is also the main cross-provincial road from Surabaya to Bali.

Below are some alternative routes to reach BNP

- From Surabaya →BanyuwangiBlimbingsari Airport (by plane ± 45 minutes) →Batangan (public transportation ± 45 Km)
- From Surabaya →KetapangBanyuwangiBaru Train Station (eksekutif, bisnis, ekonomi trains ± 8 hours) →Batangan (public transportation ±20 Km)
- From Surabaya →Batangan (public transportation ±250 Km)
- From Denpasar →Ketapang Harbor (public transportation ±200 Km)→Batangan (public transportation ±20 Km),
- From Denpasar →BanyuwangiBlimbingsari Airport (by plane ± 45 minutes) →Batangan (public transportation ±45 Km)

Baluran National Park Zonation

The managing process of BNP area is being held with zonation system that has been reviewed and published through Minister of Natural Environment and Forestry Decreement No. SK/28/IV-Set/2012 consisting of Core Zone ±6,920.18 ha (27.68 %), Forest Zone ± 12.604,14ha (50,42 %), Marine Conservation Zone ± 1.174,96 ha (4,70 %), Utilization Zone ± 1,856.51 ha (7.43%), Tradisional Zone ± 1,340.21 ha (5.36%), Rehabilitation Zone ± 365.81 ha (1.46%), andRestricted Zone ± 738,19 ha (2,5 %).

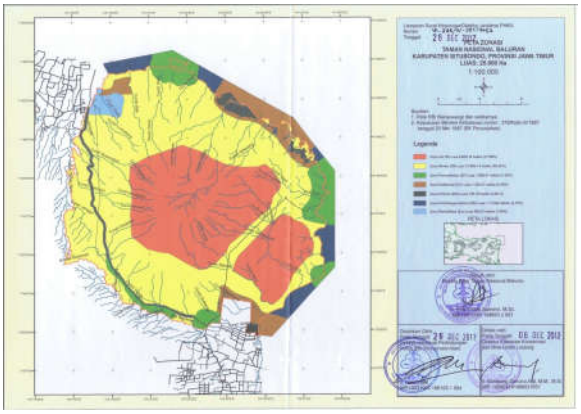

Figure.1 Zoning Map ofBaluran National Park

This research was conducted at 2 locations on Forest Zone (FZ): Bekol and Bitakol Forests; and focusing on limited ecotourism activities at 6 locations on Utilization Zone (UZ): Bendungan, Batangan, Bang Temple, Bama, Balanan, and Bilik-Sijile area). Based on the management zoning area, those 8 locations are located at two section of conservation area:

1. Section SPTNW (*SeksiPengelolaan Taman Nasional Wilayah)* I Bekol, for Bitakol Forest (Resort Bitakol), and Bekol Forest (Resort Bama) at Forest Zone (FZ); Batangan and Bang Temple (Perengan Resort), Bama (Resort Bama), Balanan (Resort Balanan) at Utilization Zone (UZ);
2. Section SPTNW II Karangtekok, Bilik-Sijile area (Resort LabuhanMerak) at Utilization Zone (UZ).

Potential Objects and Tourism Attractions

The main potency and attraction of BNP is the varieties of ecosystems and species that live inside BNP site area. Below are details of natural potencies of BNP based on the location:

Tabel 2 Potential Objects and Tourism Attractions of BNP

No	Location	Potential Objects and Tourism Attractions
1	Bekol	•Observation tower, 64 meter above sea level. Here tourists can see various wild animals like peacock, feral chicken, wild buffalos, deers, and wild boars. •Lodgings with 28 people capacity with parking area, toilet, lounge, praying room, forest rangers barrack, guard post, and canteen. •Savanna area for observing the wildlife in their natural habitat.
2	Bama Beach trail	Located on Bama Beach area, along the trail route, tourists can see the wildlife at savanna or mangrove forest nearBama Beach.
3	Bama Beach	•Tourists can doing water sports like swimming, snorkeling, diving, canoeing, fishing, or just birdwatching at coastal line area.rang •Mangrove forest formation and largest single mangrove tree (Soneratia Sp.) with 450cm diameter.
4	Camping Ground	•Lodgings with 20 people capacity with parking area, toilet, lounge, praying room, forest rangers barrack, guard post, and canteen. •Frequently used by backpackers, students, and nature lovers. •Located near river, which is water is a no problem.
5	Balanan Beach	Balanan Beach has white sands and surrounded by mangrove forest, tourist also can see sunrise here.
6	Bilik – Sejile Bay	Bilik-Sejile Bay coastal line is a white sand beach with sloppy coastal area, coral formation and mangrove forest here still in a natural state.
7	Batangan	At this location, tourists can go to GuaJepang which is a silent relic of the war history of Indonesia before independence.
8	Bang Temple	Bang Temple is a sacred tomb that local people frequently use this place to held spiritual ritual at certain time. Aside the spiritual story, surroundings of this temple is still in natural state. To reach this temple, tourists can go by boat or by walking along the coastal line.

Soucer: Researcher on-site interpretation, 2017

Figure 2 Baluran National Park Tourism MapSource: Baluran National Park
Source: Baluran National Park, 2015

This research was conducted using several devices and tools as auxiliaries on collecting relevant datas:

Tabel 3 Devices & Tools list

No	Devices & Tools	Description
1	Electronic Devices	GPS (Global Positioning System) Garmin 76CSx Digital camera for documenting the landscapes, audio recording device for interview.
2	Computer Software	Landscape planning softwares and image processing softwares (Auto CAD,AdobePhotoshop,Google Sketchup).
3	Questionnaire	Questionnairefor knowing the characteristics and the perception of tourists at BNP site area.
4	Others	a) Google Earth 2012; b). BNP maps, c) Questionnaire and interview data results from tourists, BNP management, and local communities.

Source: Researcher, 2017

Methods used in this research were questionnaire survey, on-site observation, and descriptive & spatial analyses. Spatial analysis was used to analyze the biophysical aspects that have same type of data (heterogen). Descriptive analysis was used to analyze the biophysical aspects that has same type of data (heterogen) but also doesn't have spatial data. The methods above are based on on-site conditions of BNP site area to find out the compatibility of the sites to the tourist's satisfaction and developing attractions.

Data Collecting Stage

The main aim of this stage is to collecting data and informations of BNP site area that are relevant with the focus of the research. Through the data and infromations, researcher is able to know the basic characteristics of BNP site area and tourist's preferences. There are several main data to be collected in this research: physical and biophysical conditions of BNP site area, and the potential tourism area of BNP. The data and informations were collected through several methods:

Tabel 4 Data Collecting Methods

No	Method	Description
1	Observation	Data were collected through on-site observation to find potentials and obstacles for BNP's ecotourism development.
2	Literature Study	Data were collected through books, maps, documentations, location photos, notes, journal, articles that are relevant to the BNP's ecotourism development.
3	Interview	Data were collected through purposive interviews to find informations about BNP's ecotourism history and BNP's existing ecotourism plans.
4	Questionnaire	Data were collected through questionnaire sheets to 40 respondents (tourists) on-site to find informations relevant to tourists' preferences of BNP's ecotourism sites.

Source: Researcher, 2017

DATA ANALYSES AND DISCUSSION

Tourism Aspect and Visual Quality of BNP

Gunn (1994) stated there are several main components that have to be considered in tourism area planning: visual quality, existing potential objects, aksesibility, and supporting facilities. BNP's visual attraction is the various topographic sceneries with abundant ecosystem types ranged from coastal to mountain sides of BNP's site area. The highest elevation point on BNP site area is at 1247 ASL in the western part of BNP. This point is a vantage point that has a good view of wildlife habitat (savanna). Other noticeable vantage point with good view is area between Bekol and Bama. Several points in this area are unique consisting kinds of vegetations that thrive in certain extreme conditions. The scenery of these points are completely different in certain season: groove green in rainy season, and shrivel yellowish brown in dry season. Dry season in BNP can be last for 9 months, where November – December is the pinnacle of the drough.

This extreme dry season conditions -especially on savanna area of BNP- plus the wildlife activities (wild buffalo, deer, peacocks, feral chickens, and other animals) creates a unique landscape: a natural African-like savanna in Java Island (tropical island). The wildlife mosaics are wrapped in conservation status as a national park, which embodied the hope of present time as a present to our future generations.

40 % of BNP site area was savanna ecosystem (10.000 ha), but the invasive spread of *Acacia Nilotica Sp.* reduces the area of savanna to 5.000 ha sitewide (BNP, 2013). This condition forces the management of BNP to try several methods to slow down the spreading tof the invasive species to date. One of the noticeable touristic savanna is the savanna between Bekol and Bama (420 ha).

Other obstacle comes in form of bad view scenery in some touristic area: local community's food stalls and unofficial parking lot which are not well organized. Local communities also see tourism as economy source. Thus, by looking at the pattern of tourists arrival, the local community's food stalls doubles on weekends.

Tourism Potencies

There are nine (9) noticeable ecotourism objects which are have potencies for developing:

Tourists' Perceptions and Preferences

Baluran National Park is being visited by various people with various backgrounds from recreational, educational, to research background. According to the management, most of the tourists are domestic tourists (civil, academic, and government). The recreational activities mostly held on weekend. Recreational activities also ranged based on the background, from only enjoying the natural sceneries and seeing the wild buffaloes breeding center, to plants and animals identification research.

Although the tourists come with official channel (SIMAKSI), and most of tourists must fill out the visitor's book on-site, not all of the visitor data were recorded, especially detailed data of one big group of tourist. Some individual's data might miss in the way of data recording process. The tourists' data (general characterstic, motivation, activities, perception, and expectation) are very important to the making process of ecotourism developing plan in this area.In order to obtain the

data, a questionnaire survey was conducted to 40 tourists on site.

Tabel 5 Baluran National Park Tourism Potencies

No	Objects	Description
1	Semi-natural Wild Buffaloes Conservation and Breeding Center of Baluran National Park	Best potency of this object is the conservation activities that using semi ranch model and the buffaloes are living in a big open area. Tourists can see the conservation and breeding activities here through tourism, educational, and cultural aspects.
2	Mangrove forest and saltwater swamp.	This forest type is located at north and east coastal side of Baluran National Park: Bilik, Lambuyan, Mesigit, TanjungSedano, and Kelor. Bilik and Kelor areas have good mangrove ecosystem dominated with *kayuapi* species (*AviceniaSp)*, Bogen Tree *(Sonneratiasp)*, Bakau Tree *(Rhizoporasp),* and Cantigi Tree *(Ceriopstagalsp)*. Saltwater swamp on Baluran National Park was from process of deforested mangrove forest, the noticeable areas are in north part of Pandean, Mesigit, western part of Bilik.
3	SavanaBekol	Savanna in BNP can be categorized to two group: flat savanna and wavy savanna. The noticeable characteristic of flat savanna is the black rocky young alluvial soils. SavanaBekol is around 1.500-2.000 ha wide length.
4	Saltwater forest	Saltwater forest is a favorite place for wild animals because it has freshwater stocks for entire year. The biggest saltwater forest is in Kepuh River area, south-east area of BNP, and noticeable smaller forests are in Popongan, Kelor, Bama (east side), and Gatal (west side). The vegetations are dominated with Malengan Tree *(Exocoecariaagallocha),* Manting (*Syzygiumpolyanthum),* and Poh-pohan*(Buchananiaarborescens)*.
5	Coastal forest	Coastal forests in Balunan National Park have different traits depend on the area: from black to white sands, rocky to small rubble sands. All of the coastal forest vegetations are dominated with different species in each location: *Baringtoniasp*at Merak Harbor, Pandan*(PandanusTetoriussp)*at TanjungBendi, *PemphisAcidula*at Air Karang, and with combinations of *Acrophora, Poriteslutea, Seripotophorahisterix,* and *Stylophora sp.*
6	Mountain-side Rain Forest	The area of mountain-side rain forest is located at Baluran Mountain strait at 1.200 ASL. This rain forest is difficult to reach due to the acess. The forest act as water reservoir area to the entire BNP area, especially on dry season.
7	Seasonal Forests	Seasonal forests categorized to two group: low ground seasonal forest, and high ground seasonal forest. Noticeable low ground seasonal forest is at adjoining ara of SavanaBekol and SavanaKramat. Noticeable high ground seasonal forest is in the slope of Baluran Mountain, Klosot mountain and Periuk Mountain.
8	Padang Lamun	The coastal Padang Lamun has flat area with not too extreme wave. Noticeable Padang Lamun formation can be found around Bama, Kajang, Balanan, Lempuyang, to Bilik-Sijile and Air Karang beaches. Local communities using the area to fish-farming Bandeng*(Chanoschanossp)*, or fishing squids.
9	Coral Reef Formation	Can be found in area of Bama, Lempuyang, Bilik, Air Karang, Kajang, Balanan, and Kalitopo beaches. The trait of BNP's coral reef formation is dominated with *Acropora*branching, encrusting, and tabulate, also Moushroom Coral.

Source: Researcher, 2017

Tourists' Characteristics

Research about this matter conducted to find informations cover the gender, age, educational level, occupation, and the origin of tourists. The informations was collected through questionnaire survey method on several tourists' area on-site BNP. 62% respondents are male, and 38% female. 80% of the tourist are adults, 20% are teenagers. The educational levels of tourists are from Senior High School, Diploma, to bachelor degree. The tourist's occupation mostly working as employee in private companies with 34% of them have income >Rp 2.500.000 per month.

Tourists' Motivations

From research conducted, 40% of tourists' motivations to visit BNP are derived from self-gathered informations through several media, while 60% are derived from their colleague's recommendation. 45% of tourists admit their main motivation is to see the natural sceneries of BNP, 26% of them confess only to filling their holiday time, 13% for research background, 8% for sports reason, and 8% for others.

Tourists' Activities

92% of tourists spent less than 12 hours (half a day) in a certain area of BNP for recreational activities, rest of them (8%) spent more than 24 hours (one day) in once certain area to conduct research activities.

Tourists' Perception

Results of the conducted questionnaire survey revealed 16% of tourists are very satisfied with their vacation at BNP, 37% answered somewhat satisfied, 16% less satisfied, and 2% totally not satisfied. These various answers might be because of many obstacles which reduces the satisfactories-gathering processes of tourists during their activities in BNP area. 39% of them answered the biggest obstacle is the access to and in the area of BNP, 36% answered the lack of informations, and 25% answered the conditions of facilities on-site. From all of respondents, 89% are willing to revisit BNP in their holiday time, and the rest of 11% are not willing to revisit BNP.

Analyses Results

After analyzing all of the aspects stated in previous chapters, the results were derived and displayed in a form of descriptive table consisting of potencies and obstacles analyses, and solutions in composite overlays:

Conceptual Planning

The ecotourism development of BNP will be differs into 3 concepts: 1) spatial concept, 2) activities and facilities concepts, and 3) tourists' circulation concepts. These concepts are based on the compatibilities of physical-biophysical aspect and social aspect found on-site with ecotourism aspects as the main concern.

Spatial Concept

In this concept, the BNP's site area will be divided to 5 spaces based on the function of each spaces: 1) Reception space, 2) Service space, 3) Educational space, 4) Occupation space, 5) Conservation space.

Tabel 6 Analyses Results and Solutions

No	Component	Analyses		Solution	
		Potency	Obstacle	Conceptual	Empirical
		A.Physical and Biophysical Aspects			
1	Vegetation	444 vegetation species will strengthen the name branding of BNP, especially for the species that adept in extreme dry conditions.	Invasive species.	Creating and implementing area with certain endemic species as an area of nature conservation.	Socializing the conditions with local communities and the tourists, and creating rules in conservation areas.
	Animals	Wildlife species also the strong point for BNP's branding, where tourists can see the wildlife activities in their natural habitat.	Not all of the local species of wildlife animals are in the concern of BNP's management.	Variety of the vegetations must be in concern, because growth of certain species can bring negative impacts to other species.	Promoting the wildlife sceneries as the tourism objects.
	Visual Quality	The only savanna ecosystem that can be found in Java Island.	Invasive species.	Wildlife ecotourism.	Sustaining the savanna ecosystem.
		Savanna sceneries.	Bad view spots from unofficial food stalls and bad-organized parking area.	Improvement of infrastructure.	Relocating the local communities food stalls, and providing a well-rganized spaces for them.
		Several high elevation points to see the sceneries.	Safety and security risks.	Improvement of infrastructure by providing signs and safety infrastructure.	Providing gazebo, rest area, and shelter in the trails.
		B. Tourism Aspects			
	Wild Buffaloes Conservation and Breeding Center of Baluran National Park	Semi-natural buffaloes conservation and breeding center.	Lack of supporting infromations for tourists.	Ecotourism programs integrating.	Providing informations about this places and preparing the guides and infrastructures.
	Savana Bekol	The Africa van Java. Within ± 300 Ha, this location is the main attraction of BNP.	Lack of supporting infromations for tourists.	Ecotourism programs integrating.	Implementing the regulation and ecotourism based management.

Source: Analysis Researcher

Tabel 7 Landscape Aspect Analyses

No	Component	Analyses		Solution	
		Potency	Obstacle	Conceptual	Empirical
1	Accessibility and Facilities	The main entrance road of BNP is connected to cross-provincial road from East Java – Bali.	There are few public transportation options.	Improvement of infrastructure by providing signs and safety infrastructure.	Additional transportation options.
2	Heritge Value	Goa Jepang, Son of Maulana Malik Ibrahim's tomb, Peacock's mating season (October/November).	Lack of supporting infromations for tourists.	Ecotourism and heritage values programs integrating.	Providing informations about this places and preparing the guides and infrastructures.

Source: Analysis Researcher

Tabel 8 Spatial Concepts of BNP

No	Name	Description
1	Reception Space	The reception space is all of the access point areas that has connection with other areas (in and out access) for tourists. At this spaces, should be supported with facilities like gateways, ticketing area, guard posts, parking area, and information signs.
2	Services Space	Services place is all of the information areas before going to the main attraction in certain attraction areas. This area provides informations relevant with the area, and the activities that can be done. This places should be supported with facilities like information center, canteen, praying room, toilets, equipment rental center, and others facilities.
3	Educational Space	Educational space is all of the main attractions of each ecotourism sites in BNP site area. One of them is the Wild Buffaloes Conservation and Breeding Center. These places should be supported with wildlife informations signs or guides, lounge or rest rooms.
4	Occupation Space	The occupation space is the supporting spaces in each ecotourism sites that concerned in the ecotourism educational programs as the information center of natural conservation for tourists. This palces should be supported with educational informations both empirical and conceptual infromations.
5	Conservation Space	The main function of conservation space is to provide a protection and conseration to the wildlife ecosystems due to the impacts derived from recreational activities of tourists. These spaces should have tilt level of landscape around ±25-45%, and well-maintained conditions to preserve the stability of the soils and the water reservoir level.

Source: Analysis Researcher

Tabel 9 Activities Concept

No	Name	Description
1	Activities concept	The activities concepts cover the tourists' activities that can be done in existing BNP's conditions. The activities will focus on educational and conservational activities (both active and passive ones). The results will be activity programs that ased on landscape and limited visiting time from tourists side.

Source: Analysis Researcher

Tabel 10 Facilities Concept

No	Name	Description
1	Facilities concept	The facilities concepts of BNP will be based on the BNP's landscape conditions and the need of tourists' activities with some major considerations: temperature, weather, comfortness, and minimum impact to the existing ecosystem..

Source: Analysis Researcher

Tourists' Circulation Concept

The tourists' circulation concept will focusing in providing circulation routes/trails that can provide maximum satisfaction for tourists in seeing the natural sceneries, and in the same time

has minimum negative impacts on the ecosystem around the circulation routes/trails.

Tabel 12 Tourists' Circulation Concept

No	Name	Description
1	Main Entrance – Bekol Savanna	The tourists' circulation concept and route will be using circulation route from main entrance of BNP to the Bekol Savanna as a developing role model of BNP circulation route. The route will be connecting every ecotourism objects from Mianroat to the Bekol Savanna and vice versa. The circulation route will be divided to two routes: primer (asphalt roads for car, motorcycle, and other vehicles) and secunder routes (trails for tourists, from natural or semi natural trails) and each one of them has its own fuction.

Source: Researcher, 2017

CONCLUSION

BNP's Landscape Site Plan

Through out the spatial, activities and facilities, and tourists' circulation concepts, this research concludes BNP's Landscape Site Plan should be based on the ecotourism and conservational concerns and with continuing process to see the needs of existing tourists' conditions for forecasting the development of ecotourism markets. The real applications also should embody the educational values, recreational, and bring benefits to the local communities that involved in the process. The landscape site plan should be a linkage through out every synergized tourists' activities with ecotourism concerns.

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