SPATIAL PLANNING BASED ON GEOECOLOGY STUDY FOR SETTLEMENT AREA ZONATION DIRECTION IN COASTAL AREA OF KULON PROGO DISTRICT DAERAH ISTIMEWA YOGYAKARTA PROVINCE

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Abstract: This research was conducted at Kulon Progo coastal area of Daerah Istimewa Yogyakarta Province. The objectives were to define geoecosystem units spread by examining constituent parameters of coastal geoecology system, to evaluate suitability of existing settlement zone regarding the characteristic of geoecology type, to inventory environment issues and to set the direction of settlement zone development which accommodates the characteristic of geoecology type. This research used geoecology approach based on geomorphology process and landform as a basic setting of geoecosystem unit as an analytical unit. The Method used was a survey using stratified random sampling technique. Data analysis was arranged descriptively and by spatial modeling using *Arc Gis version 9.3 software*. This research produced the identification of geoecosystem units in this area.The identified largest area were dominated by coastal alluvial plain geoecosytem unit and sand dunes geoecosystem unit ,by 2.685,461 Ha (43,05%) and 1.986,121Ha (31,84%), respectively. Old beach ridge geoecosistem unit and coastal alluvial plain were the most suitable, based on geoecology characteristic, as a direction of settlement area zonation development. This recommendation of comprehensive settlement zonation was set to solve whole environment issues and integrated by involving whole stakeholders.

Keywords : *Geoecology, Settlement Direction, Coastal Area*

Introduction

Kulon Progo coastal area district of Yogyakarta province (DIY) is one of area that interesting to examine where there has acurrent environmental stress such as the used space conflicts between the construction sector, over-exploitation of natural resources, physical destruction of coastal habitat, pollution and sedimentation . Generally, the developed of used land in this region are agriculture, settelement , tourism, fisheries, industry, mining and others, with changes in land thatmakes the rate of conversion

of farmland to industrial expansion and new settlements increased in each year . A changing in theenvironment without knowing, was always followed by a double effect, of course, it will be impact the emergence of social upheaval and utilization conflict.

Environmental management which optimizes every activities used land form can be based on a variety of approaches. One of approaches that concetrates environmental factors like phsysichally, biotic and cultural through geoecology studies approach. According to Santosa (2000, in Sultanisah 2007), a unit geoecology composed of basic units landform as the container (mapping unit), with filling topography, soils and rocks, water, climate, biota, and culture. A description about components of the geoecosystem charger unit is characterization of ageoecology.

Geoecology assessment approaches can be used in assessing the availability and suitability of the settelement development in each unit landform with describing the condition of abiotic, biotic and culture environment in unite in the coastal area geoecosystem Kulon Progo.

Land use problems often have both ecological likecoastal area geoecosystem in Kulon Progo. One of them often happened in ecological also a importance conflict in the same place.On of them which is happened on the south coast are Kulon Progo. In other side, the Ministry of Manpower and Transmigration declares as the place of local transmigration (Bugel village and Karangsewu village), that is a temporary settlement for affected communities. However, the progress of these settlements tend to be a permanent residence. On the other hand, in this two last years national issue leading to the response of tsunami andnational program of biodiesel, then wiil be done the planting of Sea Pines/Shrimp and Jatropha along the coastal . The mining sector also saw the potential of iron sand so it has done iron sand mining effort (Kundarto, 2008). But according neighborhood association Kulon Progo for southern coastal areathat the development of new resident in the district Temon is directed to serve the needs of the strategic region southern Kulon Progo.

From above conditions can be formulated a problem arising from overlapping policies that in the future will certainly be

able to cause environmental problems. Therefore it is necessary to a consideration of the development for coastal area espesially settlement area that it is comprehensive and integrated, and in accordance with the geoecology characteristics so it is no negative impact in the environment.

Based on the above problem formulation can be arranged in several research questions as follows:

1. what does type geoecology find in Kulon Progo coastal area and how arethey spreading?
2. how does the suitability of existing settlements with geoecology type of research areas and what does the existing environmental problems also occurs with the geoecology type inthe research area?
3. what about do zoning neighborhoods safely and environmentally sound, and according to the type geoekologi the area of research?

From some the questions above, this study objectives to:

1. examine the parameters of existing costal areageecology systems which determines the distribution of units in the coastal area Kulon Progo District,
2. evaluate the suitability of the existing residential togeoecology type in research area also an inventory of existing environmental problems at present and which will appear in the future related to the environment and neighborhoods.
3. determine the direction of zoning the settlement which accomodates geoecology characteristics in the research area which issafe from hazards, sustainable and environmentally concept.

The out comes/benefits to be achieved in this study are:

1. as a science, especially for researchers and generally as information about the characteristics, potential and environmental issues in their geoecosystem units in the Kulon Progo coastal area.
2. as the information doing study further and thorough in order to attempt the management and development in Kulon Progo coastal area,
3. it can be expected one of the reference policy direction for local government in management and development in Kulon progo

coastal area, particularly in the development of settlement areas.

Review References

According Hugget (1995),the meaning of geoecology is ascience that examines the structure and function geoecosystem, while geoecosystem is geoecology system defined as a unit of the landscape consisting of the biosphere, atmosphere, toposphere, pedosphere, hydrosphere and antroposfer, which together in biological processes, geomorphological, climatological, pedologis and hydrological in whole unite form (Mardiatno, 2002). Further according to Santosa (2000 in Sultanisah 2007), unit of geoecology are composed of basic units landform as the container (mapping unit), with filling topography, soils and rocks, water, climate, biota, and culture. A description the components of filling geoecosystem unit is characterization of a geoecology. Further it has explained that geoecosystem was a dynamic spatial unity, which is continuously responding to changes around it.

According Sugiarto (1976, in Dahuri, et al., 2001) the definition of coastal areas in Indonesia is the meeting between land and sea which to land ward coastal area include parts of the mainland, either dry or under water, which is still influenced by the properties like a tidal sea, sea breeze, and saline intrusion. While towards the sea, coastal areas include parts of the sea which is still influenced by the natural processes that occur on land such as sedimentation and flow of fresh water also is caused by human activities on land such as deforestation and pollution.

Many fishermen settlement are far from the land toward the sea, although the effect of sea is not directly to their area, but indirectly is influenced by marine production in their daily. So it doesn't correct for them if the coastal boundaries is just based on a biological approach or the direct effect. They become further to limit the coastal area, to the land is not only to the location of settlements, but also extends to the livelihoods of residents, who still has context do with the sea production. The implication of this statement allows the landward coastal area could be reached into the mountains (Supriharyono, 2000).

Hugget (1995), states that geoecosystem is a fully and thoroughly unity arragement among all the environmental elements which influence each other.Overall picture insome environment

and at the time are referred to as "biotic community" or community of living organisms, which live in a place or a certain areas "abiotic community" and then they established a harmonious and stable interactione specially in involved form of source of life energy, this unity is then referred as a geoecosystem (Sumantri, 1997 in Hussein, 2000).

According to Thurman (1978, in Sunarto, 2001 in Irawan, 2008), the coast is a plot of land that stretches inland from the coastline (coastline) as far as sea influence is evidenced in the form of its land. Coastal line is a line that forms the boundary between the coast and beaches, while the coastline is marked interaction between sea and land are which always move up and down consider to ebb, flow and the wave. The part of coastal areas are overviewed from geomorphology is the beach, beach ridge the coral beach, sand dunes, swale, lagoons and alluvial coastal area plains.

According Sugandhy (1999), the problem of spatial use in Indonesia is characterized by the number and rate of population growth and other population problems which is greater beach ridgebecause forest and agricultural land converted to settelement, industrial and other uses. Therefore, the trend decline in natural resources and environmental degradation are caused by decreased the quality using of space, are also being driven by the quality of structural and spatial patterns.

Studied from the definition which is contained in Act No. 4 of 1992 regarding the Housing and Settlements, the definition of settlement is part from environment outside the protected areas, both urban and rural areas which serves as the neighborhood or residential environment and activities place that supports life and livelihood.

According to Yunus (1987), settlement has widely meaning of residence or any matter relating to housing and narrowly mean area of residence or residential buildings. Furthermore, Yunus (1999) is also mentioned that in the neighborhood or residential development can not be done arbitrarily without regard the rules relating to the planning, zoning, development control and the regulations of the building it self. The construction of settlements in coastal areas and sea increased,in line with the growing needs of the population will be residential

facilities. Unfortunately, the development of residential areas is carried out only by considerations of short-term interests without regard with environmental sustainability for the future (Dahuri, et al., 2001).

Residential coastal villages density are generally high, especially in the fishing villages, but the phenomenon of coastal villages in Kulon Progo district indicates that residential density is relatively low. Generally, the existing population density in residential areas in Kulon Progo coastal are less than 200 lives forevery hectare (Marwasta and Priyono, 2007).

Natural disasters are natural phenomena, either directly or indirectly, which is the negative impact from utilization of the coastal environment. Some natural disasters which happen in coastal area are sea level rise, tsunami and ultraviolet radiation (Dahuri, et al., 2001). According Khakim (2009) vulnerability disaster form that may occur in coastal areas of DIY like a danger of tsunami, erosion and sedimentation also flooding.

Now a days people begin to realize the limitations of the coastal area as a place to live, work, play and as a source of valuable resources. This has arisen that related to the excessive pressure, excessive development in some areas and destruction from valuable resources by wrong using (Ketchum, 1972 in Pramudia, 2008). Initiatives of coastal management are usually a response from need to solve problems such as land used conflict, urbanization, access, pollution, environmental degradation and natural disasters.

According to Robert Kay (1999 in Sultanisah, 2007), the subject matter in coastal area management are like: population growth, especially in poor and developing countries, the utilization of coastal areas, the environmental impact of human activities and administrative weaknesses. Next in Dahuri (2001) is mentioned that outlines the symptoms of environmental degradation that threaten the sustainability of coastal and marine resources in Indonesia include : (1) pollution, (2) physical degradation of habitat, (3) over-exploitation of natural resources, (4) abrasion, (5) conversion of protected areas and other development, and (6) natural disasters.

The next Clark (1992, in Sultanisah, 2007) suggests, the

context of coastal and marine resource management, is the importance of coordination because coastal area is an area that has a characteristic, unique and complex problem. Complexity in this area has characterized by the presence of various users and the entities of managers area who have interests and different perspectives on the utilization and management of coastal resources.

Methods

The approach used in this study is geoecology approach. The method which is used a survey method, is a series of work which includes observation, measurement and analysis. The sampling technique was used stratified random sampling method with a stratum geoecosystem unit. Further the samples are taken in each stratum which are not same numbered among the strata with the other strata (non proportional) in which the sample depends on exist the variations and have specific characteristics within in each stratum, so they can be considered to represent an analysis unit that is geoecosystem unit. In addition geoecosystem unit, samples which are used as the other analysis unit is settlement unit in each administration. It considers important because the final results of this study was the residential zoning. Sample of respondents for residential units were be taken with indepth interview methods (indepth interviews) in which respondents are considered to be a good source of information.

Data analysis was performed by using descriptive analysis methods and spatial modelling with "matching" method that uses a combination of interpretation of image data and geographic information systems in the presentation of thematic analysis maps result.The research was done in three phases that the first stage is the preparation phase, the second stage is the implementation stage and last stage is the stage of data analysis and results.

Stages of preparation are as follows:

a. Collect and study the literature related to research topics;
b. Initial observation of the research location and tracking the literature;
c. Preparing research proposals;
d. Prepare materials, tools and research plans in the field;

e. Care of the necessary permissions in the process collecting of data in the field.

Stages of implementation are as follows:

a. Identify landforms to determine the unit geoecosystem tentative; landform map is obtained from visual interpretation of Quickbird image data 2009 and recording year ASTER imagery 2006, geological map sand RBI's map that arranged;
b. Doing identification of slope;
c. Make observations like check and direct observation in the field.

While the data analysis phase and the results of the study include:

a. Collect and classify all of the data which are obtained consist of maps, secondary data and primary data from field observations in order to simplify the data analysis process;
b. Perform data processing and data analysis of all data that have been obtained using a set of computer and software ArcGIS version 9.3.

Research Results

1. Kulon Progo Coastal Area Geoecosystem Unit

After have checked in field and based on the information society and the existing secondary data, the interpretation and identification unit geoecosystem is performed by using two Quickbird image and the image of ASTER is obtained geoecosytem units that it is contained in the research areas of beach, beach ridge and old beach ridge, sand dunes, lagoon, swale, alluvial coastal plains, floodplains, and several other geoecosystem unit processes that occurs due to the extent of fluvial and marine is presented in the table below.

No	Geoecosystem Unit	Width	
		Hectares	%
1.	Sand dune	1.986,121	31,84%
2.	Alluvial coastal plain	2.685,461	43,05%
3.	Flood plain	62,524	1,00%
4.	Beach ridge	283,619	4,55%
5.	Old beach ridge	628,154	10,07%
6.	Beach	133,831	2,15%

7.	Swale	246,927	3,96%
8.	Others	211,772	3,39%
Total		6.238,409	100,00%

2. Characteristics of Geoecosystem Kulon Progo Coastal Area Unit

Characteristics in each study area geoecosystem unit is composed of three components environment like abiotic environment, biotic and cultural components with respective indicators and variables. The results are the characteristics of each geoecosystem unit as described below.

- Beach

Beach is located in the study area with regularly shaped with a varying width from 10-30 m, slope of flat beach (0-2%), an area particularly vulnerable to the tsunami disaster. Have a Gey 2 Munsell color ground coded as 5/5B, with rough structure, dusty sand, including the type regosol soil with the carrying capacity (CBR) of 13 and the rapidly drainage. For the biotic elements, there are only a few wild plants such as shrubs and plant and animals also can still be found turtles at some point. On this geoecosystem unit there are no settlements and residents and only vacant land with no land used by the public.

- Beach ridge

In geomorphology, the form of beach ridge elongate to follow the coastline beach, has a width varying with the flat slope/ nearly flat (0-2%) in the western Bogowonto river and gently sloping (3-14%) in the eastern Bogowonto river, is with tsunami disaster. Munsell Gley 2 soil color coded as 5/5B, with rough structure, dusty sand, including the type of soil with a carrying capacity regosol (CBR) of 13 and rapidly drainage in the eastern Bogowonto river, and in the western Bogowonto river has Munsell soil value colour coded as 5YR 5, with fine structure, clay dust, including the type of regosol soil with the carrying capacity (CBR) is 25 with normally and rapidly drainage. Land use which is contained in this geoecosystem unit such as settelement and the yard at the east Bogowonto river (Jangkaran village), and the vacant land on narrow beach ridge which is in the western part Bogowonto river that near by the sea. On the location of the

land settlements (villages Jangkaran), groundwater depth <7 m with the condition slightly brackish taste, has color and slightly smelly. When Dry and wet conditions, there is always water, while the surface hydrology, widely is used for domestic purposes and livestock. There are only a few wild plants such as grasses and shrubs as well as some pandanus plant. Where as in the western Bogowonto river (Jangkaran village) there are coconut, mango, guava, banana and other plants. For fauna, there are some farm animals such as chickens, ducks, cows, buffalo and others. For area which is nearby the sea, fauna in that place similar with that found on the beach geoecosystem unit. For culture aspect, on the western settlement Bogowonto river, generally the conditions and relatively good environmental quality by the most type of buiding which are permanent with a regular distribution and facing the street. Good sanitation conditions (> 50% of homes have latrines or septic tanks or has household sewage and works fine) with a level of accessibility is also good. While in eastern Bogowonto there is no settlement. Most of the basic livelihood of people which living in the geoecosystem unit are farmers (80%), while the next are as fishing like gear and aquaculture less of the others as traders.

- Sand dunes

Sand dune form like a large sand dune, regular longitudinal follows the coast line, has varying width with the flat slope/ nearly flat slope (0-2%), some of that is prone to tsunami disaster and a small category as high tsunami potential. Munsell soil Gley 2 color coded as 3/10B, with rough structure, sandy, including the type of regosol soil with the carrying capacity (CBR) of 15 and rapidly drainage. Most of the used land are mixed farms and some small settlements and the yard. On geoecosystem unit sand dunes, groundwater depth <7 m with internal conditions drinase is excellent /fast, has a flat flavor, clearly color and odorless. Dry and wet conditions in there is always water. There is wild plant like cactus, grass grinting, pandanus plants, shrubs and timber plants like shrimp pine. As the crops there are coconut, melon, dragon fruit, and some types of vegetables and crops. There are farm animals such as chickens, ducks, cows, buffalo and others. Therefore, there are also some wild fauna such as several species of birds and sometimes it still has seen turtle which is classified

quite a rare animal. On the geoecosystem unit sand dunes, there is a small settlement of fishing residence and resettlement of residents which is scattered in several villages in the study area with good accessibility condition. Environmental problems in these settlements are usually only in air pollution by odor which is caused by chicken farms where is located around settlements. The people who live this geoecosystem unit because only a few villages choose to reside in this geoecosystem unit like in Karangwuni village, Glagah, Karangsewu and Banaran village with a population that is also low. Most of the basic livelihood people which live in the geoecosystem unit are farmers, while the next is as fishing like gear and aquaculture also small of others as traders in the tourism sector.

- Swale

Swale forms like not regular small basin land which is between two beach ridge or other geoecosystem units which is usually higher near by lagoon, has form and variety flat/nearly flat slope (0-2%), is prone area tsunami disaster and flooding. Munsell soil color Gley 1 coded as 3/06Y, with rough structure, sandy, including in type of regosol soil with carrying capacity (CBR) of 37.5 and rapidly drainage. Most of used land are tourist object area. There is a wild plant like grinting grass, pandanus plants, shrubs and some species of wood such as shrimp pine. For the cultivation plants themselves are not contained in this geoecosystem unit. Fauna which are found in the geoecosystem unit is almost similar that are contained in the sand dunes geoecosystem unit and beach ridge geoecosystem unit, only because due to its small and narrow form, then the quantity of the existing fauna has also tend to be less. On geoecosystem unit there are only very few settlements in the Glagah village. Most of the basic livelihood people who live in geoecosystem unit are as trader in tourism sector which has cooperate cultural in the activities of environmental management and mitigation of existing.

- Old beach ridge

Old beach ridge regularly elongated follow the coastline, has varying width with the slope of a flat / nearly flat (0-2%), is an area that is higher than other areas and with low vulnerability to tsunami disaster and flooding. The rock type Sentolo alluvium

formations and the soil has characterized by the Munsell soil value 5 color coded as 5YR, with fine structure, clay, dusty. Included in this type of regosol soil with a carrying capacity (CBR) of 27.5 and normally drainage. Most of the used land consist of settlement and yard and others as garden mix. There is a cultivtion yard and garden mix such as coconut mixture, mango, rambutan, jackfruit and other alsofarm animals which can be maintained by the society. Most of the settlements in this geoecosystem unit which is the most ideal for the settlement with the conditions and the excellent quality of the environment throughout its territory. Accessibility condition is very good for the province adjacent to the road (Deandels road) and phsically does not any kind environmental problems. The number of people living in geoecosystem unit is large enough because it is the area which has the best environmental condition with also good accessibility. This leads make the condition of the people who live in this geoecosystem unit are farmers, while the next is fishing and aquaculture, and other as traders, Civil Servants / Army / Police and other private sector in small quantities.

- Alluvial Coastal Area Plain

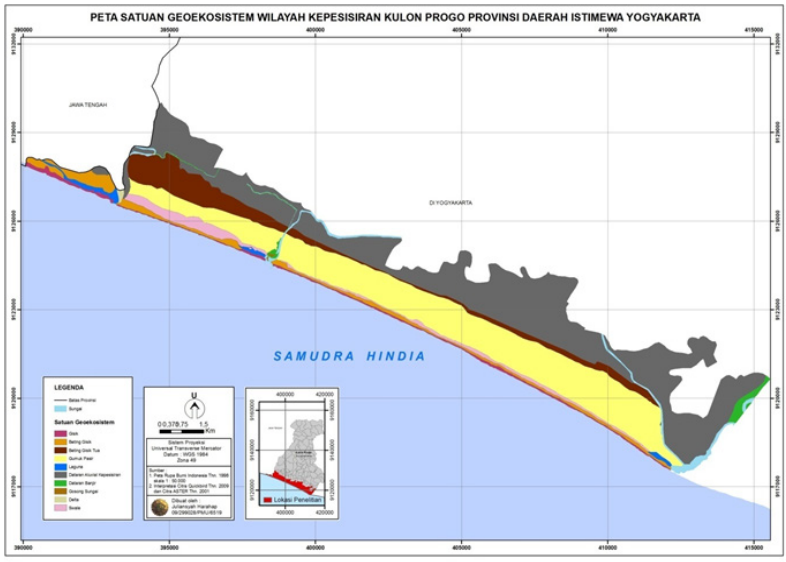
This geoecosystem unit forms like a low-lying lagoon plain which are large and irregular elongated in the north of study area, have varying width with the slope of a flat / nearly flat (0-2%), some are prone area with flooding due to some sections (especially rice acreage) is lower than other geoecosystem unit. For geology, only a small adjacent to the Progo river that type rock of alluvium young Merapi volcanic sendiment and the other like a type of alluvium Sentolo formation. For soil characteristics in this area has Munsell 5YR soil color coded as 3/4, with fine structure, clay loam including the type of alluvial soil and grumusol with a carrying capacity in the range (CBR) of 25-35 and slowly drainage of up to slightly fast. Most of the used landlike rice, garden mix and settlements and the yard. Most of the settlements are in geoecosystem unit because are associated agricultural area which is a lot in this area, is an enough ideal geoecosystem unit for the settlement with the good conditions and environmental quality, only in some regions are less good water quality. Accessibility condition is quite good, usually have a environmental problem like potential of floods.

- Flood Plain

Flood plain forms a small plain near by the river, a form and varying width with the topography is lower in surrounding and slopes flat / nearly flat (0-2%), an prone area to flooding and some of that also has hazard tsunami potential. Geology condition of this area, most area adjacent to Progo river has alluvium type of volcanic Merapi young sendiment rocks while the othe which is near by Serang river like alluvium type of Sentolo formation. For the ground condition has a Munsell 5YR color-coded land as 5/4, smooth texture and clay, including the type of alluvial soil with a bearing capacity (CBR) of 13 and flooded drainage. Most of use land like garden mix, dry and empty land. At this geoecosystem unit, groundwater depth <7 m with poor drainase condition, has flat flavor, clearly color and odorless. Dry and wet conditions,There is always water. On this unit geoecosystm, there are no settlements and residents.

3. Evalution Suitability of Settlement Areas Land Against Kulon Progo Coastal Area Geoecosystem Unit

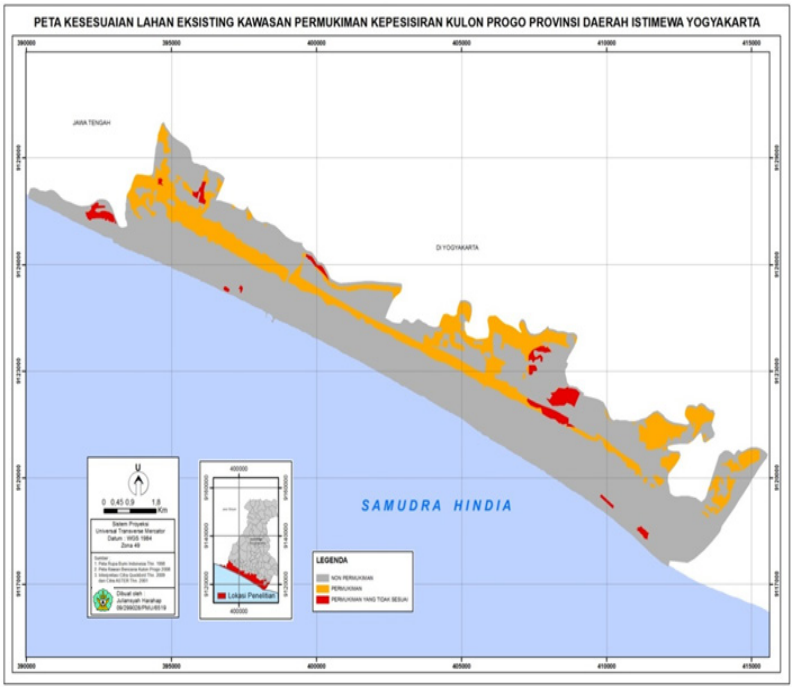
In this study, evaluation of the suitability land for the settlement of the existing geoecology unit which is performed on two things like the evaluation of the suitability existing settlement and suitability of settlement area direction Land Use Plan Map



of Spatial Detail Area Plan (RDTRK) South Coast the western in Kulon Progo district 2010 – 2029 year belong to the Public Works, Housing and Energy and Mineral Resources of which become reference direction of the settlement area Kulon Progo district government. For the evaluation of the suitability existing settlement area can be seen in the following tables and figures

No.	Geoecosystem Unit	Settlement Area		Suitability Settlement Area	
		Yes	No	Vulnerability Disaster Aspect	Environmental Condition Aspect
1.	Beach	-	√	Not suitable	Not suitable
2.	Beach ridge	√	-	Not suitable	Not suitable
3.	Sand dune	√	-	Not suitable	Not suitable
4.	Swale	-	√	Not suitable	Not suitable
5.	Old beach ridge	√	-	suitable	Suitable
6.	Alluvial coastal area plain	√	-	suitable	Limited suitable
7.	Flood plain	-	√	Not suitable	Not suitable

Same as evaluating the suitability of the existing settlement area,the evaluation of settlement area referrals Plan Land Use Map of the South Coast (RDTRK) western beach Kulon Progo district has done based on conformity to environmental conditions and vulnerability disasters of each geoecosystem unit.


PETA KESESUAIAN LAHAN EKSISTING KAWASAN PERMUKIMAN KEPESISIRAN KULON PROGO PROVINSI DAERAH ISTIMEWA YOGYAKARTA
JAWA TENGAH
DI YOGYAKARTA
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NON PERMUKIMAN
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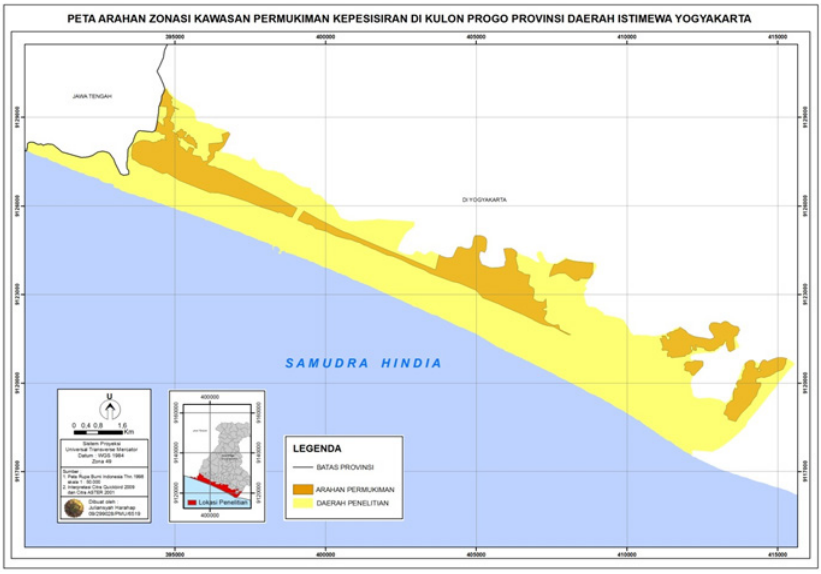
PETA ARAHAN ZONASI KAWASAN PERMUKIMAN KEPESISIRAN DI KULON PROGO PROVINSI DAERAH ISTIMEWA YOGYAKARTA
JAWA TENGAH
DI YOGYAKARTA
SAMUDRA HINDIA
LEGENDA
BATAS PROVINSI
ARAHAN PERMUKIMAN
DAERAH PENELITIAN
Lokasi Penelitian

4. Zoning Landing Area of The Appropriate Settlement with Geoecology Charateristic in Kulon Progo Coastal Area

As has discussed earlier, that of seven types of geoecosystem unit which are reviewed only old beach ridge geoecosystem shelf unit and alluvial coastal area plains geoecosystem are classified into appropriate categories according to the direction of settlement area development. It is caused by support of existing environmental consideration conditions and low risk of disasters that may occur on the second that geoecosystem unit. Beside of that two thing, there has other considerations that need to be used as a reference is not to do the conversion of agricultural lands, especially paddy fields there for the development of residential area because it is the mandate of Kulon Progo District Spatial Plan (RTRWK) which sets Kulon Progo district as an area of the barn food in the province of D.I Yogyakarta.

Conclusion

Based on the research results can be deduced as follows:

1. Geoecosystem units which is contained in Kulon Progocoastal area cosist of beach geoecosystem unit, young and old beach ridge, sand dunes, lagoon, swale, alluvial coastal area plains, flood plains and some other geoecosystem unit which is happened by fluvial and marine processes, but other geoecosystem unit is not considered further because it is the only area in very small width area and beyond the review of research that focuses on the direction of settlement area.
2. Geoecosystem unit which has the largest area in the study area is dominated by alluvial coastal area plains is 2.685,461 hectares (43.05%) and sand dunes geoecosystem unit is 1.986,121 hectares (31.84%). Old beach ridge geoecosystem unit and alluvial coastal area plain geoecosystem unit is the most appropriate geoecosystem unit based on the geoecology characteristics and vulnerability to disasters in the context of the development settlement area on Kulon Progo coastal area district.

While the advice can be given based on the results obtained from the study are as follows:

1. Direction of settlement development which was made in Kulon Progo district neighbourhood should be done by considering the characteristics of existing geoecosystem unit so can prevent the degradation of environmental quality also the emergence of various disaster.
2. In tackling environmental problems that exist in Kulon Progocoastal area through various strategies and environmental management policies are given, are required good coordination and relevant between stakeholders in order to run properly and smoothly.
3. Involving local community participation in the plan management and regional coastal area development and participation in the implementation of development programs in Kulon Progo coastal area in an effort to minimize potential environmental problems and social conflicts that can occurs in the future.
4. Further research on the study of geoecology through the development of settlement area on coastal area such in southern coastal Kulon Progo, is given population growth and increasing a development led to increased community needs for housing, while the settlement areas accordance with existing criteria, is safe from disasters and do not cause environmental degradation also damage in limited coastal areas.

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