

# PRELIMINARY STUDY ON COASTAL TOURISM DEVELOPMENT RECREATION CATEGORY IN BUNGUS BAY, PADANG CITY, WEST SUMATRA PROVINCE

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## Introduction

Bungus Bay has potential natural resources such as white and moderately sloped sandy beach, from north to south with strategic position near the capital of West Sumatra Province. This bay has a long coastline of 21,050 meters and 5418 meters long bay, 223,255,052.2 m<sup>3</sup> volume, which tends to have a rounded surface shape and surface area 1383.86 Ha (Kusumah, 2008). It's includes the District of Bungus Teluk Kabung and it is one of the coastal district in the southern city of Padang, with an area of 100.78 km<sup>2</sup> and a population of 23,400 inhabitants (BPS, 2006).

Bungus Bay is the focus area of coastal tourism development of Padang City. The objectives of this study are (1) to identify land suitability for coastal tourism, recreation category, (2) to study the development of coastal tourism, recreation category, which suitable with biophysics, economy, social, culture, and institutional the community aspects, and (3) to formulate the directive policy and the strategic development plan for coastal tourism with recreational purpose.

## Methods

The survey has been conducted in Bungus Bay, Padang City, The Province of West Sumatra on July-August 2008. The methods used in this study are: (1) spatial and tabular analysis using GIS for land suitability, and (2) descriptive and SWOT analysis for development planning. The method used in this study is based on spatial analysis methods involving computer software Arc View3.3. In principle, the analysis of data from the data base of primary and secondary data with the actual data in 2006.

Table 1. Collecting Primary Data

No.	Data Types	Technical of Data Collection	instrument used	Location of Data Collection
1.	coastal characteristics Data	Visual observation and photography	Digital Camera	Coastal of Bungus Bay
2.	Geographical Position	Plotting	GPS Garmin 12 XL	Coastal of Bungus Bay

Table 2. Collecting Secondary Data

No	Data Types	Technical Collection Data	Scale/ Resolution	data sources
1.	Ikonos Image (2005)	Basic profile	Resolution 1m	BRKP - DKP
2.	Coastal Characteristics (2006)	Inventory of the study area	-	PPPGL, BRKP-DKP
3.	Topografi Map (1943)		1:40.000	AMS
4.	RTRW Map (2004)		1:50.000	Bappeda Kota Padang

## Results

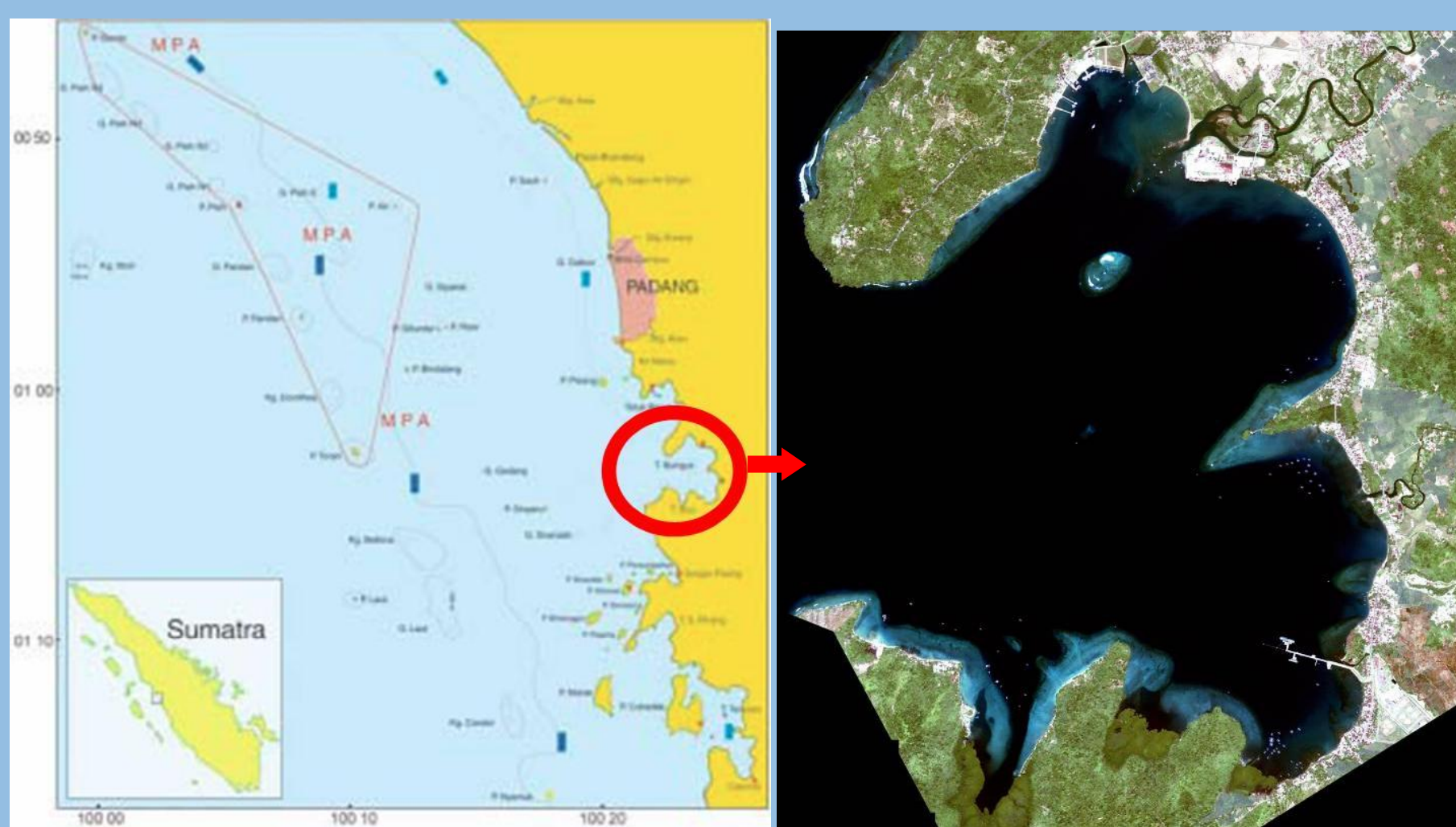


Figure 1. Map of research location (circle box)



Figure 3. Sandy Beach in Bay Area



Figure 4. Rocky Beach in Bay Area

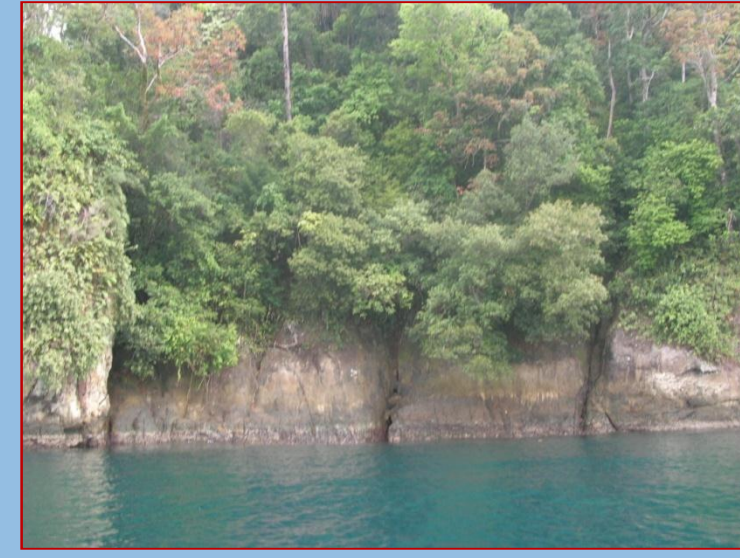


Figure 5. Cliff Beach in Bay Area



Figure 6. Mangrove Beach in Bay Area

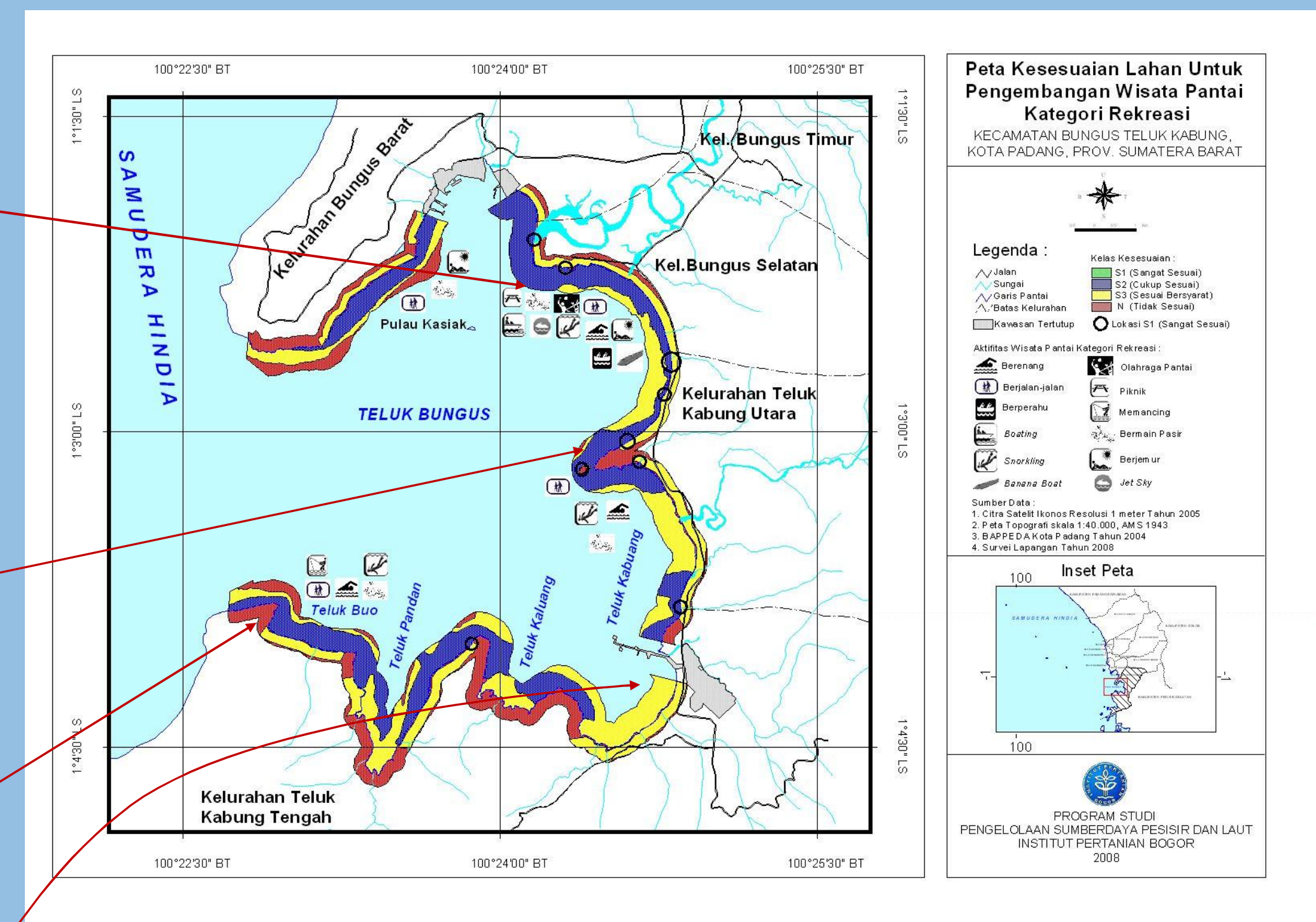


Figure 2. Map of Suitability Area For Coastal Tourism Recreation Category

Table 3. Area Suitability Matrics of Coastal Tourism Recreation Category

No	Parameters	Weight	S1 Categorized	Score	S2 Categorized	Score	S3 Categorized	Score	N Categorized	Score	Data Source
1.	Depth/ bathymetry (m)	5	0-5	4	> 5-10	3	> 10-15	2	> 15	1	Secondary
2.	Beach Type	5	Sandy Beach	4	Reef Beach	3	Black Sandy Beach	2	Mangrove Beach, Rocky Beach, Cliff Beach	1	Secondary Primary, Observation
3.	Beach Wide (m)	5	> 15	4	10-15	3	3- < 10	2	< 3	1	Secondary Primary, Measurement
4.	Sedimentation	4	Sandy	4	Sandy	3	Muddy Sand	2	Rocky Mud	1	Secondary
5.	Dip Beach (°/second)/km	4	< 10	4	10-25	3	> 25-45	2	> 45	1	Secondary Primary, Measurement
6.	Waters Turbidity (TSS) (mg/l)	3	< 400	4	400-600	3	600-800	2	> 800	1	Secondary
7.	land use beach	3	Coconut, open area	4	Small Bush, Savana	3	Bush, Steep Reef	2	Mangrove, Settlement, port	1	Secondary Primary, Observation
8.	dangerous biota	3	no	4	Sea urchin, Pterois sp.	3	Ray (fish), shark	2	Ray (fish), shark	1	Secondary Primary, Interview
9.	available fresh water (distance/km)	3	< 0,5 (km)	4	> 0,5-1 (km)	3	> 1-2 (km)	2	> 2 (km)	1	Secondary Primary, Observation
Total		35									

The result shows that Bungus Bay is suitable for coastal tourism in recreation category (33,76% of total development area of 200,43 ha). Carolina Beach, Carlos Beach, and Bungus Beach are the suitable locations for further coastal tourism development. Some existing tourism activities in Bungus Bay are swimming, canoeing, and picnic. Beach sport and fishing are the promising activities for further development. Based on SWOT analysis among the total 12 strategies for coastal development, recreational category in Bungus Bay, the three main alternatives strategy are (1) increasing people awareness and ability by counseling and management, (2) developing promotion programs to coastal tourism in Bungus Bay, and (3) monitoring and law enforcement to protect utilization of existing resources potency.

## Conclusions

Based on the results of research and discussion, it can be concluded as follows:

- Based on spatial and tabular analysis using GIS for land suitability, Bungus Bay is suitable for coastal tourism in recreation category (33,76% of total development area of 200,43 ha).
- Carolina Beach, Carlos Beach, and Bungus Beach are the suitable locations for further coastal tourism development. Some existing tourism activities in Bungus Bay are swimming, canoeing, and picnic. Beach sport and fishing are the promising activities for further development
- Based on SWOT analysis among the total 12 strategies for coastal development, recreational category in Bungus Bay, the three main alternatives strategy are :
  - Increasing people awareness and ability by counseling and management.
  - Developing promotion programs to coastal tourism in Bungus Bay.
  - Monitoring and law enforcement to protect utilization of existing resources potency.

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