SPATIAL PLANNING AND SUSTAINABLE SOLID WASTE MANAGEMENT IN KEPULAUAN RIAU PROVINCE

KEPULAUAN RIAU PROVINCIAL GOVERNMENT

2017
Outline

Provincial Spatial Plan

- Kepulauan Riau Overview
- Spatial Planning Hierarchy
- Kepulauan Riau Spatial Plan Purpose and Policy

Sustainable Solid Waste Management in Kepulauan Riau

- Solid Waste Management in Spatial Plan Policy
- Solid Waste Clustering Process
- Creation of Solid Waste Management Board
- Regional Waste Management Treatment
- Advantages and Benefits of Regional SWM Through Clustering Process
THE PROVINCE OF KEPULAUAN RIAU

Area : 425,214.67 km²
Waters : 417,005.06 km² (98%)
Landmass : 8,209.61 km² (2%)
Population : 1,679,163

Total islands : 1,795
Inhibited : 394 islands
Outer Islands : 19 islands
Kepulauan Riau Spatial Planning
Spatial Planning Hierarchy

General Spatial Plan
- National Spatial Plan
- Provincial Spatial Plan
- Regency Spatial Plan
- City Spatial Plan

Detailed Spatial Plan
- Islands-Specific Spatial Plan
- National Strategic Area Spatial Plan
- Provincial Strategic Area Spatial Plan
- Regency Strategic Area Spatial Plan
- Regencies Detailed Spatial Plan
- Cities Strategic Area Spatial Plan
- Cities Detailed Spatial Plan
General Spatial Plan and Detailed Spatial Plan
Policy direction:
- Enhance domestic and international trading sector
- Develop renewable energy (especially biomass)
- Develop downstream industry of coal
- Develop palm, rubber, tin, bauxite and kaolin industry
- Accelerate maritime economy development by enhancing fisheries industry and marine tourism
THE PROCESS OF KEPULAUAN RIAU SPATIAL PLANNING

LAW No.26 Year 2007 about SPATIAL PLANNING
MAKING OF SPATIAL PLAN DRAFT 2005-2007
RIAU ISLANDS SPATIAL PLAN DRAFT REVISION 2008 - 2009
SUBMITTED TO NATIONAL SPATIAL PLANNING COORDINATION BOARD 19 Nov 2009

GOVERNOR AND MAYOR AGREEMENT 2 DES 2016
REGIONAL REGULATION APPROVAL PLENARY SESSION 6 DECEMBER 2016
SPECIAL COMMITTEE MEETINGS AGUS S/D 1 DES 2016
PLENARY SESSION REQUEST TO PARLEMENT 13 June 2016
MINISTRY EVALUATION 14 DES 2016
REGIONAL REGULATION NUMBER 1 YEAR 2017 : RIAU ISLANDS PROVINCE SPATIAL PLAN
MINISTRY DEGREE 30 DES 2016
RULE NUMBER REGISTERED 1/7/2017 17 JAN 2017

SK.76/MenLHK-II/2015 (6 March 2015)
Forest Zone Area : 307.665 Ha
Conversion Production Forest: 74.567 Ha
Others Utilization Area : 438.756 Ha

MALAYSIA KALIMANTAN
SPATIAL PLAN
RIAU ISLANDS PROVINCE

Purpose

Policy and Strategy

Structure Plan

Urban System (Centers) Plan
Transportation Network System Plan
Energy System Plan
Telecommunication Network System Plan
Other Networks System Plan

Spatial Pattern Plan

Conservation Area Plan
Preserve Forests, nature reserve, local protection forests

Cultivation Area Plan
Production Forests, Farming, Housing, Industrial, Tourism, Mining, Others (Public Facilities, etc)

Marine Spatial Plan
General Utility Area, Conservation, National Strategy, Sea Lanes

Spatial Utility Direction

Control Spatial Utility Direction:
1. Zoning
2. Permits
3. Incentives & Disincentives
4. Punishments

Strategic Area

National Strategic Area

Borders/Boundary Area (19 Border Islands)

Dompak Island – Tanjungpinang as a Centre of Government Area

Lingga as centre of farming Area

Free Trade Zone Area

Anambas Islands as centre of fisheries, marine, and tourism area

Natuna as International Sea-Transport Hub

Programme Indication Direction

Water, Solid and Waste Water, Drainage

Land, Sea, and Air

Nationals, Regional, Locals, Strategic Nationals

Water, Drainage

Production Forests, Farming, Housing, Industrial, Tourism, Mining, Others (Public Facilities, etc)
Kepulauan Riau Spatial Planning Purpose

“Creating a Progressive and Prosperous Riau Islands through Optimal and Sustainable Spatial Planning as an Archipelago Region”

Spatial Planning Policy

1. Development of Integrated Center Activities;

2. Encourage developing accessibility and connectivity of the Islands Transport Network;

3. Development of Regional Facility System;

4. Utilization of Natural Resources Potential to Encourage Regional Economic Development

5. Developing globally competitive industrial area and zone;

6. Encourage development of free trade zone area of Batam Bintan and Karimun;

7. Maintain region sustainability and preservation; and

8. Increase the function of National Security and Safety
POLICIES OF THE SPATIAL PLANNING

- Regional nature conservation
- Development of an integral town system
- Support for the formation of archipelagic transportation network accessibilities
- Development of the regional infrastructure network system
- Supports for the Free Trade Zone and Free Port development
- Development of the Internationally competitive industrial zone.
- Management of natural resources to develop regional economics.
DESIGN OF TOWNPLANNING SYSTEM IN THE PROVINCE OF KEPULAUAN RIAU

Keterangan:
PKN : Center of National Activities
PKSN : Center of Strategic National Activities
PKW : Center of Regional Activities
PKL : Center of Local Activities
Sustainable Solid Waste Management Through Clustering
SOLID WASTE MANAGEMENT

The authority of the Provincial Government:
- to develop and manage the Regional Landfill in Bintan Island

**Waste Reduction**
- Reduce, Reuse, Recovery, Recycle

**Waste Collection**
- Waste sorting based on the type
- Waste collection and distribution to temporary station/landfill

**Waste Treatment**
- Sanitary-based landfill
- Waste treatment in order to reduce pollution/safe environment
Chapter 3
Authority of Provincial Government

Article 8

• In carrying out waste management, provincial government has the authority to:

• Stipulate policy and strategy for waste management in line with the government policy

• Facilitate cooperation between region within one province, partnership and network for waste management

• Conduct coordination, development, and Monitoring of district and municipality performance in waste management; and

• Facilitate for dispute settlement in waste management among district/municipality within one province
SW CLUSTERING PROCESS

1. Provincial Mapping Study to Determine Availability Potential SW Sites Agreement among Provincial, Municipality and Regency Government
2. Assessment of Potential Sites: Coordinating to Environment Ministry & Initial Community Consultation (Social Acceptability)
3. Final Selection Site: Site Acquisition
4. Detail Engineering Design: Site Development & Cost Recovery Planning
5. Formation and Creation of SW Board: Management/Committee & Operation
Creation of The Regional Solid Waste Management Board

KEPRI PROVINCE

SWM BOARD/COMMITTEE

Bintan Regency

Tanjungpinang Municipality
Solid waste and waste water management on municipality level is regulated on City/Regency Spatial Plan.

The Province Government could only develop waste management treatment on regional level which could serve at least two municipalities.

Due to our geographical aspects as an archipelago, a regional waste management treatment could only be developed in Bintan Islands which has two municipality (Bintan and Tanjungpinang govt).

A research has been conducted in 2014 in order to find the feasible location of the regional waste management treatment plant.
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After a thorough selection based on the basic parameters of slopes, lithology, surface waters, and other factors (physical and social conditions on surrounding area), 5 alternatives locations in Bintan Island have been selected.

Final selection is based on land use impact, conservation areas, total area available, topography, and possible expanding area.

Based on those criteria, the recommended location is the third location, in Gunung Kijang, Bintan.
Regional Waste Management Treatment Location

RECOMMENDATION LOCATION
### Advantages and Benefits of Regional SWM Trough Clustering Process

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Benefits to Kepri Province, Tanjungpinang Municipality and Bintan Regency</th>
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<tbody>
<tr>
<td>Serves as a tool in establishing growth centers between Tanjungpinang Municipality and Bintan Regency</td>
<td>Equipment needed for infrastructure development and waste management will be supplemented by other members - central Government - Investor</td>
</tr>
<tr>
<td>Allows wider area jurisdiction to achieve desired economies and management of scale</td>
<td>Increase in employment opportunities for region (Tanjungpinang and Bintan)</td>
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<td>Ensures greater benefits thru equitable sharing</td>
<td>Wider market for services will be Established</td>
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<td>Development needs easier to identify and address</td>
<td>High possibility of funding assistance and approval of proposals from donor agencies/financial institutions/investment</td>
</tr>
</tbody>
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The Succession for Regional Sustainable Solid Waste Management through Clustering in Bintan Island:

- Legal Instrument
  - Spatial Planning Regulation and others
- Strong Political Will;
  - Plans and programs for Permanent Champions
- Social acceptability;
  - Concern for Environment
- Willingness to share resources;
  - Willingness to comply with the agreement;
  - Share and Compliment Program and Budgeting among the stakeholders;
Thank you for your attention!

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