

# 07

## HIGH IMPACT PROJECTS OF STATE STRUCTURE PLAN OF NEGERI SEMBILAN 2045—TOWARDS BALANCED AND SUSTAINED ECONOMIC GROWTH

\*Abdul Azeez Kadar Hamsa, Mansor Ibrahim, Irina Safitri Zen, Mirza Sulwani, Nurul Iman Ishak & Muhammad Irham Zakir  
Department of Urban and Regional Planning,  
Kulliyyah of Architecture and Environmental Design,  
International Islamic University Malaysia

### ABSTRACT

This article is a review of Negeri Sembilan Draft State Structure Plan 2045. State structure plan sets the framework for the spatial planning and development to be translated in more detail in the next stage of development planning which is local plan. The review encompasses the goal, policies, thrusts and proposals to lead the development of Negeri Sembilan for the next 25 years. This review also highlights 9 high-impact projects proposed to be developed in Negeri Sembilan at the state level by 2045 through 30 policies and 107 strategies.

**Keywords:** Structure plan, spatial planning, local plan, development thrust, Negeri Sembilan

\* Corresponding author: azeez@iium.edu.my

### INTRODUCTION

State Structure Plan is a written statement that sets the framework for the spatial planning and development of the state as stated in Section 8 of Town and Country Planning Act (Act 172). The preparation of Negeri Sembilan Structure Plan 2045 is necessary to be reviewed due to massive economic development change and the introduction of new policies at the national level over the past 20 years. Negeri Sembilan is located on the west coast of Peninsular Malaysia and bordered by the States of Selangor to the north, Pahang to the east, Johor and Melaka to the south.

The location of Negeri Sembilan adjacent to Greater Kuala Lumpur has affected the overflow of development in Negeri Sembilan especially to Seremban District and Port Dickson District. Negeri Sembilan has an area of 665,635.85 hectares and is divided into seven districts which are Seremban, Port Dickson, Jempol, Rembau, Kuala Pilah, Tampin and Jelebu. Map 1 shows the location of the State and Map 2 shows the districts in Negeri Sembilan.



Map 1: Location Plan of Negeri Sembilan



Map 2: Key Plan of Negeri Sembilan

### METHODOLOGY

Figure 1 shows the process in the preparation of State Structure Plan

#### STAGE 1:

##### MOBLIZATION

Preparation of Reference Basis of Negeri Sembilan Structure Plan 2045(Review)

Literature Review

#### STAGE 2:

##### PREPARATION OF REPORTS &

Preparation of Inception Report

Sectors covered:

- Land Use
- Socio economy
- Population
- Housing and settlement
- Commercial
- Public facilities
- Infrastructure and utilities
- Traffic and transportation
- Urban design
- Environmental heritage

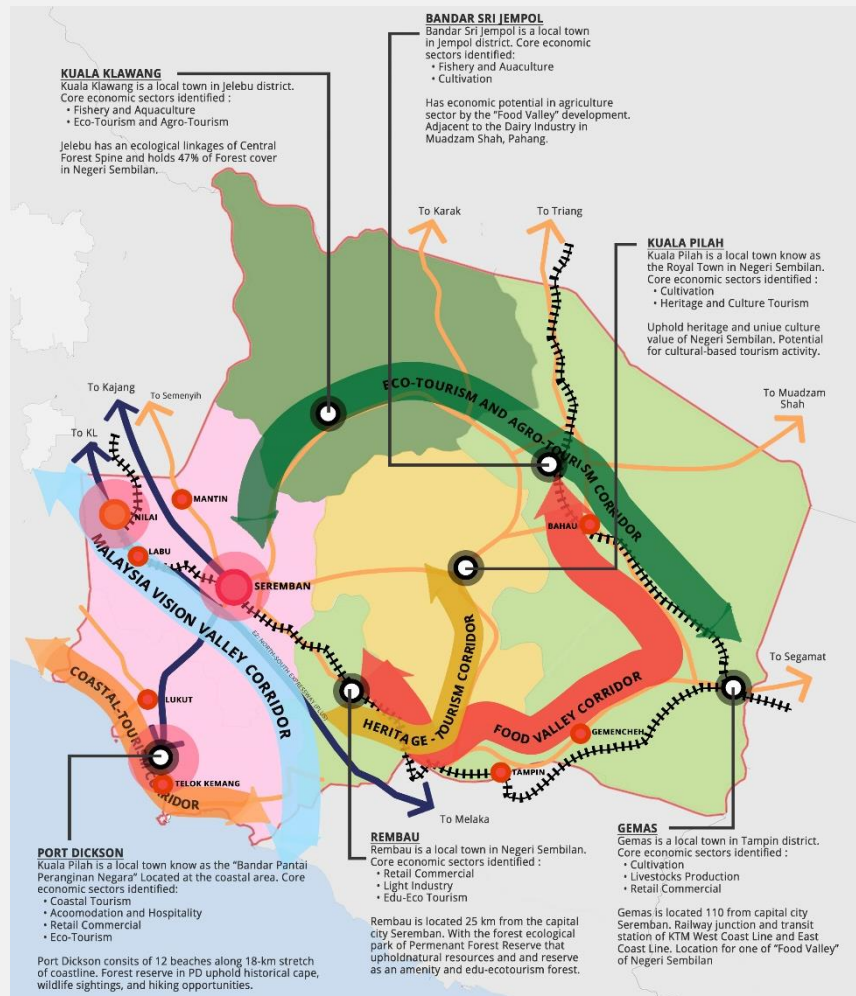
Preparation of Technical Report

Draft Negeri Sembilan State Structure Plan 2045

- Thrusts
- Development Concept
- Policies
- Strategies
- Proposals
- Land Use Zoning Plan

Figure 1: Flow Chart of the process preparation of State Structure Plan  
(Source: State Structure Plan, 2016)

## DEVELOPMENT CONCEPT



Map 3: Development Concept of Negeri Sembilan

### “INTERCONNECTED POLYCENTRIC ECONOMIC CORRIDOR”

The concept of “interconnected” is translated as catalysts centres being connected with the existing major road in Negeri Sembilan known as “Negeri Sembilan Outer and Inner Ring Road”. The polycentric act as the growth centres being identified under each development theme. The development theme established aims to improve the quality of life comprehensively including economic prosperity, social equity and environmental and cultural protection.

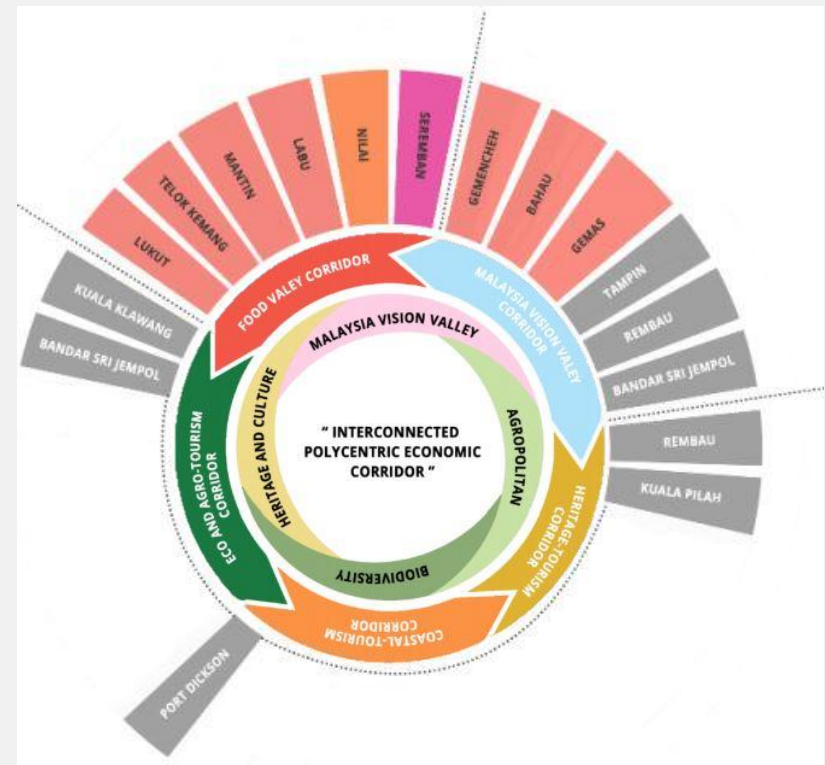


Figure 2: Hub or Centre for Development Concept

The “Interconnected Polycentric Economic Corridor” refers to the recognition of economic potential in catalyst centres that are interconnected to one and another in terms of its accessibility and functionality in forming economic corridors for a specific function. These economic corridors will contribute to the wholeness of economic contribution in Negeri Sembilan.

## DEVELOPMENT THRUST



**THRUST 1**  
Optimal & Efficient Physical Development



**THRUST 2**  
Dynamic Infrastructure & Mobility



**THRUST 3**  
Balanced & Progressive Economic Growth



**THRUST 4**  
Equitable & Inclusive Social Development



**THRUST 5**  
Natural Environment & Heritage Conservation



## PROJECT FINDINGS

### HIGH IMPACT PROJECT 1: Light Rail Transit (LRT)

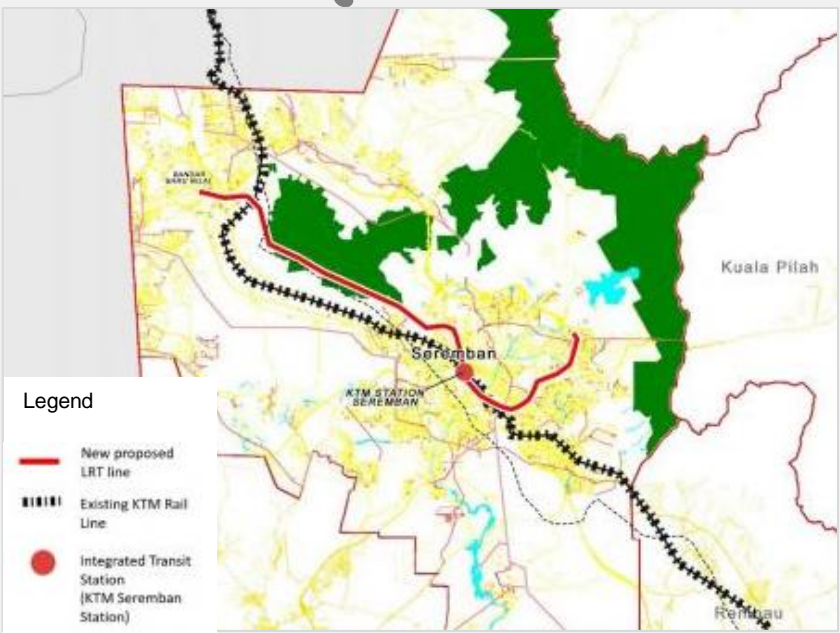
The Bandar Baru Nilai – Ampangan Line is integrated with the existing KTM rail line at the Seremban station. The station will be upgraded from Local Station (City Centre) to Regional Hub Station to accommodate the new Light Rail Transit (LRT) development in the city centre.



- Low public transportation modal share
- Cater future 1.7 Million population

BANDAR BARU NILAI

AMPANGAN



Map 4: LRT Alignment Bandar Baru Nilai – Ampangan Line



Related Policy

#### POLICY 4

Plan an efficient, reliable and smart transportation system in providing a safe and seamless journey for the people and goods.



Figure 3: LRT illustration  
(Source: www.behance, 2021)



Project Component

1. Bandar Baru Nilai – Ampangan Line
2. Upgradation of the existing KTM Seremban station from Local Station (City Centre) to Regional Hub Station
3. “Park and Ride” facilities in Bandar Baru Nilai Station.

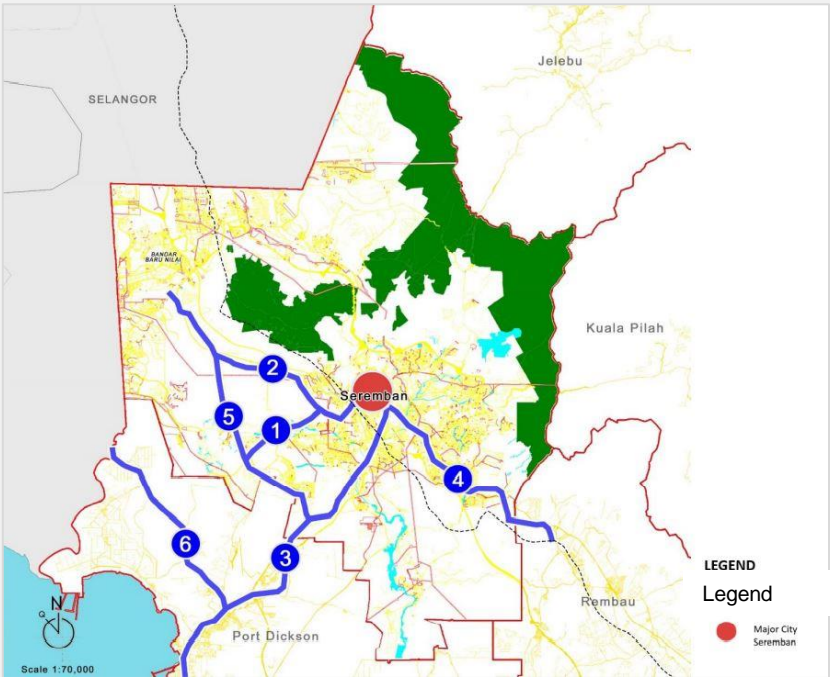
### HIGH IMPACT PROJECT 2: Bus Rapid Transit (BRT)

This BRT service is integrated with rail-based transportation service that interchange at KTM Seremban station which acts as a regional hub station of Negeri Sembilan. This BRT service is more flexible service proposed for the public transportation system in the initiative to increase the public transport modal share by 2045.



Issues

- Cater future 1.7 Million population
- High travel demand to Seremban city center
- Low public transportation modal share



Map 5: BRT Alignment of BRT Corridor



Related Policies

#### POLICY 5

Enhance the efficiency, reliability and affordability of public transportation system to increase modal shift favoring the use of public transport.

#### POLICY 6

Implement travel management measures at city center to reduce the demand for single occupancy vehicle utilization



Figure 4 : BRT illustration  
(Source: www.imbrt, 2021)



Project Component

1. Dedicated Running Way
2. Stations
3. Intelligent Transportation Systems (ITS)
4. Green Vehicles
5. Off-Bus Fare Collection



## HIGH IMPACT PROJECT 3: Sponge City in Negeri Sembilan

A sponge city is an urban area that has been designed to cope with excess rainfall using a variety of techniques (Map 6). Existing urban areas often need to deal with flooding caused by heavy rain, high tides or swollen rivers. Sponge city design can mitigate by providing the ability to naturally absorb excess water (Figure 5).

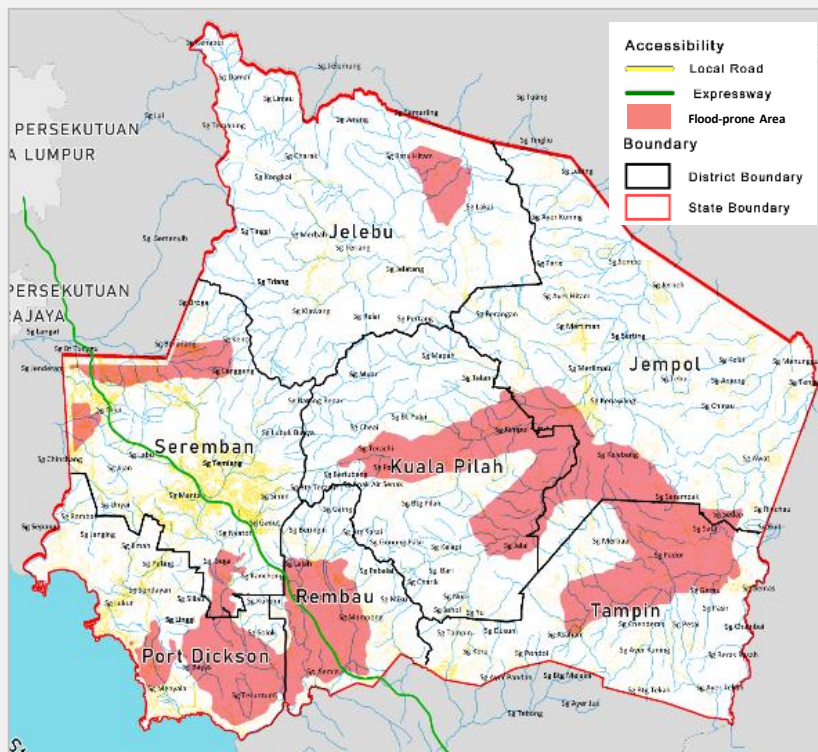


Issues

Monsoon and flash flood

High rate of Non-Revenue Water (31.9%)

Critical water reserved margin (below 10%)



Map 6: Sponge City implementation Area



Related Policy

### POLICY 11

Intensifying prime management of drainage systems for the resiliency against the occurrence of flood.



Figure 4 :Rain Garden Illustration  
(Source: www.susdrain, 2021)



Figure 5 : Sponge City Concept  
(Source: www.stormsensor, 2021)



Project Component

1.Rain garden

2.Constructed wetland

3.Bioremediation

4.Permeable pavement

5.Pipe upgrading AC to Hypro PVC O

6.River waste trap and Bioswale

## HIGH IMPACT PROJECT 4: Food Supply Chain Hub

To address the issue of food demands, the Negeri Sembilan Government plans to develop three districts under the Agropolis Development Zone and under Food Valley Development Corridors. In the effort to create the food production hub as the catalyst for balanced development, districts such as Jempol and Tampin which have many green areas. will be developed as high-tech agricultural production centres to increase the productivity of the agriculture products. On the other hand, Rembau will complete the food supply chain as the district that focuses on the processing and marketing hub of agro-food production with an emphasis on the use of green technology to reduce environmental pollution in Negeri Sembilan.



Issues

Cater the food demand

Increase the production in Negeri Sembilan



Related Policy

### POLICY 18

Enhancing Negeri Sembilan as 'Kitchen to Klang Valley' through development of a food supply chain centre in the District of Jempol, Tampin and Rembau.



Project Component

1.Food Valley

2.Meat Valley

3.Halal Hub

### 1.Food Valley



**FACILITIES**  
VEGETABLE FARMS  
FRUIT FARM  
FISHERY AND AQUACULTURE  
PRODUCTION CENTRE /  
AQUAPONIC AND GREEN-  
HOUSE VEGETABLES  
JEMPOL AGROTOURISM  
RESORT  
RESEARCH & DEVELOPMENT  
CENTRE



Figure 6 : Drone watering the plant  
(Source: organic.com, 2020)



Figure 7 : Smart Meat management  
(Source: food.com, 2020)

### 2.Meat Valley



**FACILITIES**  
LIVESTOCK MARKETING  
CENTRE  
RESEARCH AND  
DEVELOPMENT CENTRE  
LIVESTOCK PRODUCTION  
AND PROCESSING  
CENTRE  
LIVESTOCK INDUSTRY  
CENTRE

### 3.Halal Hub



## HIGH IMPACT PROJECT 5: Nilai Textile Center

Nilai Textile Hub aims to make Nilai one of the main shopping attractions increasing the economic potential of Negeri Sembilan by enhancing an existing product -Textile. Textile centre in Nilai will be the main textile collecting and distributing centre for Malaysia. Nilai focuses on collecting traditional Malaysian textile. Attributes from other countries such as Japan, Korea and China, being the main shopping attraction for the Malaysian, will also be available in Negeri Sembilan, Malaysia.



Issues

Lack of product quality and choices

Foreign product dominated the commercial activities



Related Policies

### POLICY 18

Strengthening the function of commercial activities with strategic and comprehensive development

### POLICY 19

Strengthening Negeri Sembilan as preferred destination for tourist to experience homestay, agro-tourism, urban and heritage tourism



Project Component

1. Commercialize centre for textile product

2. Textile accessories

3. Tailor Service Centre

4. Educational Center

5. Manufacture the textile product with high quality and high standard

6. Research and Development on textile production



Figure 8: tailoring center  
(Source: www.ritefashionedu.com, 2020)

## HIGH IMPACT PROJECT 6: NStore

This project provides a solution for small entrepreneurship while offering a one-stop centre with multiple online platforms integrated with fulfilment services. The implementation of e-commerce and the provision of a business centre that concentrates on e-commerce will offer a whole range of opportunities since e-commerce has been widely used to generate more sales. NStore will be located in Tampin District.



Issues

Problem in handling material

Poor storage system



Project Component

1. E-commerce warehouse

2. E-fulfilment services

3. In-bound and out-bound logistic

4. Digital Free Trade Zone



Related Policy

### POLICY 15

Empowering of E-commerce in preparing commercial and services sector to be more competitive for the future market.

## HIGH IMPACT PROJECT 7: Negeri Sembilan Smart Tourism

This project focuses on implementing a smart tourism system for tourism in Negeri Sembilan. While the concept of smart tourism is like a smart city, smart tourism aims at improving the efficiency of resources management, maximise competitiveness and enhancing sustainability with the help of technology.

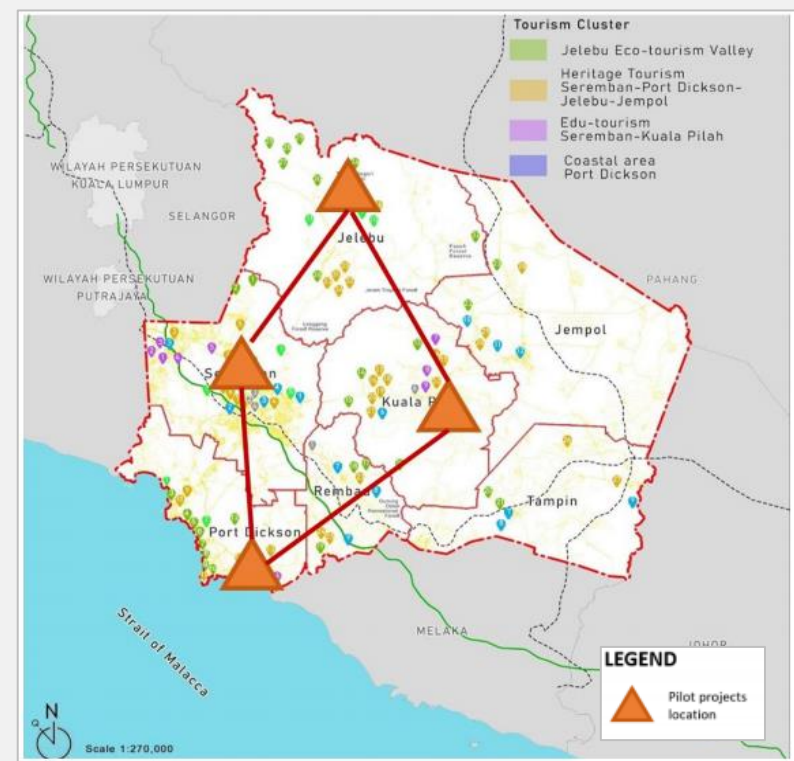


Issues

Resources not developed optimally

Pandemic issues affect the profit collection

Devising a more competitive framework of tourism



Map 7: Location of Pilot Project for Smart Tourism



Related Policy

### POLICY 23

Plan an efficient and smart tourism for sustainability of tourism sector in Negeri Sembilan



Figure 9 : Sustainable flow in Helsinki  
(Source: flowfestival.com, 2019)



Figure 10: VR experience (Source: medium.com, 2019)



Project Component

1. Smart Sustainability Initiatives

2. Smart Tourist Experience

3. Smart Destination and Business

4. Smart Research and Management Tools



## HIGH IMPACT PROJECT 8: Negeri Sembilan Cultural and Heritage Zone

Negeri Sembilan Cultural and Heritage Zone aims to maximise the preservation and conversation of culture and heritage embedded in Negeri Sembilan. This project will gather cultural and heritage products and potential development programs in one specific zone: Kuala Pilah.



Not fully utilised cultural and heritage resources

Increase job opportunity for local



Related Policies

### POLICY 29

Managing tangible heritage resources of Negeri Sembilan through effective preservation and conservation plan

### POLICY 30

Enhance Minangkabau identity of Negeri Sembilan through preservation and conservation of intangible heritage



Project Component

1.Strengthening Royal Town Seri Menanti

2.Kuala Pilah Cultural and Heritage Centre

3.Enhance the identity of Minangkabau

4.Kuala Pilah Heritage Complex

5.Negeri Sembilan Heritage Trails



Figure 11 : Sabah Cultural Centre  
(Source: Sabah.gov.com, 2020)



Figure 12 : Istana Seri Menanti  
(Source: tripadvisor.com, 2020)

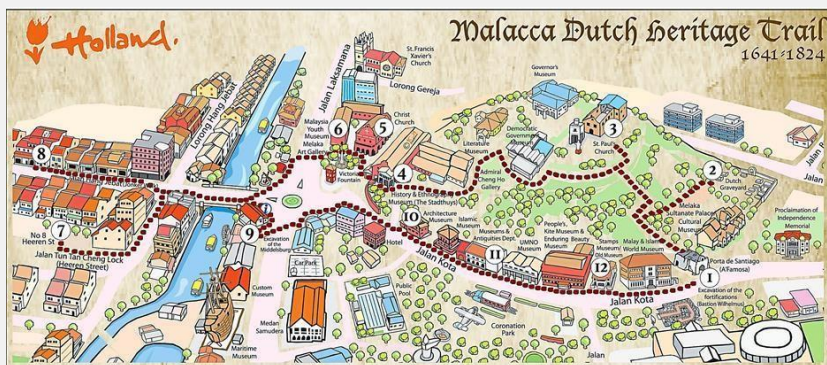


Figure 13 :Melaka Heritage Trail  
Source:(www.thestar.com.my,2019)

## HIGH IMPACT PROJECT 9: KENABOI ECO SANCTUARY

Based on the findings, Jelebu district is rich in natural components that have the potential to be developed and preserved. The natural resources and habitat mainly can be found at Hutan Simpan Kenaboi (Forest Reserved Kenaboi). Hutan Simpan Kenaboi is an Environmental Sensitive Area (ESA) classified for preservation and conservation area. The primary purpose of this project is to encourage balanced and sustainable management and development of natural resources in forest reserve as a valuable asset in Negeri Sembilan.



Uncontrolled logging management

Conversion of forest land to plantation land use



Related Policies

### POLICY 18

Strengthening the function of commercial activities with strategic and comprehensive development

### POLICY 19

Strengthening every district as preferred destination for tourist to experience homestay, agro-tourism, urban and heritage tourism

### POLICY 20

Embarking extensive marketing and promotional campaign to increase the tourist arrival in Negeri Sembilan.

### POLICY 27

Conserving Environmental Sensitive Area(ESA) with a focus on protection and enhancing comprehensive spatial planning, development control and climate mitigation action



Project Component

1.Eco Lodge

2.Wildlife and Plant Conservation Center

3.Forestry and Wildlife Research and Development

4.Reforestation Program

5.Hiking Trail

6.Indigenous Center



Figure 14: Chontaqui Eco Lodge, Peru  
(Source: Trip Advisory, Francisco)



Figure 15: National Tapir Conservation Centre  
(Source: Forestry Department)

## CONCLUSION

In conclusion, the new Draft State Structure Plan of Negeri Sembilan 2045 ensures the data and information acquired for analysis are the latest. Negeri Sembilan has many potentials to be developed to become economically competitive with other states such as Johor and Selangor by 2045. The Interconnected Polycentric Economic Development Corridor concept in this state structure plan with three main development corridors, Malaysia Vision Valley Corridor, Food Valley Corridor, and Tourism Corridor, also help in translating the future development of Negeri Sembilan according to the goal by 2045.

## ACKNOWLEDGEMENT

This project was carried out by a group of 3rd Year students (Planning Studio 5), Semester 1, 2020-2021. The project was to prepare a Negeri Sembilan State Structure Plan. This studio project was under the supervision of Prof. Dr. Abdul Azeez Kadar Hamsa, Prof TPr Dato' Dr. Mansor Ibrahim, Assoc. Prof Dr. Norzailawati Mohd Noor and Asst Prof Dr. Irina Safitri Zen. The members of the group (Kassa Planners) are Muhammad Irham Mohmad Zakir, Nurul Iman Ishak, Mirza Sulwani, Ammerul Afeeq Roslee, Aini Najwa Nazri, Mohamad Haziq Razin Mohd Faizal, Fatin Afifah Yusof, Imran Syakir Norfizam, Ahmad Zharif Zulmajdi, Siti Nur Aishah Abdul Karim, Muhammad Imran Soboman, Muhammad Faiz Akmal Sabarin, Adzreen Zahirah Rizauddin, Noor Sabrina Kamal Bahrin, Nur Nuha Ismail. The authors would like to extend their appreciation to PLANMalaysia Negeri Sembilan for their cooperation.

## REFERENCES

- PLAN Malaysia. (2016). National Physical Plan 3 of Malaysia 2040.
- Kementerian Pendidikan Malaysia (2019). *Number of Primary School by district*. Retrieved from Education Portal System.
- Negeri, B. B. (2020). *Distribution of fire station by district in Negeri Sembilan*. Retrieved from Balai Bomba dan Penyelamat Negeri.
- PLAN Malaysia. (2002-2015). *District Local Plan of Jelebu 2002-2015*. Jelebu: PLAN Malaysia.
- PLAN Malaysia. (2002-2015). *District Local Plan of Jempol 2002-2015 (Revise 1-2014)*. Jempol: PLAN Malaysia.
- PLAN Malaysia. (2015). *District Local Plan of Seremban 2015*,. PLAN Malaysia.
- PLAN Malaysia. (2019). *State Structure Plan of Negeri Sembilan 2045*. Negeri Sembilan: PLAN Malaysia.
- PLAN Malaysia. (2020). *District Local Plan of Kuala Pilah 2020*. Kuala Pilah: PLAN Malaysia.
- PLAN Malaysia. (2020). *District Local Plan of Port Dickson 2020*. Port Dickson: PLAN Malaysia.
- PLAN Malaysia. (2020). *District Local Plan of Tampin 2020*. Tampin: PLAN Malaysia.
- PLAN Malaysia Negeri Sembilan. (2020). *Malaysia Vision Valley high impacts project, MVV Jilid 2*. PLAN Malaysia.
- PLANMalaysia. (2017). *G.I.S. Negeri Sembilan*.
- Polis Di-Raja Malaysia. (2020). *Distribution of police station by district in Negeri Sembilan*. Retrieved from Polis Di-Raja Malaysia.