



# SINGAPORE – KUNMING RAIL LINK

*Ad-Hoc Expert Group Meeting for Cooperation on Facilitation of  
International Railway Transport*

12-13 March 2015

# BACKGROUND

- 6,617 km rail development project to link ASEAN with China
- To provide more environmentally friendly, efficient and economical mode for passenger and freight transport .
- Flagship Project under ASEAN-Mekong Basin Development Cooperation.
- Prioritised project under Master Plan on ASEAN Connectivity
- Track Gauge: Meter Gauge
- Two lines:
  - Eastern Line : Thailand, Cambodia, Viet Nam
  - Western Line : Thailand, Myanmar
- Common line : Singapore, Malaysia, Thailand
- Spur line to Lao PDR

# BACKGROUND



## • Current network :

- Cambodia
- Lao PDR (Spur Line)
- Malaysia
- Myanmar
- Singapore
- Thailand
- Viet Nam
- Kunming, PRC

## • Future interest:

- Surabaya, Indonesia to Singapore @ Malaysia via:
  1. Port (Multimodal); or
  2. Bridge

# PROGRESS

## MISSING LINK

Cambodia  
Myanmar  
Thailand  
Viet Nam

## SPUR LINE

Lao PDR – Viet Nam

## UPGRADE

Cambodia  
Malaysia  
Thailand

# MISSING LINK

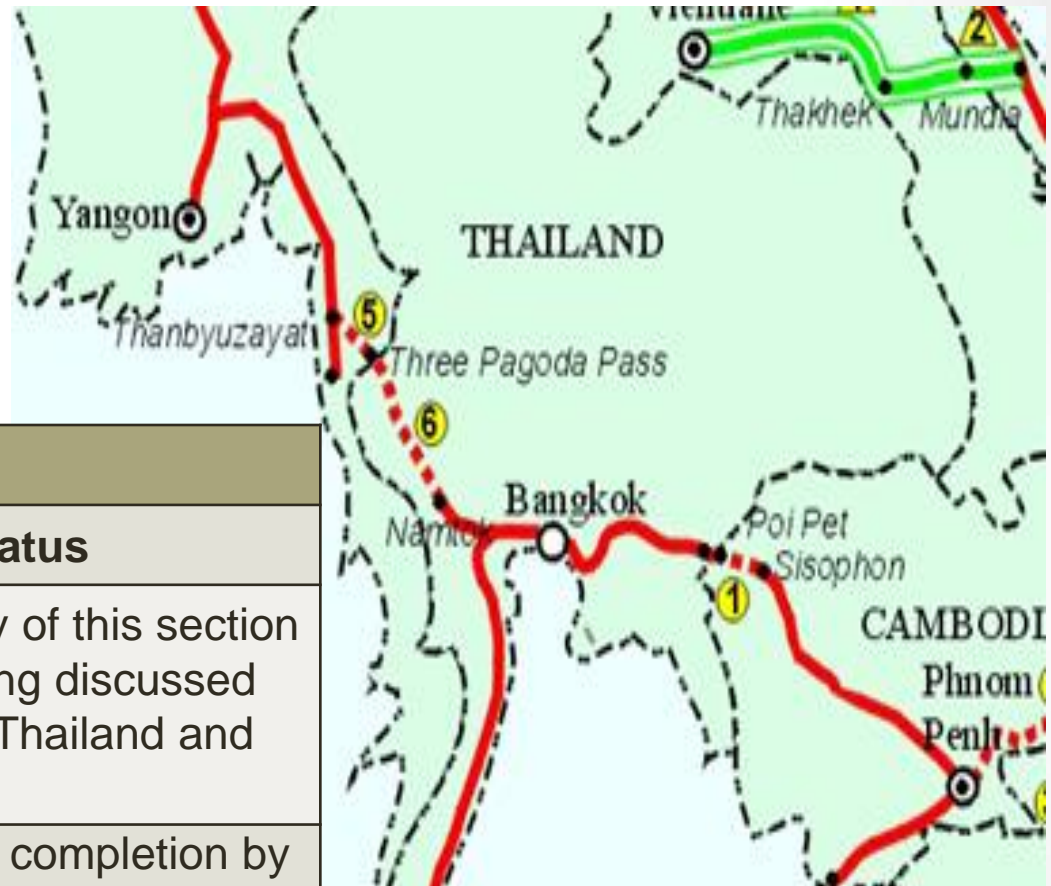
# MISSING LINK



## CAMBODIA

| Section   | Status  |
|---|---|
| Poipet (Thailand border) – Sisophon<br>[48 km]      | <ul style="list-style-type: none"> <li>- Ongoing.</li> <li>- Estimate completion by end of 2015.</li> </ul> |
| Phnom Penh – Loc Ninh (Viet Nam Border)<br>[254 km] | <ul style="list-style-type: none"> <li>- Funding negotiation ongoing</li> </ul>                             |

# MISSING LINK

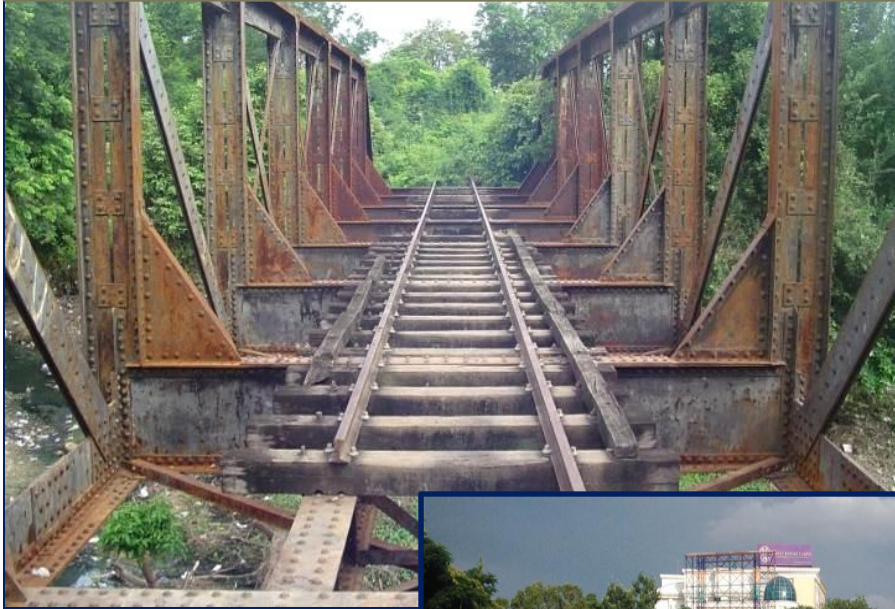


| THAILAND   |  |
|--|--|
| Section  | Status   |
| Namtok - Three Pagoda Pass (Myanmar border) [153 km] | - Feasibility of this section is still being discussed between Thailand and Myanmar                              |
| Aranyaprathet – Klongluk [6 km]                      | - Expected completion by end of 2015<br>- Simultaneous with Cambodia portion of missing link [Poipet – Sisophon] |



# ARANYAPRATHET-KLONGLUK-POIPET-SISOPHON

THAILAND-CAMBODIA RAIL BRIDGE



POIPET-SISOPHON



ARANYAPRATHET-KLONGLUK



# MISSING LINK

| MYANMAR   |   |
|---|---|
| Section   | Status  |
| Thambyuzayat - Three Pagoda Pass (Thailand border) [153 km] | - Feasibility of this section is still being discussed between Thailand and Myanmar |



# MISSING LINK

| VIET NAM                           |   |
|------------------------------------|---|
| Section                            | Status  |
| Mu Gia – Tan Ap – Vung Anh (119km) | - Technical assistance for Feasibility Study being discussed with Republic of Korea.    |
| Loc Ninh – Ho Chi Minh (129km)     | - Feasibility Study completed 2012<br>- <b>Seeking fund</b> for project implementation. |



# SPUR LINE

# SPUR LINE

| LAO PDR                            |  |
|------------------------------------|--|
| Section                            | Status                                       |
| Vientiane-Thakhek                  | - Feasibility Study completed in March 2011. |
| Thakhek - Mu Gia (Viet Nam border) | - Construction pending.                      |



# **UPGRADE/ REHABILITATION**



# CAMBODIA [REHABILITATION]

| Section                         | Status          |
|---------------------------------|-----------------|
| Bat Doeung – TrapangSre (257km) | - Seeking funds |
| Bat Deong – Sisophon (306 km)   |                 |
| Phnom Penh – Samrong (9km)      |                 |



# LAO PDR [PLANNED WORKS]



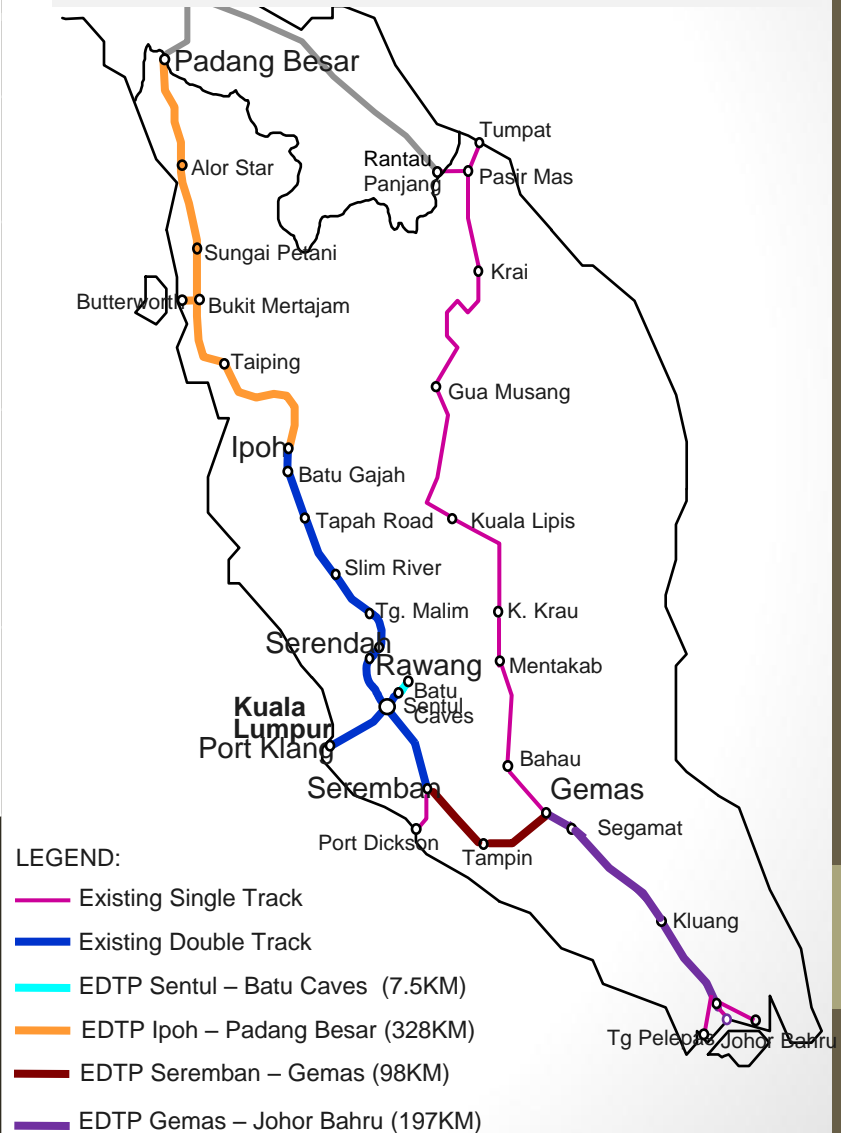
- Nongkhai - Vientiane - Thakhek - Mu Gia (480km)
- Vientiane – Luang phrabang - Boten (417km)
- Chong Mek (Lao - Thai border) - Pakse - Savannakhet – Laobao (452km)
- Mukdahan (Lao -Thai border) - Savannakhet - Lao Bao (222km)

# MALAYSIA [UPGRADE]

## (Double Track Electrified Construction)

| Section                            | Status   |
|------------------------------------|--|
| Rawang – Ipoh<br>(178 km)          | - Completed (2007)   |
| Seremban –<br>Gemas<br>(98 km)     | - Completed 31 July<br>2013  |
| Ipoh – Padang<br>Besar<br>(328 km) | - Physical construction<br>complete November<br>2014<br>- Current: system work |
| Gemas – Johor<br>Bahru<br>(197 km) | - Land Acquisition<br>process  |

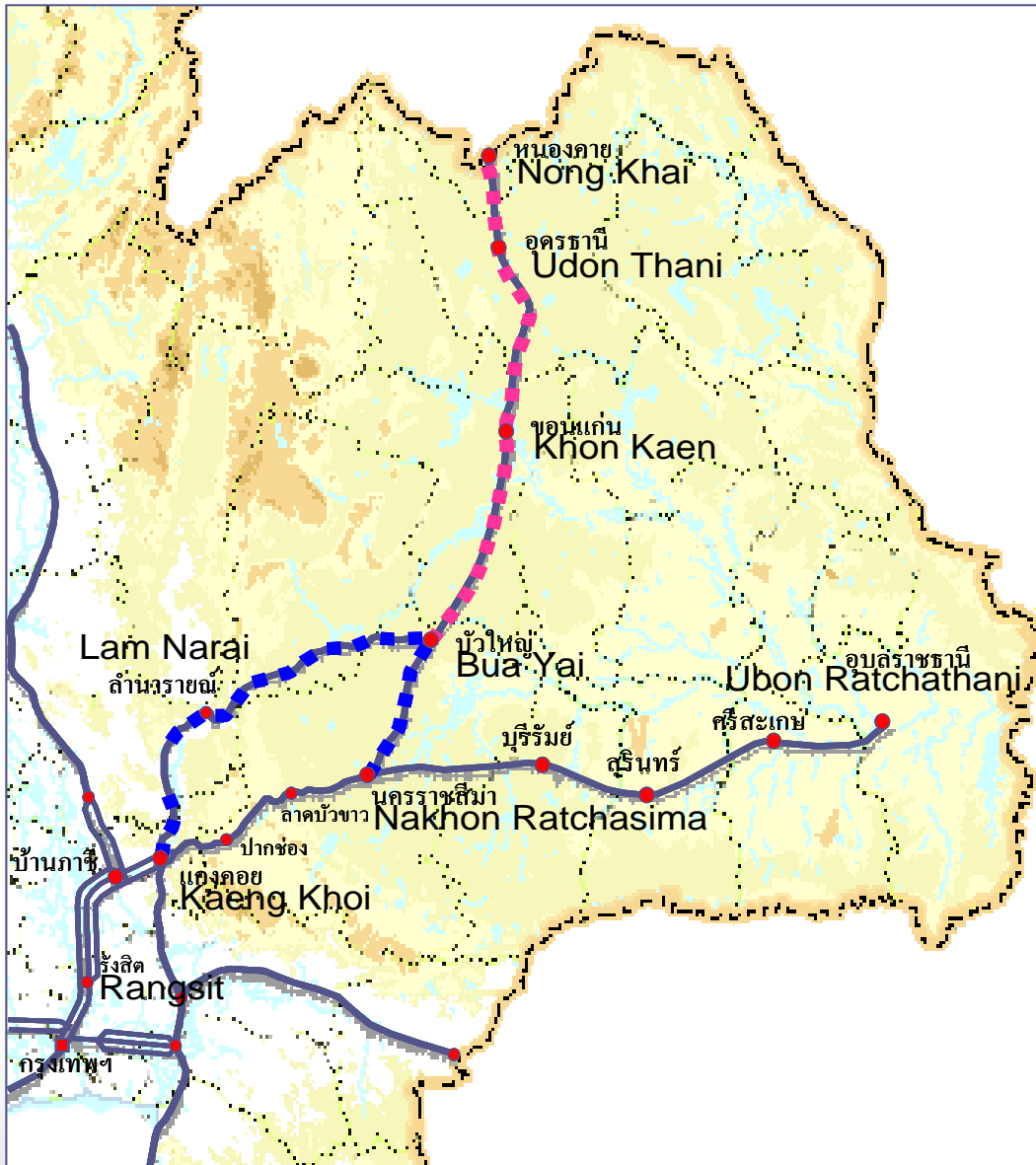
## ELECTRIFIED DOUBLE TRACK PROJECTS - LOCATION MAP -



# MYAMNAR

**No additional SKRL-related projects reported apart from  
Feasibility Study on Thanpyuzayat – Three Pagoda Pass -  
Namtok**

# THAILAND [REHABILITATION]



## Track Rehabilitation Project Phase 5,6

■ ■ ■ ■ Phase 5 (308 km)

Kaeng Khoi – Kaeng Suaten (37 km)

Suranarai – Bua Yai (192 km)

Jira – Bua Yai (79 km)

Budget 8,070 million Baht

■ ■ ■ ■ Phase 6 (278 km)

Bua Yai – Nong Khai (278 km)

Budget 6,549 million Baht

**COMPLETED MAY 2014**



# THAILAND [UPGRADE]

## DOUBLE TRACK UPGRADING

1. Map Kabao - Thanon Chira Junction (132 km)
2. Thanon Chira Junction - Khon Kaen (185 km)
3. Nakhon Pathom - Hua Hin (165 km)
4. Prachuap Khiri Khan – Chumphon (167 km)



# FUTURE INTEREST: EXTENSION TO SURABAYA



# SEAMLESS OPERATION

- **Objective: Identify & develop minimum requirement for interstate rail traffic within SKRL network**
- .
- **Aspects:**
  - **Infrastructure, Rollingstock & Maintenance**
  - **Operation**
    - **Communication**
    - **Speed**
    - **Crew change**
    - **Control & tracking**
    - **Security & safety**
  - **Legal & Procedural**
    - **Multi-party Cross Border & Operation Agreement**
    - **CIQ procedures**
- **Status: Analyzing data provided by member countries**





# COUNTRY REPORT [MALAYSIA]

*Ad-Hoc Expert Group Meeting for Cooperation on Facilitation of  
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# CROSS BORDER RAIL TRAFFIC

## Current:

1. Joint Traffic Agreement between Malayan Railway and State Railway of Thailand [**1 January 1954**] still in force.
2. Train operation in Singapore relocated from Tanjong Pagar to Woodlands Train Checkpoint [**1 July 2011**]
  - Cargo movement by rail no longer enter Singapore
  - Only passenger train stops at WTCP [8 trips daily]



# CROSS BORDER RAIL TRAFFIC

## **Latest development:**

1. Singapore agrees with Malaysia's request to operate shuttle train service between Johor Bahru Sentral and WTCP
  - Total : 26 trips daily
  - Phase 1: 14 trips daily
  - Increase to 26 trips within a year

## **Future Project:**

1. Expansion of Padang Besar Cargo Terminal
  - To be considered under 11th Malaysia Plan (2016-2020)
  - Estimated cost MYR12 Million
  - Effect: increased traffic to 8 freight trips daily



# KTMB Information

*Regional Meeting for Cooperation on Facilitation of International Railway Transport*

*S. Mahendran*

*General Manager, Operations*

*13-15 October 2014*

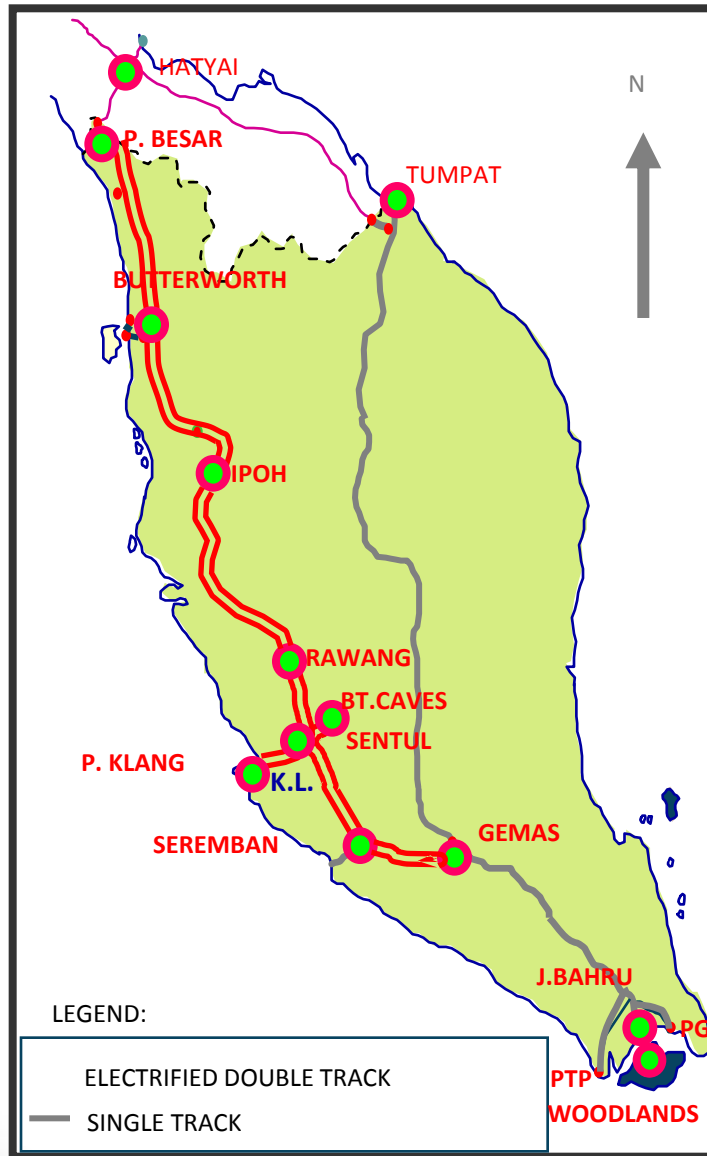
# *Table of Contents*

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- Current Electrified Double Track Projects
- Statistics of Cargo Services
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- Major Challenges in Cross Border Rail Transport
- Proposed Initiatives/Measurement for Improvements



THANK YOU

# KTMB's Network



- **Route Length: 1,641.415 km**
- **Track Gauge: 1,000 mm**
- **No. of Stations: 103**
- **No. of Halts: 65**

## **Completed Electrified Double Track (436 route km):**

- Rawang – Seremban: (105 km)
- Batu Caves – Port Klang (53 km)
- Rawang - Ipoh: (180 km)
- Seremban – Gemas (98 km)

## **Current Electrified Double Track (337 route km):**

- Ipoh to Padang Besar : 329 km (2014)
- Subang Jaya – Subang Airport : 8 km (2016)
- Gemas – JB Sentral : 197 km (2019)

## **Single Track (801 route km):**

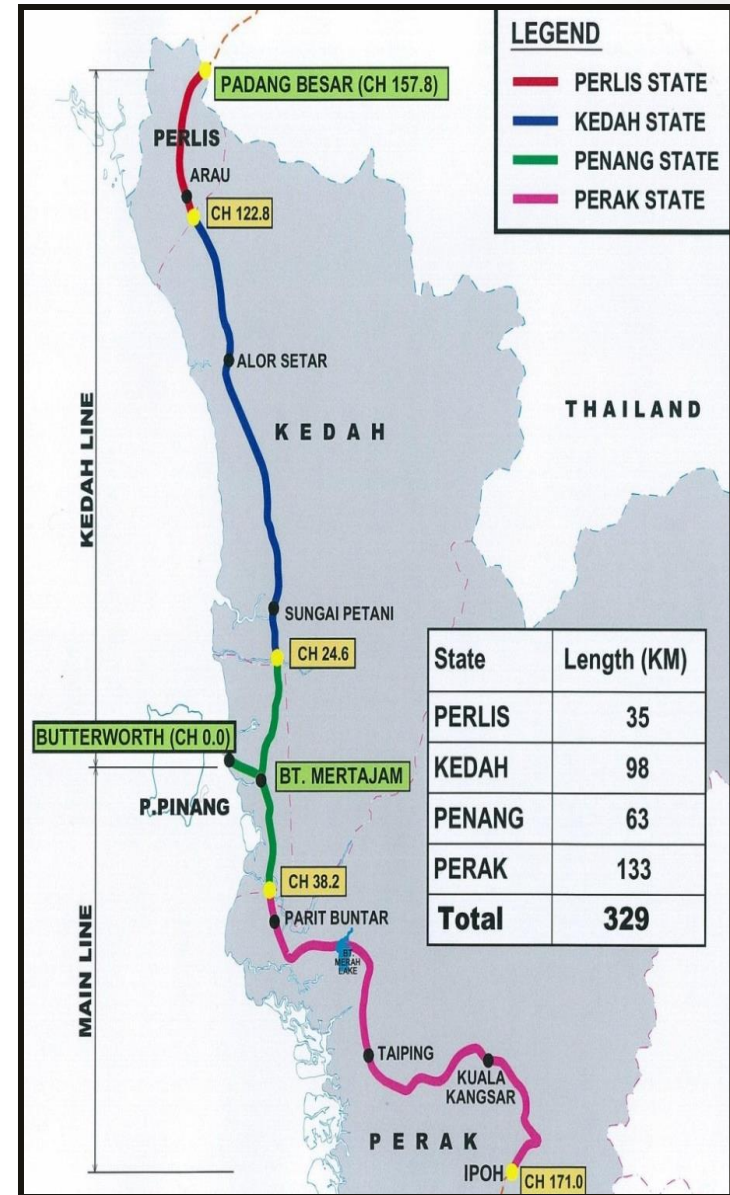
- Gemas – Woodlands: (197 km)
- Gemas – Tumpat: (528 km)
- Pasir Gudang Line (29 km)
- PTP Line (32 km)
- West Port, Pulau Indah (15 km)



# Current Electrified Double Track Projects

## Ipoh – Padang Besar

- Double Track 329km, 15 stations, 8 halts, 1 swing bridge, 2 tunnels (Berapit 3.3km and Larut 0.33km) installation of modern signalling, communication and electrification system.
- Contractor : MMC-Gamuda JV Sdn Bhd
- Contract Cost : RM12,485,000,000
- Site Possession : 08 Jan 2008
- Completion Date : 07 Nov 2014
- PMC : Konsortium Kinta Samudra – Emenea - Techart
- Progress : 99.56% completed (as of 31 August 2014)
- The spine line i.e. from Ipoh to Padang Besar completed on 7 June 2014 and the spur line i.e. from Bukit Mertajam is scheduled to complete on 7 November 2014.



# Current Electrified Double Track Projects



## Gemas – JB Sentral

- Construction of 197km double track, station buildings and installation of modern signalling, communication and electrification system;
- Preliminary design and requirements/ Statements of Needs completed;
- Relocation of squatters, demolition of illegal structures along the railway reserve and land acquisitions are in progress



# Statistics of Cargo Services

- In 2013 - average of 45 cargo trains running daily across the KTMB network
- On average, 60% of revenue contributed from conventional cargo whilst the rest is from containerized cargo.

| <u>Cargo Categories</u>  | <u>Commodity</u> | <u>Throughput 2013 (Tonne)/(Teus)</u> | <u>Revenue (%)</u> |
|--|------------------|---------------------------------------|--------------------|
| <b>Containerized</b><br> | Containerized    | 350k Teus                             | 40.0               |
|  |                  |                                       |                    |
| <b>Conventional</b><br> | Cement           | 2.60 Mil Tonnes                       | 39.5               |
|  | Sugar            | 0.41 Mil Tonnes                       | 7.6                |
|  | Ceramic          | 0.10 Mil Tonnes                       | 6.0                |
|  | Sand             | 0.26 Mil Tonnes                       | 3.6                |
|  | Urea             | 0.34 Mil Tonnes                       | 3.3                |
|  |                  | <b>3.71 Mil Tonnes</b>                |                    |

# Current Measures for Facilitation of International Railway Transport

- Currently, there are 2 types of services i.e passengers and cargo services crosses into Thailand. The cross border passengers and cargo services are facilitated by the Joint Traffic Agreement 1954 between State Railway of Thailand (SRT) and KTMB
- Under the Joint Traffic Agreement 1954, table below shows the arrangement for cross border train operations between Malaysia and Thailand

| No | Description                                | Measures   |
|----|--|--|
| 1. | Rolling Stocks (Locomotive, coach & wagon) | <ul style="list-style-type: none"> <li>▪ <b>Two landbridge train services travelled up to Bangsue every month</b></li> <li>▪ Intercity services provide cross border train services from/to KL – Hatyai on a daily basis:</li> <li>▪ SRT 's international passenger train travel from/to Bangkok - Butterworth on a daily basis</li> </ul> |
| 2. | <b>Locomotives</b>                         | <ul style="list-style-type: none"> <li>▪ <b>KTMB locomotives travels to Bangsue - 1 trip/ month</b></li> </ul>   |
| 3. | Documents                                  | <ul style="list-style-type: none"> <li>▪ Consignment Note</li> <li>▪ Invoice</li> <li>▪ Custom 8 Form</li> </ul>   |
| 4. | Crew                                       | <ul style="list-style-type: none"> <li>▪ SRT and KTMB crews are only allowed up to Padang Besar station</li> <li>▪ Exchange of crew has been done at the Padang Besar station</li> </ul>   |

# Major Challenges in Cross Border Rail Transport

| No | Challenges   |
|----|--|
| 1  | Shortage of locomotive faced by SRT has contributed to the reduced number of landbridge train.       |
| 2  | Unable to optimise locomotive hauling capacity within the SRT's rail network system due to old track |
| 3  | Limitation of area at Padang Besar yard has limited the growth for South Thai Cargo (STC) train      |



## Proposed Initiatives/Measurement for Improvements

| No | Initiatives/measures           | Expected role of ESCAP  |
|----|--------------------------------|---|
| 1  | Yard expansion at Padang Besar | To provide technical expertise on how to operate yard effectively |