

Building Resilient Transport (Indonesia's Experience)

Dr. Elly Sinaga MSc.

Director General of Research and Development Agency
Ministry of Transportation of Republic Indonesia

9th Regional EST Forum in Asia
Kathmandu - November 18, 2015

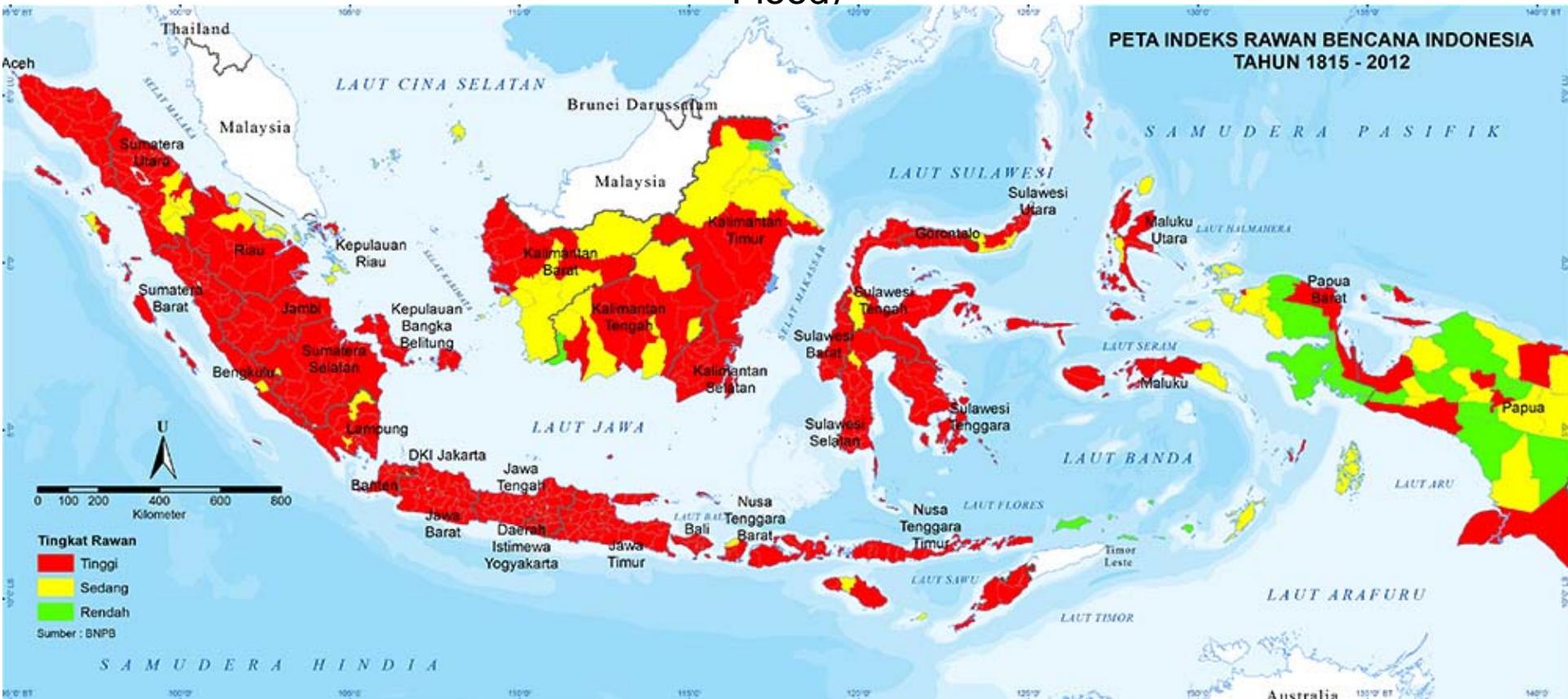
A U S T R A L I A



INTRODUCTION

Disaster Potential Threat

(Earthquake, Volcanic Eruption, Tsunami, Landslide, Forest and Land Fire, Flood)



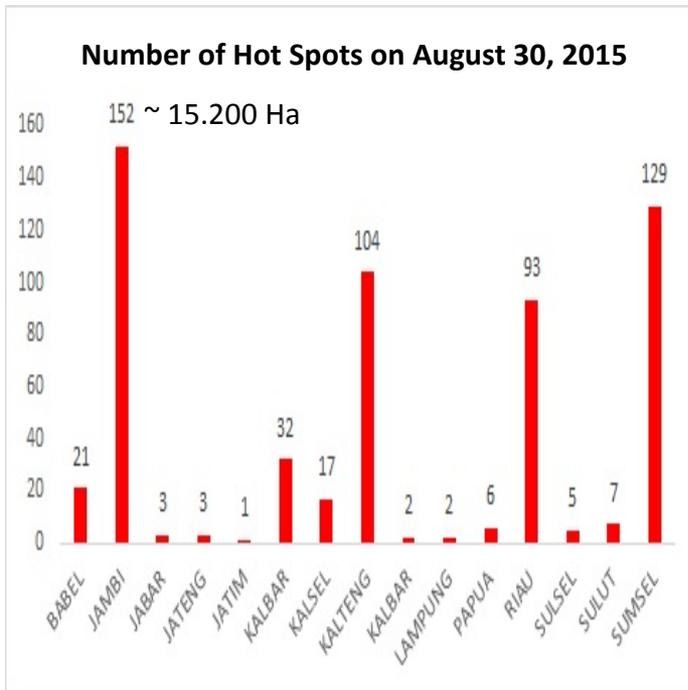
Recent Disaster:

- 15 Volcanos on “warning” status (November 15, 2015)
- Smoke Disaster due to Forest Fire (peatland on dry season and illegal land diversification)



IMPACT OF SMOKE DISASTER TO THE TRANSPORTATION ACTIVITY

Location Point of Smoke Disaster



Statistic of land and forest fire events are based on the hot spot data.
 One hot spot represent 1.1 km x 1.1 km area or around 100 Ha with the surface temperature treshold between 45 – 47 °C



Figure: Hot spot condition on 30 August 2015 (source: analyzed from hotspot MODIS with confidence level > 80)

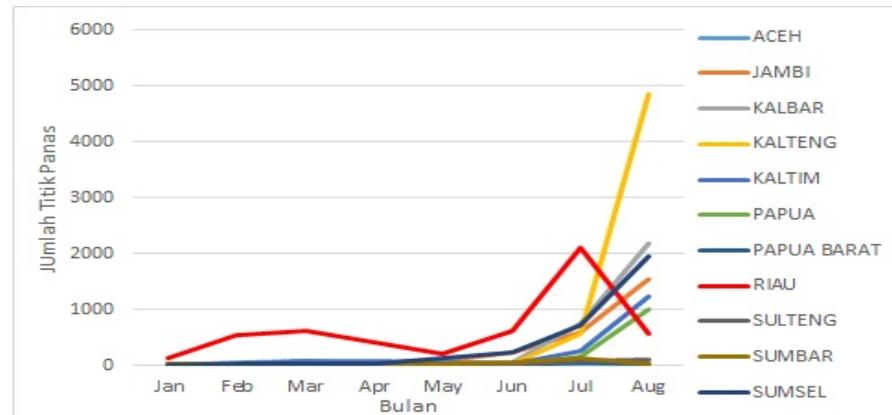


Figure : statistic of monthly hot spot until August 2015 (source: analyzed from Terra and Aqua satellite)

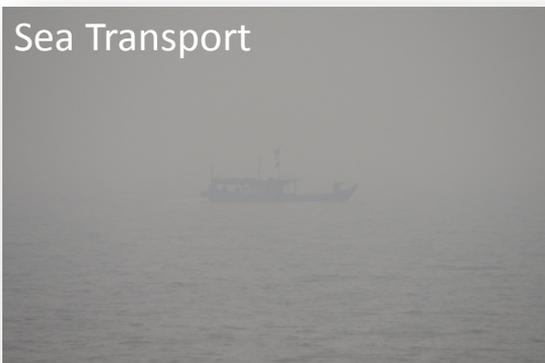
Impact of the Smoke Disaster on Transportation Activity



Motorcycle rider passing through street which smokey haze from forest fire in Pekanbaru, Riau Province on Monday (14/9). The smokey haze resulted in the **low visibility limit no more than 100 m** in the morning



Garuda Indonesia airlines reported that at least **449 of their scheduled flight are cancelled** for the period 3 to 20 September 2015. The number of flight which are cancelled as follow:

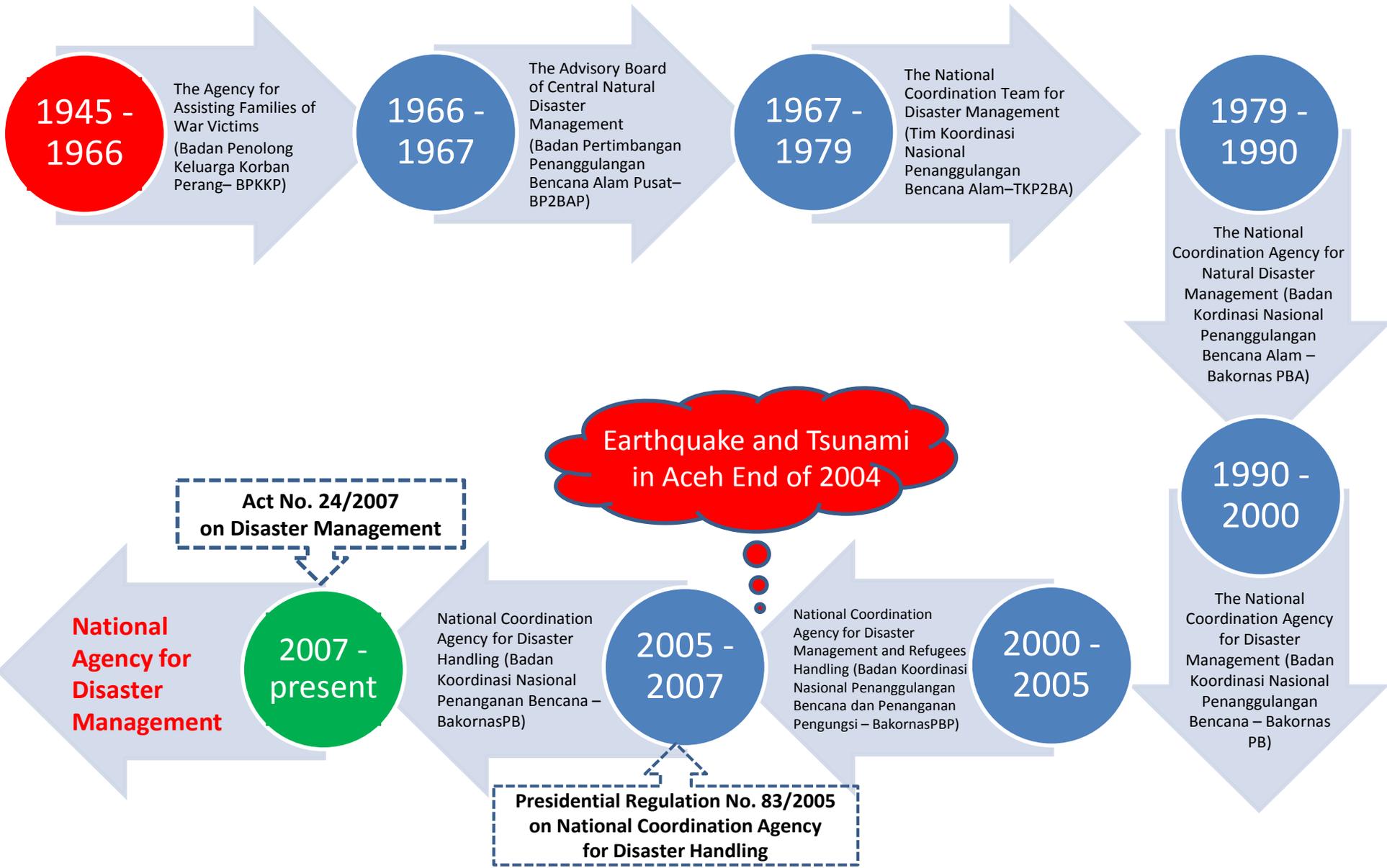


- **Visibility is limited to 50 - 100 m in the morning**
- Speed of the vessel must be reduced
- **Longer voyage time of the vessel: from Muara to Sampit normally took 4 hours become 6 hours** when smokey haze occurred which is increasing the fuel consumption
- Smaller boat operated on sea are unseen



DISASTER MANAGEMENT SYSTEM IN INDONESIA

History of Disaster Management System



Synergy on Disaster Management
between
Ministry of Transportation (MoT)
and
National Disaster Management Authority (BNPB)
No. PJ. 19 , March 11, 2014

1. Pre Disaster Stage

- a. Disaster Prevention
- b. Mitigation and Disaster Preparedness

2. Emergency Response Stage

- a. Rapid Disaster Assessment
- b. Comply the basic needs in transportation field
- c. Restore the vital facilities and infrastructure of transportation

3. Post Disaster Stage

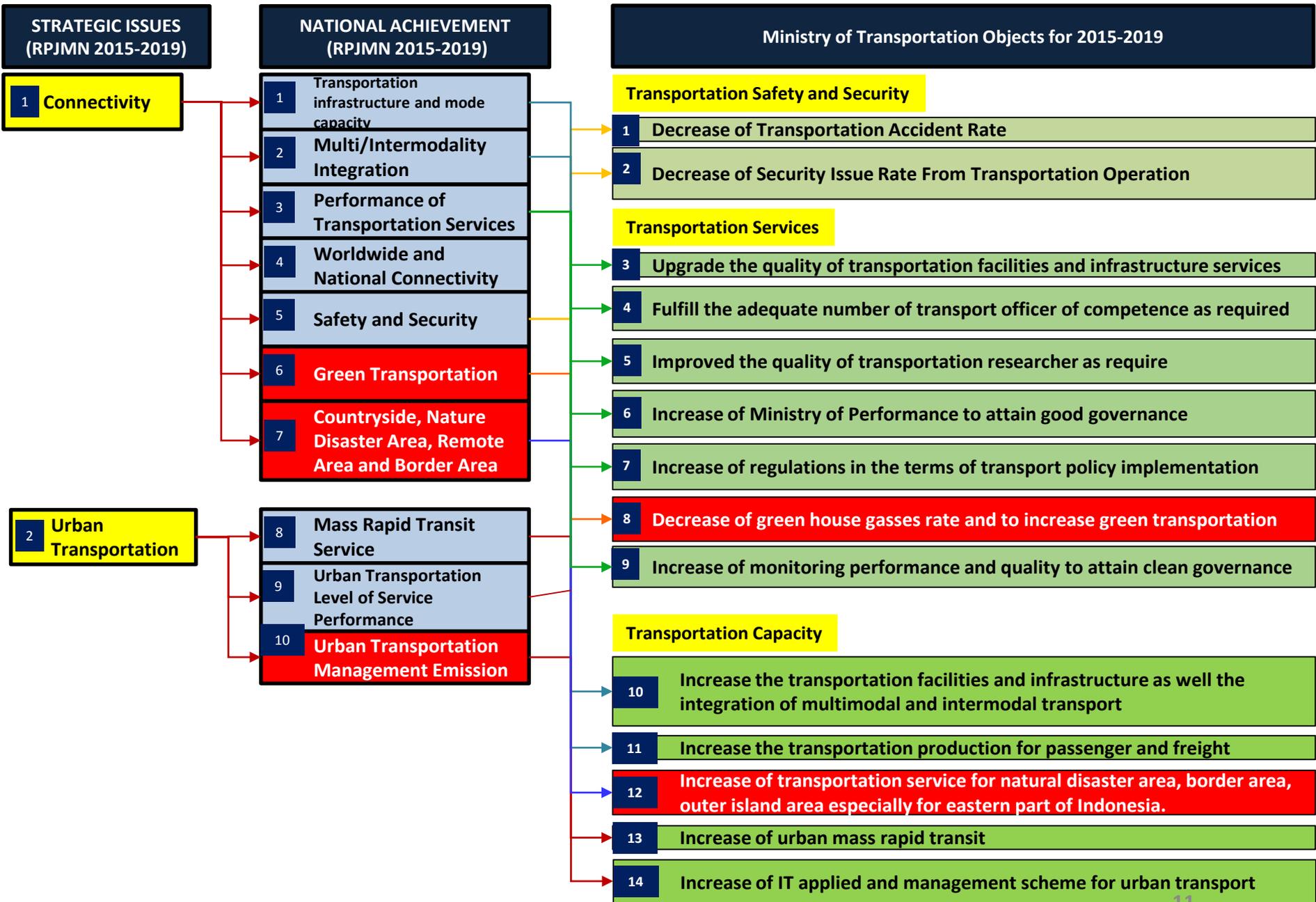
- a. Rehabilitation in The Transportation Field
- b. Reconstruction in Transportation Field

4. Monitoring and evaluate as well exchange the data and information in order to upgrade the duties and function the parties



MoT STRATEGIC PLAN 2015 - 2019 ON TRANSPORTATION SERVICES/ INFRASTRUCTURES ON NATURAL DISASTER AREA

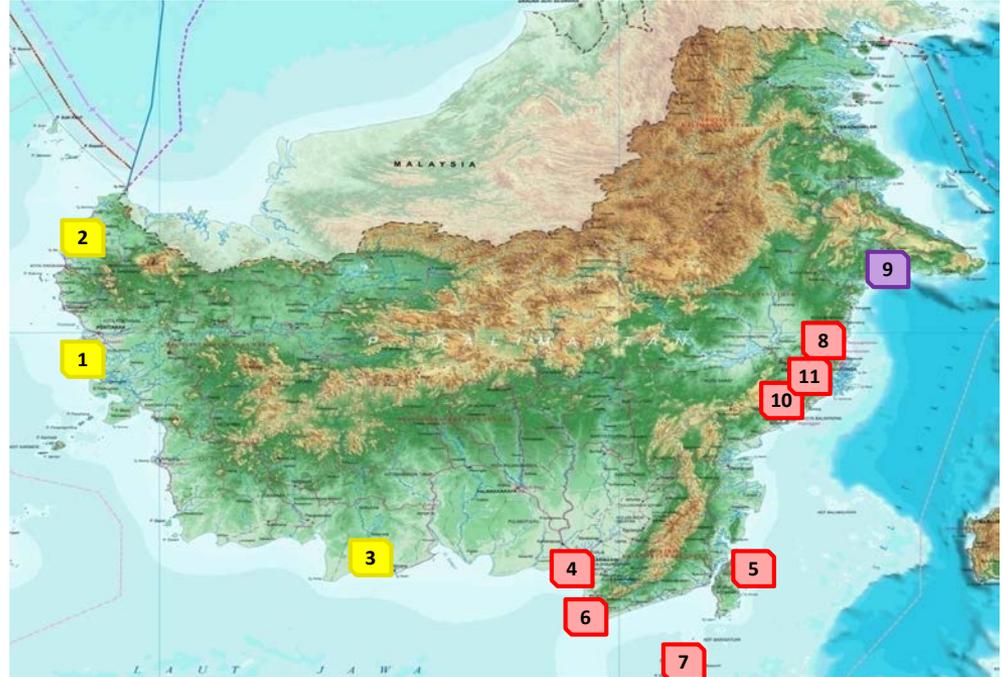
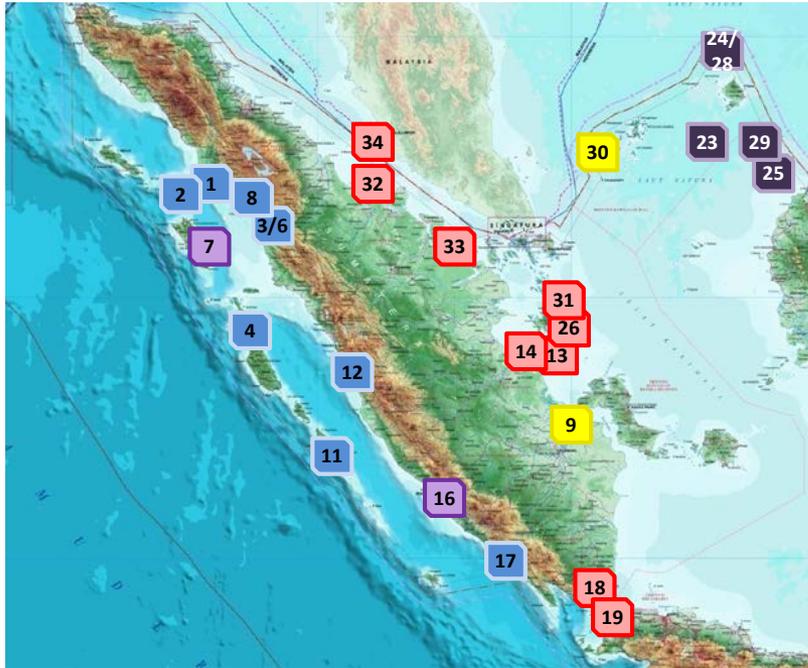
National Achievement and MoT Strategic Plan 2015-2019





POLICY 1 :
Transport Infrastructures and Facilities
Development in Potential Disaster Area

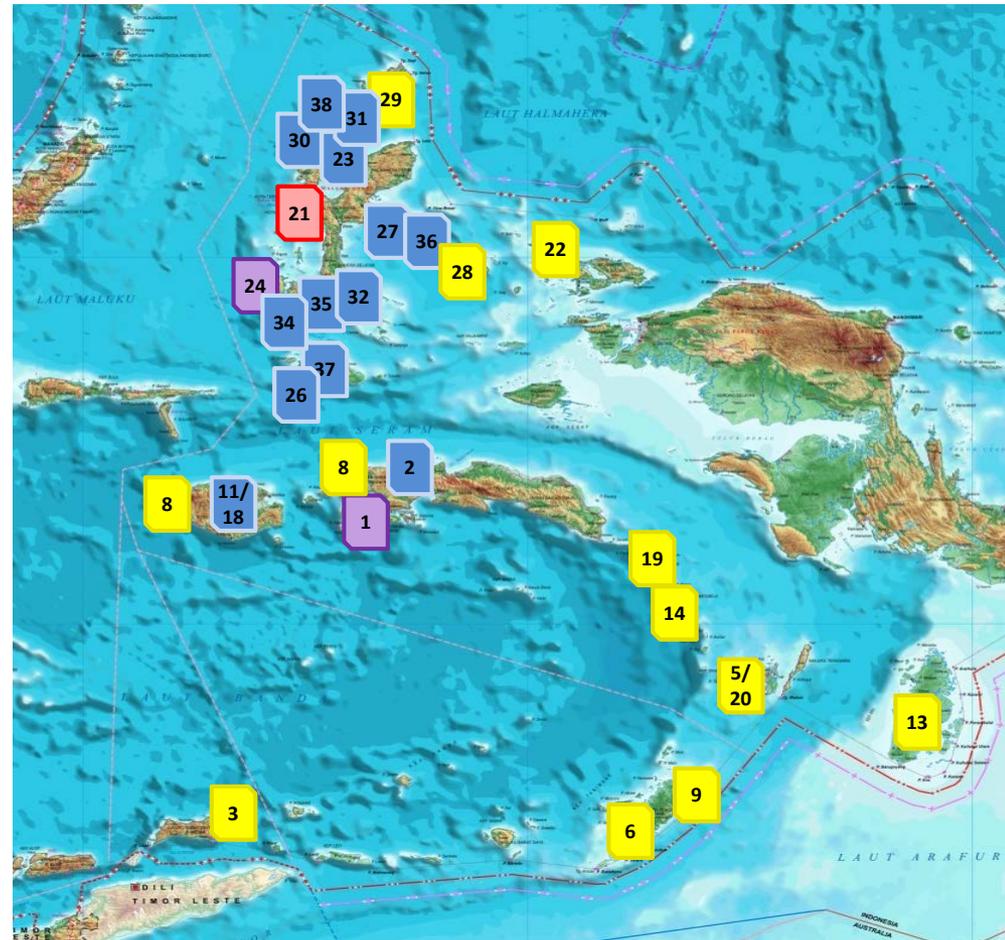
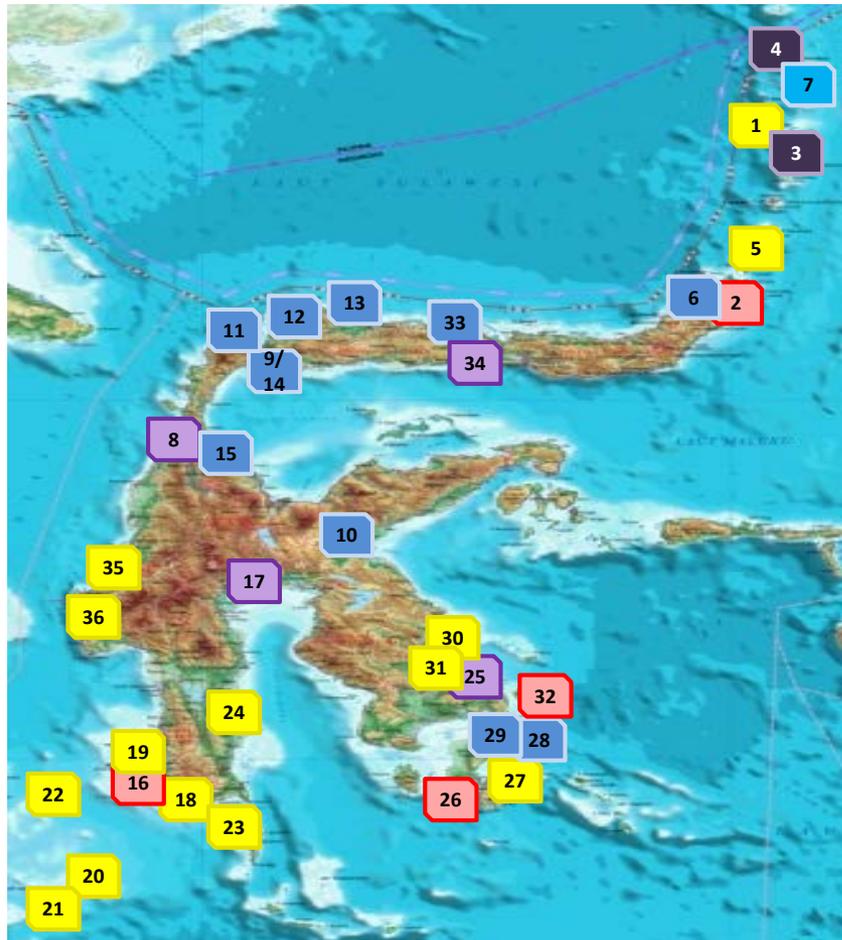
Location of Port Facilities Development in Potential Disaster Area for 2015 – 2019 in Sumatera, Kalimantan, Java and Nusa Tenggara



Remarks:

- PORT IN DISASTER/POTENTIAL DISASTER AREA
- PORT IN UNDER DEVELOP AREA
- PORT IN DEVELOPING, NOT BORDER AND NOT IN POTENTIAL DISASATER AREA
- PORT IN UNDER DEVELOP AND BORDER AREA

Location of Port Facilities Development in Potential Disaster Area for 2015 - 2019 in Sulawesi and Maluku Islands



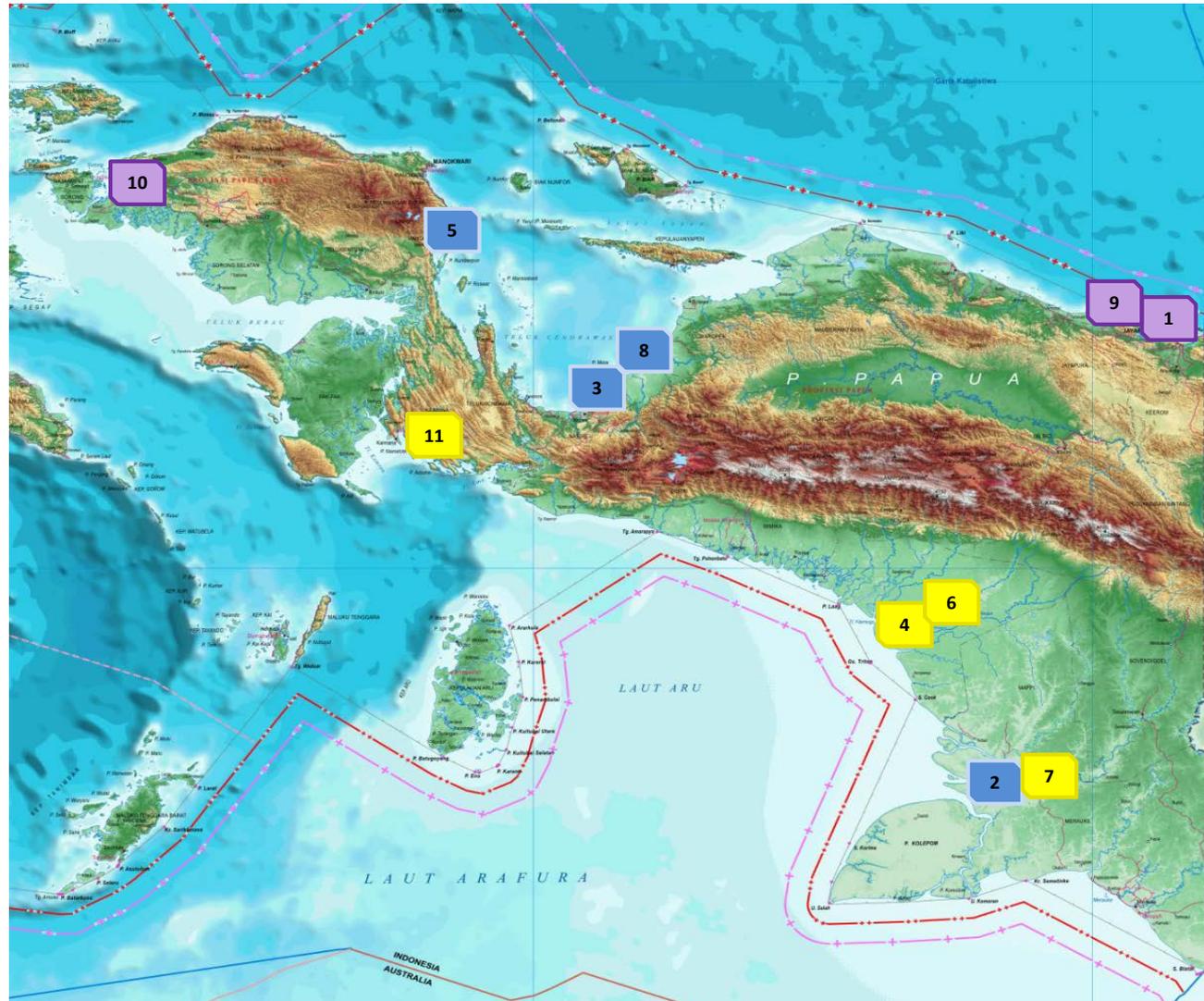
Remarks:

- | | |
|--|---|
|  PORT IN DISASTER/POTENTIAL DISASTER AREA |  PORT IN DEVELOPING, NOT BORDER AND NOT IN POTENTIAL DISASTER AREA |
|  PORT IN UNDER DEVELOP AREA |  PORT IN UNDER DEVELOP AND BORDER AREA |

Location of Port Facilities Development in Potential Disaster Area for 2015 - 2019 in Papua Island

Remarks:

-  PORT IN DISASTER/POTENTIAL DISASTER AREA
-  PORT IN UNDER DEVELOP AREA
-  PORT IN DEVELOPING, NOT BORDER AND NOT IN POTENTIAL DISASTER AREA
-  PORT IN UNDER DEVELOP AND BORDER AREA



Location of Airport Facilities Development in Potential Disaster Area



Airport Emergency Facilities Services Improvement for 2015-2019





POLICY 2 :
Urban Transport Development
Toward A Safe; Climate Adaptive and
for Building Resilient Society

Issues on Urban Transport

- Actions to reduce traffic accidents and air quality → Vulnerable road transport → Motorcyclist !
- Land Use and Transport not at Integrated Plan !
- Actions to reduce climate change, mitigations and adaptations → what integrated transport policy options



Actions on Urban Transport Resilient

- Jakarta Metropolitan (JABODETABEK; consist of 9 Municipalities) → according to **Presidential Regulation** (no 103/2015) will be manage by One Body so called “Jabodetabek Transport Management Agency (JTMA)” → under MoT
- **The Grand design will be issued by Presidential Regulation** → Public transport modal share (60% in 2030) ; 80% road network covered by Public transport; Accident rate reduced to 50%; Implementing “Push_Pull” policy, ie TOD; TDM; ERP; Parking Policy; construct Pedestrian Pathways ; Electric Motorcycle
- New policy for public transport priority ; Constructing LRT (Elevated) ; MRT; BRT for Jabodetabek : High speed train(Jakarta_ Bandung) :
- 2018 accomplish for certain network
- JTMA should operated next middle of December 2015

Impacts on Urban Transport Resilient

Impacts:

- Climate change impact to Transport → Reduced private car → Reduce energy → Reduced emission
- Vulnerable Road User, motorcyclist will be shifting to more resilient transport of public transport



Thank You