



*EGM on Road Maintenance and Management*  
*29-31 May 2013, Hanoi, Viet Nam*

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# Major issues and challenges in road maintenance for Asia and the Pacific

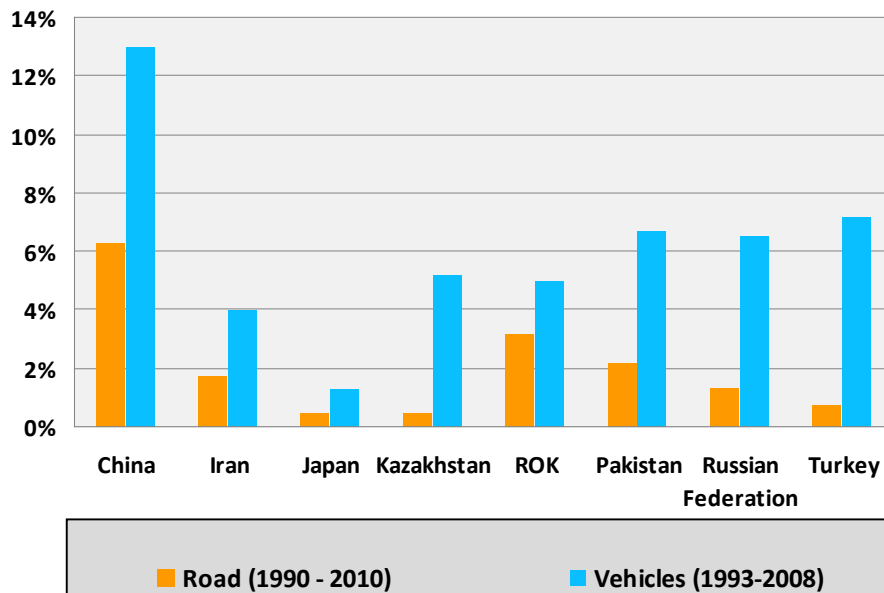


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# State of Asian roads

**Road and Vehicle Growth Rate**



Country	Length	% paved	car/1000
India	4.1 m	48	10
Pakistan	260,420	66	9
Bangladesh	311,065	10	1
Bhutan	6,920	52	38
Lao	39,600	15	2
Myanmar	142,395	22	5
Nepal	20,264	38	3
Cambodia	39,600	15	18
Thailand	115,680	99	54
Sri Lanka	99,875	81	19
Vietnam	222,179	19	13

Share of transport investment:

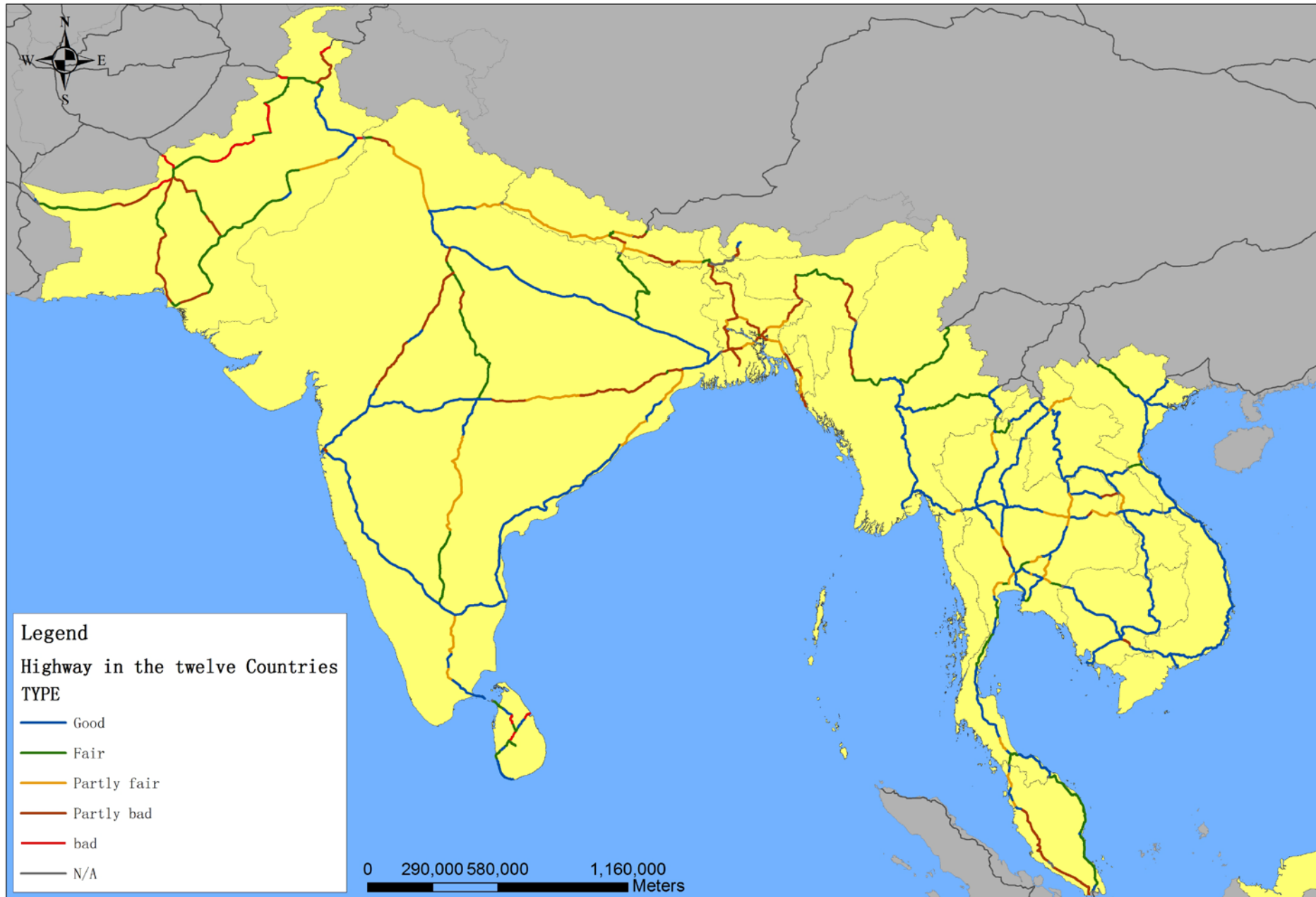
- Highways- 75%,
- Railway- 7-15%,
- IWT- 3-7%

# Why Road Maintenance is an Issue?

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- ❑ Increased attention to new roads
  - ❑ Lack of sufficient funding for maintenance
  - ❑ Economic consequences of bad roads
  - ❑ Varying state of Asian roads
    - Percentage of paved road varies from 3% to 100%
    - Surface condition - Good, Fair, Poor
    - Asian Highway, 14, 300 km – includes important national roads
      - ❑ 34% are in fair (25%) and bad (9%) condition
      - ❑ 7, 000 km have gravel or earthen pavement (5%)
      - ❑ AC-67%, PM, SB and DB-23%, CC-5%
      - ❑ 10,000 km do not meet minimum standards
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# Highway Condition



# Road maintenance what it is?

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- ❑ Activities required to keep the road system in an appropriate condition
    - Routine-(Pot holes, clearing drains, signs)
    - Periodic/cyclic - (Resealing, resurfacing)
    - Preventive maintenance- sealing cracks and joints
    - Emergency- (restoration of traffic, slide clearance)
  - ❑ Does not include:
    - Rehabilitation- strengthening pavements, widening
    - New Roads
    - Upgrading- standards, geometry, alignment
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# Why does maintenance makes financial sense?

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- ❑ Every \$ spent in maintenance saves 3 \$ in VOC
- ❑ Reduce vehicle operating costs
  - Less fuel
  - Less breakdown and need of spare parts
  - Increase vehicle line
- ❑ Saves additional foreign exchange for more fuel, earlier vehicle replacement, additional spare parts
- ❑ Reduce production costs and consumer prices
- ❑ Increases the competitiveness of the economy
- ❑ Preserve and safeguard road investment and assets
- ❑ Reduce road accidents

Thus, overall contributes to the national economy

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# Challenges for maintenance

- ❑ Rational planning and allocation of funds
- ❑ Lengthy contracting process
- ❑ Budget cycle
- ❑ Fund release from Treasury
- ❑ Capacity of planning and implementation
- ❑ Transparency and accountability
- ❑ Ineffective and inefficient use of funds
- ❑ Quality of works
- ❑ Backlog maintenance - Higher cost of rehabilitation
- ❑ Road condition assessment survey



# Overloading



预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_6991](https://www.yunbaogao.cn/report/index/report?reportId=5_6991)

