

OUTCOMES OF THE REGIONAL EST FORUMS IN ASIA ~ MOVING FROM AICHI TO POST-2015 DEVELOPMENT ERA



Public Symposium on Environmentally Sustainable Transport (EST) in Asia

(19 March 2015, Lecture Hall, Graduate School of Environmental Studies Building, Nagoya University)

Choudhury Rudra Charan Mohanty
Environment Programme Coordinator, UNCRD



United Nations Centre for Regional Development

ASIAN EST INITIATIVE

- To create a new paradigm in the transport sector in Asia towards low carbon and sustainable transport (integrating social equity, economic prosperity, and environmental conservation) UNCRD has been promoting the **Asian EST Initiative** since 2004
- To build a common understanding across Asia on essential elements of EST and to create a political consensus on the need for an **integrated approach** to deal with multi/cross-sectoral environment, health and transport issues, including climate change, through **interagency coordination** (MoE, MoT, MoUD, MoH, etc.)

Major components:

- High level **Regional EST Forum** in Asia
- Regional/national **EST training** programs
- Technical assistance for **national EST strategies**
- Asian **Mayors' Policy Dialogue** on EST
- Rio+20 Voluntary Commitments



(24 EST Member Countries – ASEAN, South Asia, East Asia, and Russian Federation)



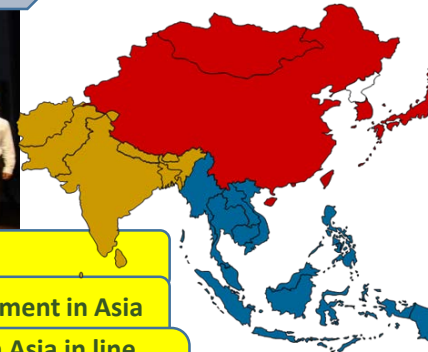
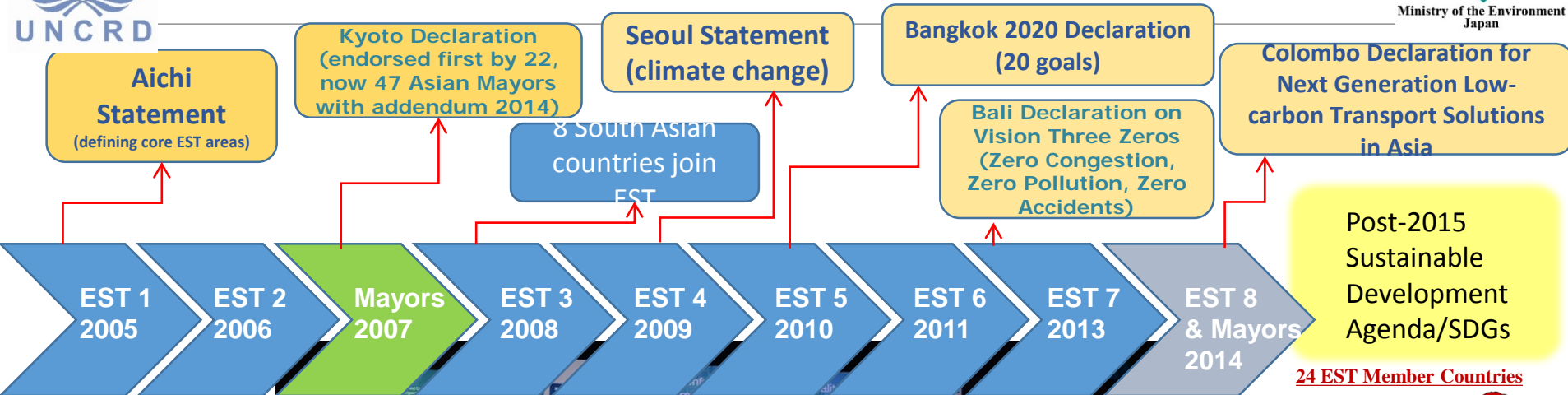


Environmentally
Sustainable
Transport

ASIAN EST INITIATIVE



Ministry of the Environment
Japan



Awareness Raising on Sustainability Transport in Asia

Formulation of National EST Strategies (Philippines, Viet Nam, Cambodia, Lao PDR, Indonesia, Nepal)

Development Banks start shifting funding to Sustainable Transport

Promotion of Green Freight in Asia/Green Freight Agreement in Asia

Greater focus on sustainable transport, low carbon solutions for livable society in Asia in line with Rio+20 outcome – *The Future We Want*, SG's Climate Summit (2014), Post-2015 Development Goals/SDGs.

Avoid trips
Shift to most efficient mode
Improve efficiency

Aichi Statement (2005) -> Integrated EST Strategy

Integrated EST strategies – result not only in the improvement of human health through reduction of urban air pollution, but also the reduction of GHG emissions, deaths and injuries from road accidents, harmful noise levels, and traffic congestion

(Aichi Statement, 2005)



Avoid – avoid or reduce travel or the need to travel

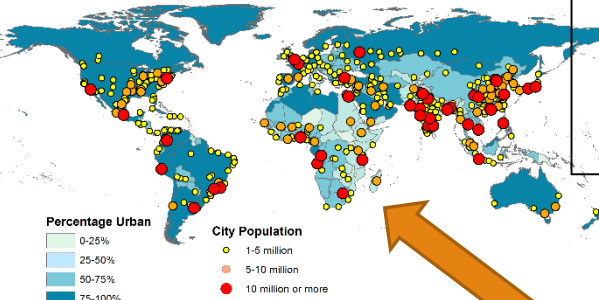
Shift – shift to more environmentally friendly modes

Improve – improve the energy efficiency of transport modes and vehicle technology

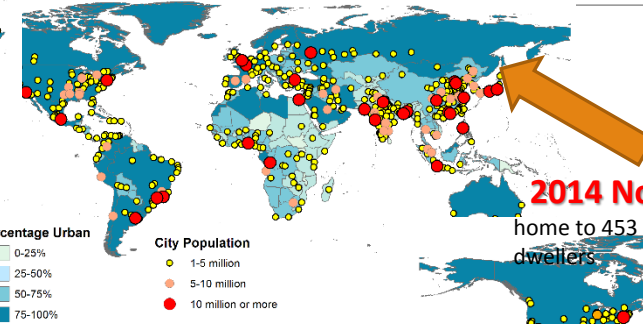


Shared issues ~ Urbanization Trends & Implications

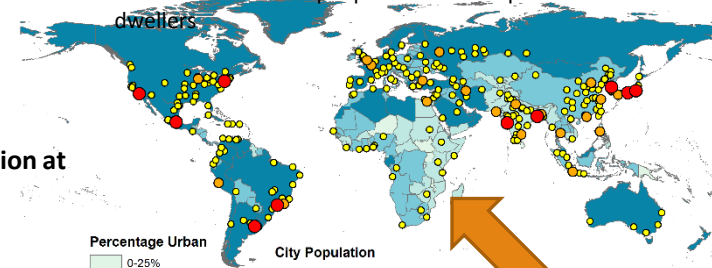
- 1) Can the current level of urban infrastructure meet various demands ~ safe drinking water, energy, housing, healthcare, employment and transport, etc.?
- 2) Is the current level or provision of urban transport infrastructure and services able to cope up with the level of urbanization? Or there is a huge infrastructure deficit in most Asian cities at current level of urbanization ?



2030 No. of Mega Cities-41



2014 No. of Mega Cities-28 <16 are in Asia>
home to 453 million people or about 12 percent of the world's urban dwellers

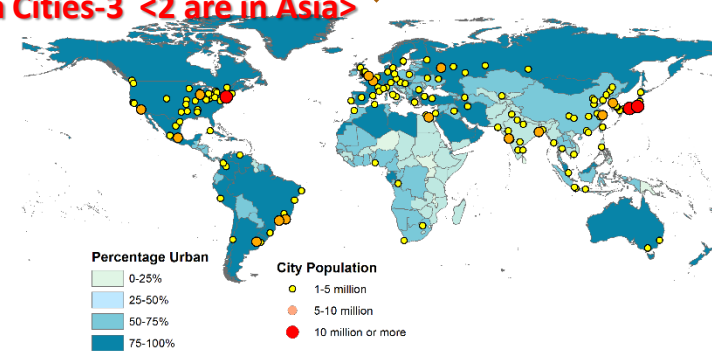
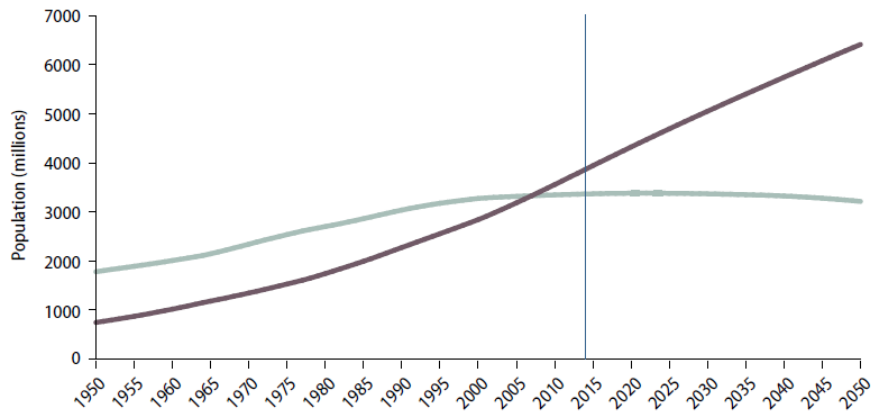


1970 No. of Mega Cities-3 <2 are in Asia>
Tokyo and Osaka in Japan

1990 No. of Mega Cities-10 <5 are in Asia>

153 million people or slightly less than 7% of the global urban population at that time

that time

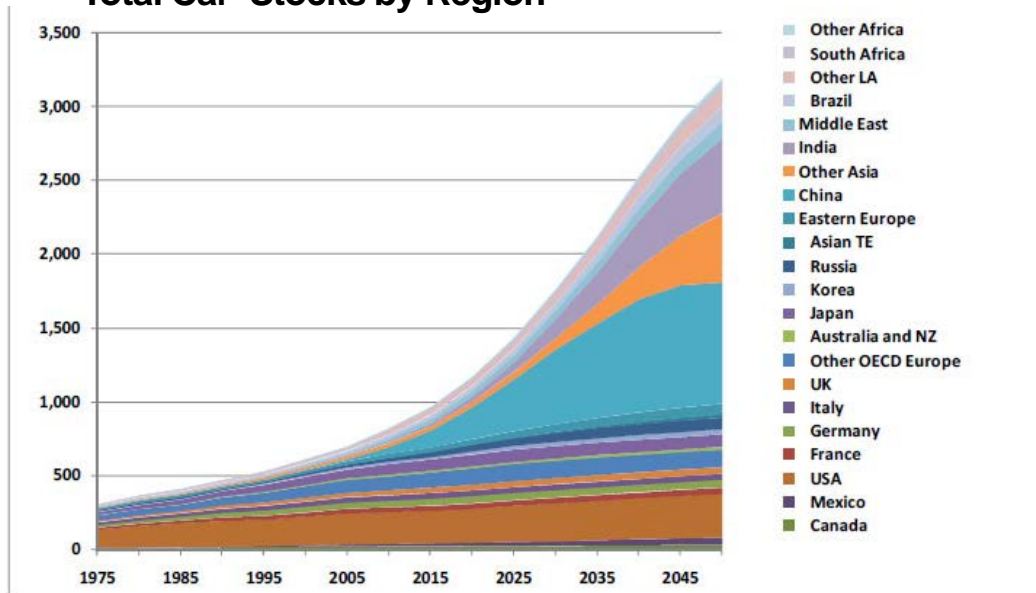


Shared issues

Car Ownership Projection by Region

ETP Vehicle Ownership Projections

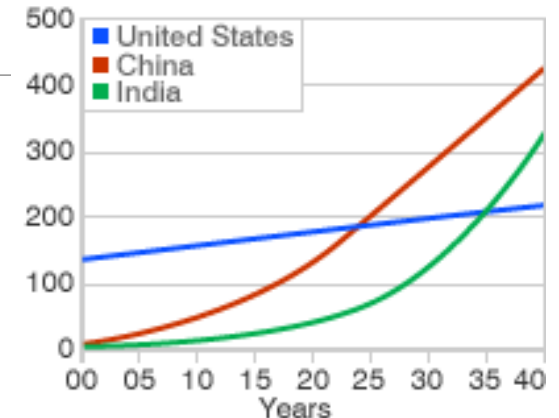
Total Car Stocks by Region



ETP-Energy Technology Perspectives 2008, IEA

GLOBAL CAR OWNERSHIP

forecast for car ownership
millions



SOURCE: Goldman Sachs/Economist

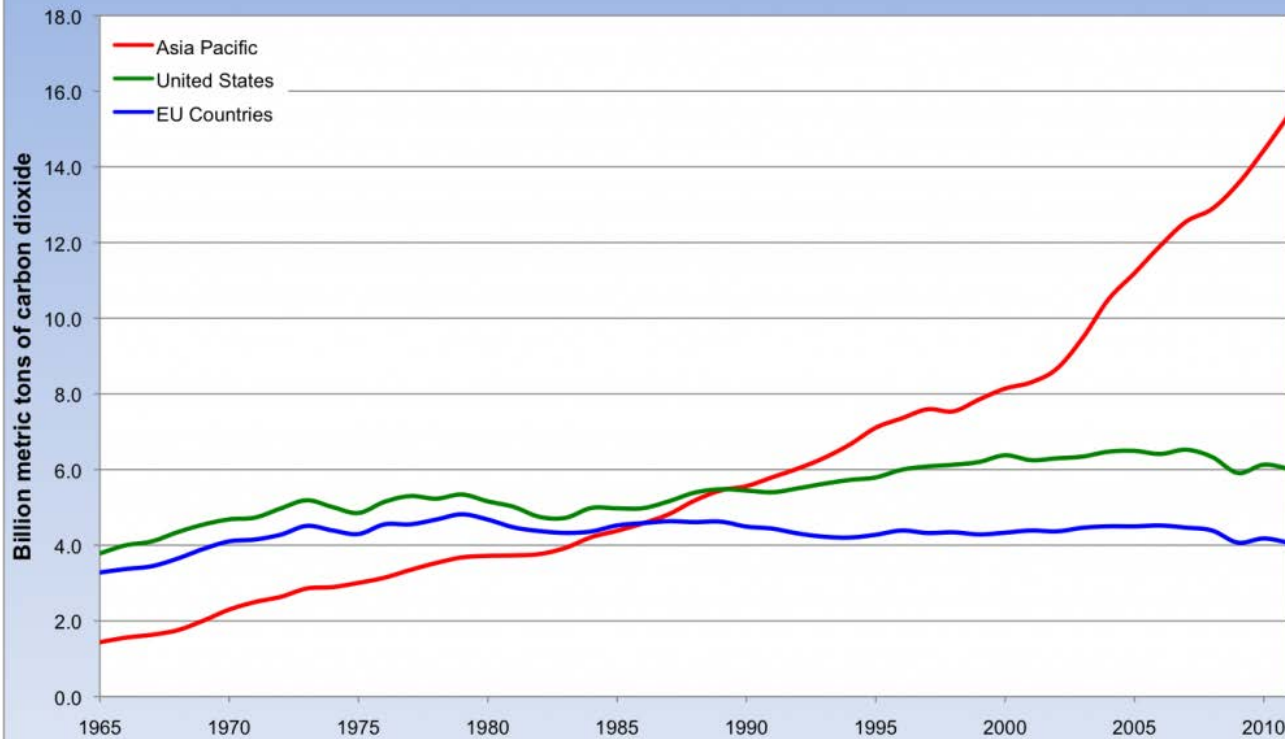


What leads to a car oriented society where as many countries are proud to be public transport and bicycle oriented society?

Shared issues

Asia's transport sector emissions are a significant contributor to the global greenhouse gas (GHG) emissions that leads to climate change and global warming. If present trend persist, by 2035 the transport sector will become **the single largest GHG emitter accounting for 46% of global emission**, and by 2050 that will reach up to 80% (ADB, 2012).

CO₂ Emissions 1965-2011



Data source: 2012 BP Statistical Review of World Energy

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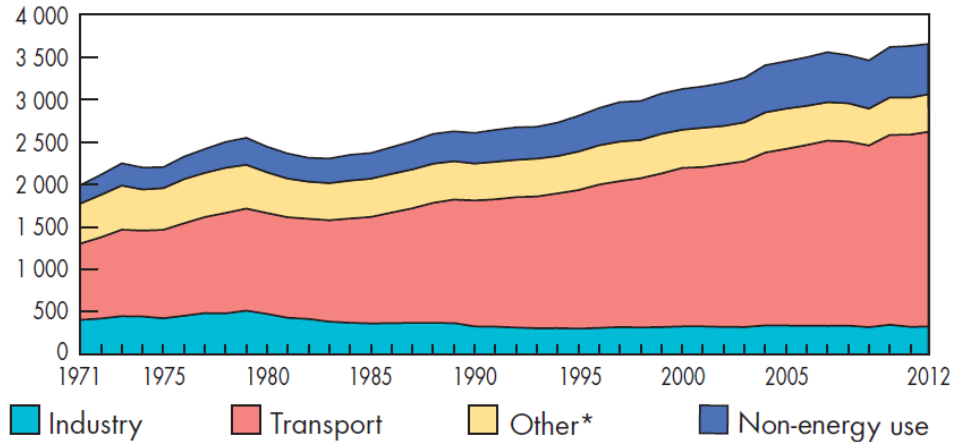
By 2030, the share of Asia in total worldwide transport-sector related CO₂ emissions will increase to 31%.

- 1) *What are the climate implications of Asia's emerging transport trends and development?*
- 2) *What are the long term climatic impacts on Asia's transport infrastructure?*
- 3) *How far Asia's climate and transport policies are integrated for low carbon development?*
- 4) *Is climate and disaster resiliency an integral part of Asia's transport policy, planning and development, including infrastructure development?*
- 5) *How can we build resilient cities in post-2015 development era?*

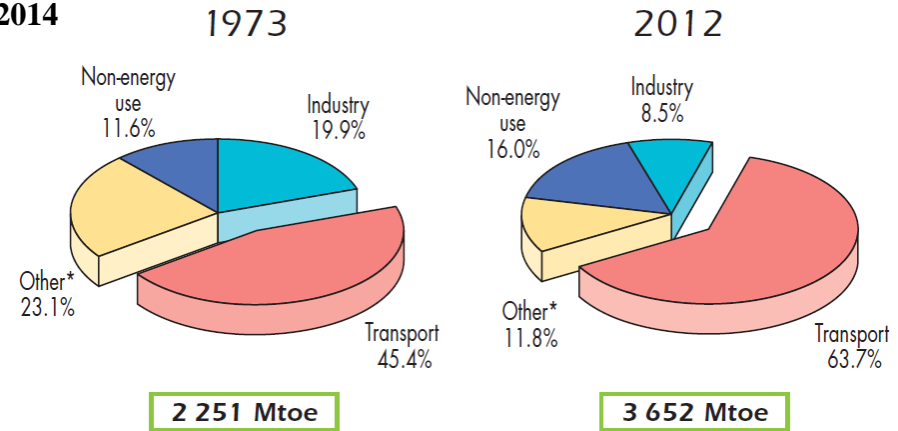
Shared issues

Increase Transport Demand

Total oil consumption from 2001 to 2012 by sectors (Mtoe)



Comparison: Global Energy Consumption on 1971 and 2014

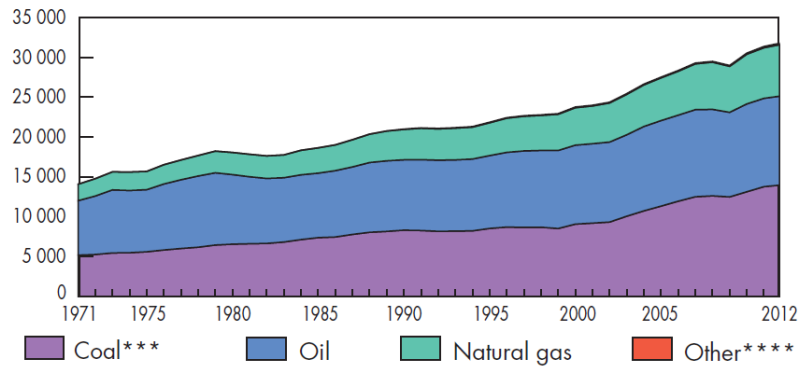


Source: IAEA 2013 and 2014

Shared issues

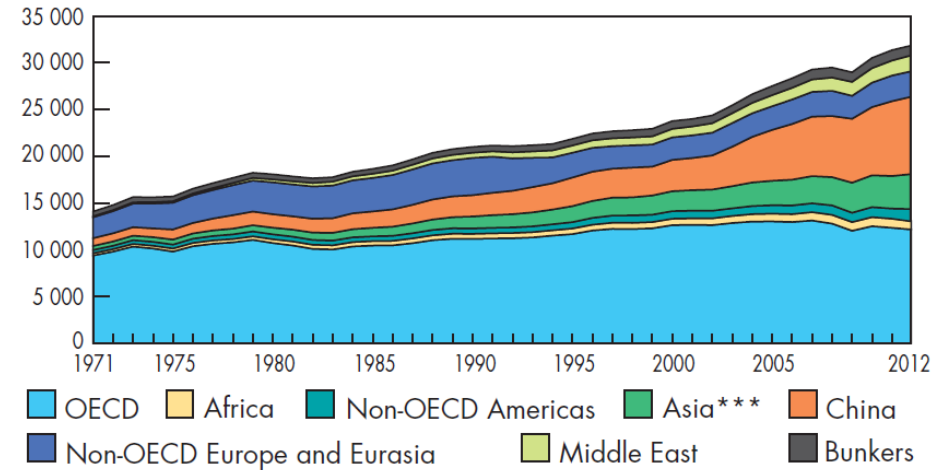
CO2 emission by fuel

World* CO₂ emissions** from 1971 to 2012
by fuel (Mt of CO₂)



CO2 emission by region

World* CO₂ emissions** from 1971 to 2012
by region (Mt of CO₂)



Shared issues: resiliency has not been integral part of transport policy, planning, and development in Asia

➤ rise in frequency and magnitude of natural disasters (flood, earthquake, cyclones, landslides, etc.)

➤ climate resiliency is not yet a major element in the current transport policy, planning, and urban/transport infrastructure and services development resulting in unprecedented damages to both human life and economy during such extreme events;

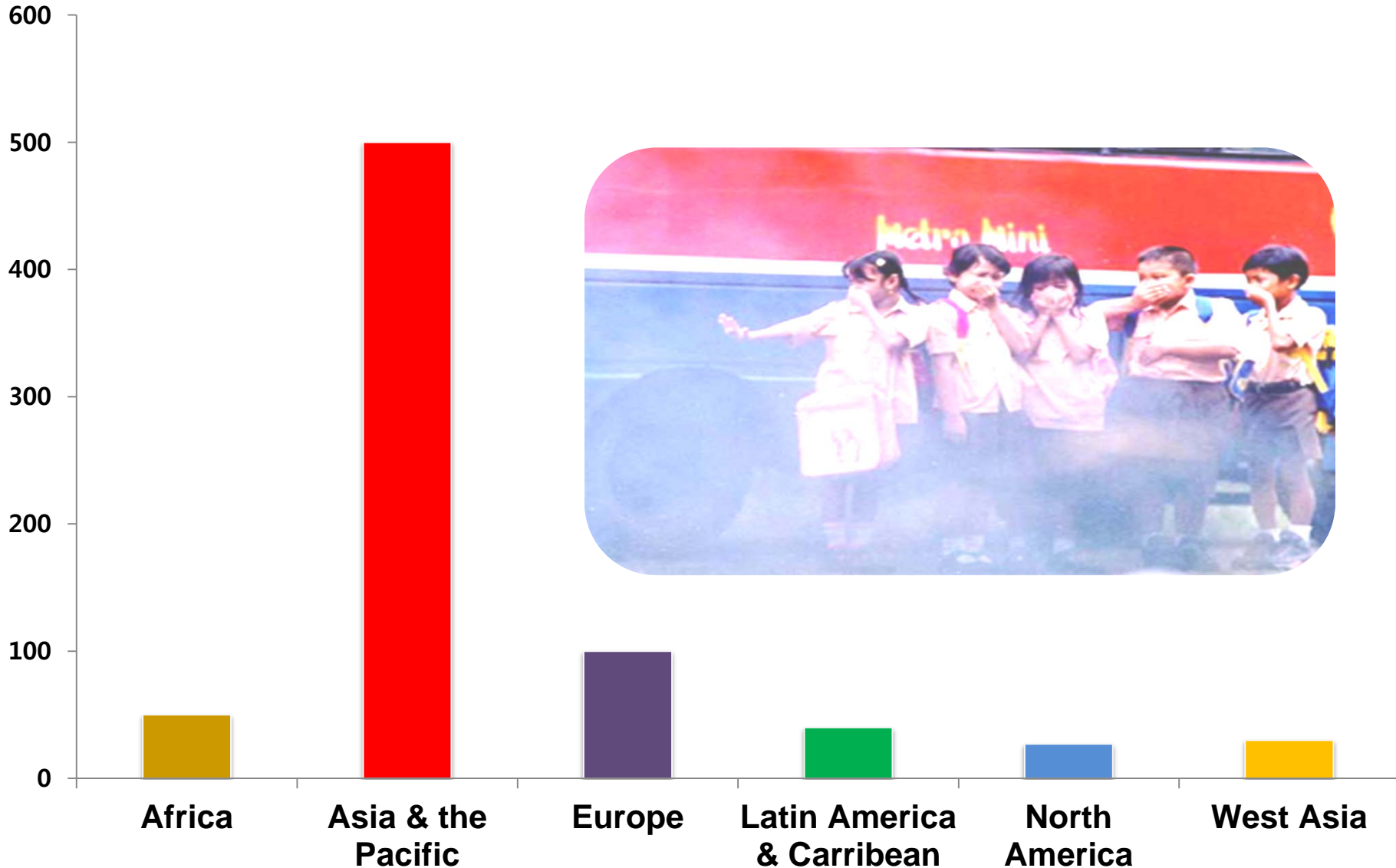
➤ in the current state, urban/transport infrastructures in Asia are vulnerable to effects of climate change, and these vulnerabilities are yet to be addressed in the design, construction, and geometry of roads, railway tracks, and other transport infrastructure, including the drainage system of cities.



Shared issues

Premature deaths due to PM₁₀ exposure

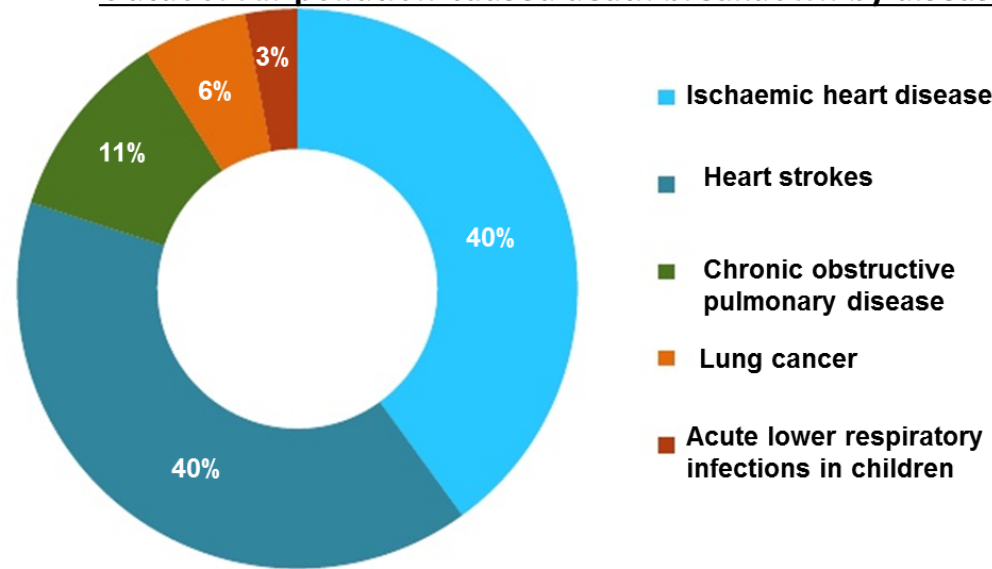
Attributable deaths(1000 people)



Shared issues

An estimated cost of Air Pollution for OECD + People's Republic of China & India is about **USD 3.5 Trillion** in terms of value of lives lost and ill health

Outdoor Air pollution-caused death breakdown by disease



By region, low-and middle-income countries in South-East Asia and Western Pacific had the largest outdoor air pollution-related deaths of **2.6 million in 2012** (WHO, 2012), imposing costs equivalent to **2-4% of these countries' GDP.**

The cost of the health impact of outdoor Air pollution cost China 1.4 Trillion and India 0.5 Trillion combine is more than all OECD countries (1.7 Trillion) in 2010 (OECD, 2014).

What does it mean in terms of human development and national productivity loss to a country?

Cost of mortality from outdoor pollution by countries (2010)

The World Bank estimates that **the cost of air pollution health damages is about US \$1 billion a year in cities such as Bangkok and Jakarta.**

Cost of mortality from outdoor air pollution, 2010

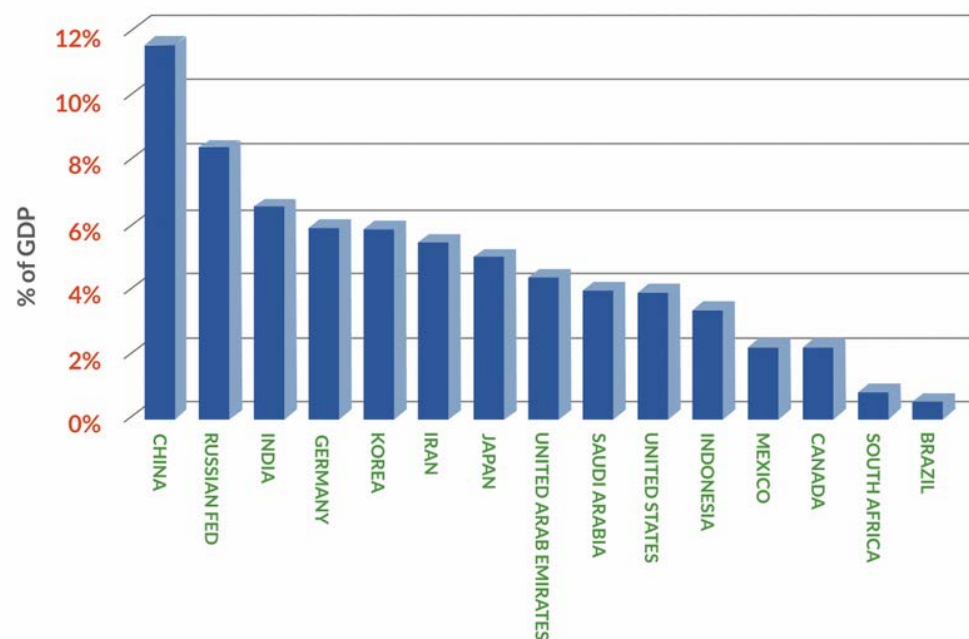


Photo: Jakarta, Indonesia

In Beijing, a [recent estimate](#) suggests that heavy haze in the month of January 2013 alone caused **23 billion RMB (3.7 billion USD)** in economic losses, **about 98 per cent of which were health-related costs.**

Shared issues



Road Accident and Fatalities



Ratio among fatalities, hospital admissions and other injuries is 1 / 7 / 52

1.3 million fatalities road accidents cause almost 80 million injuries of which 9 million requiring hospital admission 50 million (2/3) of the injuries are sustained in the Asian EST area.

(Source: WHO 2013 and Worldbank/IHME 2014)

What does it mean in terms of human development and national productivity loss to a country? Are Asia's roads and transport infrastructures safe and people friendly?

Shared issues: Economic cost of accidents ranges 1-2 % of GDP



Issues in Developing Countries

- Weak enforcement of Traffic Safety Regulations
- Lack of Licensing and Drivers Education
- Poor Road Design and Maintenance
- Inadequate Traffic Management

- Nearly 0.5 million die and up to 15 million are injured in urban road accidents in developing countries each year.
- ASEAN → 75,000 people die each year on roads and 4.7 million are injured.
- Economic cost of such tragedies for developing countries is estimated to be between 1~2% of their GDP.
- ASEAN → US\$15.1 billion or 2.2% of regional GDP,

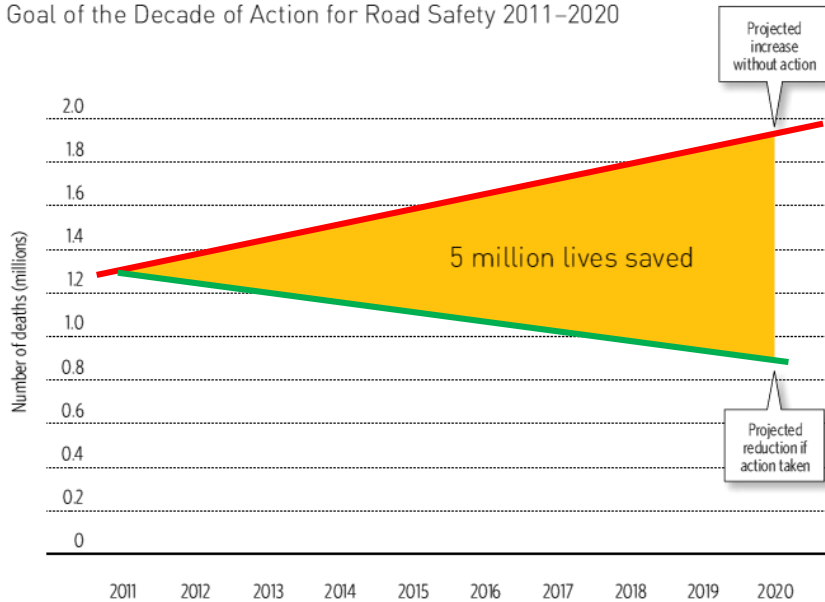
Source: ADB, WB



Shared issues

Goal of 2011-2020 Decade of Action for Road Safety

Goal of the Decade of Action for Road Safety 2011–2020



Source: WHO Decade of Action for Road Safety 2011–2020 and Jac et al. 2014 presented in the 8th Regional EST Forum in Asia in Colombo, Sri Lanka.

Table : Different measures to account for productivity loss

Measure	Description
Years of life lost (YLL)	Numbers of expected years of life lost due to premature death. Will depend on expected lifetime and age of premature mortality. Needs to be adjusted for retirement age in productivity analysis.
Years lived with disability (YLD)	Years of life lived with long or short-term health loss adjusted for severity.
Disability adjusted life years (DALY)	The sum of YLL and YLD and measures the number of years of healthy life lost.

Table : Economic cost of traffic accidents

Category	Type of cost
Direct economic cost	Medical and rehabilitation cost Legal cost Emergency services cost Property damage cost
Indirect economic cost	Lost production capacity (gross or net)
Value of safety per se	Value of statistical life (VSL)

What are the root causes of the growing road accidents and fatalities in Asia? Is it a policy problem, regulation failures, enforcement problem, infrastructure design problem, or a combination of all? How to save millions of lives?

Shared issues: for most cities NMT is a peripheral issue

NMT receives very low priority in most transport planning and infrastructure design and development, which is most often oriented to promote motorized transport rather than to support people movement

consequence => thousands of pedestrians and cyclists are killed by accidents each year in developing countries of Asia!



NMT a peripheral issue - Evident from mostly car oriented design



ITDP

Jakarta



Kuala Lumpur



Lloyd Wright

Bangkok



Lloyd Wright

NMT a peripheral issue - Evident from mostly car oriented design



Lloyd Wright

Obstructed footbridges



Lloyd Wright

Motorcycles driving on footpaths



Karl Fjellstrom

Lack of crossings

Bangkok 2020 Declaration

– Sustainable Transport Goals for 2010-2020 –

1. 22 participating Asian countries of the 5th Regional EST Forum in August, Bangkok, Thailand, agreed on **“the Bangkok 2020 Declaration”**, which reflects a regional consensus as well as aims to influence the decisions of governments and transport stakeholders in the region over the next decade towards realization of safe, secure, affordable, efficient, and people- and environment-friendly transport in rapidly urbanizing Asia.
2. 22 Asian countries of the 7th Regional EST Forum in Bali successfully adopted **“the Bali Declaration on Vision Three Zeros for Next Generation Transport Systems: Zero Congestion, Zero Pollution, and Zero Accidents (3Zs)”**, reinforcing the Bangkok 2020 Declaration (2010-2020).



5th Regional EST Forum in Asia, 23-25 August 2010, Bangkok, Thailand.

7th Regional EST Forum in Asia, 23-25 April 2013, Bali, Indonesia.



Rio+20 Outcome – The Future We Want

- Asian countries continue to face vast challenges in realizing **safe, secure, people and environment friendly, affordable, and climate resilient** transport systems. Rapid urbanization throughout the region further compounds these challenges.
- Transport infrastructure is vulnerable to extreme weather events associated with climate change as well as natural disasters. **Significant investment/financing requirement for resilient transport system.** Damage caused by 2011 flooding in Thailand amounted to US\$46.5 billion, while the recovery and reconstruction costs are expected to reach at least US\$50 billion according to the Government of Thailand and U.N
- Investments in people and **environmentally friendly transport system, including safe and dedicated walkways and bicycle lanes**, in Asia have not kept pace with the still growing needs for environmentally sustainable transport in the region.
- The Forum recognized the essential contribution of EST towards realizing not just the transport related objectives from The Future We Want but also other key thematic and cross cutting issues including but not limited to: **poverty alleviation, sustainable cities and human settlement, energy, food security and sustainable agriculture, as well as health and education.**
- Strengthening **rural-urban connectivity is key to overall economic development** in the countries. At the same time improved intercity connectivity is important to accommodate the rise in transport demand. These can help address the need to connect effectively, farm gate to consumer, manufacturer to customer, and personal mobility needs of people.
- Connectivity is not just about land transport but also about **shipping and the role of ports and ocean shipping**. Regional connectivity of **inter-island shipping needs** to be strengthened. **Inland and coastal waterways** have great potential to support more environmentally sustainable transport as does the greater use of rail transport with double tracking and electrification.
- **Full and seamless integration of public transport modes** (physical, information, network and fare integration) will be an essential characteristic of next generation transport systems. This can be achieved by forming **transit alliances between local government organisations and the private sector at provincial or regional level.**



Rio+20 Outcome – The Future We Want

- **Green Freight is essential for Asian countries in the 21st century** to respond to high logistics costs, disproportionate environmental social impacts from freight movement and market pressures to improve efficiency. The Forum recommended the following core-elements to be considered as part of a possible **regional agreement**, but not limited to: **(a)** Green Freight Programs at the national or sub - regional level, **(b)** set of plans and policies for a socially inclusive green freight, **(c)** standard set of indicators for green freight, and **(d)** regional collaboration framework on green freight.
- **Railways play a key role to serve urban and economic development in Asian countries**, while at the same time offering opportunities to mitigate emissions, reduce traffic congestion, enhance traffic safety, and improve accessibility and connectivity.
- Many countries have a **huge infrastructure deficit at the current level of urbanization**. As the urban population doubles in the next 20 years the pressure to build infrastructure is huge. For instance, India has estimated the finance need to be \$70 billion in the next 5 years, \$450 billion over the next 20 years and the government is planning to support cities through the next round of the Jawaharlal Nehru Urban Renewal Mission (JnNURM) investments.
- **Intelligent Transportation Systems (ITS)** could significantly contribute to improved safety, higher efficiency, better service and reduced pollution and greenhouse gas emissions, thereby these can enable next-generation Vision Three Zero transport systems. They may also play a key role in integrating transport systems for **both passenger and freight, across modes and localities**.



Intelligent Freight System (IFS) & Green Freight

Explosive growth in freight

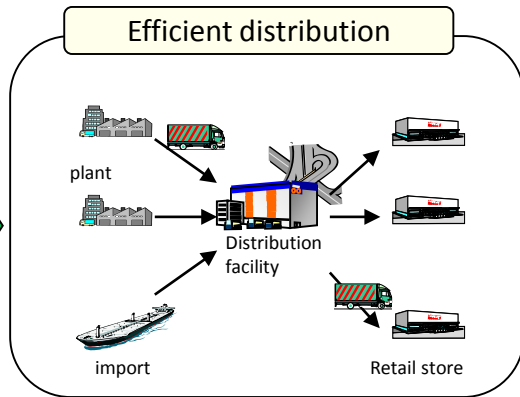
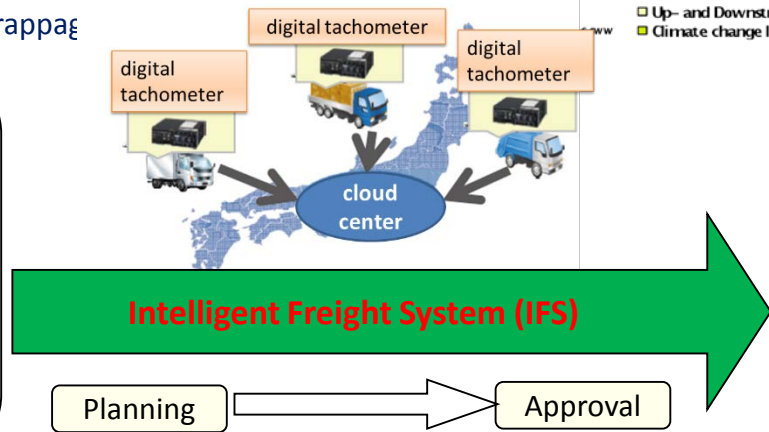
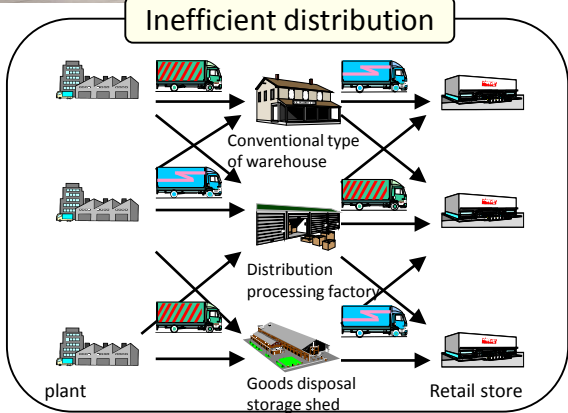
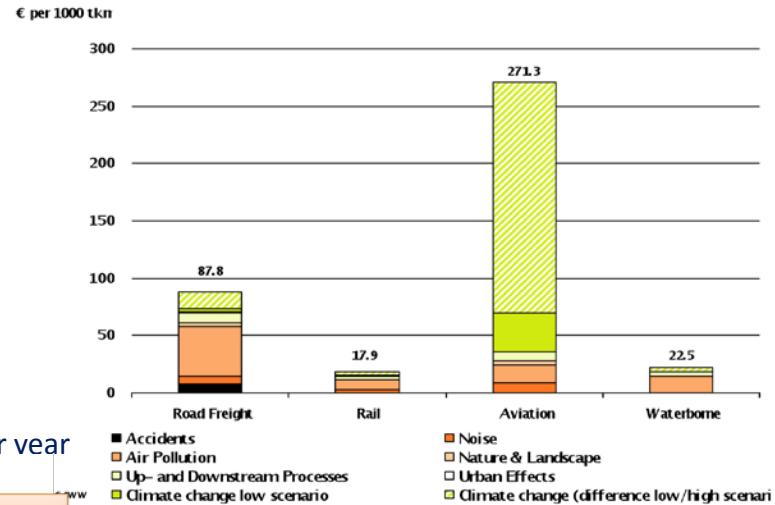
- One of every two trucks worldwide sold in Asia
- Infrastructure improvement 30% faster than rest of world

Freight sector is inefficient

- Logistics costs 15-25% of GDP in Asia (US & Europe <10%)
- About 90% of trucking companies are individual drivers
- Up to 40% of trucks trips are empty (US 28%, Europe 25%)

Significant improvement potential

- Fuel >40% of truck operational costs
- Truck tire technologies in PR China: 20 million tons CO₂ per year
- Winners: truck scrapping



Source: Rothengatter, Punte and Kumai 2014 presented in the 8th Regional EST Forum in Asia in Colomb, Sri Lanka.

Major Outcomes of the 8th Regional EST Forum in Asia

Recognizing that clean air and sustainable transport are essential to a livable society in Asia, the Integrated Conference called for innovative, smart and cost-effective solutions (policy, institution, technology, and financing) that significantly reduce air pollution and greenhouse gases from energy, industry, transport, and area sources, and ensure a safe, equitable, environment-and-people-friendly transport system by accelerating the shift towards more environmentally sustainable transport (EST) in Asian cities and countries.

1. Asian countries were urged to develop next generation transport policies, programmes, infrastructures in the spirit of Bali Vision Three Zeros ~ Zero Congestion, Zero Pollution, Zero Accidents;
2. As electric mobility helps to reduce energy use, air pollution and greenhouse gas emissions, e-Mobility should be considered as the next generation solution for clean air and sustainable transport in Asia;
3. Improving access to essential utilities and services is a critical need for communities to achieve sustainability and social equity in emerging Asia.;
4. Improving road safety and injury prevention are indispensable for the national productivity and human development in the region;
5. EST member countries are increasingly becoming interested in planning and implementation of low-carbon transport solutions which is evident from the adoption of the Colombo Declaration for the Promotion of Next Generation Low Carbon Transport Solutions in Asia;
6. The 21st century Asian cities should focus on resilience, smart growth, and the ability to rise up to different types of challenge, such as providing a healthy living environment for people, and supporting the mobility need for all citizens. In this regard, policy makers have to look for integrated solutions that would result in the greatest co-benefits (social, economic, and environment);
7. Asian Mayors and local authorities adopted the “Addendum to Kyoto Declaration for the Promotion of Environmentally Sustainable Transport ~ Towards Realizing Resilient, Smart and Liveable Cities in Asia,” which is highly relevant in post-2015 development context;
8. Asian countries need to invest in a low carbon transport system that integrates walking, cycling and public transport, which is necessary for sustainable development in Asia;
9. Intelligent Freight Systems (IFS) are crucial for a modern economy. There is significant potential for improvement in productivity, energy efficiency and GHG reduction through IFS in Asia;
10. Increased global rail investments and mode shift to passenger and freight rail are essential to meeting a two-degree Celsius climate change scenario (2DS), and Asian countries have a great opportunity to play a central role in this task. The expansion of rail transport is a key element in strengthening regional connectivity in the EST region as part of building stronger economic integration and resilient community.

21 Asian Countries adopted Colombo Declaration for the Promotion of Next Generation Low-carbon Transport Solutions in Asia

Support efforts made by UN Secretary-General on Transport and outcome of UN Climate Summit 2014



Call for greater use of mechanism under UNFCCC (CDM, CTCN, GEF, GEF, NAMA)

Call for south-south cooperation on Low-carbon transport solutions, transport safety



Support transport-related commitments made at UN Climate Summit 2014 –

- Mobility
- TOD
- NMT
- Maritime transport
- Public transport
- Fuel economy
- Green freight



Call upon development partners for support for technical assistance including capacity building, financial support to implement commitments made at UN Climate Summit 2014



Acknowledge positive role of **Regional EST Forum in Asia** for facilitating dialogue among Asian countries and development partners towards Low-carbon development path



Contribute towards

- ◆ Next Generation Low-carbon Transport Solutions
- ◆ Smart, safe, resilient, inclusive, livable society
- ◆ Post-2015 Development Agenda/Sustainable Development Goals (SDGs)

Together with [Bangkok 2020 Declaration](#) (adopted in 2010, at the Fifth Forum), [Bali Declaration on Vision Three Zeros](#) (adopted in 2013, at the Seventh Forum), the [Colombo Declaration](#) presents a complete and contemporary framework for Asian countries to develop their next generation transport policies, programmes, infrastructures, research and development (R&D) programmes, vehicle technologies, alternative fuels, green freight and logistics, mass transit options and railways towards smart, resilient, inclusive, low-carbon and resource efficient societies relevant in the context of post-2015 development agenda and sustainable development goals (SDGs) under consideration

Fuel Economy and Environmental Performance: Comparison of Conventional Gasoline and Electric Vehicles

Gasoline Vehicle Save Fuel cost in 5 years period



Source: <http://www.zmescience.com/>

S
A
V
E

Shift from Gasoline Vehicle to Electric Vehicle

Electric Vehicle Save Fuel cost in 5 years period



S
A
V
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EPA DOT Fuel Economy and Environment Gasoline Vehicle

Fuel Economy
26 MPG
 combined city/hwy
 22 city 32 highway
 3.8 gallons per 100 miles

Small SUVs range from 16 to 32 MPG. The best vehicle rates 99 MPGe.

You save \$1,850
 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$2,150

Fuel Economy & Greenhouse Gas Rating (tailpipe only) 7 (Best 10)

Smog Rating (tailpipe only) 6 (Best 10)

This vehicle emits 317 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Producing and distributing fuel also create emissions; learn more at fuelconomy.gov.

Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 22 MPG and costs \$12,600 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$3.70 per gallon. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fuelconomy.gov
 Calculate personalized estimates and compare vehicles

Smartphone QR Code

Save Fuel, Fuel Cost and Environment

EPA DOT Fuel Economy and Environment Electric Vehicle

Fuel Economy
99 MPGe
 combined city/hwy
 103 city 95 highway 34 kW-hrs per 100 miles
 Driving Range: When fully charged, vehicle can travel about... 99 miles
 Charge Time: 8 hours (240V)

Midsize cars range from 10 to 99 MPGe. The best vehicle rates 99 MPGe.

You save \$9,600
 in fuel costs over 5 years compared to the average new vehicle.

Annual fuel cost \$600

Fuel Economy & Greenhouse Gas Rating (tailpipe only) 10 (Best 10)

Smog Rating (tailpipe only) 10 (Best 10)

This vehicle emits 0 grams CO₂ per mile. The best emits 0 grams per mile (tailpipe only). Does not include emissions from generating electricity; learn more at fuelconomy.gov.

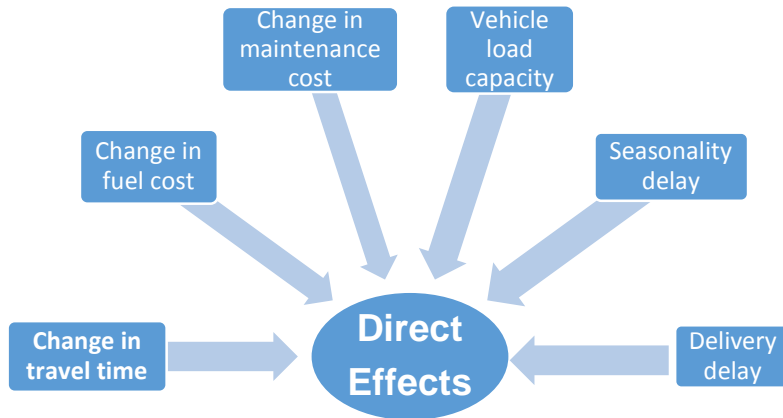
Actual results will vary for many reasons, including driving conditions and how you drive and maintain your vehicle. The average new vehicle gets 22 MPG and costs \$12,600 to fuel over 5 years. Cost estimates are based on 15,000 miles per year at \$0.12 per kW-hr. MPGe is miles per gasoline gallon equivalent. Vehicle emissions are a significant cause of climate change and smog.

fuelconomy.gov
 Calculate personalized estimates and compare vehicles

Smartphone QR Code

Source: Wahnschafft and Walter (2014) presented in the 8th Regional EST Forum in Asia in Colombo, Sri Lanka.

Accessibility and Development

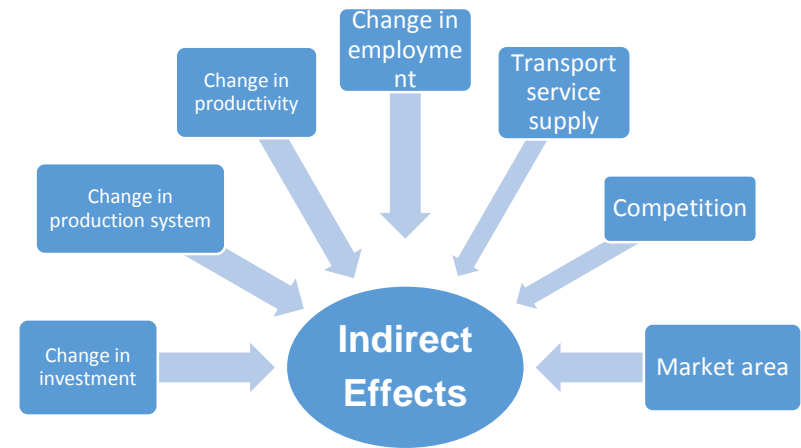


For Urban Poor-Main Issue

Road Safety: Vulnerable road users sustain a vast majority of the fatalities in Asian Pacific countries

Percentage Distribution of Road Traffic Deaths by Type of Road User

Country/Mode	Cyclist	2/3-Wheeler	Other
Thailand	3	73.5	2.5
Malaysia	2.8	58.7	3.4
Lao PDR	1.3	74.4	3.4
Indonesia	1.7	35.7	35.4
Cambodia	5	12	3
Bangladesh	4	11	2
Pakistan	0	38.6	4.4
India	4.6	32.4	38.7



Direct and Indirect Effects in the Form of Improved Accessibility

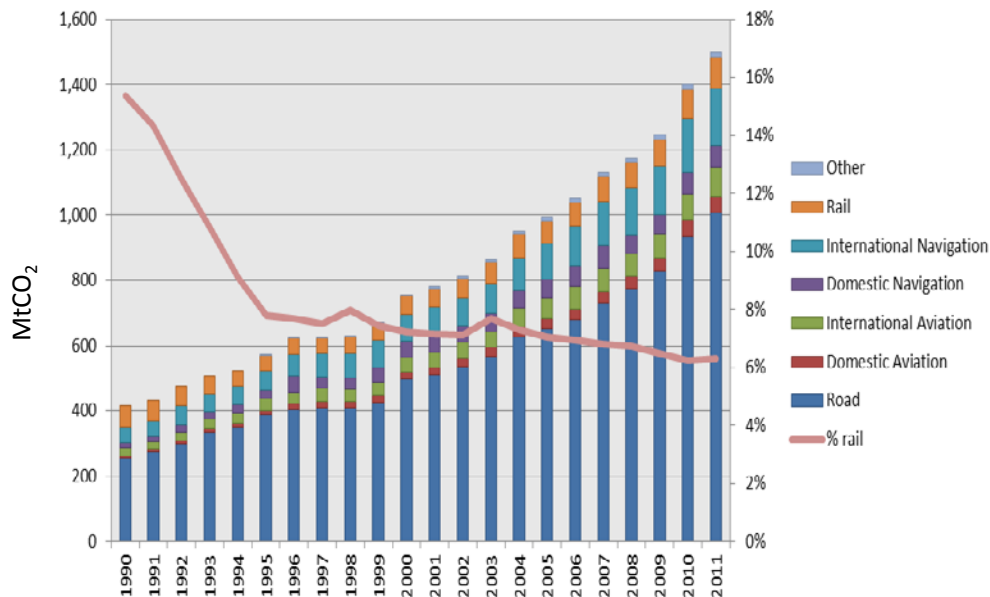
Impacts of the Road Project

- Both vehicle operating costs and travel time decreased considerably
- Fuel consumption declined, on average, by 35%
- Maintenance costs reduced by 44%
- Travel time reduced by 40%
- Delays almost disappeared
- The road became passable throughout the year
- Uncompetitive production system of a fishing oligopoly collapsed
- Fishing sector-related groups increased income considerably

The higher sustainability of rail

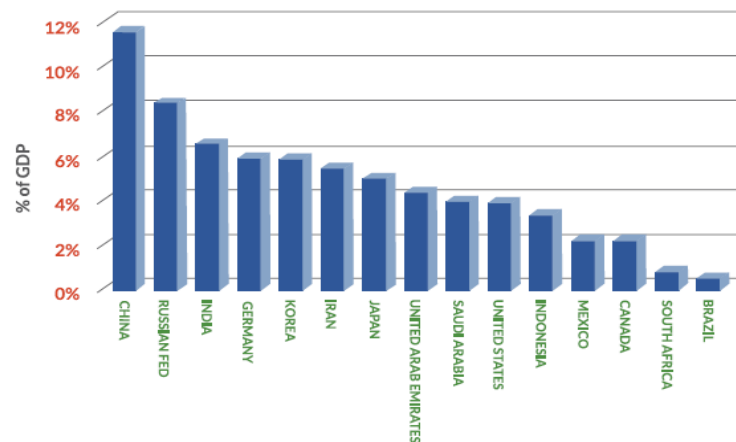
Urban road-related transport is responsible for the majority of CO₂ and NO_x emissions. Particulate matter, whose main source is road vehicles, leads to diseases and high rates of mortality.

The modal shift to urban rail can drastically reduce these impacts.

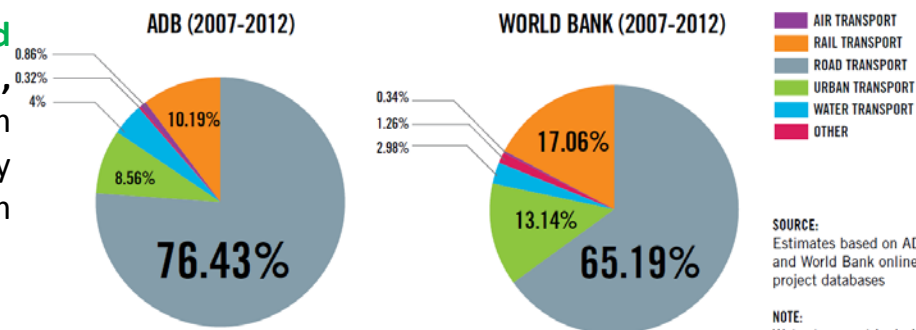


Total CO₂ emissions from transport in Asia have increased almost four fold from 1990 to 2011. In the same timeframe, emissions from railways have been halved, dropping from nearly 16% of total transport emissions to about 6%, mainly due to better energy efficiency, substantial reduction of steam traction and more use of electrical traction systems.

COST OF MORTALITY FROM OUTDOOR PM 2.5 EXPOSURE -AS % OF GDP (MEDIAN ESTIMATES), 2010, 15 LARGEST CO₂ EMITTERS



ADB and World Bank investment in transport, 2007-2012



SOURCE: Estimates based on ADB and World Bank online project databases

NOTE: Water transport includes both maritime and inland water transport projects.

Shift Transport Funding to Non-OECD Countries

Now 60% of global annual transport infrastructure investment is directed to OECD countries, and 40% of investment is directed to non-OECD countries.

Per IEA, in order to meet a 2DS or 4DS scenario, it is necessary that 60% of investment be directed to non-OECD countries and 40% to OECD countries

Funding for needed investments in non-OECD countries must increase 50% from current levels, and it is unlikely that the public sector is in a position to increase funding by this amount.

Rio+20 Outcome – The Future We Want

Sustainable Transport (para. 132-133)



RIO+20
United Nations Conference
on Sustainable Development

Among others, the Heads of State and Governments:

- *note that **transportation and mobility are central to sustainable development**. Sustainable transportation can enhance economic growth and improve accessibility. Sustainable transport achieves better integration of the economy while respecting the environment.*
- *recognize the importance of the **efficient movement of people and goods, and access to environmentally sound, safe and affordable transportation as a means to improve social equity, health, resilience of cities, urban-rural linkages and productivity of rural areas**. In this regard, we take into account road safety as part of our efforts to achieve sustainable development.*
- *support the development of sustainable transport systems, including **energy efficient multi-modal transport systems, notably public mass transportation systems, clean fuels and vehicles, as well as improved transportation systems in rural areas**.*
- *recognize the need to promote an integrated approach to policymaking at the national, regional and local levels for transport services and systems to promote sustainable development.*
- *recognize that the special development needs of landlocked and transit developing countries need to be taken into account while establishing sustainable transit transport systems.*
- *acknowledge the need for international support to developing countries in this regard.*

UN SG's Climate Summit – 23 Sep 2014



- Transport contributed 25% of energy-related global GHG emissions and about 20% of energy use in 2009, under a 'Business as Usual' scenario, transport energy use and GHG emissions are projected to rise by nearly 50% by 2030 and by more than 80% by 2050 (from 2009).
- The International Energy Agency estimates that a shift to sustainable, low-carbon transport by the middle of the century could save governments, companies and individuals up to US\$70 trillion.
- Action Areas of UN SG's Climate Summit 2014 – Agriculture, Cities, Energy, Financing, Forests, Industry, Resilience, Transportation
- The proposed actions on transport (outlined in the Joint Statement by Governments, transport companies and associations, other private sector players and civil society organizations) to scale up public transport and make it the number one choice for travel, **greater use of more efficient rail and public transport and an accelerated introduction of urban electric transport will reduce the carbon footprint of at least 50% of all the passenger and freight trips made by 2025.** These actions are expected to leverage wider action on low carbon transport, both within the scope of the UN 2014 Climate Summit and outside,
 - urban electric mobility, railways and public transport under the Transport Action Area;
 - the fuel economy commitment under the Energy Action Area
 - Green Freight Commitment under the Industry Action Area

Sustainable Development Goals (SDGs) ~ Proposal of OWG

- Goal 1 End poverty in all its forms everywhere**
- Goal 2 End hunger, achieve food security and improved nutrition and promote sustainable agriculture**
- Goal 3 Ensure healthy lives and promote well-being for all at all ages**
- Goal 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all**
- Goal 5 Achieve gender equality and empower all women and girls**
- Goal 6 Ensure availability and sustainable management of water and sanitation for all**
- Goal 7 Ensure access to affordable, reliable, sustainable and modern energy for all**
- Goal 8 Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**
- Goal 9 Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**
- Goal 10 Reduce inequality within and among countries**
- Goal 11 Make cities and human settlements inclusive, safe, resilient and sustainable**
- Goal 12 Ensure sustainable consumption and production patterns**
- Goal 13 Take urgent action to combat climate change and its impacts***
- Goal 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development**
- Goal 15 Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss**
- Goal 16 Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels**
- Goal 17 Strengthen the means of implementation and revitalize the global partnership for sustainable development**

Post 2015 Development Agenda / SGDs

PROPOSED SDGs IN THE OWG FINAL REPORT (19 JULY 2014) – direct and indirect relevance to transport sector

- **Goal 2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**
- **Goal 3: Ensure healthy lives and promote well-being for all at all ages**
- **Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all**
- **Goal 9: Built resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation**
- **Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable**

Target 11.2 by 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

Target 11.6 by 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality, municipal and other waste management

Target 11.7 by 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities

Target 11.a support economic, social and environmental links between urban, peri-urban and rural areas into by strengthening national and regional development planning

- **Goal 12. Ensure sustainable consumption and production patterns**
- **Goal 13. Take urgent action to combat climate change and its impacts**

Six essential elements for delivering the SDGs



Areas that Asian EST Initiative Aims to Influence in Post-2015/SDGs

Towards achieving safe, smart, resilient, inclusive, livable, low carbon and resource efficient society -

- *Institutional reform in realizing next generation sustainable transport systems*
- *Pricing reform and innovative financing for next generation sustainable transport solutions*
- *Integrating climate change considerations and resiliency in overall transport policy, planning and infrastructure design/development => 2DS*
- *Improving transport technologies and systems and scaling up their applications => ITS, IFS, clean fuel, e-Mobility, vehicle technology*
- *Promoting dedicated walking and bicycle facilities as an integral part of the transport planning and development for safety and social equity*
- *Integrated transport and clean air solutions as opposed to compartmentalized action*
- *Regional connectivity (intra-region/rural-urban linkage) for sustainable development;*
- *Greening the freight and logistics sector / promotion of intelligent freight system;*
- *Improved accessibility to essential utilities and services;*
- *Expansion of e-Mobility and railways as next generation solutions;*
- *Smart growth, transit oriented developments (TODs), low carbon transport solutions and development path*
- *Strong leadership, international collaborative research and new innovative partnerships*



Asian EST Initiative

A joint initiative of UNCRD and MoE-Japan



United Nations Centre for Regional Development (UNCRD)

World Health Organization