

EST Planning for Resilience – Outcome of the Nepal EST Forum

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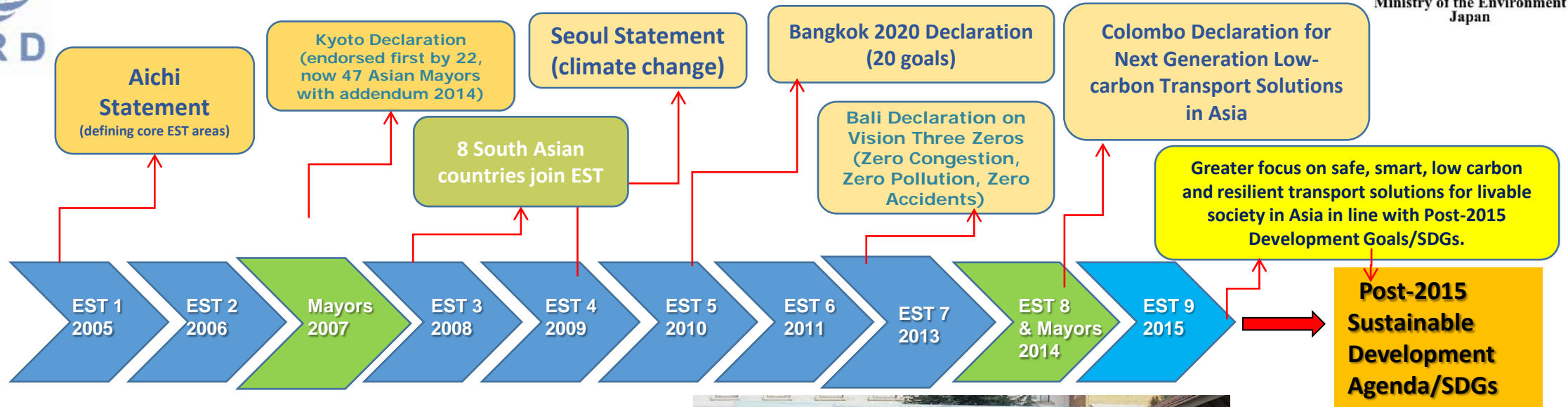


United Nations Centre for Regional Development

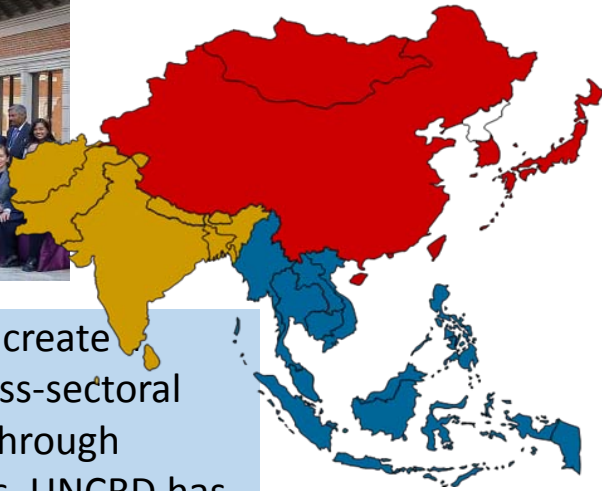


Environmentally
Sustainable
Transport

ASIAN EST INITIATIVE



- 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



- Avoid trips
- Shift to most efficient mode
- Improve efficiency

To build a common understanding across Asia on essential elements of EST and to create political consensus on the need for an **integrated approach** to deal with multi/cross-sectoral environment, health and transport issues, including disaster and climate change, through **interagency coordination** among MoE, MoT, MoUD, MoH, and other stakeholders. UNCRD has been promoting the Asian EST Initiative since 2004 with the strong support of MOE-Japan.

24 EST Member Countries

9th Regional EST Forum in Asia (Nepal Forum)

Theme: EST For Resiliency- Building Safe, Smart, Low-carbon and Resilient Transport

- Nepal Forum was held on 17-20 November 2015 in Kathmandu, Nepal
- The Forum was hosted by the Government of Nepal and co-organized by the MOE-Japan, UN ESCAP & UNCRD. The Forum was officially inaugurated by Prime Minister of Nepal and Chaired by Deputy Prime Minister of Nepal
- Over 350 participants from more than 40 countries attended the Forum
- The Nepal EST Forum provided an opportune time to generate an Asia-wide regional consensus on-
 - *how Asia's transportation sector can better integrate resilience in transport policy, planning, budgeting, as well as infrastructure development; and*
 - *how the Asian countries can build their cities and towns in a manner that is more safe, resilient, liveable and sustainable.*



Why EST Planning for Resilience?

1) Significant population growth

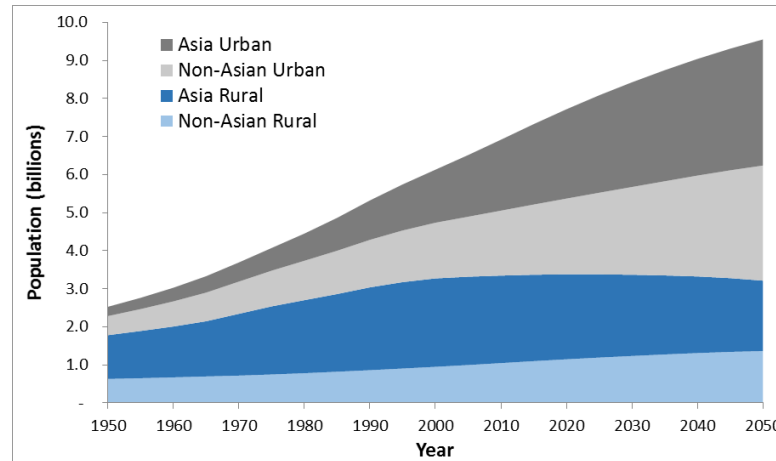
- ✓ According to ADB, every year, around 44 million people are being added to the population of Asian cities and towns

2) Rapid Urbanization

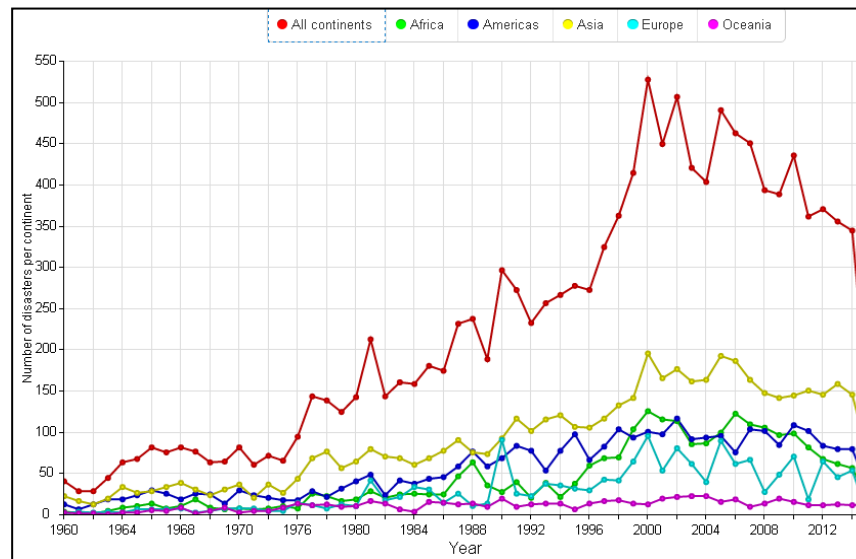
- ✓ Asia is one of the fastest urbanizing regions in the world. More than two thirds of the world's megacities are in Asia. Out of ten top megacities 8 will be in Asia by 2030
- ✓ large stress on transport and mobility in urban areas
- ✓ Vehicle fleets across Asian cities are doubling every 5 to 7 years
- ✓ Energy demand is increasing by 2.7% annually

3) Natural Disasters

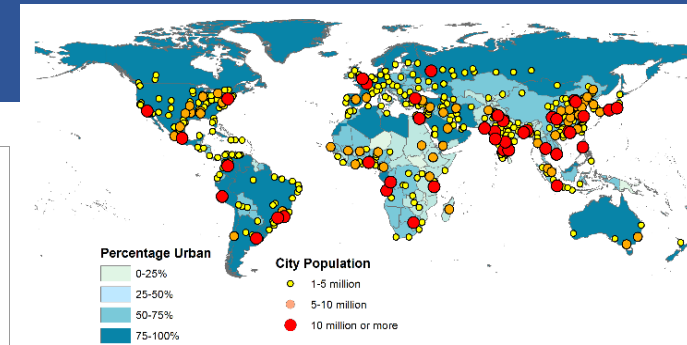
- ✓ Asia and the Pacific is one of the most prone regions to natural disasters and climate change impact
- ✓ The magnitude and the frequency of the Natural disasters in Asia are increasing significantly



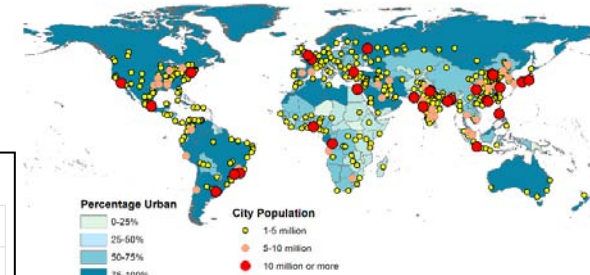
Source: Urbanization in Developing Countries (UN 2011) (<http://esa.un.org>)



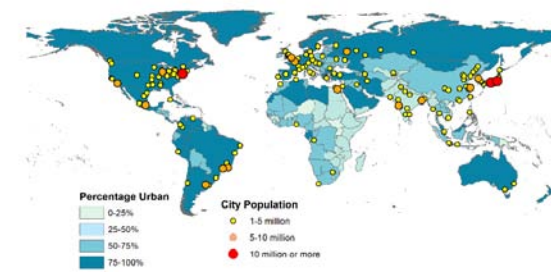
Source: CRED EM-DAT International Disaster Database (2015)



By 2030 No. of Mega Cities - 41
< out of top 10 cities 8 cities are in Asia >



2014 No. of Mega Cities-28 <16 are in Asia>



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

Source: UN

Impact of Natural Disasters in Asia & the Pacific

Asian countries and cities are highly vulnerable to natural disasters

- ❑ The majority of developing countries and cities have NOT made disaster and climate resilience as an integral part of their policy and planning for the development transport infrastructures and services
- ❑ Most of the Asian developing countries and cities lack state-of-the-art early warning systems, strong enforcement of building codes, land-use planning, people-and environment-friendly transport system, and climate and disaster resilient transport infrastructure and services
- ❑ Limited accessibility and transport facility; and
- ❑ Lack of rural-urban connectivity

According to recent reports published by UN ESCAP (2014 & 2015) in Asia and the Pacific region;

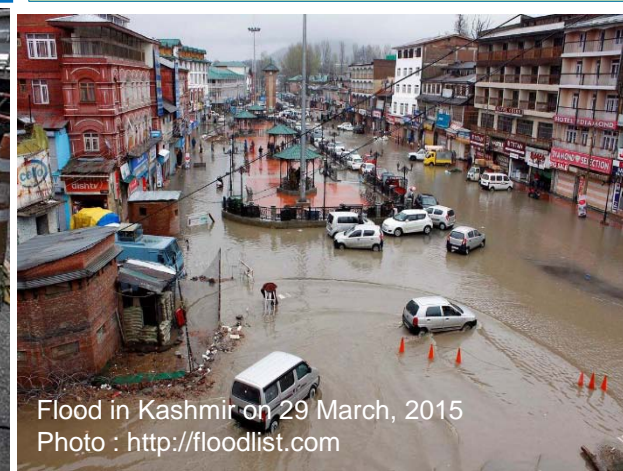
- ❑ From 1970 to 2014 period, **5,139 natural disasters occurred** which is about **43% of the total disasters globally**
- ❑ Approximately **2 million people lost their lives**
- ❑ Around **6 billion people were affected**; and
- ❑ Estimated **US\$1.15 trillion in economic damage**, which is **40.7% of global total**



Earthquake in Nepal April 2015
Photo-AFP



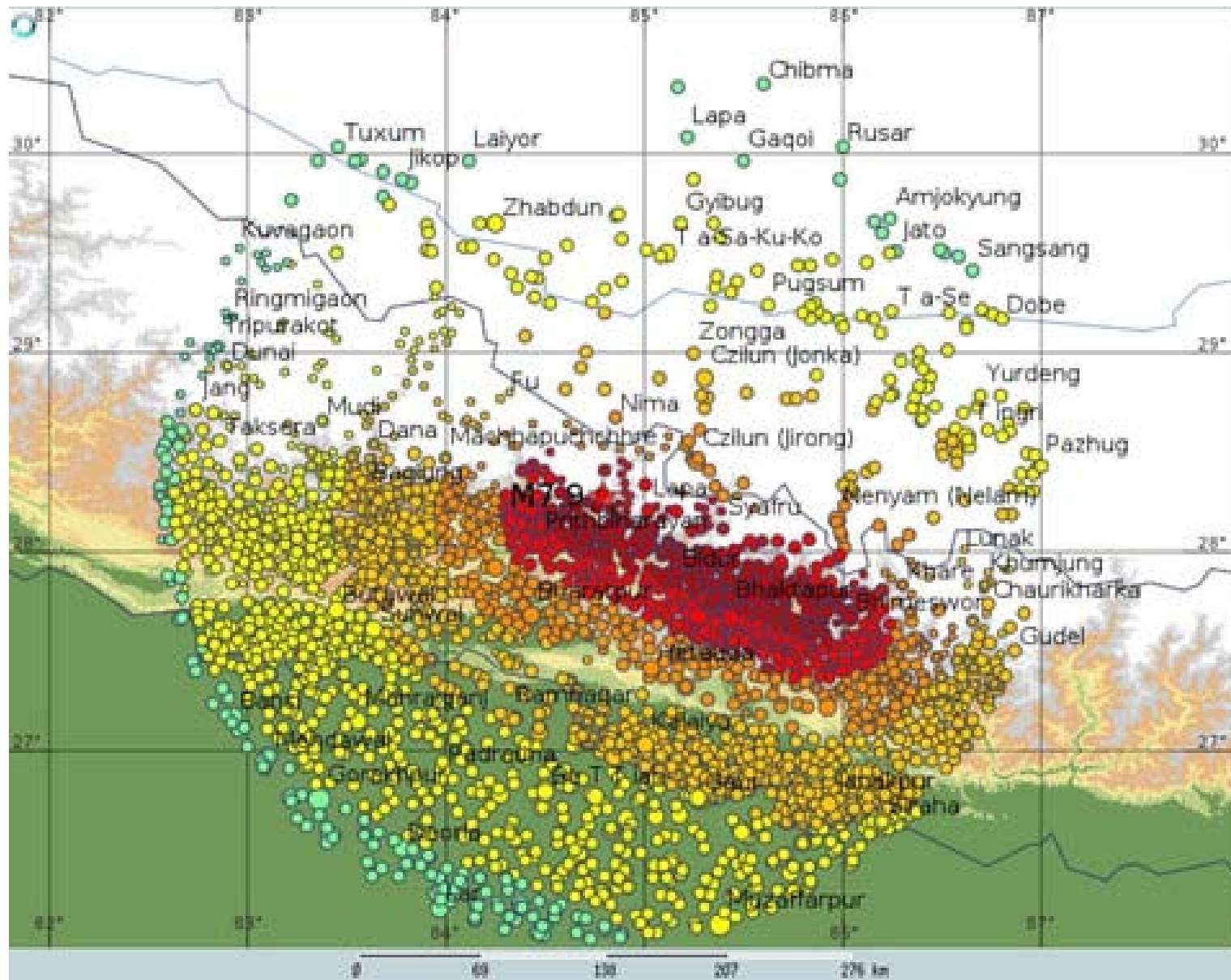
Earthquake in Nepal April 2015
Photo - Hindustan Times



Flood in Kashmir on 29 March, 2015
Photo : <http://floodlist.com>



Landslide in China 25 June 2015
Photo - <http://www.chinadaily.co.cn/china>



A map of the estimated intensity of shaking in settlements within 200 kilometers (124 miles) of the epicenter of the **April 25, 2015**, earthquake in Nepal. More than 379 aftershocks rattled Nepal and surrounding region.

Source: Max Wyss

Nepal Earthquake & it's Impacts

On 25 April 2015 devastating earthquake with a magnitude of **7.9** hit **Nepal**

- ❑ **Human loss:** more than **9,100 people killed**, **nearly 25,000 injured**
- ❑ **Property loss:** about **605,254 houses** were completely destroyed and **288,255 houses** were partially destroyed
- ❑ **Cultural loss:** more than **30 monuments collapsed** and **120 partially damage** in Kathmandu & more than **1,000 temples, monasteries and shrines** were impacted
- ❑ **Economic loss:** Estimated economic damage is more than **US\$ 7 billion** (i.e. **one third of the Nepal's entire GDP**)



Flickr/AP



Source: Government of Nepal, 2015; Nepal Earthquake Event Recap Report 2015

Why EST Planning for Resilience? Cont....

Other shared Issues

4) Traffic congestion: It is estimated that road congestion cost **Asian countries 2-5%** of their GDP annually.

5) Road accidents & fatalities: About **733,000 deaths (59% of global)** occurred in the Asia Pacific roads on 2013. Road accidents **cost Asian countries 1-4% of their GDP** (Global Status Report on Road Safety, 2013).

6) Air pollution: According to WHO the outdoor **air pollution causing 100,000 premature deaths** and associated economic **cost of 81 billion each year** in the region.

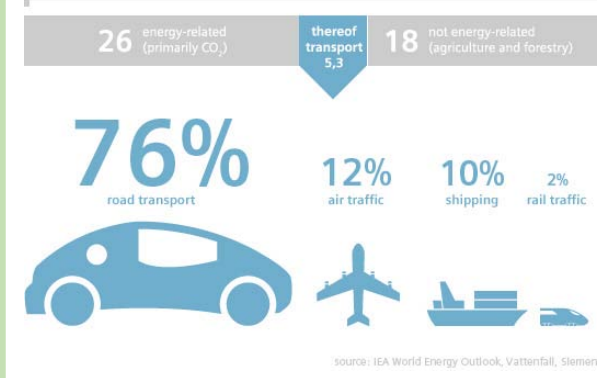
7) GHG emissions : Transport being responsible for **a quarter of global GHG emissions** and **23% of global CO2 emissions**. Road transport contributes **76% of the CO2 emissions related to transportation**.

8) Climate Change & Global warming: According to a recent study published by ADB and UK Aid, **South Asia could lose about 1.8% of its annual GDP due to climate change impact by 2050**, under the business-as usual scenario

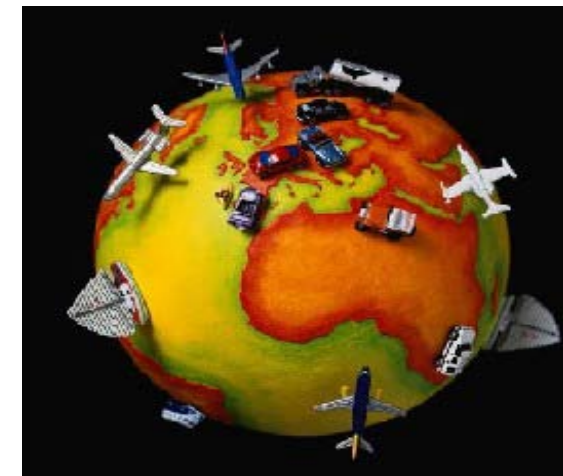
9) Food loss : Studies show that poor rural transport infrastructure and services, distribution networks and lack of cooling facilities result in **post-harvest waste losses of 30- 40% in developing countries**.



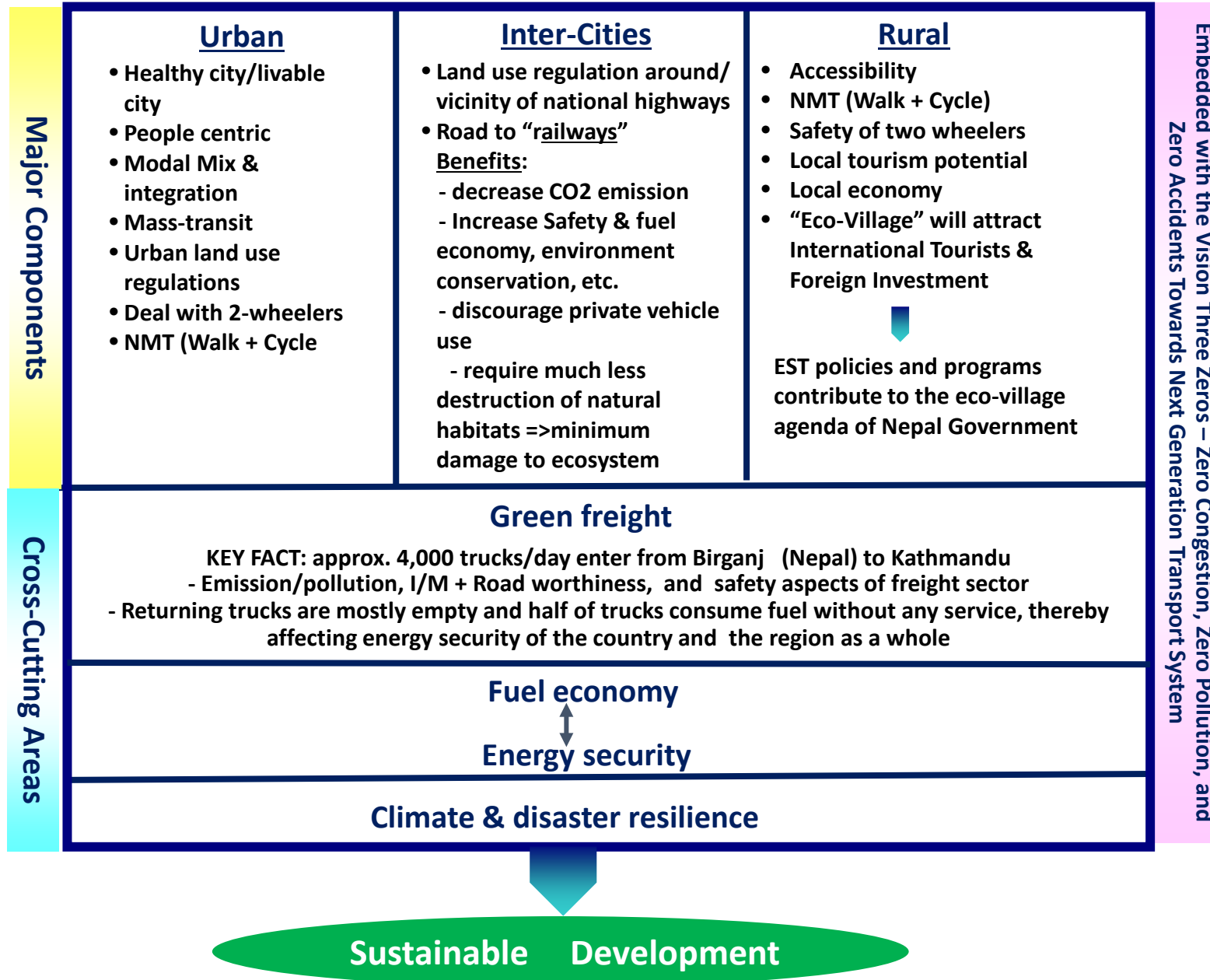
Source: <http://nepalitimes.com/>



source: IEA World Energy Outlook, Vattenfall, Siemens



Implementation of Nepal EST Strategy (2015-2040) for Resilience Transport Infrastructure and Services



Embedded with the Vision Three Zeros – Zero Congestion, Zero Pollution, and Zero Accidents Towards Next Generation Transport System

Resilient & Sustainable Transport Planning Benefits

Resilient transport policy, planning, and infrastructure development can help cities in many ways, such as –

- ❑ **enhance cities' ability for efficient and fast rescue, evacuation, relief distribution, and recovery**
- ❑ scale up the capacity of countries and cities for emergency response
- ❑ **improve the ability of cities and communities to withstand disaster and adverse effect of climate change**
- ❑ facilitate cities' development pathway for energy efficiency and energy security through low-carbon transport options
- ❑ **improve road safety measures and provisions of people-friendly transport infrastructures**
- ❑ disaster risk reduction and enhance adaptability
- ❑ **long term cost benefits for the governments by reducing future maintenance and reconstruction cost; and**
- ❑ increase in international investment and business opportunities



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



Source: <https://www.tes.com>

Lessons Learnt & the Way Forwards

- ❑ Asian countries and cities need urgent attention to cope up with the threat of extreme weather events and natural disasters. They need to build their cities and towns in a manner that is safer, more resilient, liveable and sustainable.
- ❑ Given the frequency and magnitude of natural disasters (flood, earthquake, cyclones, landslides, etc.) are on the rise across Asia, the Forum recognized the need for developing countries and cities of Asia to better integrate **“resilience”** as an important strategy and component of their national planning, budgeting and financing of transport infrastructure and services development;
- ❑ Asian countries need to strengthen their policy, planning, and development to better cope with disaster risks and extreme climate events. They also need to increase investments in disaster and climate resilient infrastructures and services.



Thank you !

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