EST Planning for Resilience – Outcome of the Nepal EST Forum

Chikako Takase & Ganesh Raj Joshi (PhD)
UNCRD
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United Nations Centre for Regional Development
Greater focus on safe, smart, low carbon and resilient transport solutions for livable society in Asia in line with Post-2015 Development Goals/SDGs.

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.
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 mega cities 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)
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**.
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 7.8 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 damaged 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)

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

**Urban**
- Healthy city/livable city
- People centric
- Modal Mix & integration
- Mass-transit
- Urban land use regulations
- Deal with 2-wheelers
- NMT (Walk + Cycle)

**Inter-Cities**
- Land use regulation around/vicinity of national highways
- Road to “railways”
- Benefits:
  - decrease CO2 emission
  - Increase Safety & fuel economy, environment conservation, etc.
  - discourage private vehicle use
  - require much less destruction of natural habitats =>minimum damage to ecosystem

**Rural**
- Accessibility
- NMT (Walk + Cycle)
- Safety of two wheelers
- Local tourism potential
- Local economy
- “Eco-Village” will attract International Tourists & Foreign Investment

**Green freight**
- KEY FACT: approx. 4,000 trucks/day enter from Birganj (Nepal) to Kathmandu
- Emission/pollution, I/M + Road worthiness, and safety aspects of freight sector
- Returning trucks are mostly empty and half of trucks consume fuel without any service, thereby affecting energy security of the country and the region as a whole

**Fuel economy**
- Energy security

**Climate & disaster resilience**

**Sustainable Development**

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

EST policies and programs contribute to the eco-village agenda of Nepal Government
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: https://www.tes.com

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

Source: http://thecityfix.com
Source: http://www.amecfw.com
Source: http://safecitiessolutions.org/
Thank you!

Source: http://richardmasinguziart.blogspot.jp/