TRANSITION TOWARDS CLEAN AND ENERGY-EFFICIENT LOGISTICS SYSTEM FOR NEPAL

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I. ACTIONS BY LOGISTIC SERVICE PROVIDERS FOR TRANSITION TO CLEAN AND ENERGY-EFFICIENT TRANSPORT SERVICES

a. Investment in cleaner fuel vehicles: Such as compressed natural gas (CNG) or electric vehicles (EVs) which produce fewer emissions. Furthermore, adopting energy-efficient technologies like hybrid vehicles or vehicles with improved fuel efficiency can help reduce pollution and lower operating costs. The government should incentivize this transition by providing import tax rebates.

b. Adoption of cleaner and energy-efficient technologies
   - Investment in public transportation: Such as buses and metro trains, can reduce reliance on individual vehicles.
   - Promotion of cycling and walking: This can effectively reduce congestion, air pollution, and carbon emissions. Infrastructure improvements, such as dedicated bicycle lanes and pedestrian-friendly pathways,
   - Biofuels and renewable energy: Exploring opportunities to integrate renewable energy sources, such as solar, electricity or wind power, into the transportation infrastructure can provide clean energy for electric vehicles and reduce emissions. Investing in Charging Station is needed.
c. Promotion of sustainable practices: Such as encourage and educate the employees and customers about sustainable practices. Implementing waste management systems, recycling programs, and reducing energy consumption as well as upgrade in warehouses and office spaces as well as load consolidation with green packing practices.

d. Participation in industry associations and initiatives: Share best practices and collectively work towards developing standards and guidelines for environmentally friendly logistics operations is something that needs attention. Train workforce on sustainability as well as green certification.
2. GOVERNMENT AND PRIVATE SECTOR INITIATIVES

a. Enhancing coordination with government agencies: Fostering strong relationships and open lines of communication to collaborate on implementing environmentally friendly policies and address infrastructure gaps. The Ministry of Physical Infrastructure and Transport (MoPIT) should include logistic service providers in its committees to gather inputs.

b. Investing in reforestation and vegetation initiatives: Collaborating with local communities, non-governmental organizations (NGOs), or government agencies to plant trees and promote sustainable land management practices. Reforestation initiatives can help restore ecological balance, reduce soil erosion, and mitigate the impacts of floods and landslides.

c. Strengthening regulations and policies: Enforce stronger regulations and policies related to emissions standards, fuel efficiency, and environmental impact assessments for the transport and logistics sector.
d. Promoting clean and renewable energy sources: Provide incentives and support for the adoption of clean and renewable energy sources. Include subsidies or tax benefits for logistics service providers who transition to electric vehicles or other forms of zero-emission transportation that contribute to reducing the carbon footprint of logistics operations.

e. Improving infrastructure and logistics planning: Intermodal transportation hubs, and logistics parks that would optimize transportation routes, reduce congestion, and minimize fuel consumption.

f. Raising awareness and education: These campaigns should include all stakeholders to promote behavioral changes that prioritize sustainability.

g. Supporting research and development: This can involve exploring alternative transportation modes like rail or waterways, optimizing delivery routes, or utilizing advanced technologies to improve supply chain efficiency and reduce emissions.
3. FUTURE CONSIDERATIONS AND CONTRIBUTIONS OF LOGISTIC SERVICE PROVIDERS

a. Encouraging public-private partnerships: Foster public-private partnerships to facilitate knowledge sharing, resource pooling, and joint investments in sustainable logistics infrastructure.

b. Supporting research and innovation: Support projects focused on sustainable logistics practices, alternative fuel sources, and technology development to foster a culture of innovation and drive the adoption of environmentally friendly practices.

c. Capacity building and training: Focus on eco-driving techniques, vehicle maintenance for optimal fuel efficiency, and adopting sustainable logistics practices.
4. CONSTRAINTS

A. Bad fuel: This causes air pollution contributing to the greenhouse effect and global warming. High sulfur content leads to higher emissions of pollutants like sulfur dioxide (SO2) and particulate matter (PM).

B. Old vehicles: They provide lower fuel efficiency and higher emissions. High levels of pollutants, including nitrogen oxides (NOx) and carbon monoxide (CO), harm air quality and human health. Additionally, older vehicles often lack modern emission control technologies to upgrade, resulting in more significant environmental impacts.

C. Uneconomic roads: The inefficient transportation practices, including increased fuel consumption and emissions; traffic congestion, longer travel times, and unnecessary idling, which worsen air pollution and increase carbon emissions.
D. Dust pollution: Unpaved roads, construction activities, and wind erosion, contributes to poor air quality and respiratory issues. The inhalation of particulate matter (PM10 and PM2.5) can lead to respiratory and cardiovascular diseases. Dust particles also absorb and scatter sunlight, affecting temperature patterns and contributing to climate change.

E. Deforestation: Deforestation disrupts this natural balance, releasing stored carbon into the atmosphere and contributing to GHG emissions. It also reduces the availability of natural resources, affects wildlife habitats, and leads to soil erosion and decreased water quality.

F. Landslides and floods: This induces changes in water absorption and runoff patterns. Loss of vegetation and destabilization of slopes due to deforestation make areas more prone to landslides. Flooding can result from deforestation-induced changes in water absorption and runoff patterns. Landslides and floods not only cause immediate destruction and loss of lives but also have long-term consequences for ecosystems and climate resilience.
We must remember the threats we now confront to peace, prosperity and planet due to climate change. In 2021 the net transfer from official loans to emerging and developing countries for mitigating climate change were just $38bn. Grants were larger but more narrowly focused. There must be greater aid, debt, relief support in this sector for generating needed resources to address the long term task.

By Martin Wolf The west must recognize its Hypocrisy.

Financial Times. July 11, 2023
SOME INITIATIVES OF GOVERNMENT AND PRIVATE SECTORS

- 1. Cycle track
- 2. BRT (Bus Rapid transit)
- 3. Electric and battery vehicles and green sticker
- 4. ‘Only one earth’ sustainable living with nature.
- 5. Environmental protection act 2019
- 6. GREID Green flexible and inclusive development (7.4 billion $) by donors.
- 7. NEPAP National environmental protection action plan
- 8. NSTC National sustainable transport strategy
- 9. Standardization of vehicle for BBIN motor vehicle agreement
5. CONCLUSION

- Need to approach initiatives holistically and consider their long-term impact to support the transition to a cleaner and more energy-efficient logistics system by:
  - adopting cleaner fuels,
  - investing in sustainable technologies,
  - promoting sustainable practices,
  - participating in industry associations, and
  - collaborating with government agencies.

- The government and private sector can play a crucial role by enhancing coordination, investing in reforestation and vegetation initiatives, strengthening regulations and policies, promoting clean and renewable energy sources, improving infrastructure and logistics planning, raising awareness and supporting research and development.
Thank You!