

Unit 7 Tourism Logistics, Transportation and the Future

Topic

- Sustainable transport and green logistics
- Transportation safety and security

Objectives

Students should be able to:

- Discuss about transportation and its key issues in future concerns.
- Define what sustainable transport and the three dimensions (environment, economy, society), and green logistics are.
- Explain the relationship between transportation and environment.
- Explain the environmental dimensions of transportation that related to the causes, the activities, the outputs and the results of transport systems.
- Suggest how to manage transport demand, especially road transport, in ways that can reduce motorized use.



SUSTAINABLE TRANSPORT AND GREEN LOGISTICS

Issue 1: Transport and energy

- Alternative fuels in the form of non- crude oil resources.
- The most prevalent alternatives being considered are: *biogas, hydrogen, electricity and hybrid vehicles.*

Issue 2: The transport and environment (a linkage)

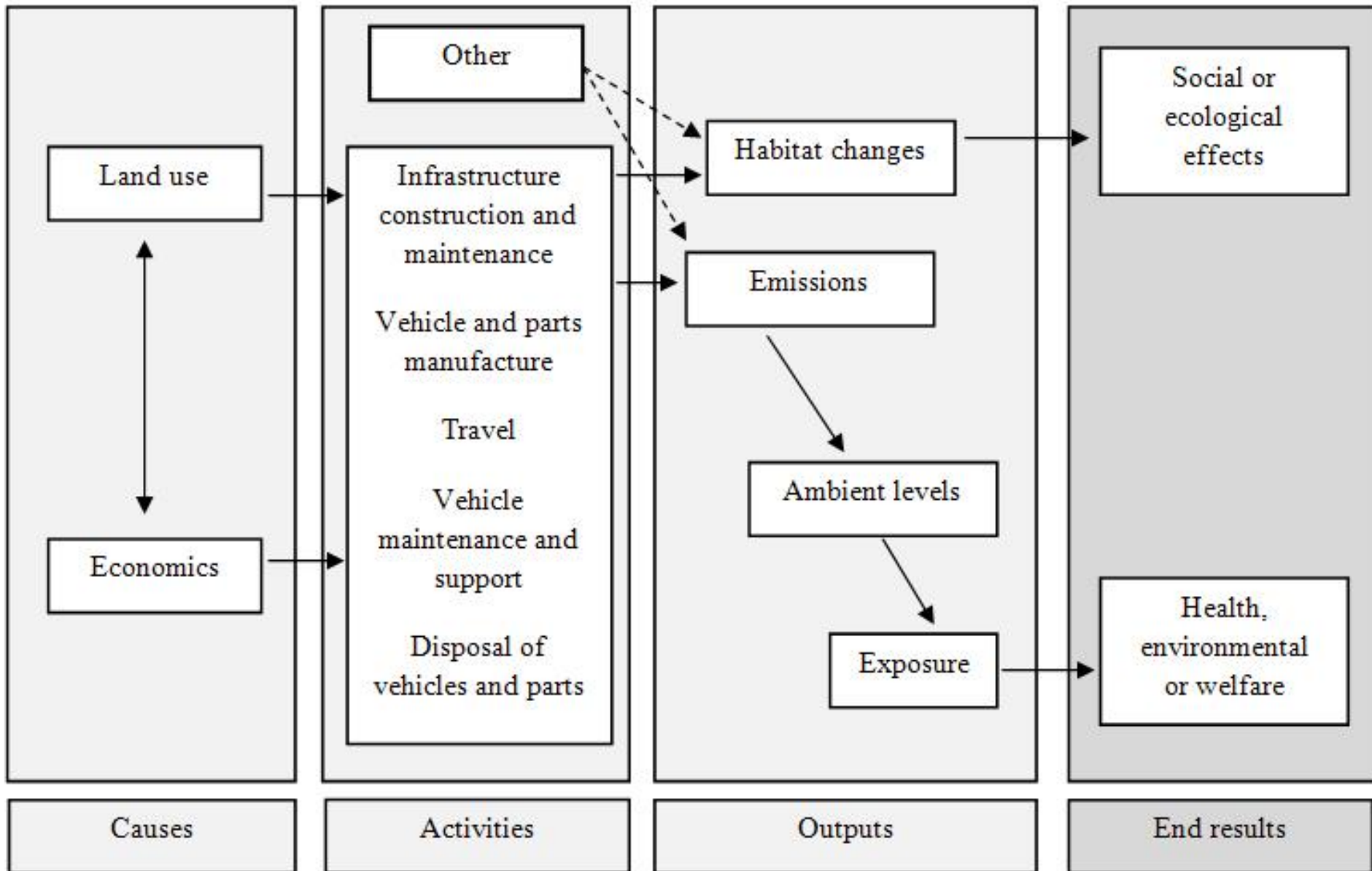


Figure 1: Environmental dimensions of transportation

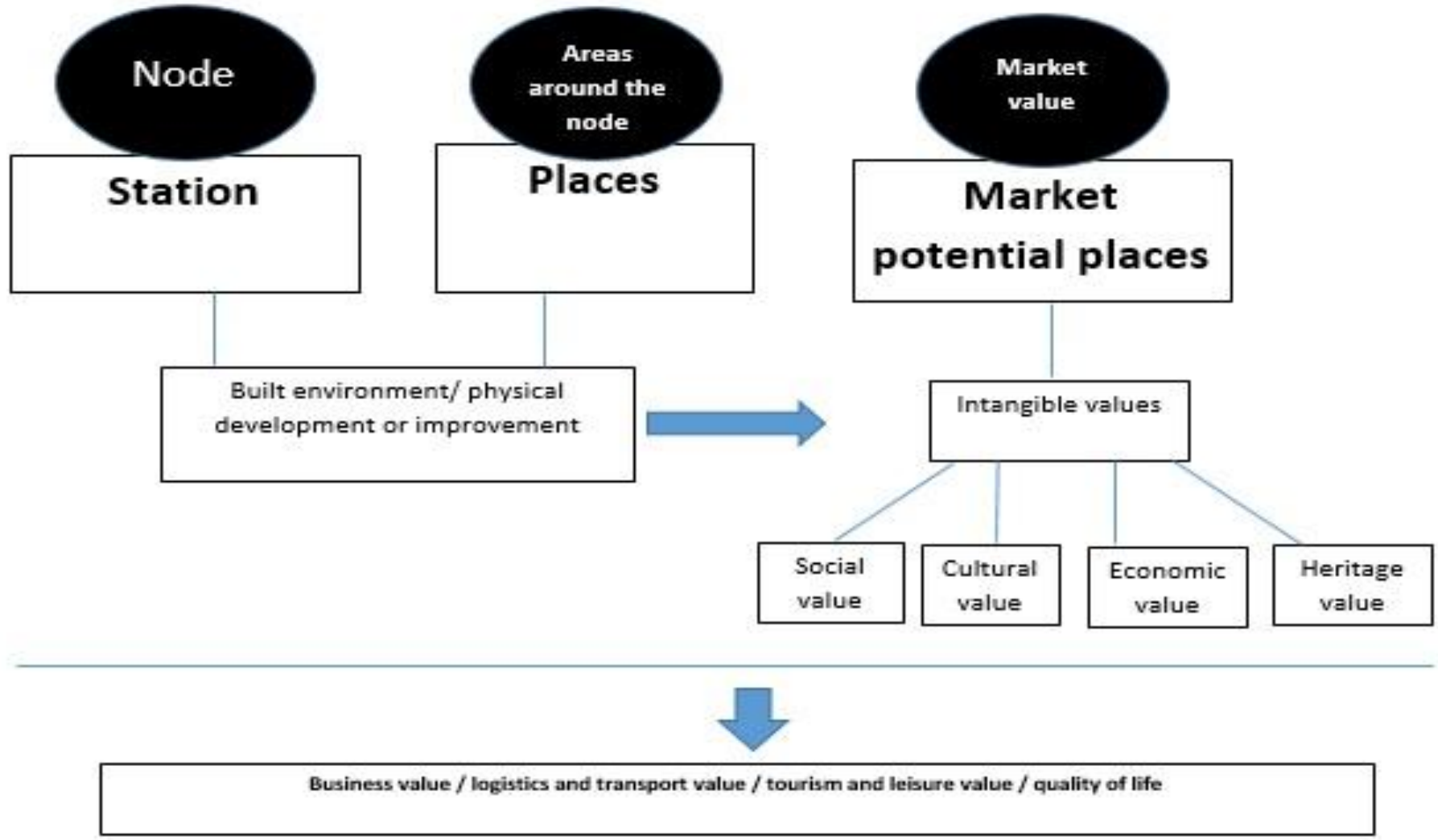
Environmental dimensions

- Transportation sector is becoming increasingly linked to environmental problems.
- The most important impacts of transport on the environment relate to climate change, air quality, noise, water quality, soil quality, biodiversity and land take (land take: transportation facilities have an impact on the urban landscape).
- Even though transportation development can support urban life in mobility, major transport facilities can also affect the quality of urban life by creating physical barriers, increasing noise levels, generating odors. These reduce the urban aesthetic and affect the built heritage.

TOD can represent this environmental sustainability

Town Planning/ Land Use Planning

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Issue 3: Sustainable transportation

Sustainable transportation is the capacity to support the mobility needs of people, freight and information in a manner that is the least damaging to the environment.

The concept of sustainable transportation is linked with the development of sustainable transport modes, infrastructures and logistics. Three major dimensions are considered for such a purpose: *Environment, Economy, Society*

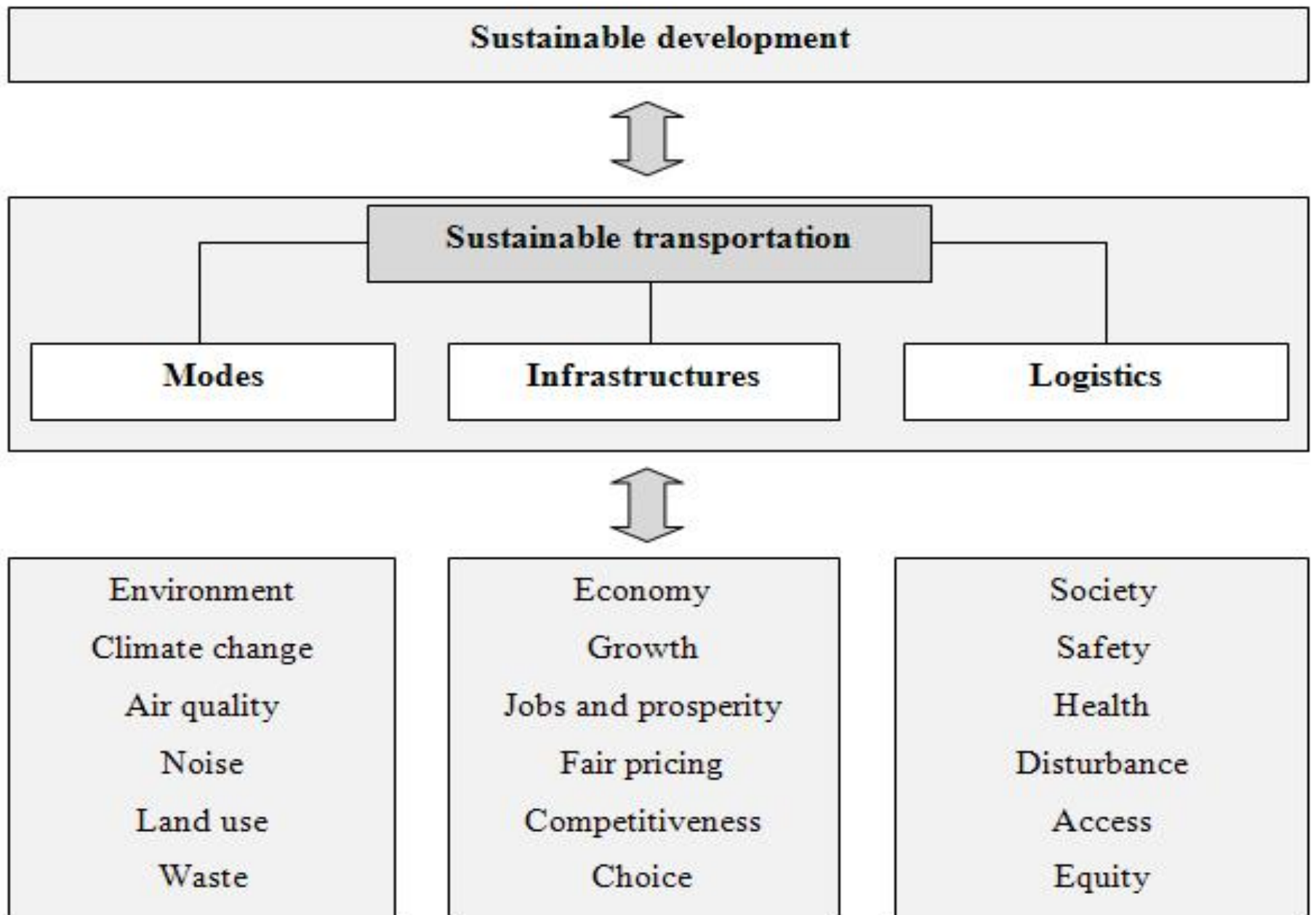


Figure 2: Sustainable transportation

Issue 4: Greenness and logistics

Green logistics focuses more on freight.

“Logistics is at the heart of the operation of modern transport systems and implies a degree of organization and control over freight movements. To have green logistics, it needs modern technology.”

Greenness concept is used in logistics to suggest that it can be compatible with the environment. Therefore, green logistics is perceived as beneficial, environmentally friendly, and efficient for transport and distribution system.

Definition of green logistics

It is supply chain management practices and strategies that reduced the environmental and energy footprint of freight distribution. It focuses on material handling, waste management, packaging and transport.

The green applications of logistics are numerous and cover three main dimensions:

Product design and production planning: developing products that have a lower environmental footprint, including their production process.

Physical distribution: Ensuring that the mobility of freight related to logistics operations is performed in a sustainable and environmentally friendly manner.

Material management: Moving towards more efficient forms of materials use, including packaging and recycling so that what used to be an output can become an input (meaning that wastes can be recycled and used again).



TRANSPORT SAFETY AND SECURITY

Issue 5: Safety and security in transport

Aircraft Hijacking

Aircraft Terrorism, e.g. 9/11

Aircraft fall down by storms

Territory issue (e.g. Malaysia Airlines hit by missile, crashing in Ukraine)

Road Accidents

Driver factors

Alcohol

Old age

Physical
impairment, e.g.
poor eyesight

Age-
immaturity

Drug use

Lack of sleep/
fatigue

Other distractions, e.g.
using mobile phone while
driving

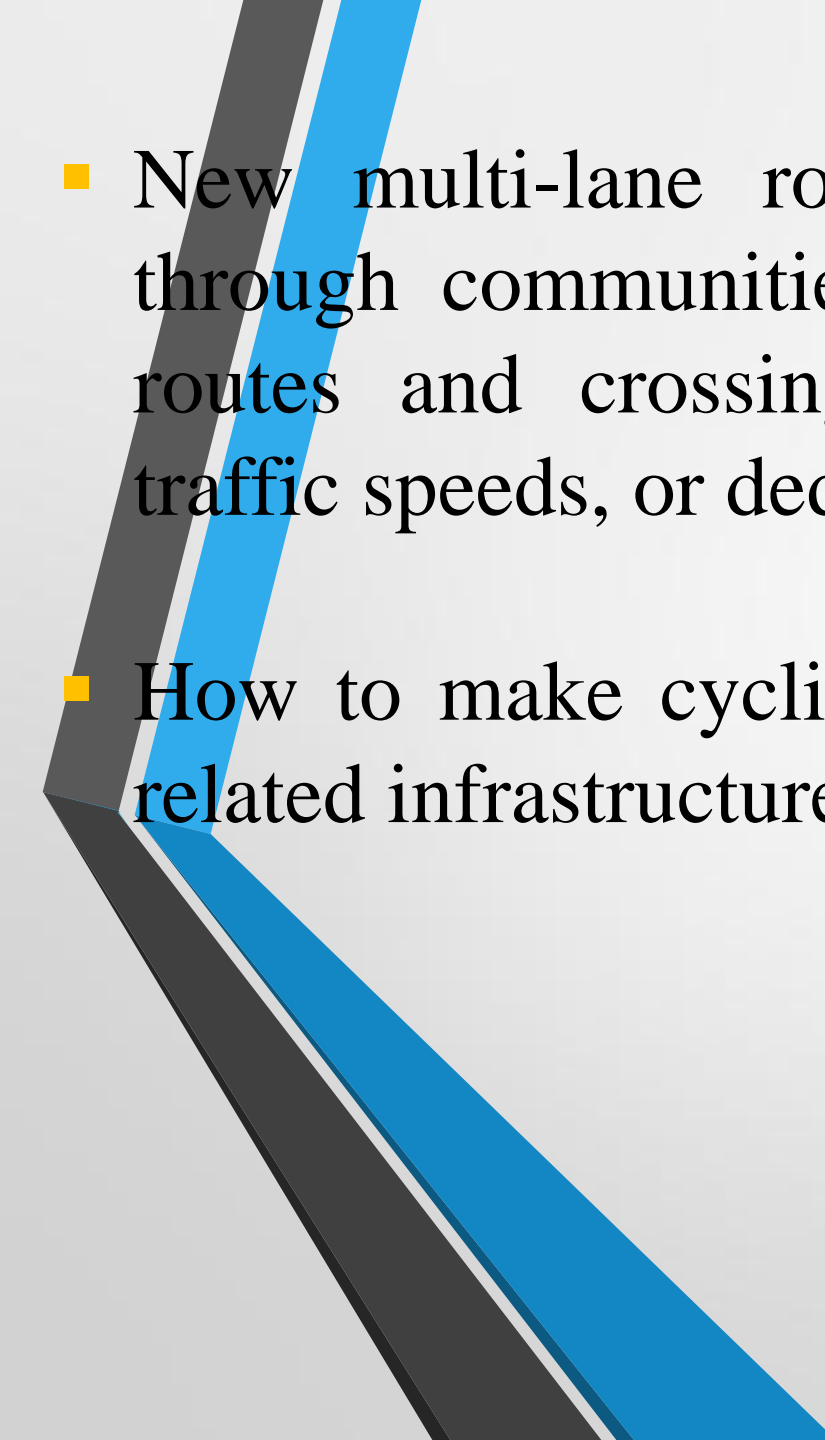
Road safety laws and five key risk factors according to the WHO

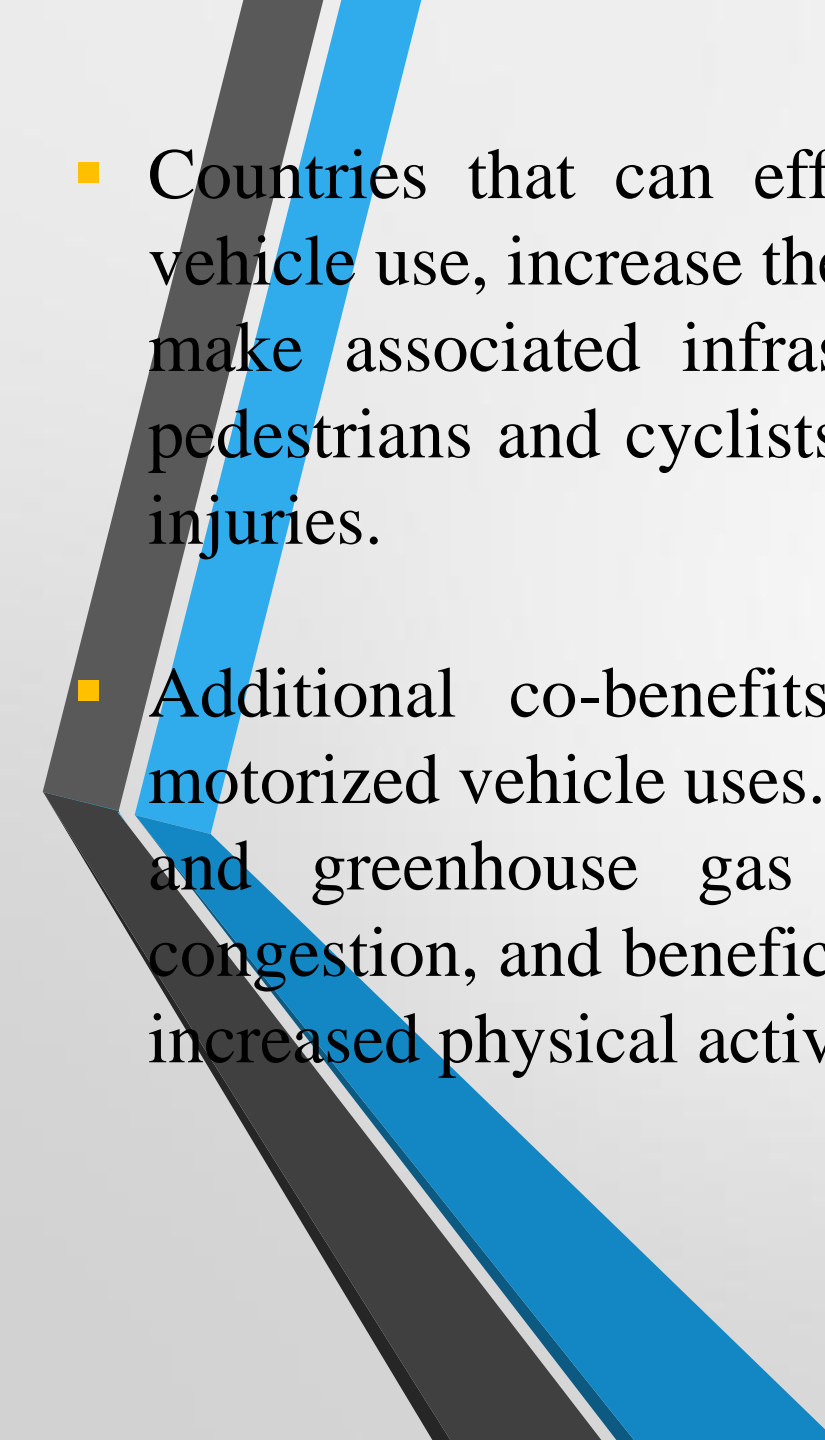
- (1) drinking and driving
- (2) speeding
- (3) failing to use motorcycle helmets, seat-belts, child restraints



Issue 6: Safety for road users who use alternative modes of transport

The increasing number of motorized vehicles makes roads more dangerous for those road users who use alternative modes of transport – notably those who walk, cycle and use motorcycles.

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- New multi-lane roads are often built to cut through communities without provision of safe routes and crossings for pedestrians, slowing traffic speeds, or dedicated lanes for cyclists.
 - How to make cycling and walking policies and related infrastructures from true?

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- Countries that can effectively reduce private motorized vehicle use, increase the appeal of walking and cycling and make associated infrastructure improvements to protect pedestrians and cyclists can reduce the risk of road traffic injuries.
 - Additional co-benefits can also result from reducing motorized vehicle uses. These include reduced air pollution and greenhouse gas emissions, reductions in traffic congestion, and beneficial health outcomes associated with increased physical activity from walking and cycling.

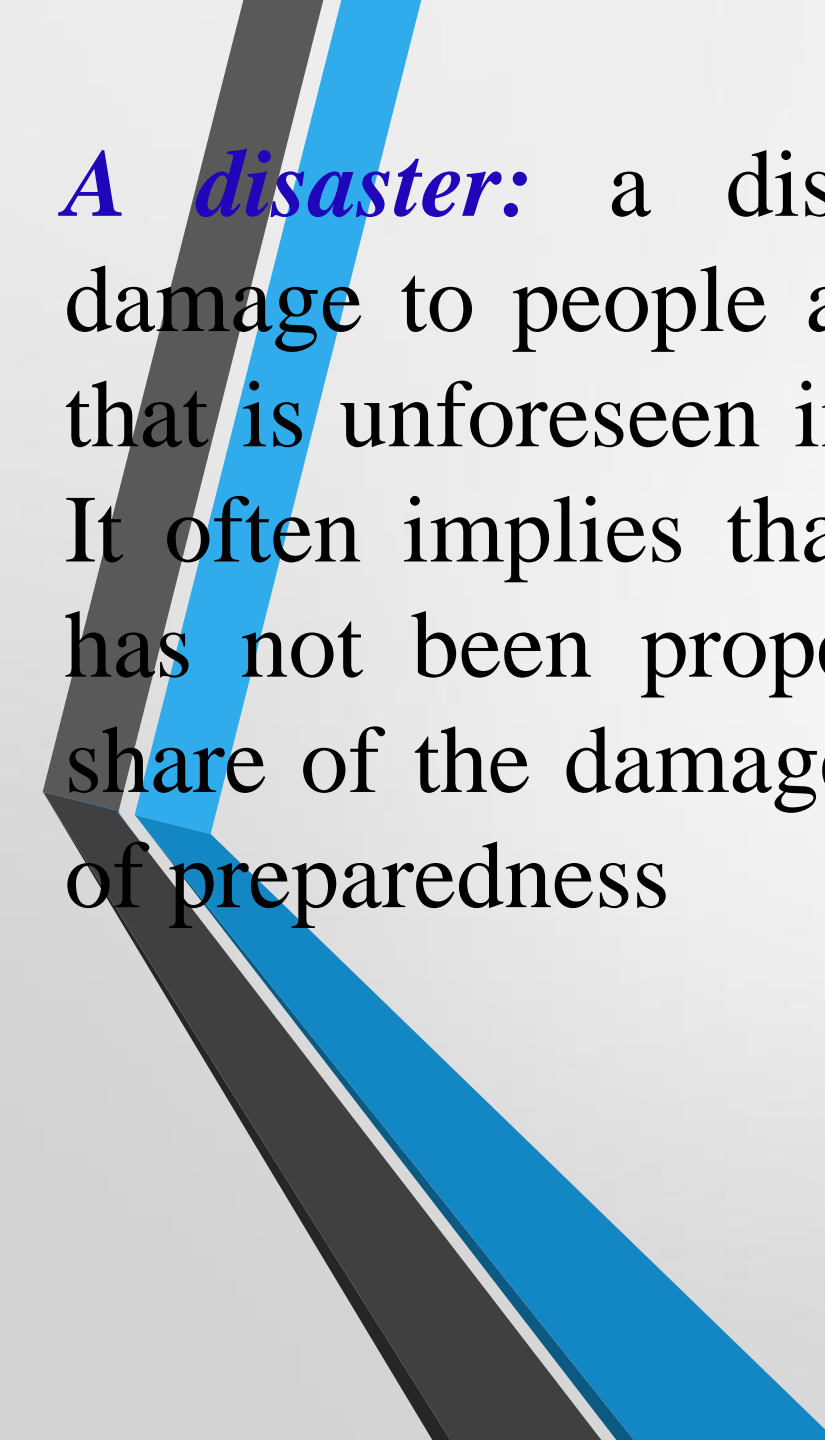
Managing transport demand to reduce motorized use

Managing the demand for transport is made up of a large number of small interventions that cumulatively can impact car use, but in particular improve the livability of cities. A sample of well- practiced and successful interventions includes:

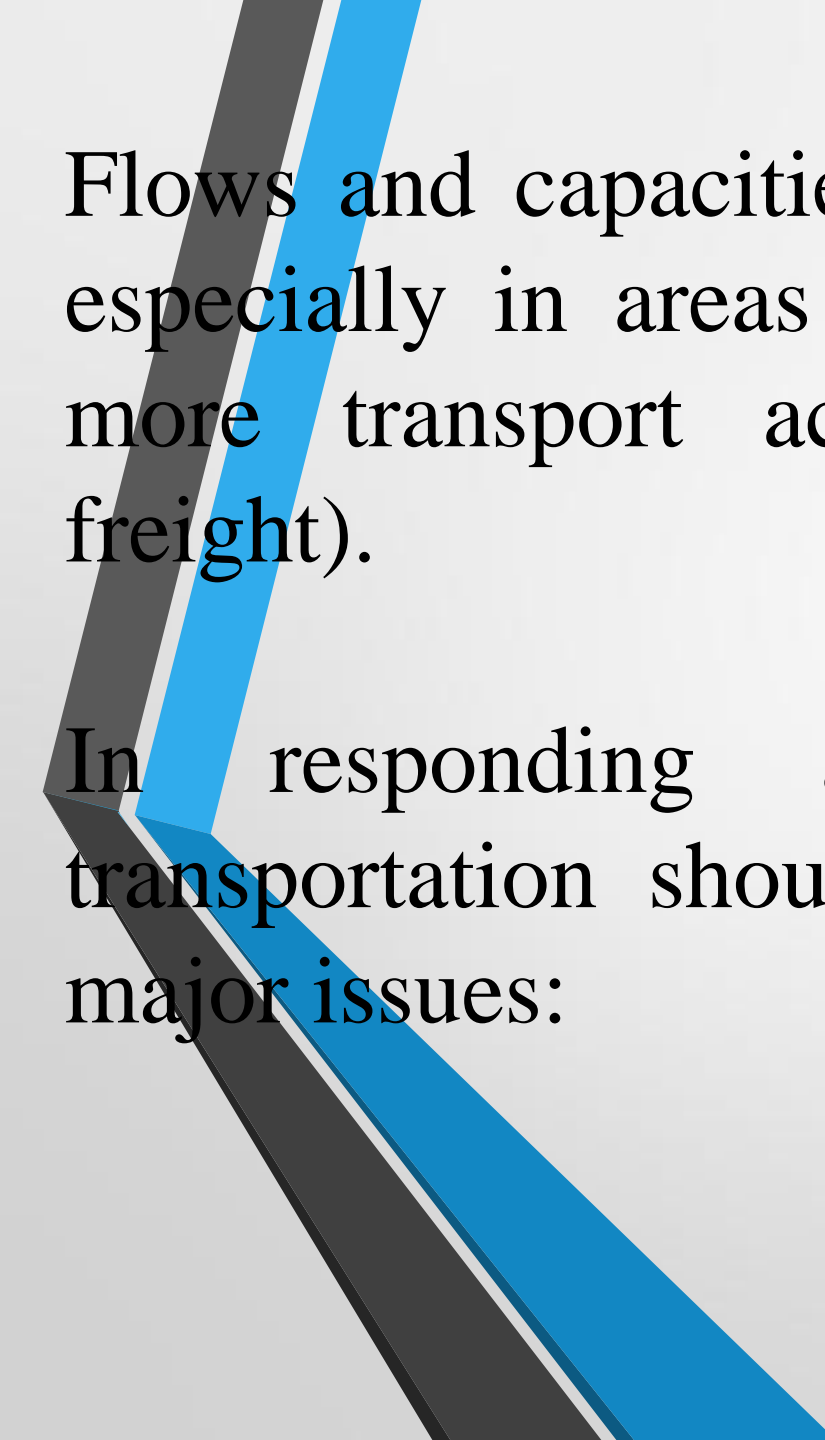
- Park and ride
- Traffic calming (speed bumps and street narrowing)
- Priority lanes for buses and high occupancy vehicles
- Alternative work schedules
- Promoting bicycle use
- Car sharing
- Enhancing pedestrian areas
- Improving public transit
- Parking management

Issue 7: Transport and disasters

Transportation systems are designed to operate under normal conditions. Yet, disruptions such as those caused by an accident or by a storm are rather common and well mitigated. On occasion, a disruption at a much higher scale takes place to the extent that the security of a whole region or nation is compromised.

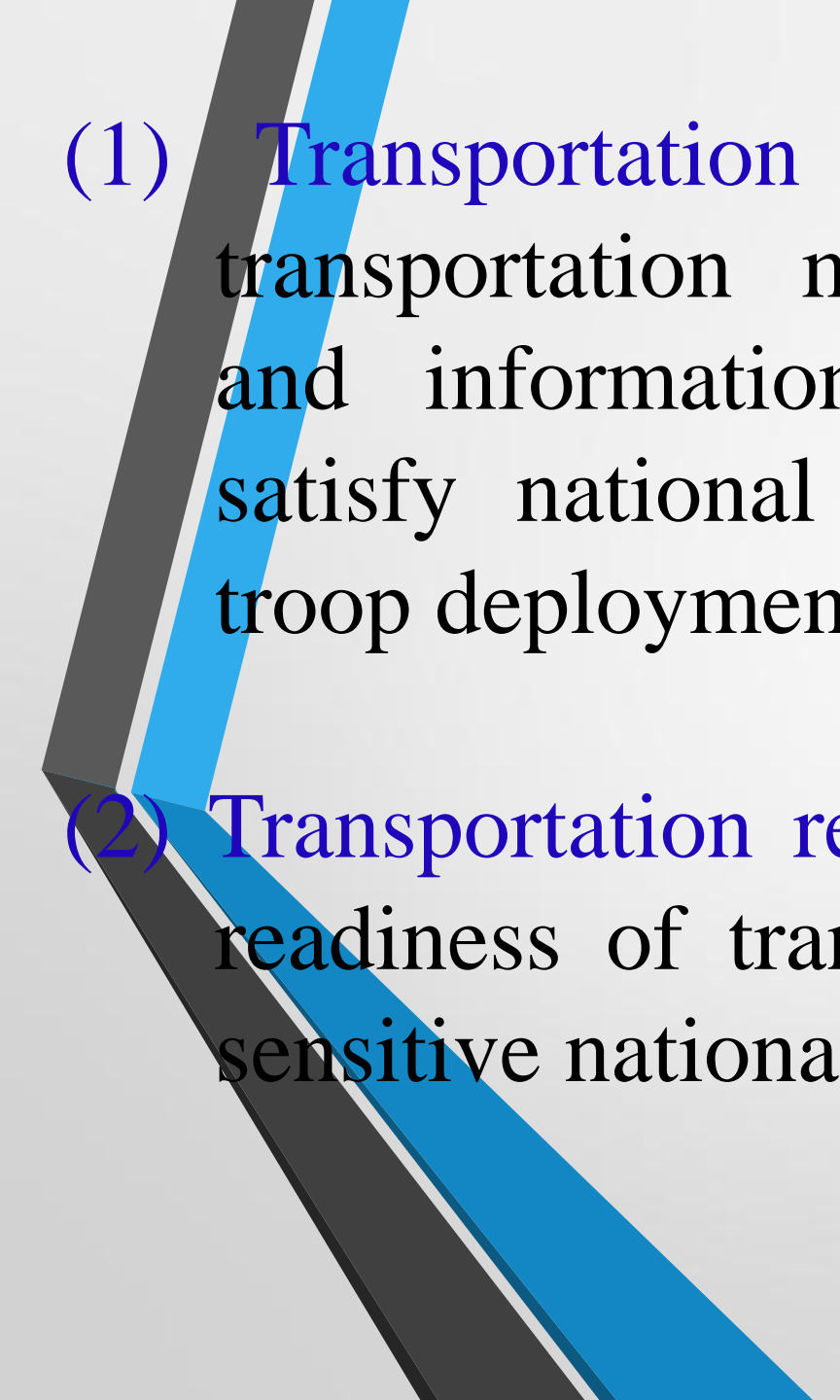


A disaster: a disaster involves extensive damage to people and physical infrastructure that is unforeseen in nature, scale and extent. It often implies that their risk of occurrence has not been properly assessed and a large share of the damage is the outcome of a lack of preparedness



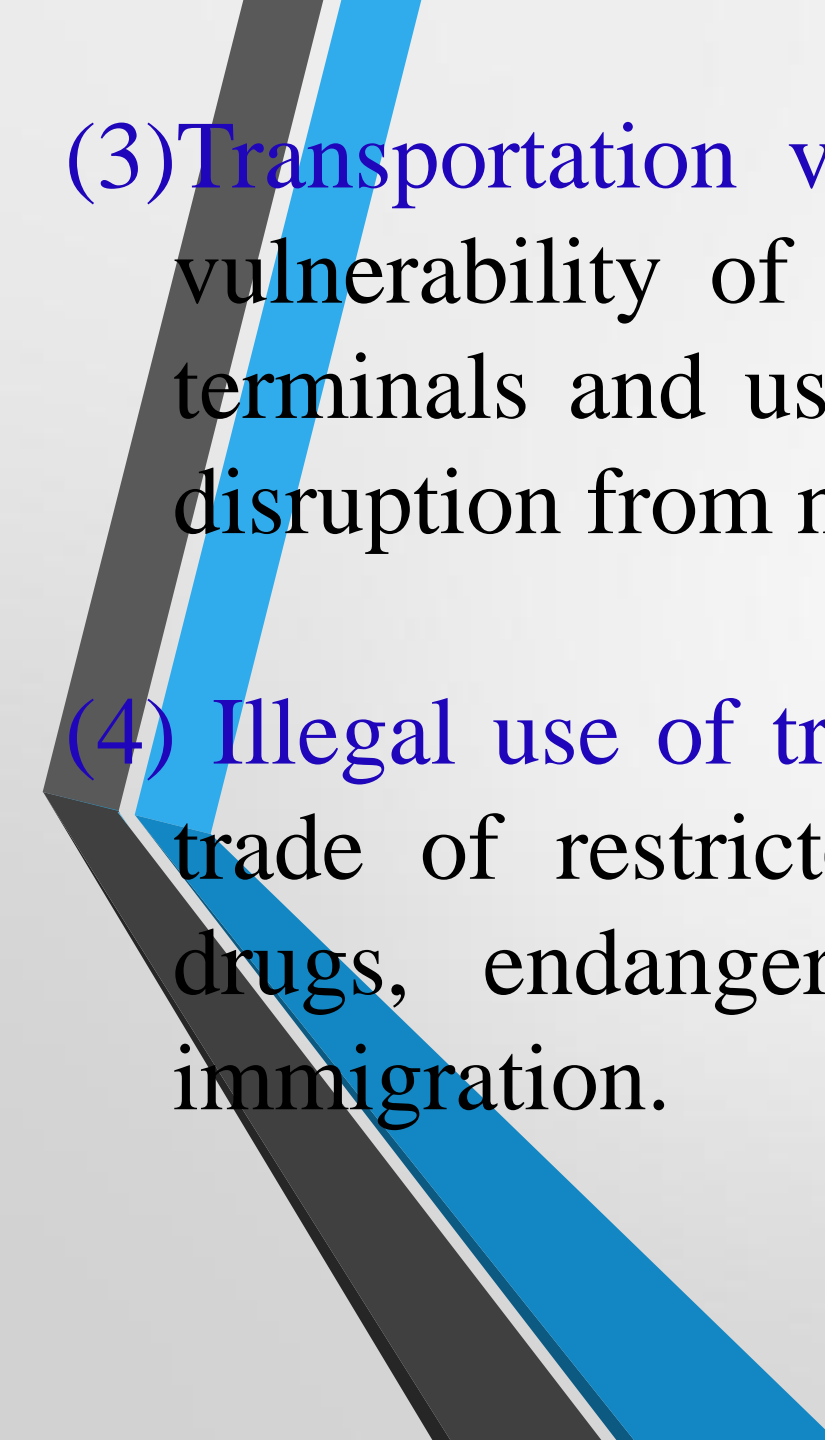
Flows and capacities of transport are needed especially in areas with a huge crowds and more transport activities (passengers and freight).

In responding any emergency cases, transportation should be improved in the 4 major issues:



(1) **Transportation supply:** ensuring that transportation modes, routes, terminals and information systems are able to satisfy national security needs such as troop deployment and emergency relief.

(2) **Transportation readiness:** maintaining the readiness of transportation to face time-sensitive national security needs.



(3) **Transportation vulnerability:** reducing the vulnerability of the transportation modes, terminals and users to intentional harm or disruption from natural events.

(4) **Illegal use of transportation:** reducing the trade of restricted or illegal goods (e.g. drugs, endangered species), and illegal immigration.