

Beyond Road Safety

The Wider Benefits of Safe Transport Systems

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The Science of Child and Vulnerable Person Road Safety and the Co-Benefits of a Safer System Webinar

Asia-Pacific Road Safety Observatory
Asian Development Bank
The George Institute for Global Health and CAREC

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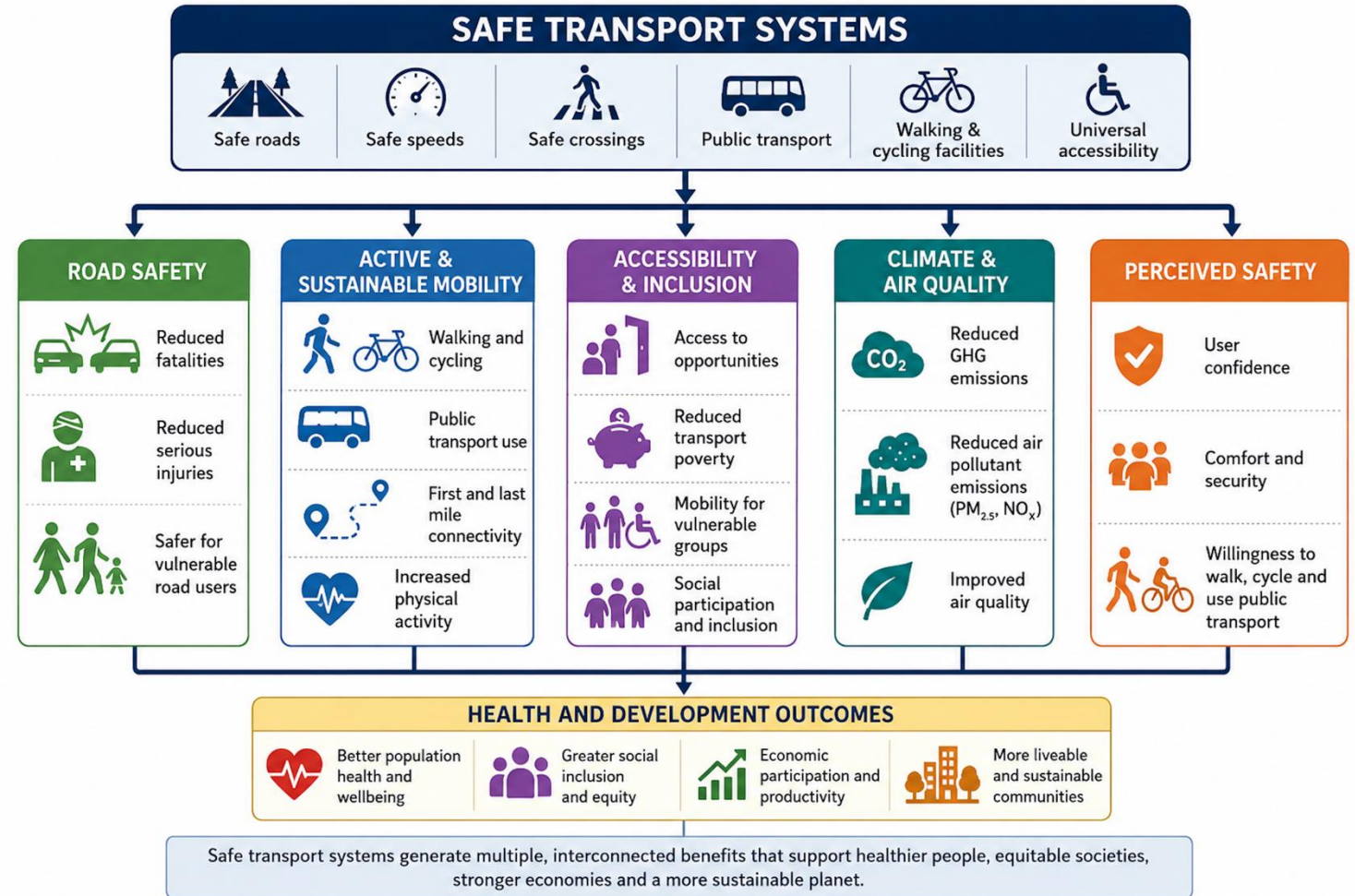
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Co-Benefits of Safe Transport

Safe transport systems deliver benefits beyond reducing deaths and injuries, including improved health, accessibility, inclusion and environmental sustainability.

Realising these benefits requires understanding users, inclusive planning, safe infrastructure, behaviour change and sustainable mobility.



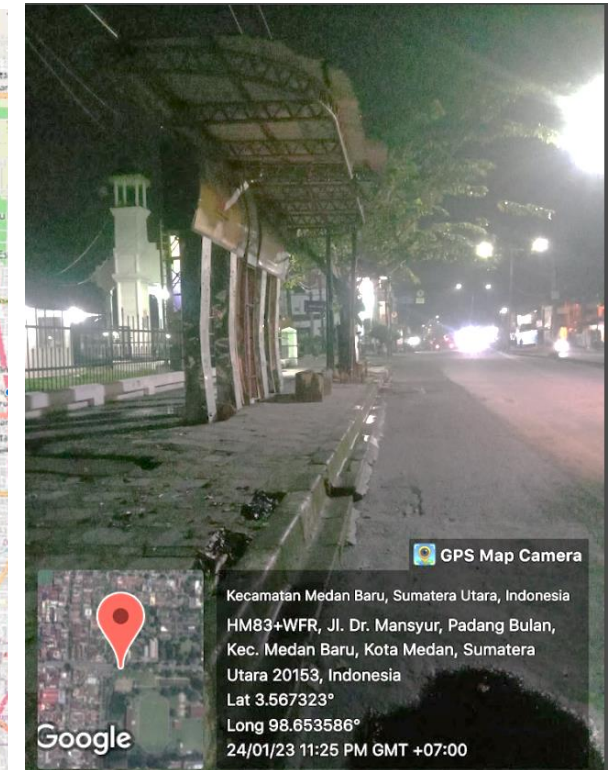
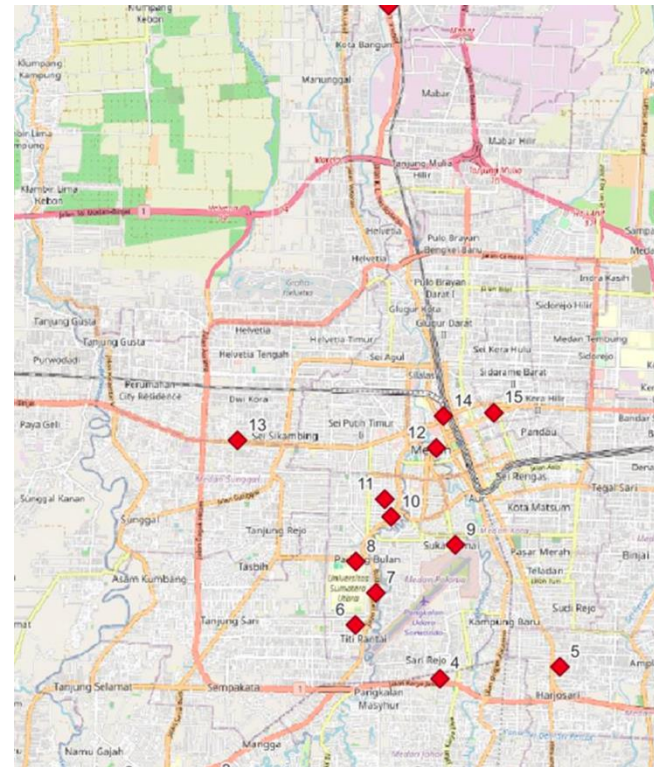
Source: Haq (2026), author's conceptual framework

Understanding Vulnerable Transport Users

To identify barriers to safe, accessible and inclusive mobility, especially of women, children, older people and persons with disabilities.

Participatory Approaches:

- Participatory mapping
- Photovoice
- Digital journey mapping (Google Timeline)
- Spatial surveys
- Rapid appraisal GIS
- Online participatory mapping



Understanding users' lived experiences is essential for designing safer and more inclusive transport systems.



Inclusive Planning and Co-design

To ensure transport solutions reflect the needs of users and vulnerable groups.

Approaches

- Community engagement
- Co-design workshops
- Tactical urbanism
- Testing solutions before permanent investment



	Not problematic	Somewhat problematic	Seriously Problematic
Lighting	9	3	
Noise	12		
Air Quality	5	6	1
Signage	2		9
Greenery	1	2	10
Traffic Flow	1	4	7
Passenger Facilities	4		8
Service Accessibility	5		7
Information Availability	2	1	9
Security		7	5
Merchant Operations	5		7



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Tactical Urbanism

Tactical urbanism is the use of low-cost, temporary and often community-led interventions to test and evaluate improvements to transport, accessibility and public space before making permanent investments.



- Terminal Binjai, in North Sumatra, faced significant accessibility and safety challenges.
- Poor pedestrian facilities, inadequate amenities and limited accessibility discouraged public transport use, particularly among older people, women and persons with disabilities.
- As a result, reliance on private vehicles increased, contributing to congestion, transport emissions and poor air quality.



Working with local users, a series of tactical urbanism interventions were co-designed and tested at Binjai Terminal, including improved pedestrian facilities, tactile paving, information boards, shelters, bus parking lanes and zebra crossings to enhance safety, accessibility and user experience.



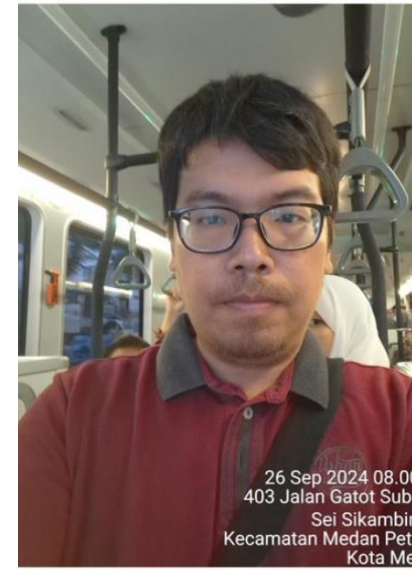
Behaviour Change

Supporting individuals to shift from private vehicles to:

- Public transport
- Walking
- Cycling
- Shared mobility

Intervention

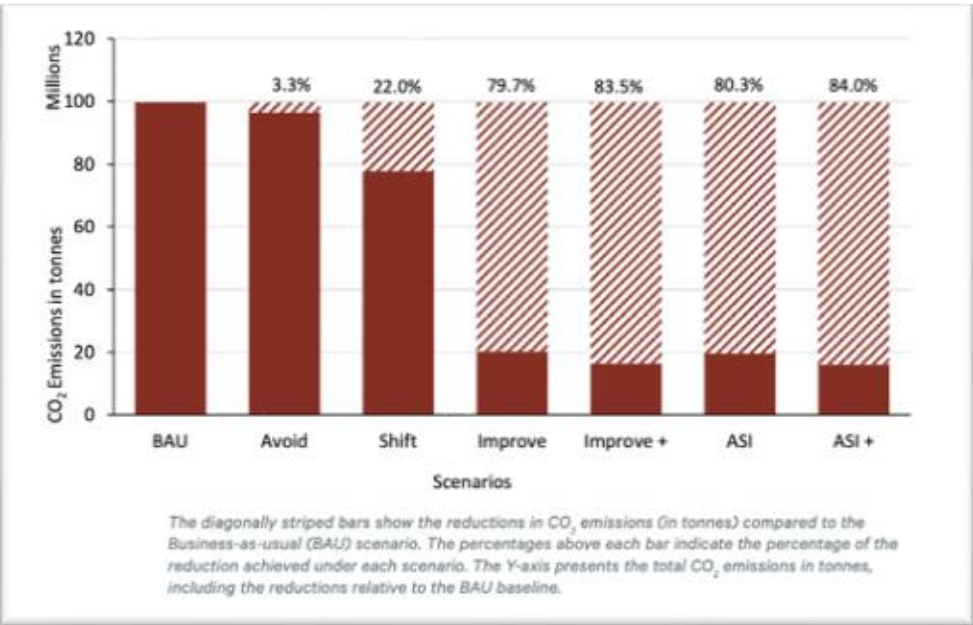
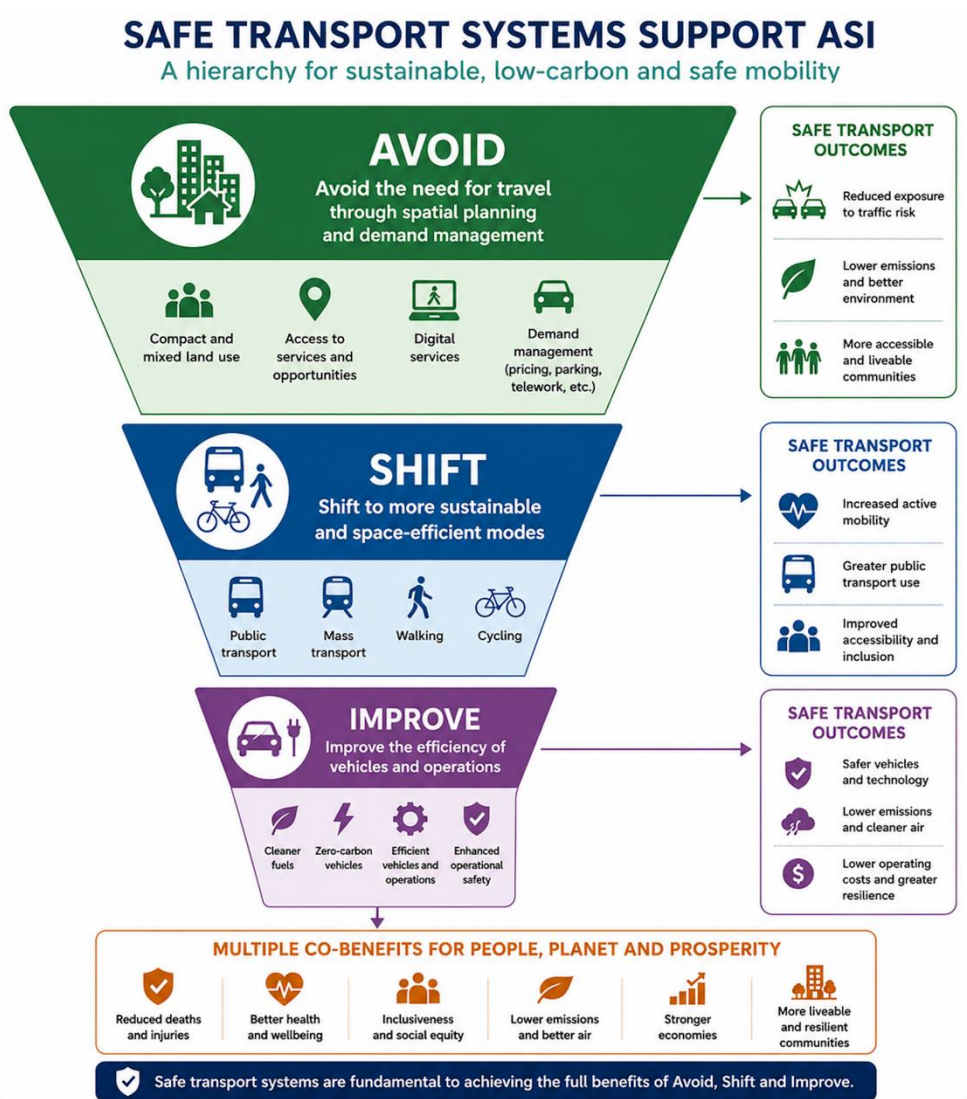
- Personalised travel plans
- Travel information
- Public transport guidance
- Incentives for sustainable travel



Outcomes

- +20.6% increase in paratransit use
- +17.6% increase in BRT use
- +2.9% increase in cycling
- 26.4% reduction in motorcycle use
- 5.9% reduction in private car use

Safe Transport Systems and the Avoid–Shift–Improve Framework



Strategy	Key interventions	Emission reductions by 2030	Emission reductions by 2050
Avoid (A)	8% of the population work from home	0.9%	3.3%
Shift (S)	Modal shift from private vehicle to public transport by 30% by 2050 10% increase in non-motorized-transport share by 2050	6.3%	22%
Improve (I)	100% electrification of all road passenger vehicles by 2050. 0.7% and 1.4% annual improvement in fuel economy	41.2%	79.7%
Improve+	Avoid, shift and improve measures combined, plus full electrification of road passenger vehicles and a 50% share of biofuels for vehicles that are not electrified by 2050.	41.4%	83.5%
ASI	Avoid, shift and improve measures combined	46.4%	80.3%
ASI+	The most ambitious pathway, which brings together the Improve+ measures and incorporates behavioural and infrastructure measures to reduce car use and shift travel modes.	46.6%	84%

Key Takeaways

1. Safe transport systems deliver multiple co-benefits

Beyond reducing deaths and injuries, they can improve health, accessibility, inclusion and environmental sustainability.

2. Achieving these benefits requires an integrated approach

Understanding the needs of children and vulnerable road users, inclusive planning, safe infrastructure and behaviour change are all essential components of a Safe System.

3. Safety, accessibility and sustainable mobility are mutually reinforcing

Safer and more inclusive transport systems can encourage walking, cycling and public transport use, supporting healthier and more liveable communities.



Safe transport systems are an investment not only in road safety, but also in healthier people, more inclusive societies and sustainable development.



Thank You



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