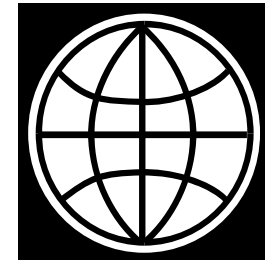




Risk Management and Safety – An Overview of Developing Countries

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Global road safety trends

Road deaths and injuries in developing countries are projected to deteriorate, unless new initiatives are taken to address this growing public health crisis.

In contrast, road safety risks in high-income countries are being successfully managed. A huge body of knowledge and practice has built up around this experience which could be adapted to managing the risks on the roads in developing countries.

The gap is widening

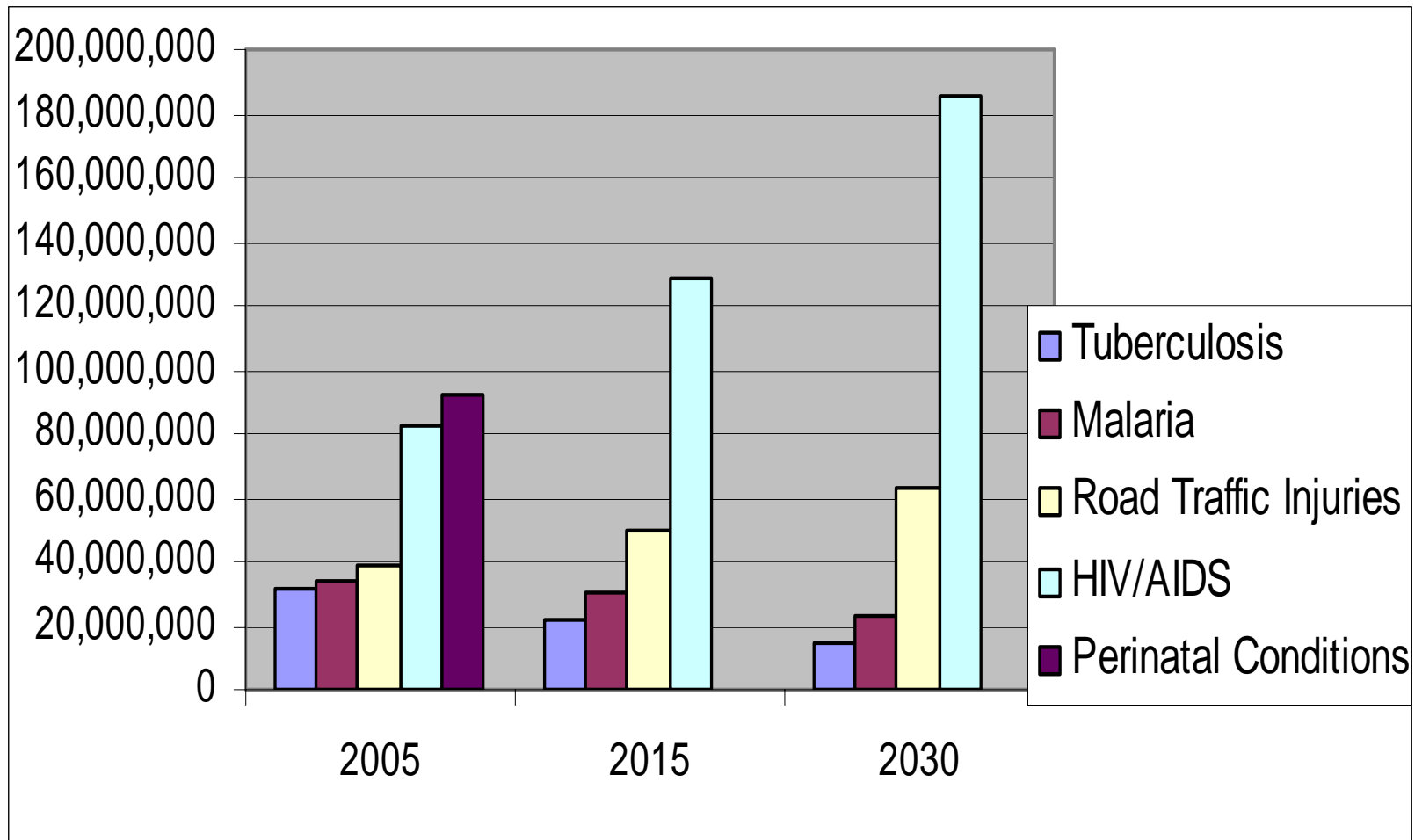
World Bank Region	% change 2000 - 2020
South Asia	144%
East Asia & Pacific	80%
Sub-Saharan Africa	80%
Middle East & North Africa	68%
Latin America & Caribbean	48%
Europe & Central Asia	18%
<i>Sub-total</i>	+ 83%
High-income countries	- 28%
<i>Global total</i>	66%

Health losses from crashes

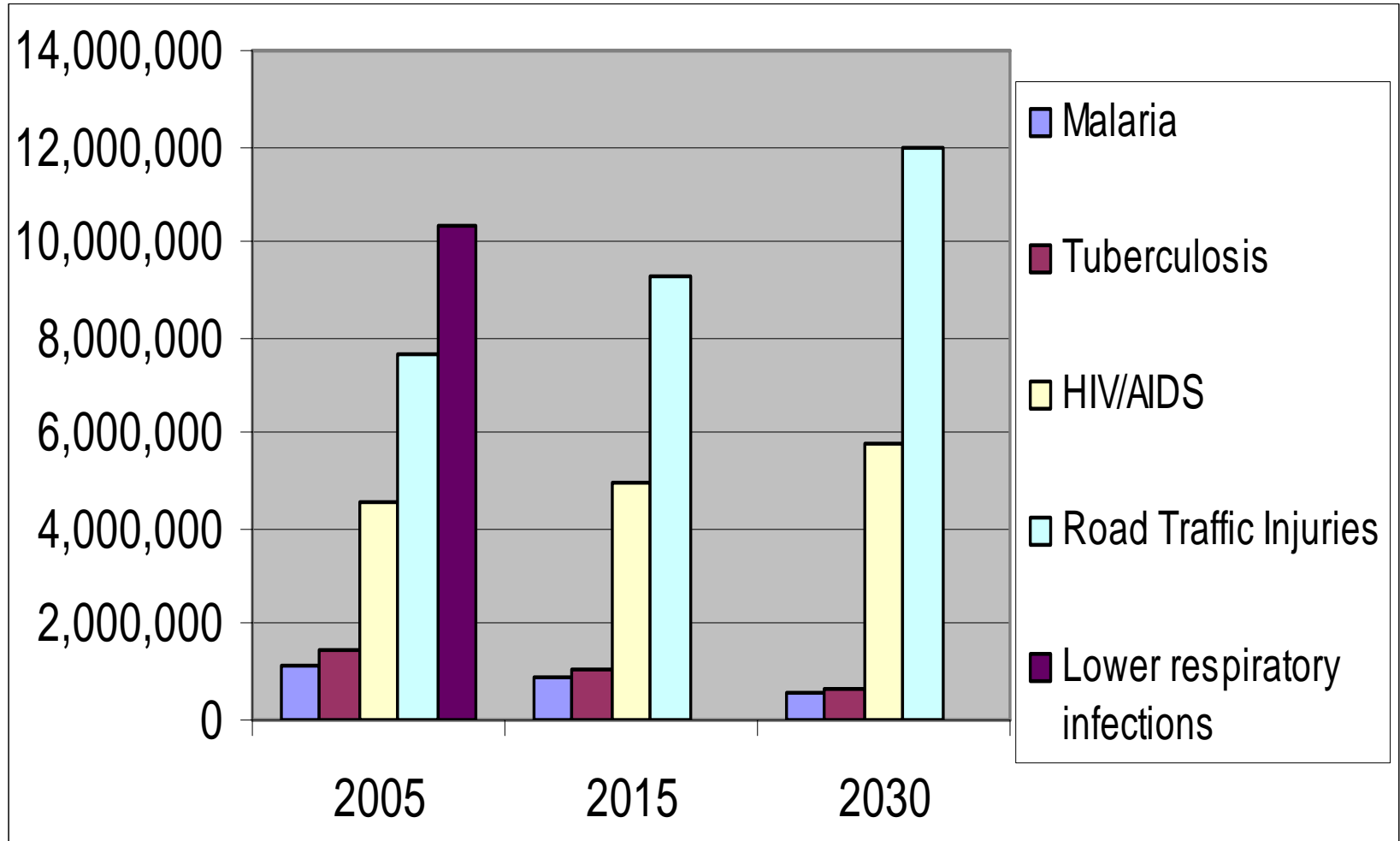
Road crash deaths and injuries in developing countries are projected to be the 4th largest cause of healthy life years lost by the total population in 2030, compared with tuberculosis (26th) and malaria (15th).

Road deaths are projected to be the leading cause of health losses for children (age 5 – 14) by 2015, and the second cause for men by 2030.

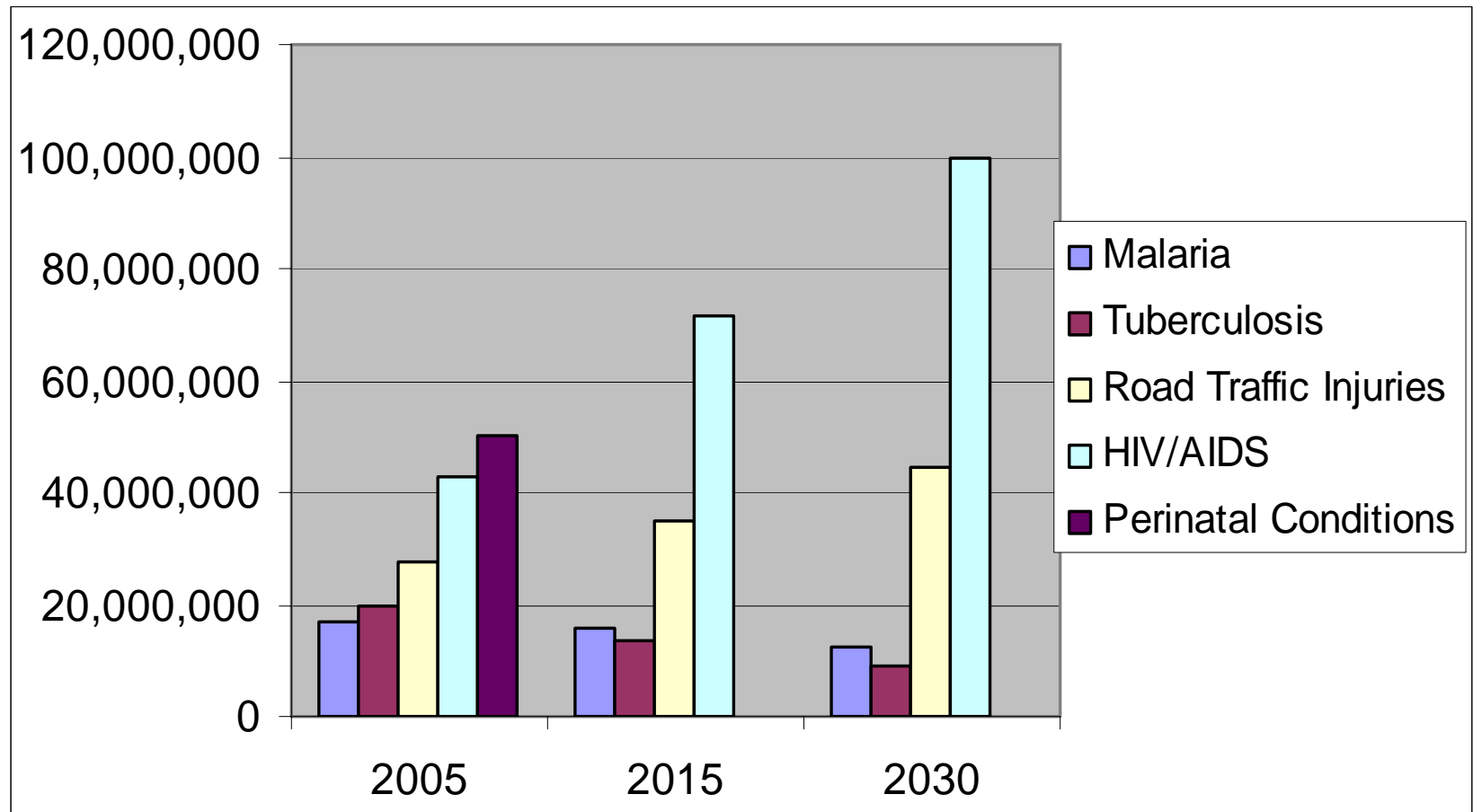
DALYs in developing countries (total population)



DALYs in developing countries (children age 5 - 14)



DALYs in developing countries (male population)





The way ahead?

The generic characteristics of the road safety management system in high-income countries and its evolution over a long period of motorization can be identified.

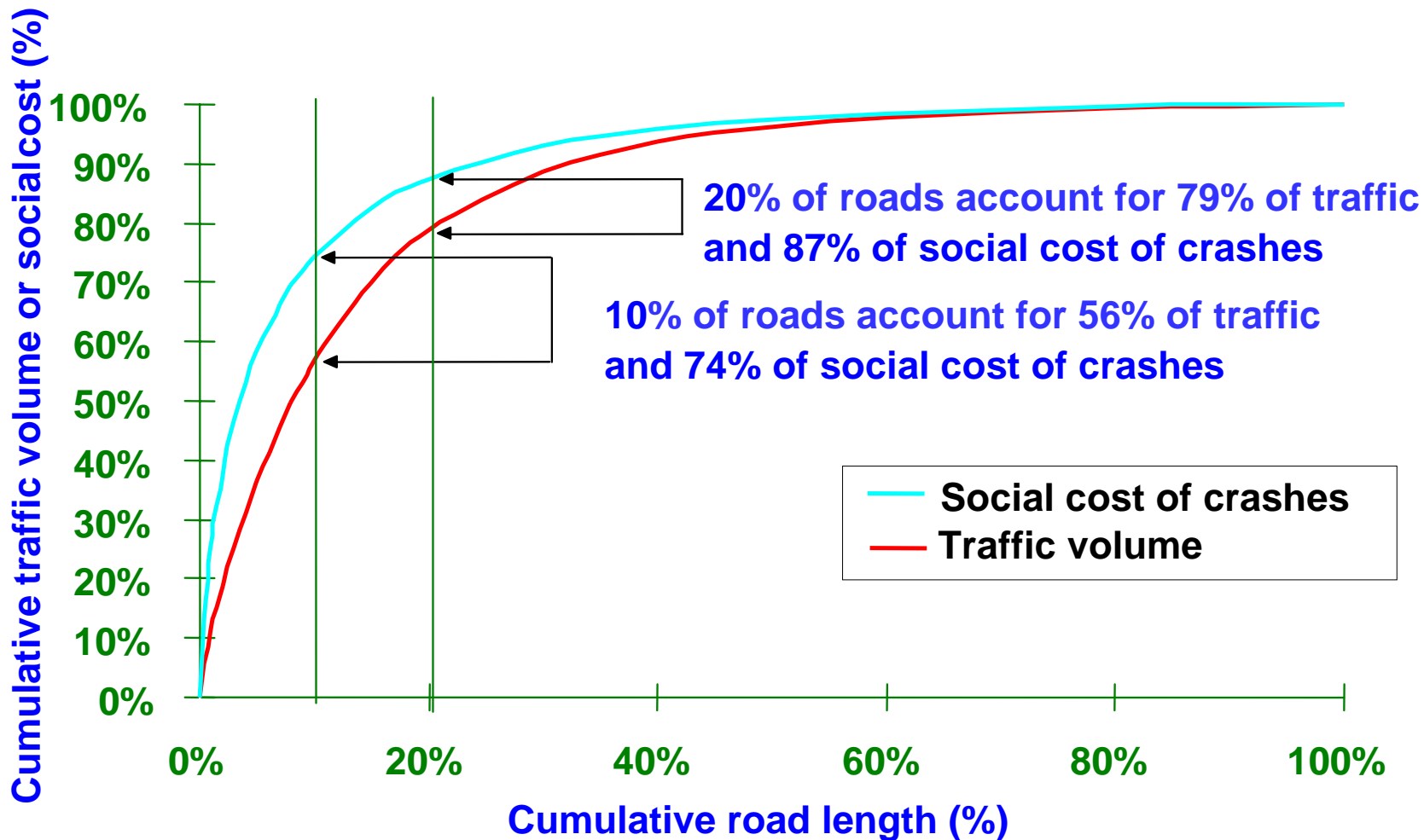
This evolution is especially relevant to developing countries. While their safety management capacity is almost universally weak, they can ill-afford to repeat the experience of high-income countries.

Managing road safety risks

Efficient and effective road safety risk management in the best performing high-income countries targets the highest concentrations of death and injury on the *road network*.

Safety in the road network is *produced* using a *systematic* multi-sectoral approach that addresses institutional management functions, interventions and desired results.

Targeting deaths and injuries



Source: *Road Safety Strategy 2010*, National Road Safety Committee, Wellington, New Zealand, October 2000



Safety management system

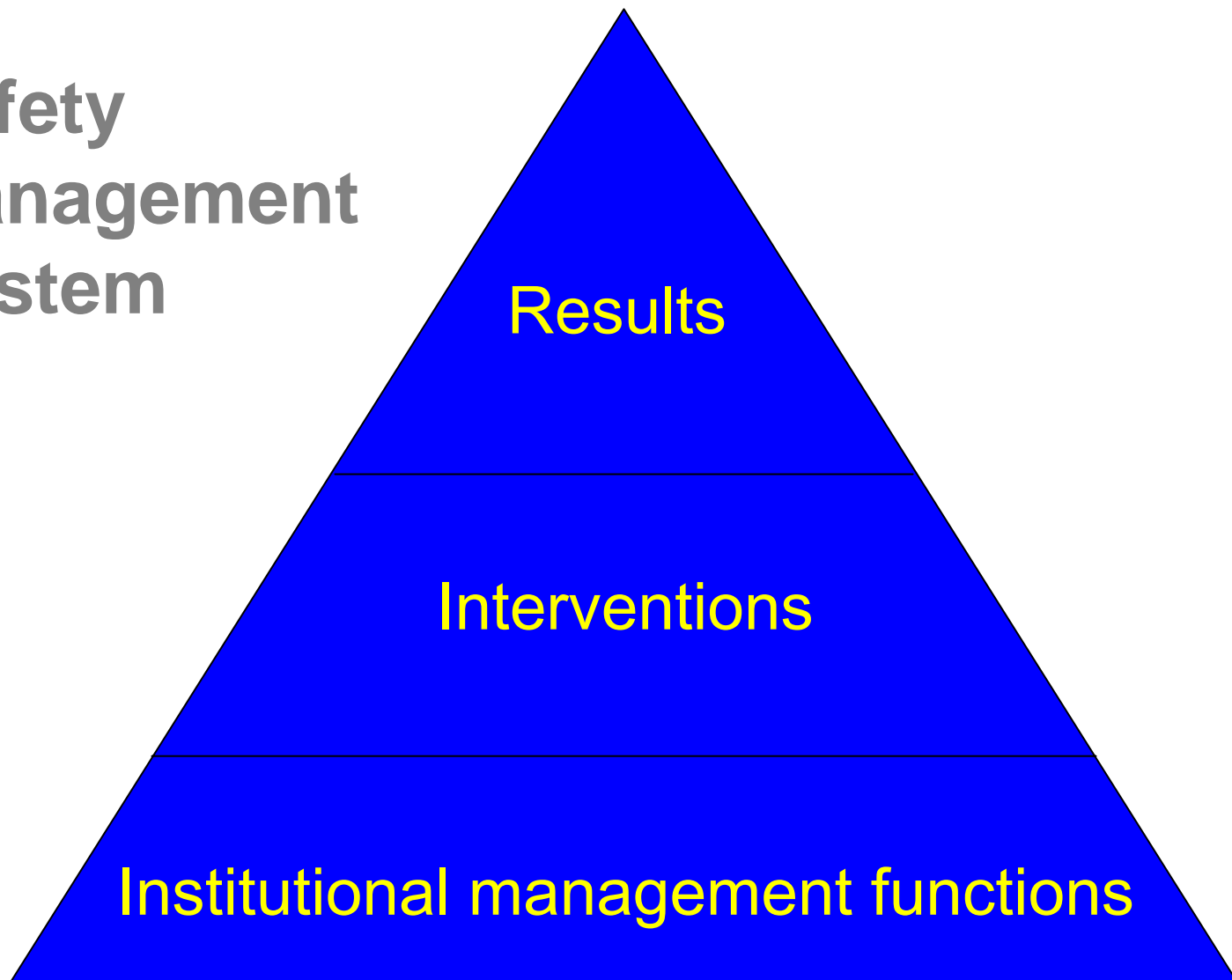
The road safety management system comprises three essential elements:

- *Institutional management functions*
- *Interventions*
- *Results*

This system is generic and could apply to managing safety in other transport modes or risk contexts elsewhere.



**Safety
Management
System**



Source: *Institutional Arrangements for Road Safety Management, A Manual for Decision-Makers and Practitioners*, The World Bank, Washington DC, (in preparation).

Management functions

Seven vital institutional management functions can be identified:

- *Results focus*
- *Coordination*
- *Legislation*
- *Funding and resource allocation*
- *Promotion*
- *Monitoring and evaluation*
- *Research and knowledge transfer*



Results focus

What has been termed 'results focus' is the primary, overarching institutional management function.

This addresses the issue of leadership, strategy and 'ownership'. What are you trying to achieve? How are you going to get there? Who is responsible for this?

The other six functions contribute to the achievement of the desired results. How do you coordinate this? Legislate for this? Etc.

Interventions

Interventions address:

- *The design and operation of the road network*
- *The entry and exit of vehicles to the road network*
- *The recovery of road crash victims from the road network and their rehabilitation*

They set standards and rules for these activities; and also address compliance with these standards and rules, using education, enforcement and incentives.



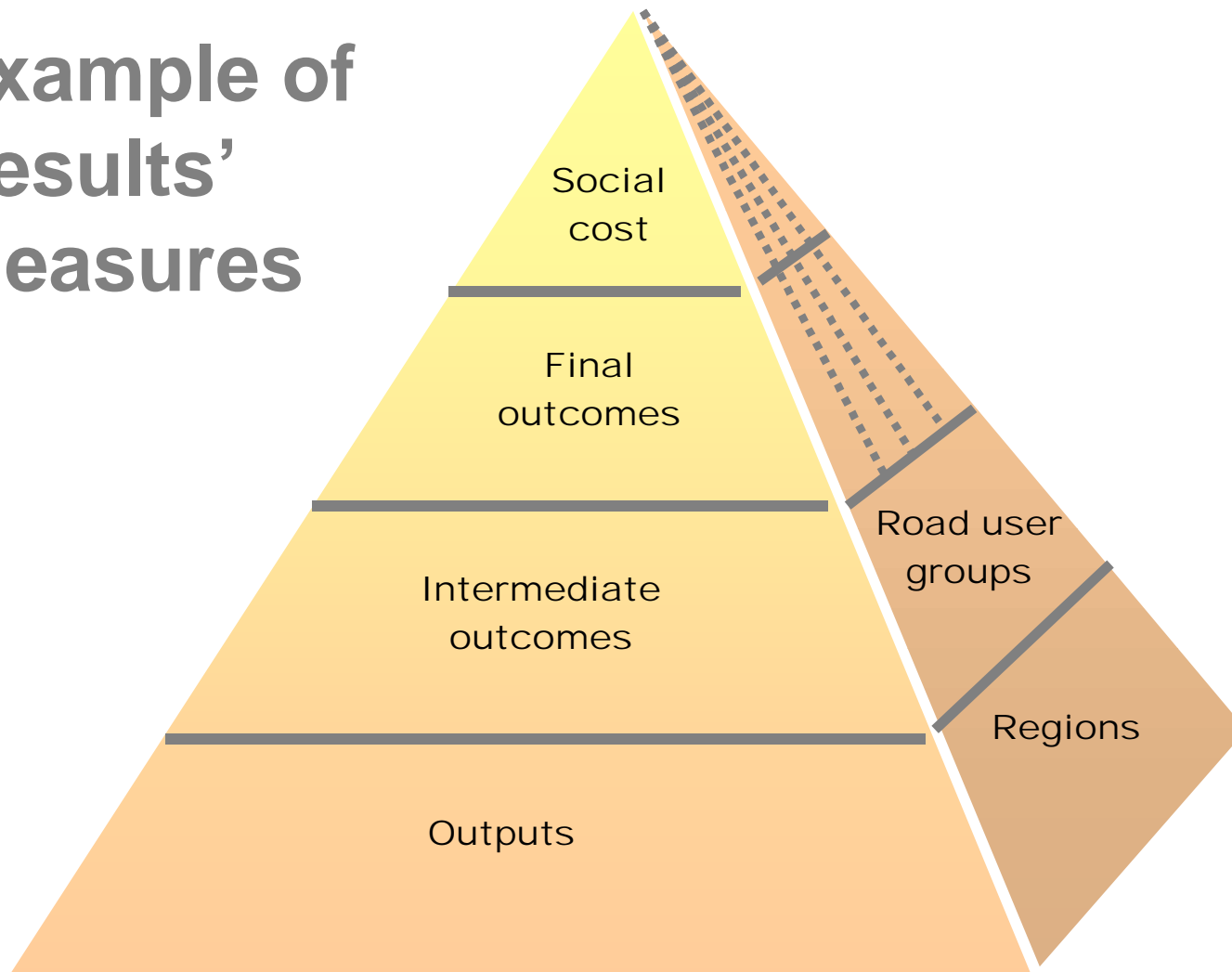
Results

Results can be expressed as final outcomes, intermediate outcomes, or outputs.

Final outcomes consist of social costs, fatalities and injuries. Intermediate outcomes consist of reduced speeds, higher wearing rates, improved road and vehicle standards, etc. Outputs consist of deliverables such as hours of police patrol, volume of offence notices, length of road treated, etc.



Example of 'results' measures



Source: *Road Safety Strategy 2010*, National Road Safety Committee, Wellington, New Zealand, October 2000

Evolution of results focus

1950s

the road user

1960 – 70s

systemic interventions –
the 'Haddon matrix'

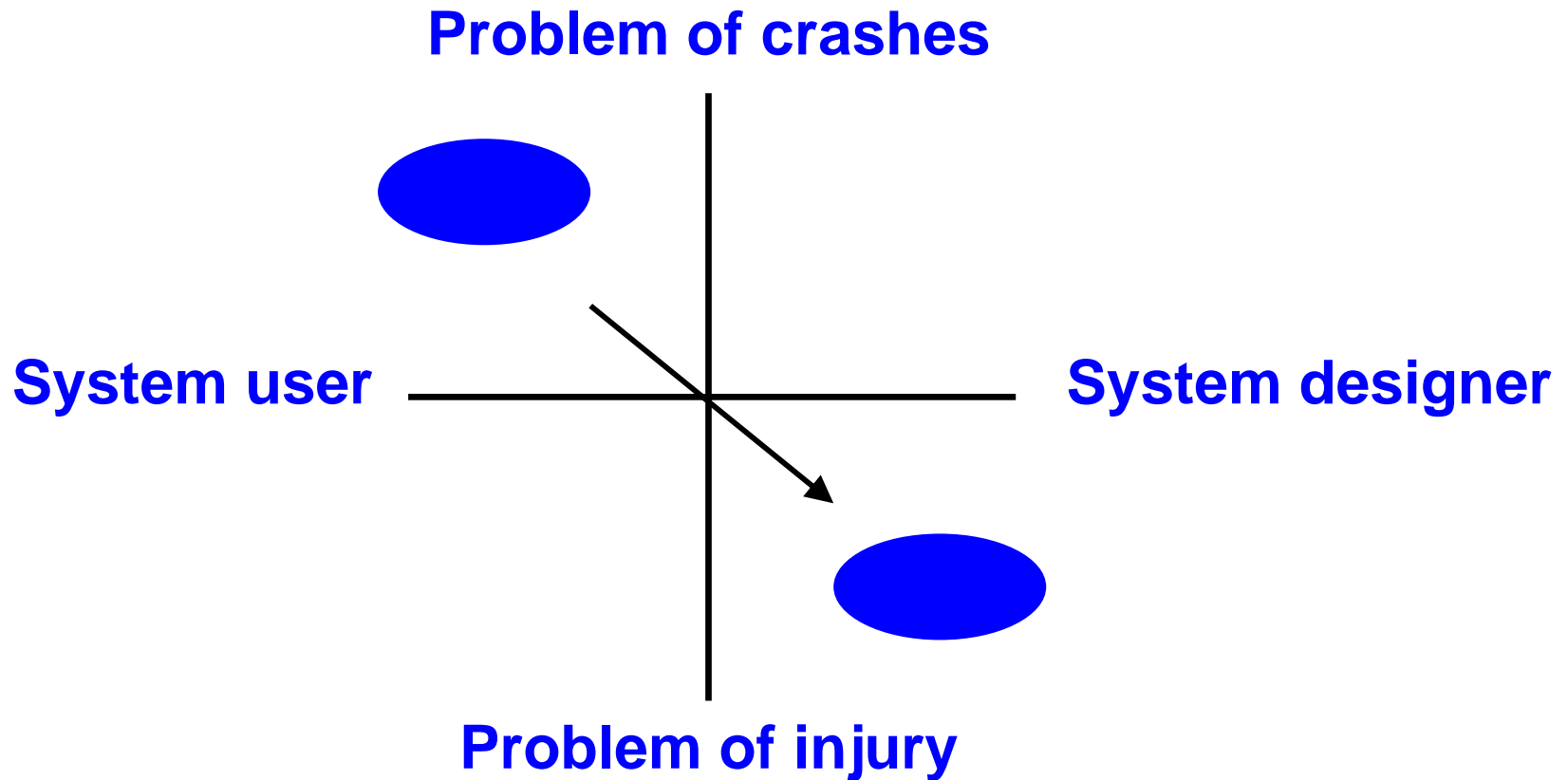
1980 – 90s

targeted national plans

90s onwards

safe system – the 'total
quality' model

Safe system approach





Implications

The shift to a safe system approach must be driven by innovation to reshape interventions to meet the desired results focus. The way forward is uncertain, whereas targeted plans seek results from selected interventions with known dose/responses.

The implications for developing countries of the evolution in managing road safety risks and the paradigm shift to the safe system approach must be carefully considered.



The challenge

It should be possible to rapidly reduce the huge economic and social costs of road crashes in developing countries with a large-scale global program that accelerates knowledge transfer to these countries and scales up their road safety investment.

The alternative is to submit to 'professional fatalism' and follow the slow evolutionary pathway that was taken by high-income countries to manage their road safety risks.

