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Item 3 (c) of the provisional agenda**
Major issues in transport

Safe and inclusive transport and mobility

Note by the secretariat

Summary

The present document contains information on the status of safe and inclusive transport, including challenges related to social inclusion, poverty reduction and inequality and progress made in the transport sector in the Asia-Pacific region. It also contains the Regional Plan of Action for Asia and the Pacific for the Second Decade of Action for Road Safety 2021–2030 in line with the Global Plan for the Second Decade of Action for Road Safety 2021–2030, the latter of which was launched in October 2021.

In addition, the present document contains information about policies and measures to support the socially inclusive planning and design of transport services, infrastructure and systems, workforce diversity, and a just transition to sustainable transport that can contribute to reducing poverty and inequality in the region. The key question of how transport and mobility can be made accessible to all, regardless of age, gender, health, income and geographical location, as the sector evolves to be more digitalized, automated and decarbonized is explored.

The Committee on Transport may wish to endorse the Regional Plan of Action annexed to the present document. The endorsement of a regional plan of action for the Second Decade is one of the indicators of achievement under the Regional Action Programme for Sustainable Transport Development in Asia and the Pacific (2022–2026) in the thematic area on road safety. The Committee may also wish to provide guidance on further regional, subregional and national efforts to significantly reduce road fatalities, as well as to enhance social inclusion in the transport sector in the region.

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I. Introduction

1. Transport safety and inclusiveness form the pillars of sustainable and equitable transport in Asia and the Pacific. For sustainable development to have real meaning, it must be coupled with safe and inclusive transport.

2. Transport and mobility play a significant role in economic and social integration because they facilitate a wide range of social and economic interactions. The availability of safe and inclusive transport infrastructure and services will create economic and social benefits for all by expanding accessibility so that all social groups can access necessary and desired activities, such as job opportunities, education, health care, shopping and leisure.

3. Despite the benefits that improving the social aspects of transport create, a review of the inclusive policies included in national transport plans of countries in the region shows that only 20 have existing strategies to improve the inclusiveness of transport.

4. Transport users in low-income households, women and children, disabled persons, older persons and people who live in rural areas may find current transport systems unsafe, restricted and uncomfortable. For them, moving from one location to another can be fraught with risks, ranging from minor inconveniences to violent crime. Due to a lack of access to private modes of transport, these user groups often rely more on walking, biking and public transport.

5. Travel restrictions exacerbate economic and social disadvantages, as the lack of transport options further limits low-income groups' access to jobs, educational institutions, health-care facilities and social networks, creating a poverty trap. These users travel under poorer conditions, make fewer and shorter-distance trips, but have long travel times. Similarly, older persons travel less frequently and for shorter distances as their driving ability deteriorates and travel options decrease. Due to their reduced mobility, older persons are more vulnerable to social isolation and loneliness. People with disabilities also have lower transport demand and make fewer trips on average.

6. Gender differences exist in transport as well. Women have different travel patterns and behaviour than men and tend to travel shorter distances, make more trips at off-peak hours and choose more flexible modes. Women's safety concerns can also lead to increased wariness when riding public transport or walking and affect their mode choice altogether.

7. In parallel with rapid urbanization, rural populations have decreased across the Asia-Pacific region. Rural transport networks built to serve more users are therefore struggling to survive. However, inadequate coverage in rural areas creates structural challenges for marginalized populations, who are frequently low-income individuals, older persons, students and people with disabilities.

8. Improving the accessibility of existing transport systems will therefore benefit all user groups, regardless of income, age, gender, health and geographical location. An inclusive transport system that is accessible to all user groups provides equal access to resources and opportunities for all members of the society regardless of their circumstances.

9. The present document contains information on selected regional considerations on safe and inclusive transport and mobility in the Asia-Pacific region, existing policy gaps and potential areas for regional cooperation to improve road safety and support poverty reduction, social inclusion and gender equality in order to achieve the Sustainable Development Goals. It also contains updated information on the secretariat's recent and ongoing activities on road safety and inclusive transport, as envisaged in the Regional Action Programme for Sustainable Transport Development in Asia and the Pacific (2022–2026).

II. Transport safety

10. Road safety remains one of the major challenges for sustainable transport development. Globally, the number of road traffic fatalities and serious injuries did not decrease during the past decade, which was one of the targets of the first Decade of Action for Road Safety 2011–2020.[1] The number of road crash fatalities is unacceptable, with a toll of more than 1.28 million fatalities globally in 2019.[2] Moreover, 97 per cent of all transport-related deaths are estimated to occur on roads. Road crashes are the seventh leading cause of fatality in low-income countries and the tenth in middle-income countries.[3]

11. The road safety situation varies significantly among the regions of the world. During the first Decade of Action, road safety in the Asia-Pacific region improved slightly between 2010 and 2019. Analysis by the Economic and Social Commission for Asia and the Pacific (ESCAP) showed a decrease, from 777,000 fatalities in 2010 to 714,346 fatalities in 2019, an 8 per cent reduction.[4]

A. Road safety in the region

12. In the Asia-Pacific region, a recent analysis indicated that road fatalities had gone down by 12.13 per cent between 2016 and 2019. This improvement can also be seen in the decrease in the region's proportion of global road deaths: from 62.8 per cent in 2016 to 58.5 per cent in 2019.

13. While the average road traffic fatality rate in the region in 2016, 18.35 deaths per 100,000 inhabitants, was higher than the worldwide average of 18.14, in 2019 that rate had improved to 15.73, which was lower than the worldwide average of 16.73.

14. Global, regional and subregional road traffic fatality rates are presented in figure I.

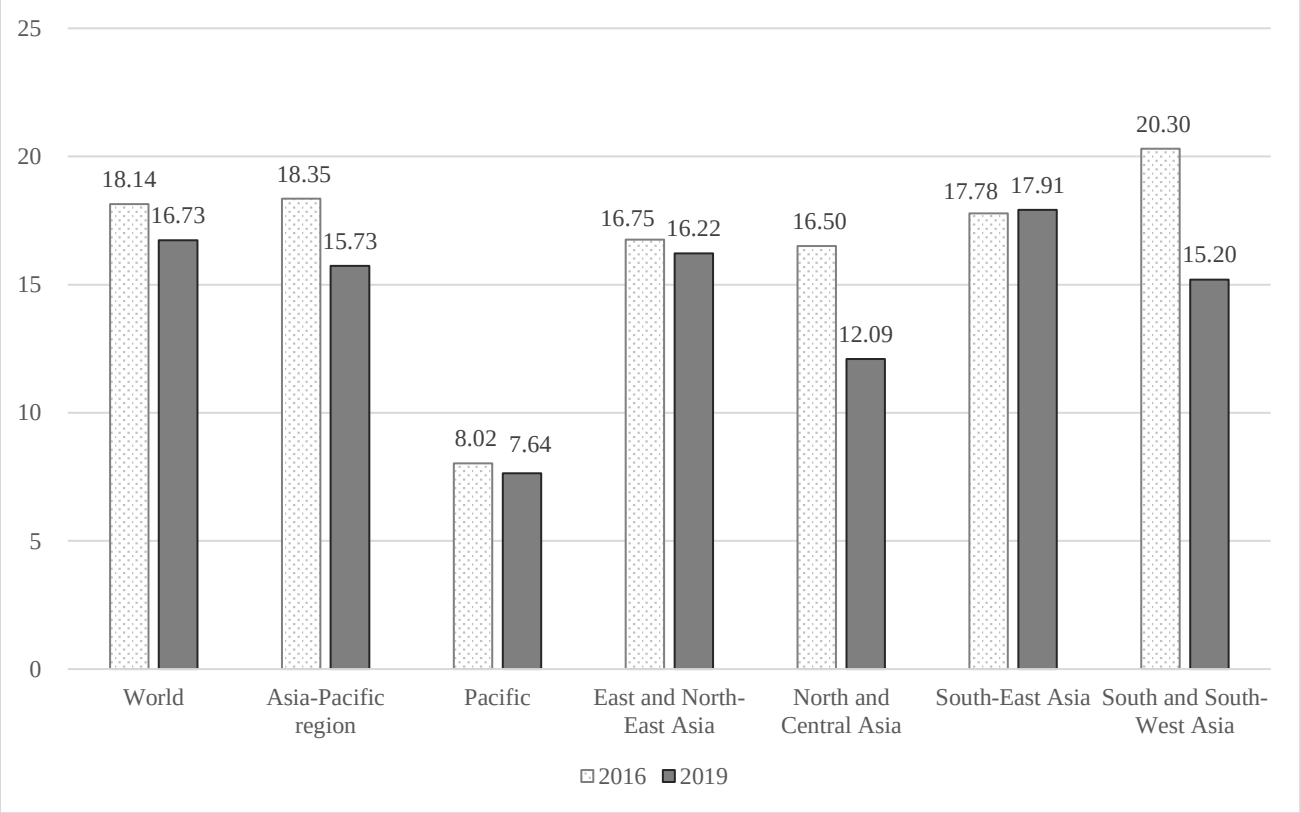
[1] World Health Organization (WHO), "Decade of Action for Road Safety 2011–2020". Available at www.who.int/groups/united-nations-road-safety-collaboration/decade-of-action-for-road-safety-2011-2020.

[2] WHO, Global Health Observatory data repository, road traffic mortality. Available at www.who.int/data/gho/data/themes/topics/topic-details/GHO/road-traffic-mortality (accessed on 19 August 2022).

[3] WHO, "The top 10 causes of death", 9 December 2020.

[4] The road fatality data for 2010 are available from WHO, *Global Status Report on Road Safety 2013: Supporting a Decade of Action* (Geneva, 2013); the 2019 data are from WHO, "Global Health Observatory data repository, road traffic mortality", available at www.who.int/data/gho/data/themes/topics/topic-details/GHO/road-traffic-mortality (accessed on 19 August 2022).

Figure I
Road traffic fatalities per 100,000 inhabitants



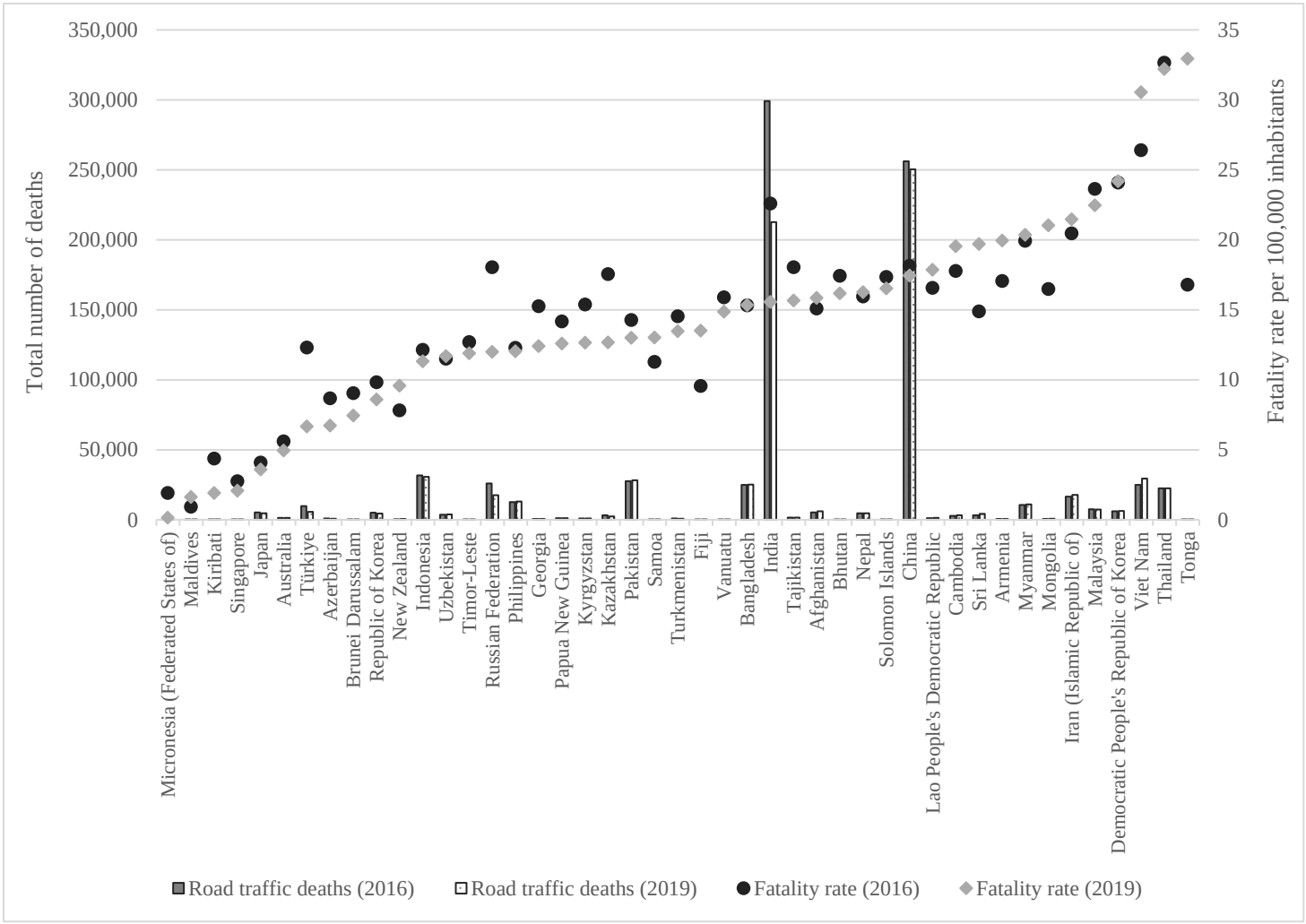
Sources: ESCAP calculations of the road fatality data for 2016 are based on World Health Organization (WHO), *Global Status Report on Road Safety 2018* (Geneva, 2018); the 2019 data are from WHO, Global Health Observatory data repository, road traffic mortality, available at www.who.int/data/gho/data/themes/topics/topic-details/GHO/road-traffic-mortality (accessed on 19 August 2022).

15. Figure II shows the World Health Organization (WHO) estimated number of road traffic fatalities compared with the fatality rate per 100,000 inhabitants in the region.[5]

16. Figure III shows changes in the number of road traffic fatalities between 2016 and 2019 in countries in the region, and figure IV shows the percentage of fatalities to vulnerable road users in the region in 2016.

[5] The road fatality data for 2016 are available from WHO, *Global Status Report on Road Safety 2018* (Geneva, 2018); the 2019 data are from WHO, Global Health Observatory data repository, road traffic mortality, available at www.who.int/data/gho/data/themes/topics/topic-details/GHO/road-traffic-mortality (accessed on 19 August 2022).

Figure II
Number of road traffic deaths compared to fatality rate

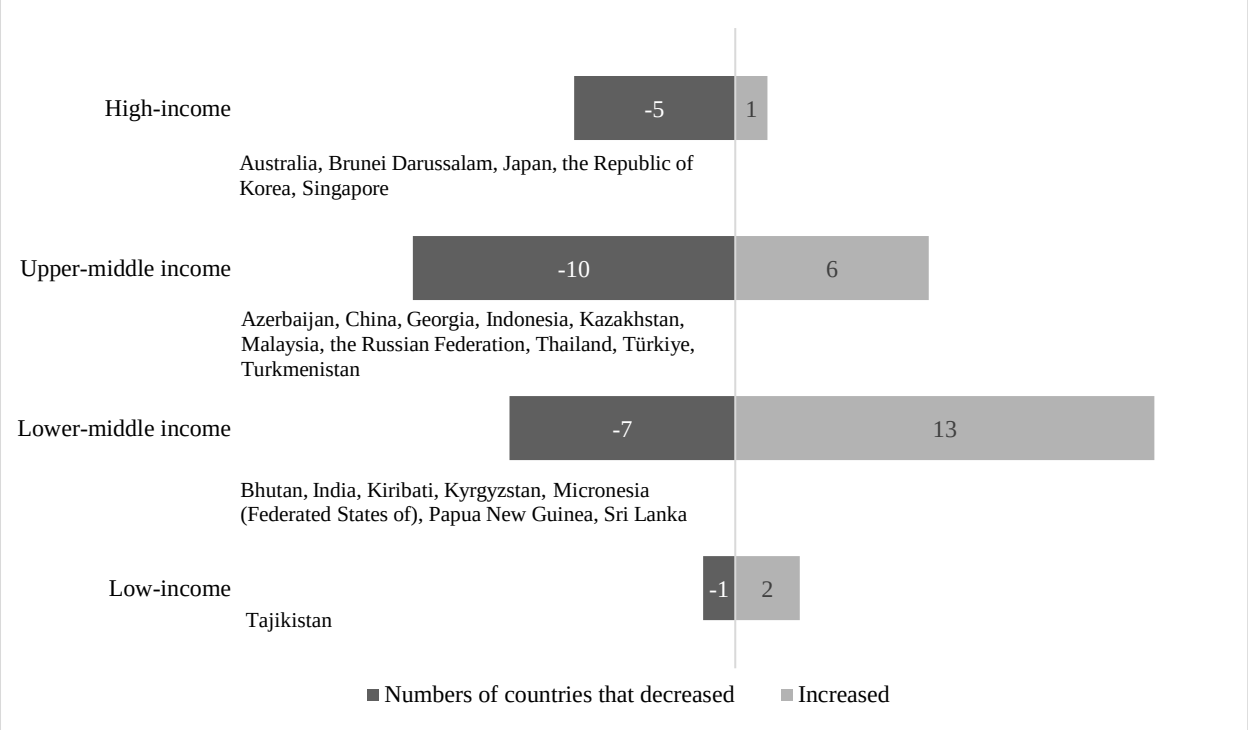


Source: ESCAP calculations (see figure I).

17. In 2019, the majority of road fatalities occurred in the middle-income countries (96.6 per cent). And while 10 out of 16 upper-middle income countries were able to reduce their road fatality numbers between 2016 and 2019, only 7 of the 20 lower-middle income countries and 1 of the 3 low-income countries in the region reduced their number of fatalities.[6]

[6] Ibid.

Figure III
Countries that experienced a reduction or increase in road traffic fatality numbers between 2016 and 2019, by income group

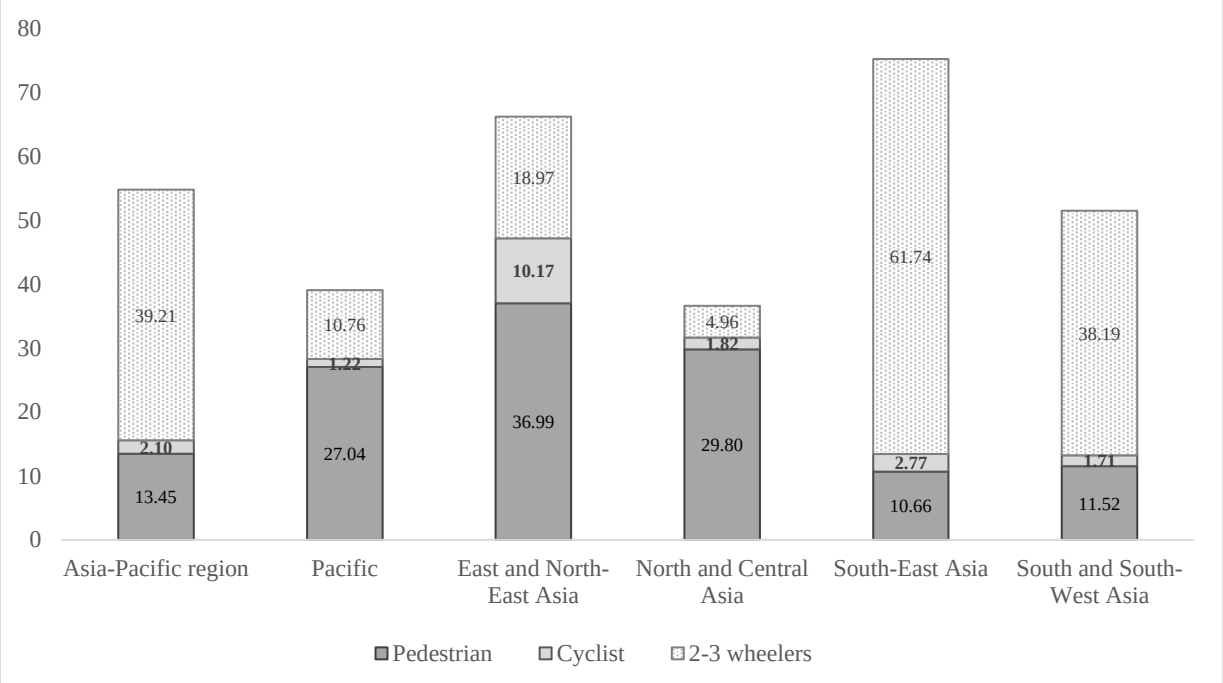


Source: ESCAP calculations (see figure I).

Note: Only the countries that experienced reductions are named.

18. While there were some slight improvements in the Asia-Pacific region from 2016 to 2019, the goal of reducing road traffic fatalities and injuries by at least 50 per cent between 2021 and 2030 remains ambitious and requires interventions at the national, regional and global levels.

Figure IV
Fatalities of vulnerable road users in the region in 2016
(Percentage)



Source: ESCAP calculations based on 2016 data from WHO, *Global Status Report on Road Safety 2018* (Geneva, 2018).

B. Global and regional initiatives

19. On 31 August 2020, the General Assembly adopted resolution 74/299 on improving global road safety, in which it proclaimed the period 2021–2030 as the Second Decade of Action for Road Safety, with a goal of reducing road traffic deaths and injuries by at least 50 per cent from 2021 to 2030. In the resolution, the Assembly requested WHO and the United Nations regional commissions to prepare a plan of action of the Second Decade as a guiding document to support the implementation of its objectives. In response, the secretariat joined the Global Task Force led by WHO to develop a global plan of action. The Global Plan for the Second Decade of Action for Road Safety 2021–2030 was finalized and launched by the global community on 28 October 2021.

20. While global road safety issues are addressed in general in the Global Plan, more attention needs to be paid to the local issues in the Regional Plan of Action for Asia and the Pacific for the Second Decade of Action for Road Safety 2021–2030. Those issues include, for example, the safety of motorized two- and three-wheelers and climate conditions in the region. In consideration of this, at the Fourth Ministerial Conference on Transport, held in Bangkok and online in December 2021, the Regional Action Programme for Sustainable Transport Development in Asia and the Pacific 2022–2026 was adopted. In the Regional Action Programme, road safety was identified as one of the priority areas for the region. The Regional Action Programme includes the development and endorsement of a regional plan of action for the Second Decade of Action for Road Safety 2021–2030, in line with the Global Plan for the Second Decade of Action for Road Safety 2021–2030, as one of its activities and indicators of achievement.

21. Accordingly, the secretariat prepared the draft regional plan in consultation with the members and associate members at the capacity-building workshop on the development of a regional plan of action for the Second Decade of Action in March 2022, at which it received and incorporated feedback. The revised draft was presented at the Regional Meeting on the Regional Plan for the Decade of Action for Road Safety, which was held in Bangkok and online on 9 and 10 August 2022.[7] At the Regional Meeting, it was agreed that the Regional Plan of Action should be presented to the Committee on Transport at its seventh session for endorsement.

III. Inclusive transport and mobility

A. Current context and challenges in Asia and the Pacific

22. Approximately 1.3 billion people in Asia and the Pacific live on less than $3.20 per day, defined as the lower middle-income poverty line,[8] with few transport options. Walking, bicycling and two-wheelers are the most common modes of transport for low-income transport users. These users make fewer trips compared to other income groups yet spend more time on transport due to their limited travel options, which can limit their employment opportunities.[9,10] Transport has therefore been identified as one of the most significant employment barriers for the low-income group in both rural and urban areas.

23. In addition, the trade-off between housing costs, living space and transport costs affects low-income groups more than other income group. As cities grow, low-income groups are forced to relocate farther away from the city centre, where employment opportunities, services and basic facilities are, to search for low-cost housing. Without well-connected transport services, their transport costs and time will often increase.

24. Rural areas are home to approximately half of the region's population, yet 25 per cent of the rural population lacks access to all-season roads.[11] In addition, access to all-season roads does not also guarantee accessibility, which depends on the transport modes available and their quality and frequency.

25. The availability of public transport has significant implications for the health and safety of rural residents, particularly the elderly. In rural areas, the level of accessibility often shapes an individual's ability to participate in local and regional economic and social activities. Being adequately connected ensures that an individual can participate in a specific activity or set of

[7] Further refinement and editorial improvements were made to the draft document after that meeting.

[8] Yusuke Tateno and Zakaria Zoundi, "Estimating the short-term impact of the COVID-19 pandemic on poverty in Asia-Pacific LDCs" (Bangkok, ESCAP, 2021).

[9] Chris Zegras, Sumeeta Srinivasan and Pierce Hall, "Household income, travel behavior, location, and accessibility: sketches from two different developing contexts", *Transport Research Record Journal of the Transportation Research Board*, vol. 2038, No. 1 (December 2007), pp. 128–138.

[10] Sumeeta Srinivasan, ChengHe Guan and Chris P. Nielsen, "Built environment, income and travel behavior: change in the city of Chengdu, China 2005–2016", *International Journal of Sustainable Transport*, vol. 14, No. 10 (July 2019), pp. 749–760.

[11] World Bank, Rural Access Index. Available at https://rai.azavea.com (accessed on 19 August 2022).

activities. On the other hand, inadequate transport accessibility creates structural challenges for the poor and marginalized populations.

26. Existing transport infrastructure, services and systems are often not designed for all social groups. In order to improve universal accessibility and create barrier-free transport access, transport infrastructure, services and systems would need to start providing for different travel needs and preferences. Common transport barriers include high travel costs, misplaced priority seats in public transport, inadequate public transport services in rural areas, and a lack of safe walking paths, bike lanes and accessibility facilities (manifesting for example as high-floor buses without wheelchair boarding ramps or parking areas for disabled groups).

27. Inclusivity in the transport workforce can also increase economic benefits and reduce poverty. In many cities in the region, urban transport is a significant source of employment. Jobs in the transport sector, however, are highly gendered. Transport is a male-dominated industry with gender gaps at all levels of the workforce. In 2021, women made up less than 20 per cent of the transport workforce globally, while in Asia and the Pacific, this percentage is even lower at less than 15 per cent.[12] Gender-biased attitudes and discriminatory work environments and conditions are all barriers to hiring and retaining women in the transport sector. However, greater diversity in the workforce is critical for welfare gains, productivity, business and economic growth for all.

28. Increasing female employment will yield economic gains greater than an equivalent increase in male employment, as gender diversity creates benefits on its own through the inclusion of new skills, differences in risk preference and response to incentives. Attracting and retaining more women in the transport workforce will allow for better planning and designing of transport systems and services that cater to the needs of women users. A multitude of perspectives is required to ensure inclusive transport and increasing the representation and visibility of women at all stages of policy, planning, implementation and usage of transport projects will make transport more responsive to the needs of all users and even increase the sustainability of transport development. Therefore, gender equality in the transport workforce is not just an intrinsic value and a right in itself, but it is also instrumental in achieving economic growth, poverty reduction and sustainable development, as well as addressing labour shortages in the sector.

B. Policy priorities for the Asia-Pacific region

29. Existing policies, standards and initiatives on inclusive transport in countries in the region have created the overall direction for considering the social impact of transport in the design and construction of transport infrastructure. Some countries have included social impact assessments for their transport projects, while others are committed to promoting inclusive and sustainable development while fostering innovation.

[12] International Labour Organization (ILO), “Employment by sex and economic activity: ILO modelled estimates, Nov. 2021 (thousands) - annual”, ILOSTAT. Available at www.ilo.org/shinyapps/bulkexplorer38/?lang=en&segment=indicator&id=EAP_2WAP_SEX_AGE_RT_A (accessed on 19 August 2022).

30. Other countries have laid out specific goals and targets for achieving inclusive transport and accessibility through non-motorized mode choices, as well as transit-oriented development, prioritization of pedestrians, mainstreaming gender considerations in transport facilities, and providing safe walkways, sidewalks and bike lanes. Inclusive and people-oriented transport systems, where public health and well-being will be prioritized, have also been mentioned in national transport plans and strategies.

31. Policy insights and recommendations to support inclusive transport will need to address challenges for both transport users and workers. Among the various urban planning and design concepts aimed at meeting the needs of the widest possible range of users, universal design has become the most popular. Applying the concept of universal design to the early stages of transport planning can help to eliminate travel barriers and maximize people's participation in society. The seven universal design principles[13] comprise the following:

(a) Equitable use;

(b) Flexibility in use;

(c) Simple and intuitive use;

(d) Perceptible information;

(e) Tolerance for error;

(f) Low physical effort;

(g) Size and space for approach.

32. Common measures that have been implemented in cities across the region to improve transport safety and security for women users include the provision of bicycle lanes and women-only public transport services to reduce harassment, as well as a variety of safety features, such as proper lighting, surveillance, segregated areas and staff trained to assist women commuters.

33. For transport workers, the provision of employment stability and decent pay and working conditions is imperative. Transport workers would also need to have the knowledge, skills and experience to design and staff transport services of the future as the sector becomes more automated, digitalized and decarbonized over time. Another area of policy concern is the existing automotive and energy industries, as they will be directly affected by the transition to electric mobility financially and by structural and technological changes, with implications for the workers in those industries.

34. Disaggregated transport data by age, income, gender and disability will become increasingly critical to the development of inclusive transport policies. Such socioeconomic characteristics should always be included in transport data collection and analysis to better understand the travel demand, patterns and preferences of all user groups. The scarcity of relevant transport data has made it difficult to understand differences in travel behaviours and for policymakers to develop transport plans that meet different needs. Having a standardized set of socioeconomic variables in household travel surveys across countries will greatly facilitate cross-country analysis and provide better policy insights. Relevant data on transport workers would also need to be gender

[13] Center for Universal Design, North Carolina State University, "The principles of universal design", 1 April 1997. Available at https://projects.ncsu.edu/ncsu/design/cud/about_ud/udprinciplestext.htm (accessed on 18 August 2022).

disaggregated to better develop employment policies that will close the gender gap in the transport workforce.

35. The secretariat has developed projects and initiatives on inclusive transport to support its development in Asia and the Pacific. Recent knowledge products include the study report "Enhancing sustainability and inclusiveness of urban passenger transport in Asian cities"[14] and the *Review of Developments in Transport in Asia and the Pacific 2021: Towards Sustainable, Inclusive and Resilient Urban Passenger Transport in Asian Cities*".[15] Additional empirical and theoretical work to connect the issue of social exclusion in transport to other aspects of sustainable transport will need to be further developed. Implementation of a project on enhancing social inclusion and innovations in urban transport systems in Asia-Pacific cities is progressing. This project aims to enhance the capacity of policymakers to plan for more accessible, safe, socially inclusive and innovative urban transport systems and to specifically address the transport needs of different user groups.

36. Lastly, a regional meeting on a just transition to low carbon mobility in Asia and the Pacific was held in August 2022 to highlight existing challenges in the region and identify policy actions that will enable the achievement of a just and inclusive transition to low carbon transport. The regional meeting served as a forum for multi-stakeholder engagement and the sharing of best practices and knowledge among ESCAP members and associate members, as well as other relevant transport, urban and energy stakeholders. It is clear that greater collaboration and coordination between and within countries are required to advance both sustainable and inclusive transport goals.

IV. Issues for consideration by the Committee

37. The Committee may wish to endorse the Regional Plan of Action for Asia and the Pacific for the Second Decade of Action for Road Safety 2021–2030 contained in the annex to the present document. The endorsement of a regional plan of action for the Second Decade is one of the indicators of achievement under the Regional Action Programme for Sustainable Transport Development in Asia and the Pacific (2022–2026) in the thematic area on road safety.

38. The Committee may also wish to review the activities described in the present document and provide guidance to the secretariat on future activities in support of the development of safe and inclusive transport. Representatives are also invited to inform the Committee of progress and relevant activities at the national, subregional and regional levels that contribute towards achieving safe and inclusive transport in the Asia-Pacific region.

[14] Dorina Pojani, paper presented at the Regional Workshop on Sustainable, Inclusive and Resilient Urban Passenger Transport: Preparing for Post-Pandemic Mobility in Asia, Bangkok, October 2021.

[15] United Nations publication, 2021.

Annex

Regional Plan of Action for Asia and the Pacific for the Second Decade of Action for Road Safety 2021–2030

I. Background

1. The Regional Plan of Action for Asia and the Pacific for the Second Decade of Action for Road Safety 2021–2030 is intended to guide and support efforts to reduce road traffic deaths and injuries by at least 50 per cent from 2021 to 2030 and to achieve the Sustainable Development Goal targets related to road safety, including target 3.6, by 2030. The Regional Plan of Action is intended to inspire the governments of the Asia-Pacific region at all levels and stakeholders who can influence road safety (including non-governmental organizations, academia, the private sector, donors, the broader community and the media) as they develop national and local action plans and targets for this vital Second Decade.

2. The recommendations under each arena are to be read in conjunction with the related recommendation in the Global Plan for the Second Decade of Action for Road Safety 2021–2030.[1]

II. Vision and target for the Asia-Pacific region

3. **Vision**: To achieve an Asia-Pacific region increasingly free of the human suffering and economic burden of road crash deaths and injuries.

4. **Target**: To reduce road traffic deaths and injuries by at least 50 per cent from 2021 to 2030.

III. Arenas of road safety intervention (based on the Global Plan)

Arena 1. Safe road infrastructure

5. Safe road infrastructure (roads and roadsides) is particularly pertinent to improving road safety because (a) the right design increases road safety gains; (b) changes to infrastructure are relatively sustainable over many years; and (c) it is largely under the control of governments. However, it is critical that the concept of a safe road moves away from the outdated definition of a road. With the acceptance that humans inevitably make mistakes, a safe road must be defined as one which protects all road user types from the consequences of the mistakes of the users. This requires a shift from viewing safety infrastructure as guiding road users (with signs and lines) to the modern approach of protecting road users from their inevitable mistakes.

6. Safe road infrastructure, together with speed management, must fundamentally address the different classes of road users present on the road: pedestrians (including those with disabilities), cyclists, motorcyclists, cars and heavy vehicles. This can be achieved through three processes in combination:

(a) Build and operate infrastructure to protect all road users in line with the safe system approach;

[1] World Health Organization (WHO), “Global Plan for the Decade of Action for Road Safety 2021-2030” (Geneva, 2021). Available at www.who.int/publications/m/item/global-plan-for-the-decade-of-action-for-road-safety-2021-2030.

(b) Set speed limits and lower speeds to the levels which are safe for road users;

(c) If necessary, as a last choice, prevent access by those road users who are not fully protected by the first two processes.

7. The Asia-Pacific region urgently needs to improve the protective aspects of road infrastructure, which will provide immense opportunities to save lives and prevent injuries, including disabilities, making it a sound economic investment.

Recommendations

8. In line with targets 3 and 4 of the voluntary global performance targets for road safety risk factors and service delivery mechanisms, [2] it is recommended that governments of the Asia-Pacific region at all levels and stakeholders who can influence road safety should:

(a) For decisions regarding road investment, shift to relying on modern evidence and away from the myth that building faster roads, prioritizing motor traffic and cutting safety investment is better for the economy. Over the past decade, the growing evidence of the huge economic cost of crashes and their retarding effects on national economies has become compelling;

(b) Capture a full economic picture for road investment decisions, including the increased cost of all types of higher-speed roads and prioritizing traffic (including more deaths and resulting disabilities and increased air pollution, greenhouse gases, noise, dislocations and inequity);

(c) Road infrastructure designs must consider the safety of vulnerable road users, especially pedestrians, bicyclists and motorized two-wheelers, in consideration of the local needs;

(d) Move steadily to a culture of increasingly protecting the road user, when mistakes are made, through road features consistent with a safe system;

(e) Revise national road engineering and construction standards, in general and to include the standards adopted in 2017 at the seventh meeting of the Working Group on the Asian Highway contained in annex II bis to the Intergovernmental Agreement on the Asian Highway Network, entitled "Asian Highway Design Standards for Road Safety". In many countries of the Asia-Pacific region, current national standards for road design do not facilitate or may even prohibit the adoption of modern best practices in road safety infrastructure and are in urgent need of extensive updating;

(f) Improve the classification systems and policies which prioritize motorized traffic movement over saving lives; the prioritization of motorized traffic movement prevents the imposition of speed limits and safe infrastructure required for pedestrians once a road is classified as a highway. Road classification per section based on real use (especially pedestrians and cyclists), rather than the original intention for the road, will facilitate strong safety opportunities;

(g) Improve pedestrian safety (including for those with disabilities) through the provision of footpaths and by preventing shops and other activities from taking footpath space and providing safe crossing facilities, with speeds

[2] See https://cdn.who.int/media/docs/default-source/documents/un-road-safety-collaboration/targets-and-indicators-visual-clean.pdf?sfvrsn=29627bde_5.

lowered to 30 km per hour. Other vulnerable road users (cyclists and motorcycle riders) should increasingly be protected through the provision of well-designed, separated cycle and motorcycle lanes if feasible, with projects subjected to a full road safety audit wherever applicable;

(h) Encourage multilateral development banks to make uniformly strong commitments to road safety following the 2020 Multilateral Development Banks High-level Joint Statement on Road Safety, with crash costs included in economic appraisals of projects;

(i) Improve capacity for and use and influence of road assessments and road safety audits, setting higher safety star rating standards for road projects.

Arena 2. Safe vehicles

9. Safe vehicles offer major opportunities for improving safety through three broad mechanisms. First, vehicles can protect their occupants with features such as safety belts, airbags, structural protection of survival space and crumple zones, which reduce the sudden deceleration of the human body in a crash. Second, vehicle features can also protect those outside the vehicle in the event of a crash, including softer vehicle fronts for pedestrians and under-run guards on trucks to protect other vehicle occupants in a crash. Third, vehicles can prevent crashes or reduce the speeds of impact through active safety features such as electronic stability control and emergency brake assistance.

10. Although autonomous driving vehicles, which will reduce human error, are continuously being developed, their mass deployment at scale is still years away in high-income countries and even further away for the lower-middle income countries that need them most. Road safety cannot be left waiting on these processes, especially in Asia and the Pacific.

11. Only a small minority of countries in Asia and the Pacific have regulated requirements for electronic stability control and other safety features. As motorcycles constitute a large proportion of the vehicle fleets and motorcycle accidents a large proportion of deaths in many Asia-Pacific countries, the general absence of requirements for anti-lock brakes for motorcycles (except in some high-income countries with small motorcycle fleets) is the cause of profound suffering and high costs.

Recommendations

12. In line with target 5 of the voluntary global performance targets for road safety risk factors and service delivery mechanisms, it is recommended that governments of the Asia-Pacific region at all levels and stakeholders who can influence road safety should:

(a) Progressively regulate core safety features for the manufacture or import of vehicles, ultimately including the following:

(i) Electronic stability control, including for trucks;

(ii) Anti-lock braking system and daytime running lights for motorcycles to promote rider visibility;

(iii) Standards for passenger car front and side impact to ensure occupant protection;

(iv) Safety belts and safety belt anchorage for all seats to ensure that safety belts are fitted in vehicles when they are manufactured;

(v) International Organization for Standardization standard 13216 (ISOFIX) on child-restraint anchor points to secure the child-restraint systems attached directly to the frame of the vehicle to prevent misuse;

(vi) Autonomous Emergency Braking to reduce collisions for all vehicles, including motorcycles;

(vii) Pedestrian protection standards to reduce the severity of an impact with a motor vehicle;

(viii) Motorcycle helmets certified according to international harmonized standards and in consideration of the local climatic condition;

(ix) Under-run guards on trucks;

(b) Promote safer vehicles to the community, to influence consumer vehicle purchase decisions and force improvements from manufacturers, and increase funding for vehicle safety testing;

(c) Set high safety standards for vehicle fleet purchases/leases. Incentivize modal shifts of road vehicles away from motorcycles to buses and especially bus rapid transit systems. Motorcycles are dramatically and inherently more dangerous than cars (with approximately 10 to 20 times the death risk per kilometre of travel), and cars are dramatically more dangerous than route buses, especially when the buses are regulated to set routes and are not competing on any given route;

(d) Maintain safety standards (and emission standards) of vehicles through well-regulated vehicle inspection schemes, including audits of vehicle inspection schemes;

(e) Revise the export policies of the countries that export second-hand vehicles to other countries to prevent export of substandard, unsafe and polluting vehicles. Countries that import second-hand vehicles need to consider this issue in their policies;

(f) Improve vehicle registration and identification systems, as vehicle identification is a requirement for speed cameras, enforcement, vehicle inspection processes and the prevention of revenue leakage.

13. Road safety must not be left waiting on the long-term development and infiltration of autonomous vehicles.

Arena 3. Safe road use

14. No country has yet reached the point where the roads, vehicles and controlled speeds protect road users from their mistakes, and thus substantial reduction in death and injury and concomitant savings can be achieved by improving road user behaviour. There are extensive opportunities in this arena and evidence-based interventions should be prioritized. Many effective interventions exist, including a narrow, specific set of training programmes.[3]

15. Effective interventions include the creation of general deterrence through well-publicized enforcement, which creates a high perceived risk of detection and delivers swift, unavoidable, deterring penalties. Enforcement,

[3] Blair Turner, Soames Job and Sudeshna Mitra, *Guide for Road Safety Interventions: Evidence of What Works and What Does Not Work* (Washington, D.C., World Bank, 2021).

legislation, technology and multiple systems working in unison are required to achieve this.

16. The interventions most relevant to and valuable in the Asia-Pacific region are listed in the recommendations below.

Recommendations

17. In line with targets 7 to 11 of the voluntary global performance targets for road safety risk factors and service delivery mechanisms, it is recommended that governments of the Asia-Pacific region at all levels and stakeholders who can influence road safety should:

(a) Ensure that all policies and programmes are based on rigorous scientific evidence showing that the policy or intervention is effective in saving lives and preventing injuries;

(b) Adopt enforcement activities and processes which act as a strong general deterrence, as the established key to changing behaviour. At a minimum, this requires enforcement to be publicized with strong warnings weeks in advance of changes in enforcement activities;

(c) Apply the effective enforcement processes to motorcycle-helmet wearing and seatbelt use, together with monitoring of seatbelt use and motorcycle-helmet use through on-road observational surveys (not self-reporting surveys) to assess the efficacy of actions and allow refinements;

(d) Mandate vehicle safety features and technologies to support safe behaviours, including seatbelts;

(e) Ensure that road safety legislation exists and that effective enforcement occurs with regard to low blood alcohol concentration limits to prevent drunk driving, with specific lower blood alcohol concentration level provisions for novice and professional drivers. The measurement of alcohol in fatal crashes is also required to monitor progress;

(f) In countries with significant numbers of pedestrian victims and/or motorcycle victims, increase the focus on enforcement of the regulations requiring car, bus and truck drivers to give way to motorcycles and pedestrians as well as on motorcycle enforcement. Regulate bus systems, so that competition between operators is for exclusive assignment to a set route not a competition between providers on the same route;

(g) Provide sufficient and suitable equipment for enforcement activities, including contracts to ensure maintenance and calibration of equipment. For many countries, this may be best achieved by contracting companies to continuously supply set amounts of working equipment rather than the purchase of equipment;

(h) Increase the proportion of driving by female drivers, who, evidence shows, are safer than male drivers even when the amount of driving is considered;

(i) Create a licensing system that ensures that people start their driving careers “in the system” with on-road training and testing;

(j) Adopt a graduated licensing scheme that gradually releases drivers from various restrictions as they get older and pass relevant tests, if applicable;

(k) Legislate (if necessary) and create systems that allow enforcement of limits for maximum driving hours and minimum rest periods for professional drivers;

(l) Make liability insurance mandatory for operators of motorized vehicles and consider a levy on premiums to assist the funding of road safety, if possible.

Arena 4. Post-crash care

18. The World Health Organization (WHO) estimates that the proportion of injured people who die before reaching hospitals is at least twice as high in lower-middle-income countries as in high-income countries,[4] reflecting many factors, but the speed of response and quality of emergency care are certainly significant.

19. Rapid, effective emergency care not only saves lives but may also reduce long-term disability for survivors of road crashes and many other incidents. The people, knowledge, skills, infrastructure, equipment, systems, management and funding required to achieve this level of care are substantial and largely outside the purview of road safety, as they should be based on the breadth of issues emergency care addresses. Care for crash victims must also go beyond an emergency response to include the provision of medium and long-term care and rehabilitation.

20. The Asia-Pacific region faces many challenges in post-crash care. Crash victims can wait hours for help in some countries, especially in rural and remote areas. In several countries, the police are often the only service providing first aid. Bystanders may be reluctant to intervene due to a lack of training and confidence in being able to assist. Other challenges faced by emergency response systems in many Asia-Pacific countries include poorly coordinated dispatch services, lack of geo-location of crashes, the absence of working protocols between emergency services, poorly equipped ambulances, and in some countries, the fact that it is difficult for women to travel with or be treated by male rescue staff.

Recommendations

21. In line with target 12 of the voluntary global performance targets for road safety risk factors and service delivery mechanisms, it is recommended that governments of the Asia-Pacific region at all levels and stakeholders who can influence road safety should:

(a) Set strong targets for minimum emergency response times, and manage, fund and resource emergency response systems to achieve these targets, monitor progress and refine actions to achieve targets;

(b) Provide access to emergency and hospital care for all, regardless of ability to pay;

(c) Provide a single emergency care number that is available in all locations and is well known nationwide;

(d) Ensure that pre-hospital emergency response staff have suitable standardized training and certification;

[4] WHO, *Global Status Report on Road Safety 2018* (Geneva, 2018).

(e) Provide equipment and training activities to fit specific geographical needs, e.g. rope rescue in steep terrain or river rescue. In big, congested conurbations there are also specific issues; for example, motorcycle ambulances can reach victims more quickly in congested areas and carry essential emergency care to the scene more effectively than waiting for a larger vehicle to arrive;

(f) Enact Good Samaritan laws to ensure protection for lay responders;

(g) Conduct post-crash care-capacity reviews, if the current level of service is not clear, in order to guide the above improvements;

(h) Develop systematic trauma registry data systems and share data;

(i) Provide medium- and long-term care, as well as rehabilitation, to minimize disability;

(j) Provide social, judicial and, where appropriate, financial support to bereaved families and survivors;

(k) Employ female rescue personnel, both as a gender equity in employment issue and also to address the challenges faced by male staff in treating female victims in some countries;

(l) Include requirements for the provision of emergency care in concession contracts for toll roads where risk is relevant;

(m) Cautiously assess the relevance of eCall (the emergency call system initiative in the European Union) or the Accident Emergency Call System because they can waste resources by generating false alarms when a crash occurs but no one requires emergency care.

Arena 5. Safe speed, a cross-cutting issue

22. Safe speed is an arena of action in the Regional Plan of Action because it is critical to road safety and represents powerful cost-effective opportunities across the Asia-Pacific region. Speed refers simply to the occurrence of movement measured as distance/time, such as kilometres per hour. Speed is fundamental to road safety and lies at the heart of the safe system approach: speed not only increases crash severity but also the occurrence of crashes.

23. The best evidence from many countries demonstrates the powerful effects of speed on road safety: each 1 per cent decrease in speed delivers a 4 per cent decrease in deaths, an approximately 3 per cent decrease in serious injuries, and a decrease in all crashes. The effects of speed on crash occurrence and crash severity are universal to all countries because they arise from the fundamental laws of physics.

24. The Asia-Pacific region will benefit more profoundly than most regions from 30-km-per-hour speed limits in pedestrian and bicycle areas (which many countries in the region have already started to implement), good engineering to manage speeding, and improved management of speeding on rural roads and highways.

Recommendations

25. In line with target 6 of the voluntary global performance targets for road safety risk factors and service delivery mechanisms, it is recommended that governments of the Asia-Pacific region at all levels and stakeholders who can influence road safety should:

(a) Revise current methods for setting speed limits to prioritize safe system speeds, in preference to road classification-based speeds;

(b) Adopt a widespread programme of 30-km-per-hour zones in areas where pedestrians or cyclists are common, with strong well-proven speed controlling infrastructure and education of the community;

(c) Ensure that national road engineering and construction standards not only allow but require road design features to reduce speeds (such as area-wide traffic calming, speed humps, speed cushions, well-designed roundabouts, raised pedestrian crossings, raised platform intersections and gateway treatments, which have strong benefits and create powerful economic returns) in areas such as pedestrian activity areas, markets, shopping areas, schools and routes to schools for children;

(d) Publicize the safety, economic and other benefits of lowering speeds. Seek out and collaborate with partners working on other global agendas that would also benefit from better speed management (climate change, health, air pollution, gender) to give a stronger voice to the value of managing speed;

(e) Review readiness for speed cameras, following the recently developed Global Road Safety Partnership-Global Road Safety Facility guide for assessing readiness, and employ results to either help to implement speed cameras or improve the weaknesses identified in the assessment. As soon as feasible, implement speed cameras, which deliver proven powerful road safety gains, and promote the importance of speed enforcement;

(f) Follow best practices with regard to speed enforcement with a focus on generally deterring speeding. This includes improved general deterrence as a result of well-publicized, effective enforcement, as well as penalties that create a deterrence effect and are unavoidable;

(g) Manage and monitor the speeding behaviour of employees of public and private sector entities, with negative consequences for speeding.

Arena 6. Modal shift, land use planning and reduced road use exposure

26. Road travel is the most dangerous form of transport: 97 per cent of injury-related deaths in the global transport system are caused by road transport.[5] Thus, reducing road use is an effective road safety intervention. This is not about the change to safer vehicles, which is also valuable and is covered in arena 2.

27. Road use can be reduced in two ways. First, moving people and freight from road transport to other forms of transport (rail, mass rapid transit, water and air) provides significant net safety improvements. The creation of non-road transport options, policies and practices that make the use of alternative forms of transport easier and more comfortable or less costly (including through fees and taxes for road use) are powerful though not obvious road safety interventions. The second area of policy and regulatory improvement lies in reducing the need for mobility. In broader terms, instead of promoting mobility as a right, it may be better to promote access as a right, with mobility being one method of access.

28. Government policies in this regard can substantially improve road safety, including through better city design, land use planning and regulation.

[5] Hilda Maria Gomez and others, “Chapter 4: Safety” in *Global Mobility Report 2017*, Cathy Gagnet, ed. (Washington, D.C., Sustainable Mobility for All, 2017).

29. Reduced road use will also serve other global agendas (climate change, the health effects of air pollution and noise pollution, and increased active transport).

Recommendations

30. In line with Sustainable Development Goal target 11.2, as well as the recommendations in the Global Plan, it is recommended that governments of the Asia-Pacific region at all levels and stakeholders who can influence road safety should:

(a) Increase access to and create incentives (or disincentives for private vehicles) for the use of non-road forms of transport for people and goods: mass rapid transit systems, air, rail and water transport;

(b) Allow and facilitate increased work from home where possible to reduce commuting;

(c) Following the coronavirus disease (COVID-19) pandemic, serve the long-term benefit of cities by not expending substantial resources to reinvigorate city centres and instead work to facilitate the more effective distribution of facilities and services to locations that encourage and better serve those working from home;

(d) Emphasize the safety of vulnerable road users in land use planning. For example, facility planning for bicycles, pedestrians and motorized two-wheelers needs to be incorporated into land use planning;

(e) Refocus the work of, and increase the influence of, urban planners/designers on road safety and reducing road use (through more compact city designs, lower road travel speeds, transit-oriented development concentrating urban and commercial development around mass transit nodes, incentives discouraging the use of private vehicles), and including the explicit calculation of crash cost savings and human life savings in assessments of urban planning policies and practices. Involve urban planners, road safety experts and public transport experts in the development of a guideline for the above processes;

(f) Build capacity for city planning in the Asia-Pacific region;

(g) Hold city administrations and planners accountable for reducing motorized road use, in the service of the many issues which will benefit;

(h) Refrain from presenting road safety performance measures in terms of death or injuries per 100 million vehicle kilometres (as some high-income countries do) because it dismisses the value of reducing road use;

(i) Create a cultural shift in the stated goal of the transport system from the provision of mobility to the broader aim of provision of access.

Arena 7. Road safety management and leadership

31. Management and leadership of road safety is an arena of action in the Regional Plan of Action because it provides many opportunities for vital improvement. The activities and expertise required for this work cannot be achieved by a committee or a council, but a strong well-resourced expert lead agency dedicated purely to road safety, in addition to a high-level committee, would be valuable.

32. Road safety is a product that can be delivered. Its delivery is achievable through actions in each arena, as outlined in the present Regional Plan of Action. Such actions, in turn, require effective management of and leadership on road safety. This involves ensuring that the selected actions are based on scientific evidence and driven by data. Road safety also requires significant funding, which requires sound business cases as well as a real commitment to road safety from governments.

33. Arena 7, on road safety management (together with arena 5 on safe speed), addresses the most critical factors that limited success during the first Decade of Action for Road Safety: (a) substantially inadequate funding of road safety and inadequate commitment to road safety improvements by the funding agencies, (b) many countries do not have a road safety target, plan or strategy or an effective lead agency for road safety; and (c) crash and other road safety data are commonly poor, with exceptions in the high-income countries, including in the Asia-Pacific region. Opportunities for improvements exist, in terms of recording, analysing and employing crash data as well as harmonizing data management using the Asia-Pacific Road Safety Observatory.

34. In addition, monitoring, evaluation and regular refinement of interventions are vital elements of road safety management. This often includes midterm reviews of the plans themselves.

35. National and local action plans are ideally suited to reflect the best opportunities available for local circumstances but should still comprise actions for which evidence of life-saving value exists. Monitoring the implementation and the outcomes should be carried out iteratively at national and local levels and be informed by data. Results should be used to refine, improve, expand and/or strengthen actions. The collection of quality data is a key prerequisite for targeted implementation and monitoring progress, and it is improved by data sharing and linkages across sectors. Monitoring can include ongoing processes such as road safety assessments and safety audits to guide improvement.

Recommendations

36. In line with target 1 of the voluntary global performance targets for road safety risk factors and service delivery mechanisms, it is recommended that governments of the Asia-Pacific region at all levels and stakeholders who can influence road safety should:

(a) Create/maintain a national lead agency for road safety, as well as a high-level national coordinating committee. The lead agency should be suitably staffed with road safety experts and other relevant staff, be suitably funded and have the formal power to coordinate, direct, guide and monitor the road safety delivery of other government agencies/departments;

(b) Sustainably fund the lead agency’s operation as well as the direct delivery of road safety. While external sources (such as the United Nations Road Safety Fund, the World Bank Global Road Safety Facility, donors such as Bloomberg Philanthropies, and funding from multilateral development banks for road safety projects) are valuable, governments must appreciate that the entirety of the funding required cannot be provided from these sources and that road safety is a sound economic investment. Ideally, this funding should be controlled by a road safety agency or at a minimum by the road safety arms of relevant delivery agencies, not the larger delivery agency;

(c) Ensure that the road safety authority has either the funding to purchase road safety services and actions from other government entities or the power to direct other entities included in the expenditure of their funding. It should have full access to crash and other data, responsibility for improving the data and representing the country in the Asia-Pacific Road Safety Observatory, and provide expert advice and secretarial services for the national road safety committee/council, which should meet several times per year;

(d) Employ the human and hard economic costs of road crashes in business case considerations of the clear economic returns from effective road safety actions;

(e) Adopt a rigorous evidence-based approach, not a common-sense approach, to selecting road safety interventions, noting that this is not the same as a data-driven approach to road safety and that both are necessary;

(f) Develop and fund the actions contained in a national road safety action plan and/or strategy based on the present Regional Plan of Action, including targets for actions and intermediate outcomes, with milestones (interim targets) though the decade to connect the national plan with the Sustainable Development Goal of halving deaths and serious injuries by 2030. Such actions may be more efficiently developed by countries in the same subregion working in collaboration;

(g) Adopt the proven safe-system approach to road safety and promote and advocate for it. This includes rejecting and actively countering a victim-blaming culture and fostering road system operator responsibility and accountability for road safety;

(h) Commit to closer collaboration among government agencies and departments to deliver on the national plan and the range of interventions required for a safe system. This particularly includes collaborating in determining responsibility for actions, reporting on performance and sharing data fully openly;

(i) In several vital areas of road safety delivery (enforcement, road design and construction, vehicle inspection), significantly improve governance and transparency;

(j) Map stakeholders to ensure that the best partnerships beyond government are identified and adopted;

(k) Consider United Nations legal instruments most suitable to the country and accede to them;

(l) In road safety management, highlight and leverage the synergies between road safety and the other global agendas noted above, including consideration of the costs of these agendas in the business case for synergizing interventions;

(m) Develop valid comprehensive crash data for multiple aspects of road safety management and delivery and participate in the Asia-Pacific Road Safety Observatory;

(n) Build capacity of road safety staff;

(o) Monitor progress and conduct a midterm review of the Regional Plan of Action to adapt to changes, progress and lessons from the first five years and ensure its currency.