



AFERA

**Association des Fonds
d'Entretien Routier Africains**



ARMFA

**African Road Maintenance
Funds Association**

The Contribution of Road Maintenance Funds to Road Safety

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Tanzania Roads Association**

Presentation Outline



Introduction: Road Safety Situation
World Wide and Africa



Strategies & Action Plans on Road
Safety



Financing Road Safety VIA
Maintenance Funds

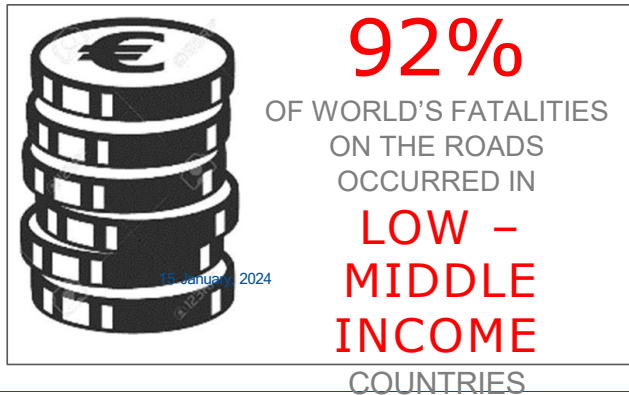


Case Studies



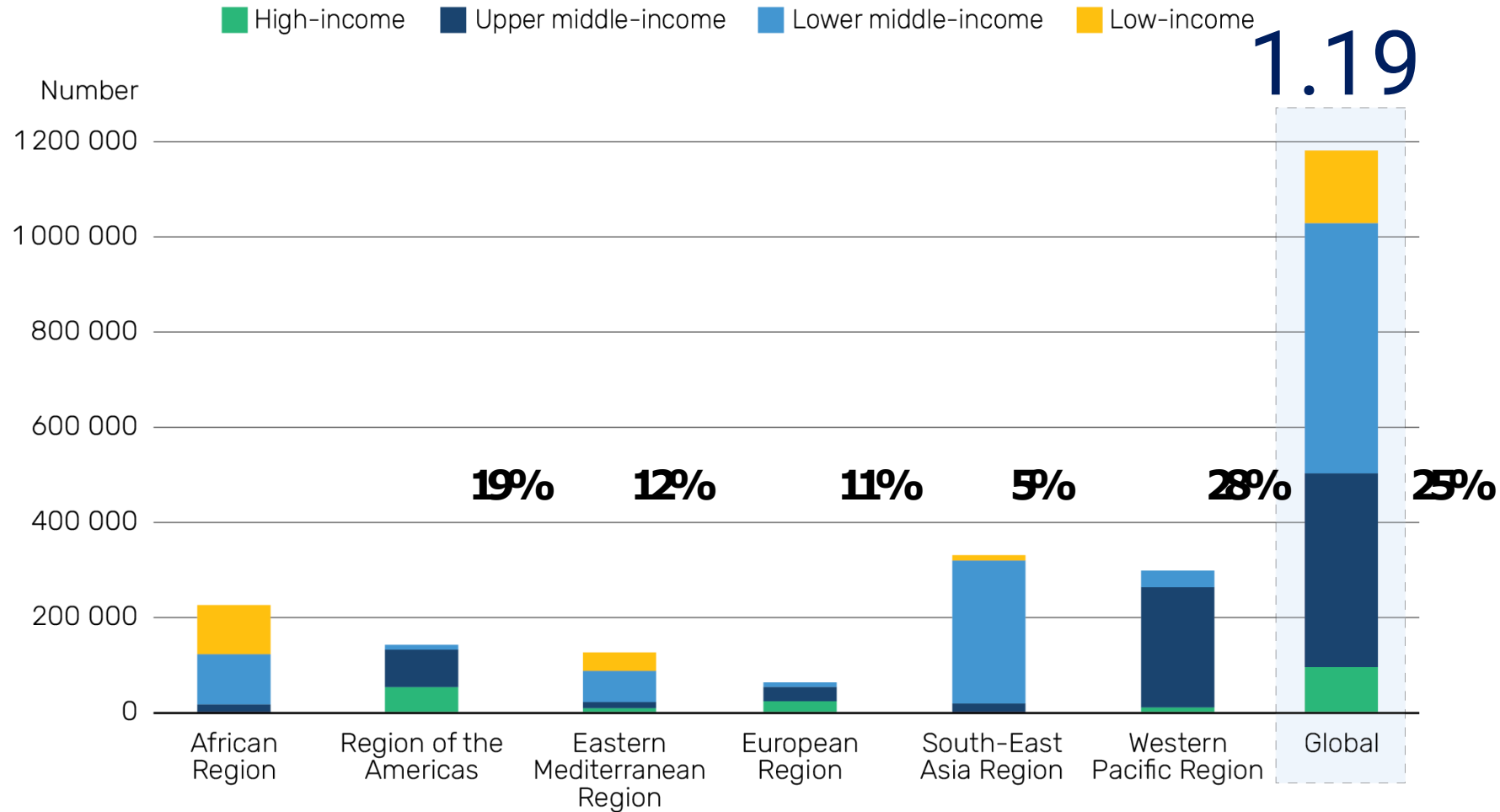
Recommendations

Road Safety Global Facts



Introduction: Road Safety Situation World Wide

Number of deaths

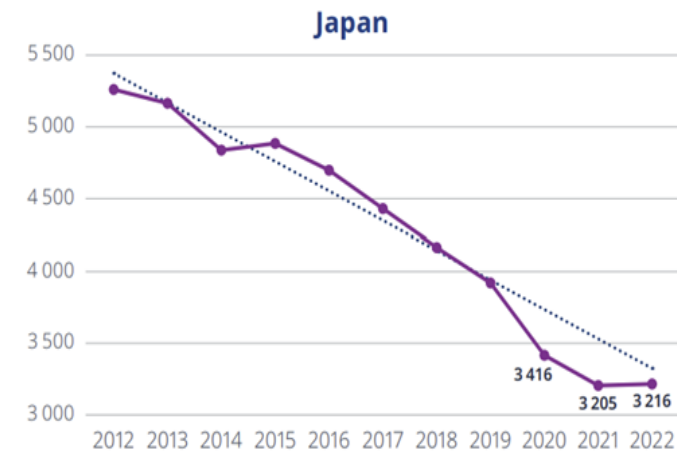
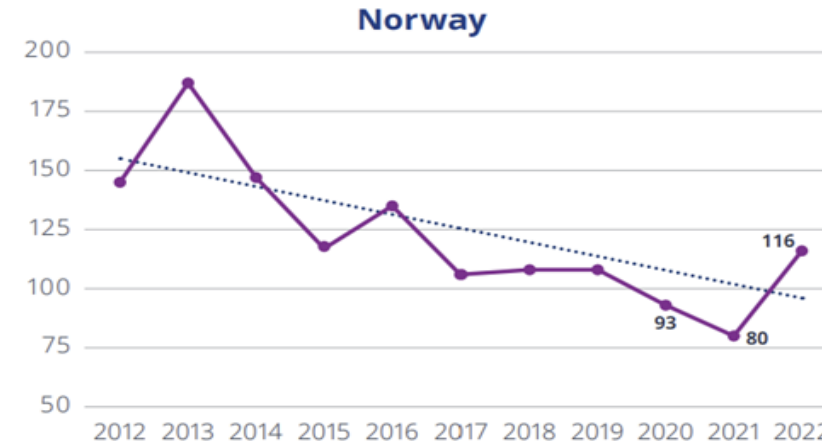
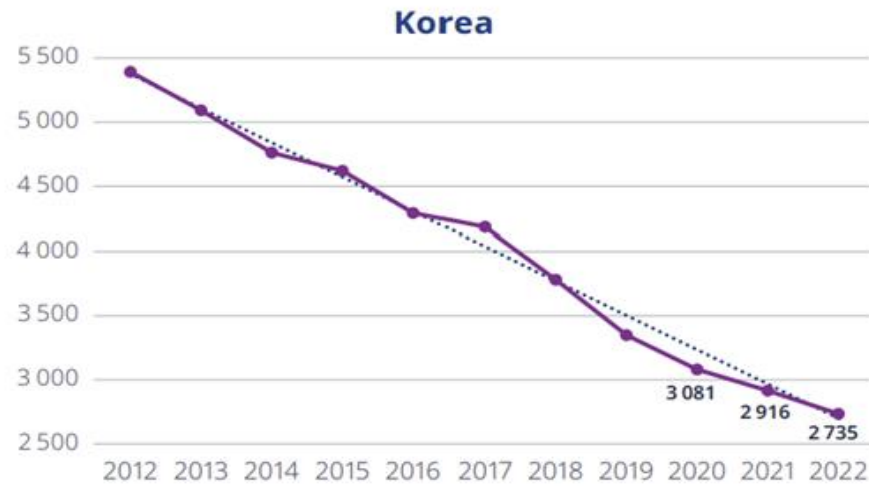


Road Safety Situation in Africa

- The world's region most affected by road crashes is sub-Saharan Africa's
- The World Health Organization (WHO) estimates the road traffic fatality rate on the continent to be 26.6 deaths per 100,000 people compared to 17 in Southeast Asia, 9.3 in Europe and the world's average of 17.5 (three times fatality in Europe)
- Africa, traffic deaths account for about one quarter of the global number of victims, even though the continent has barely 2 per cent of the world's vehicle fleet,



Road Accident Situation in Africa Compared



Root cause of the Road Safety Problem in Africa

- Inadequate Road safety management: weak lead agencies, underfunded, legislation, licensing, regulation, and research
- Unsafe roads: Road safety audits are rarely done, no systematic black-spot analysis undertaken, road safety not design manuals, no facilities vulnerable road users
- Unsafe road users: Drivers can be undisciplined, traveling at unsafe speeds, disobeying traffic signals, driving while overtired seatbelts for passengers, helmet use by passengers and use of mobile phones; Driver training and testing not up to best practice
- Unsafe vehicles: No annual roadworthiness test and on vehicle standards. at best, a brief visual inspection is carried out. Post-crash response: handling of crash victims is not systematic and emergency services do not provide the most basic post trauma care.
- Inadequate Funding: Without secure and stable funding, no serious actions can be taken to improve road safety.



AU Road Safety Action Plan Roadmap

1. Data collection, analysis and reporting
2. Development National Road Safety Strategies
3. Sensitization
4. Technical Control (Vehicle Inspections)
5. Create / Strengthen Lead Road Safety Agencies
6. Capacity Building / Lack of Country Capacity Review
7. Funding Road Safety activities



AU Strategy on Funding and Infrastructure

- Allocate 10% of Road infrastructure funding to Road Safety.
- Create a fund for Road Safety
- Provide a clear framework for Public private partnerships
- Facilitate financing of road safety by technical and financial partners
- Allocate 5% of road maintenance resources to road safety;
- Develop functional classifications and desired safety performance standards for each road user group at the geographic land-use and road corridor level
- Review and update legislation and local design standards that consider road function and the needs of all road users, and for specific zones
- Specify a technical standard and star rating target for all designs linked to each road user, and the desired safety performance standard at that location
- Implement infrastructure treatments that ensure logical and intuitive compliance with the desired speed environment (e.g. 30 km/h urban centres; ≤ 80 km/h undivided rural roads; 100 km/h expressways)

Strategic directions for the post 2011-2020 decade of action for road safety & African road safety action plan for the decade 2021-2030. Addis Ababa :. © UN. ECA,.

Challenges in Implementing RS Strategy

Challenges in Implementing the strategy:

- inadequate political leadership;
- lack of accountability for road safety;
- lack of regular monitoring and evaluation of the
- implementation of the Action Plan using measurable result-based indicators;
- limited involvement of the private sector and civil society, limited capacity of governments and the civil society to implement the Action Plan;
- inadequate coordination between actors at the continental, regional and national levels as well as within the different levels;
- Road funds currently invest little in road safety even though road safety may qualify for funding from the road fund.



Road Safety Management in Africa

WHO, 2010 / for Sierra Leone: WHO, 2015/

	Established or strengthening of lead agency					Improved management of data	
Western African region	Is lead agency present	The lead agency is funded	National Road Strategy present	Funding available to implement NRS Strategy	Fatality reduction target	Registration of total number of vehicles	Good death registration data (acc to WHO)
Benin	yes	no	no	missing	missing	yes	no
Burkina Faso	yes	yes	yes	partial	yes	yes	No
Cabo Verde	Yes	yes	yes	partial	yes	yes	No
Cote d'Ivoire	yes	yes	yes	yes	yes	yes	No
Gambia	yes	yes	no	missing	missing	yes	No
Ghana	yes	yes	yes	partial	yes	yes	No
Guinea	Yes	No	No			Yes	no
Guinea-Bissau	no	missing	no	missing	missing	yes	No
Liberia	no	missing	no	missing	missing	yes	No
Mauritania	yes	yes	yes	partial	yes	no	No
Mali	Yes	Yes	yes	Partial	Yes	yes	No
Niger	yes	yes	yes	partial	no	yes	No
Nigeria	yes	yes	yes	yes	yes	yes	No
Senegal	yes	yes	yes	partial	yes	yes	No
Sierra Leone	yes	no	yes	no	yes	yes	No
Togo	yes	no	no	missing	missing	yes	No
Total	88%	77%	63%	20%	90%	94%	0%
Total na	0%	7%	0%	0%	0%	0%	0%

	Established or strengthening of lead agency					Improved management of data	
Central African region	Is lead agency present	The lead agency is funded	National Road Strategy NRS present	Funding available to implement NRS Strategy	Fatality reduction target	Registration of total number of vehicles	Good death registration data
Angola	yes	No	Yes	partial	No	no	No
Burundi	yes	Yes	No	missing	missing	yes	No
Cameroon	no	Missing	Yes	partial	No	no	No
Central African Republic	yes	Yes	No	missing	missing	yes	No
Chad	yes	Yes	Yes	partial	Yes	yes	No
Congo	yes	No	Yes	partial	Yes	no	No
D.R. of the Congo	yes	Yes	Yes	partial	No	no	No
Equatorial Guinea	yes	Yes	No	missing	missing	yes	No
Gabon	yes	Yes	Yes	no	No	no	No
Sao Tome and Principe	yes	No	No	missing	missing	yes	No
Total	88%	55%	66%	55% (partial)	22%	44%	0%

WHO, 2010, WHO, 2015, for Djibouti and Zambia/

	Established or strengthening of lead agency					Improved management of data	
Eastern African Region	Is lead agency present	The lead agency is funded	National Road Strategy NRS present	Funding available to implement NRS Strategy	Fatality reduction target	Registration of total number of vehicles	Good death registration data
Burundi	Yes	Yes	No	Missing	Missing	No	No
Comoros	Yes	No	no	Missing	Missing	Yes	No
Djibouti	No	Missing	No	Missing	Missing	No	no
Eritrea	Yes	Yes	Yes	Partial	Yes	Yes	No
Ethiopia	Yes	Yes	Yes	Partial	Yes	Yes	No
Kenya	Yes	Yes	No	missing	Missing	Yes	no

Study on Road Safety Lead Agencies in Africa

2022

Countries Covered:

1. Cameroon
2. Cote d'Ivoire
1. DRC Congo
2. Egypt
3. Ethiopia
4. Ghana
5. Kenya
6. Mali
7. Morocco
8. Mozambique
9. Namibia
10. Nigeria
11. South Africa
12. Tchad
13. Tunisia
14. Uganda



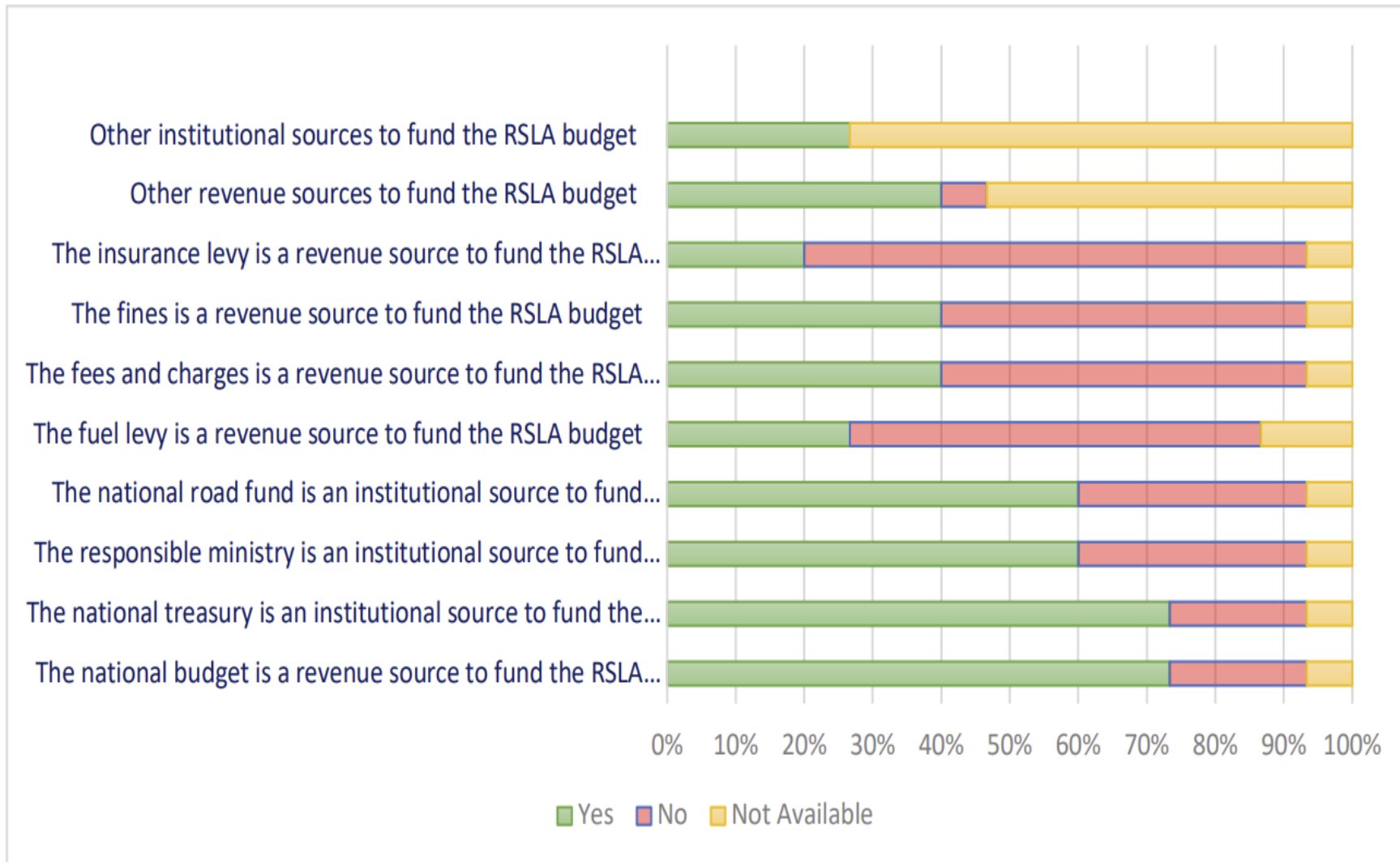
Budget Allocated to RSLA

	2018/2019 USD	2019/2020 USD	2020/2021 USD
KENYA	320,400	338,200	267,000
ETHIOPIA	2,104,410	5250	2,102,856
GHANA	3,399,770	4,792,778	5,055,072
NAMIBIA	4,686,252	3,865,984	4,996,544
MALI	2,853,609	2,985,115	3,860,147
UGANDA	800,000	810,000	820,000
MAROC	--	100,000,000	180,000,000
EGYPT	7500	7500	7500
NIGERIA	85,175,694	97,233,933	103,346,277
TCHAD	297,500	360,400	487,900
COTE D'IVOIRE	603,999	5,419,617	6,338,155
MOZAMBIQUE	8,571,429	9,071,429	125,714
SOUTH AFRICA	--	--	809,855

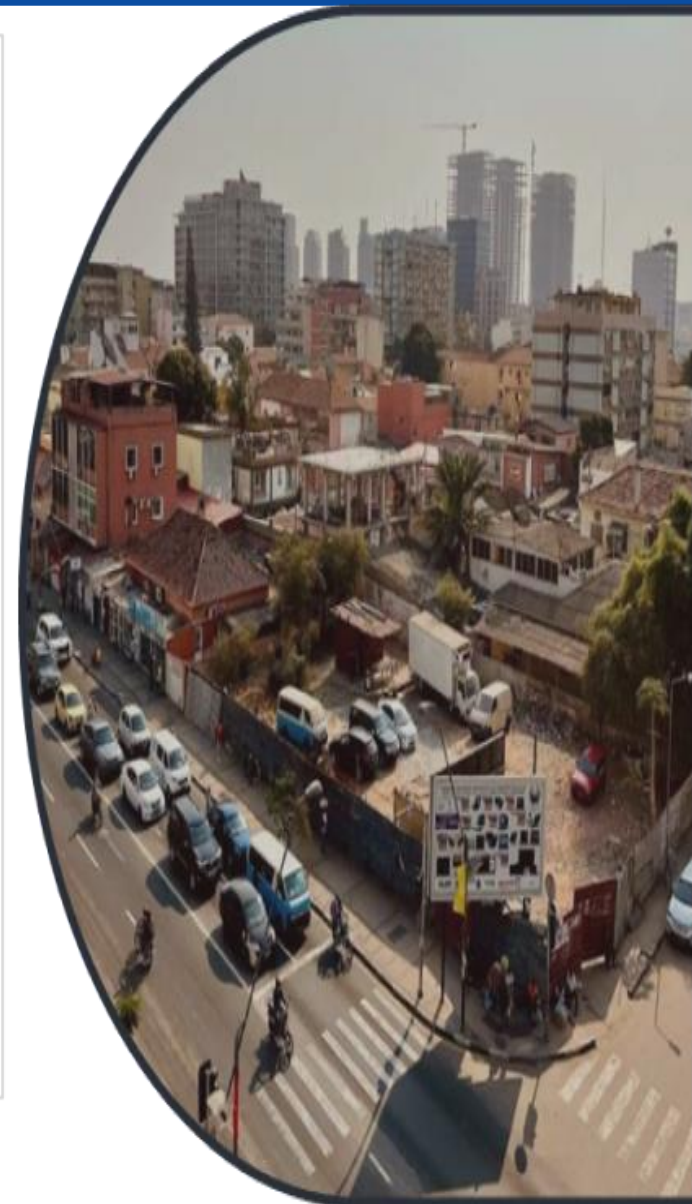


Study on Road Safety Lead Agencies in Africa 2022

Main Sources of Financing of Road Safety Lead Agencies



Study on Road Safety Lead Agencies in Africa 2022



Inadequate funding of Road Safety in Africa

- Funding for road safety activities is largely provided by national treasuries and responsible ministries.
- The lack of stable and sufficient funding is a real obstacle to implementation and evaluation of road safety interventions
- Nine countries have road funds, but only Morocco had sufficient budget for 2020/21
- Five of the sixteen RSLAs had no funding for their road safety approved strategic plan.
- Half the RSLAs reported they had 50-75% of the required resources to deliver on their mandate, and more than 40% had less than half of the required resources.



Case 1: : Ghana Good Practice of Sustainable Road Safety Funding

- In Ghana, 2,373 road traffic deaths were reported in 2022 — a death rate of 7.7 per 100,000 population.
- The World Health Organization (WHO) estimates four times as many deaths than are reported nationally (Accra road safety report, 2022)
- As part of a reform of the lead agency mandate in Ghana, the National Road Safety Authority Act 2019,
- The Act provides that the funds of the National Road Safety Authority include:
 - 2.5% of revenue accruing to the Ghana Road Fund
 - 2% of revenue accruing to the Driver and Vehicle Licensing Authority from vehicle and driver testing services
 - A percentage of revenue accruing to the National Insurance Commission for motor insurance, to be reviewed annually by the NIC, the NRSA and the Ghana Insurance Association.
- By establishing a percentage of revenues from these sources, the Authority's legislated revenue streams will rise with increased activity, and provide a much more sustainable funding mechanism over time.



Road Fund Secretariat established by Act 536 (1997), is to finance the following activities:

- o Routine and Periodic Maintenance of road and related facilities;
- o Upgrading and Rehabilitation of Roads;
- o **Road Safety Activities**;
- o Selected Road Safety Projects and such other relevant matters as may be determined by the Board

total road network was estimated at 94,203km, with 27% paved and 73% unpaved. “We have increased the stock of our paved roads despite the expansion in the network size. The interventions over the last 6 years have led to a marked improvement of Ghana’s road network to 44% good, 34% fair and 22% poor,



Funding Road Safety in Ghana: MRH Budget Estimates 2023

PROGRAMME 4: ROAD SAFETY AND ENVIRONMENT: Budget Programme Objectives

- To reduce road crashes and fatalities
- To reduce adverse effects resulting from road accidents
- Funding for 2023 is GHC 135,247,727 out of GHC 5,295,359,626 which is 2.6% of the total budget.

 1.5. Appropriation Bill Summary of Expenditure by Sub-Programme, Economic Item and Funding Entity: 022 - Ministry of Roads and Highways Year: 2023 Currency: Ghana Cedi (GHC) Version 1															
	GoG				IGF				Funds / Others			Donors			Grand Total
	Compensation of employees	Goods and Services	31 - Non financial assets	Total	Compensation of employees	Goods and Services	31 - Non financial assets	Total	Statutory	ABFA	Others	Goods and Services	31 - Non financial assets	Total	
02201 - Management and Administration	74,681,224	767,249	17,090,082	92,538,555		590,239		590,239		5,000,000		90,000,000		90,000,000	188,128,794
02201001 - General Administration		447,249	12,170,082	12,617,331		396,118		396,118				50,000,000		50,000,000	63,013,449
02201002 - Finance		80,000		80,000								10,000,000		10,000,000	10,080,000
02201003 - Human Resource	74,681,224	80,000		74,761,224								10,000,000		10,000,000	84,761,224
02201004 - Policy, Planning, Monitoring and Evaluation		80,000	4,920,000	5,000,000						5,000,000		10,000,000		10,000,000	20,000,000
02201005 - Statistics, Research, Information and Public Relations		80,000		80,000		194,121		194,121				10,000,000		10,000,000	10,274,121
02202 - Road and Bridge Construction		480,000	100,500,000	100,980,000						520,740,000		75,900,000	1,120,000,000	1,195,900,000	1,817,620,000
02202000 - Road and Bridge Construction		480,000	100,500,000	100,980,000						520,740,000		75,900,000	1,120,000,000	1,195,900,000	1,817,620,000
02203 - Roads Rehabilitation and Maintenance			294,700,000	294,700,000		12,241,628	11,046,775	23,288,403		1,570,574,701			1,265,800,000	1,265,800,000	3,154,363,106
02203001 - Routine Maintenance			98,233,333	98,233,333		12,241,628	11,046,775	23,288,403		356,951,568			85,740,000	85,740,000	564,213,304
02203002 - Periodic Maintenance			98,733,333	98,733,333						606,811,568			425,030,000	425,030,000	1,130,074,901
02203003 - Minor Rehabilitation			98,233,333	98,233,333						606,811,568			755,030,000	755,030,000	1,460,074,901
02204 - Road Safety and Environment			20,800,000	20,800,000		4,378,532		4,378,532		110,069,195					135,247,727
02204000 - Road Safety Management			20,800,000	20,800,000		4,378,532		4,378,532		110,069,195					135,247,727
Grand Total	74,681,224	1,247,249	433,090,082	509,018,555		17,210,399	11,046,775	28,257,174		2,206,383,898		185,900,000	2,385,800,000	2,551,700,000	5,295,359,626

- There has been a significant rise in the NRSA budget from fiscal year 2018/19 to 2020/21—through an 85 percent increase in funds allocated from the Ghana Road Fund (to US\$3.76 million), and a nearly 50 percent increase in total budget to US\$5.06 million.
- Additional funding comes with additional responsibility, and more importantly opportunity to strengthen the safety response by NRSA and its stakeholders.
- While the NRSA budget is still considered to be sufficient to cover only 50–75 percent of the required resources to deliver on its mandated functions, it appears that there has been a considerable strengthening in the financial resources of the Agency
- Ghana's National Road Safety Authority, for example, employs only a third of the technical staff in its establishment.



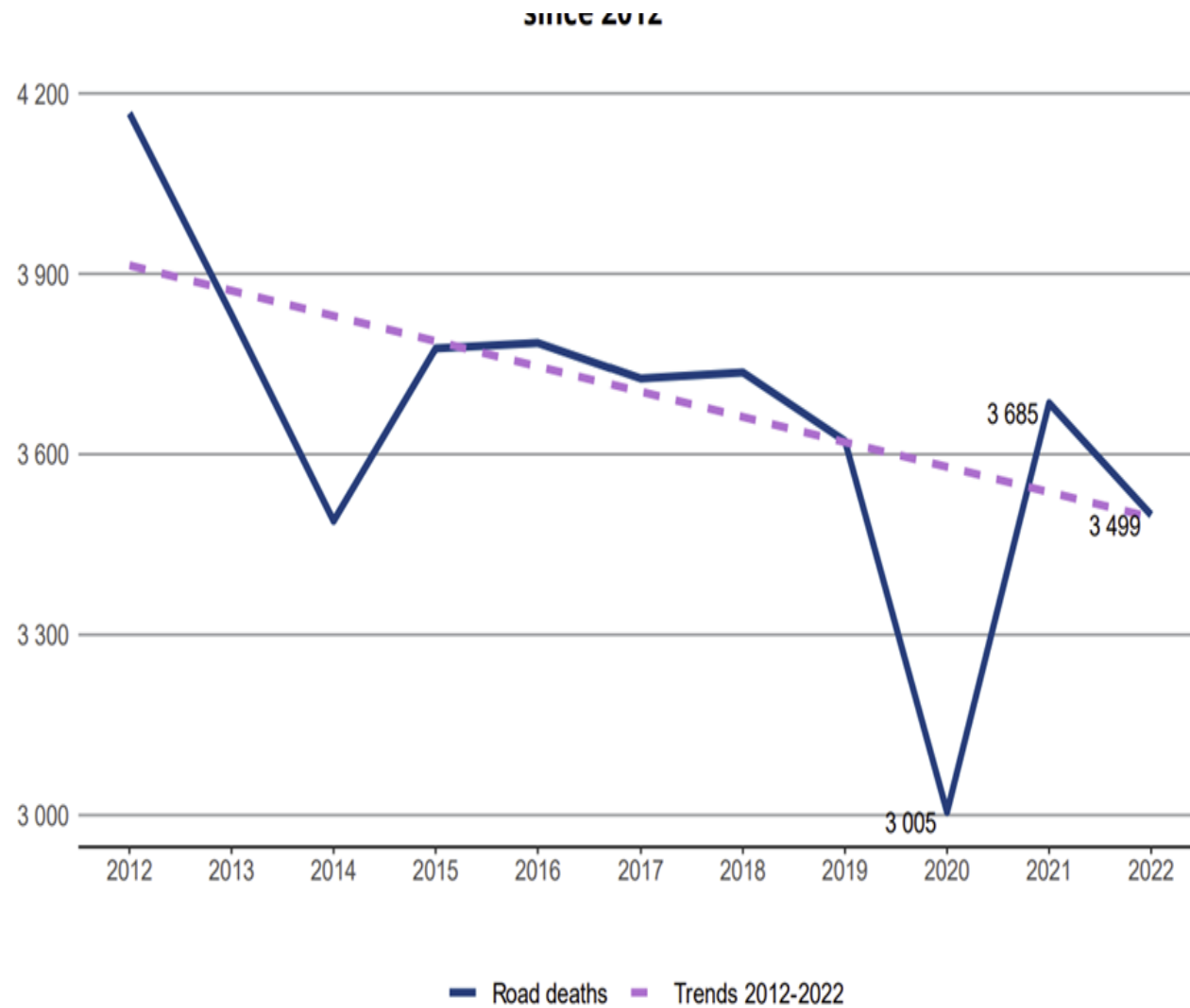
Case 2: Morocco Good Practice in Sustainable Road Safety Funding

- Morocco has one of the best road systems on the continent, securing the 16th position in the top 20 countries with the best roads worldwide.
- Over the past 20 years, the government has built approximately 1100 miles of modern roads, connecting most major cities via toll expressways.
- The Moroccan Ministry of Transport and Logistics aims to build an additional 2,100 miles of expressways and 1,300 miles of highway by 2030.
- In 2030 World Cup will mark the centennial World Cup competition and For the first time, three countries from two continents will host the competition with Spain, Portugal, and Morocco as host nations.
- Morocco recorded 3 499 road deaths in 2022, a mortality rate of 9.5 road deaths per 100 000 population, Vulnerable road users represent almost three-quarters of all deaths.
- Between 2012 and 2022, road deaths decreased by 16%. During the same period, registered vehicles more than doubled from 2.8 million units in 2010 to 6.3 million in 2022.
- Speeding is one of the leading causes of road crashes about 18% of all road fatalities

Source: International Transport Forum



Morocco Road Deaths



Source: International Transport Forum



Morocco National Road Safety Agency (NARSA).

- In February 2018, the government adopted a law to create a National Road Safety Agency (NARSA).
- The agency is responsible for implementing and managing all road safety actions including :
 - road safety strategy, issuing motorcycle and motor vehicle registration cards, driving license examination, demerit point system management,
 - technical inspections and inspections of all motor vehicles,
 - issuing authorisations for driving schools and their instructors,
 - Communication campaigns, and acquiring enforcement equipment.
 - NARSA is made up of six departments, employs 800 staff



Benacer Boulaajoul, NARSA Director General, Morocco, is the lead coordinator of the 4th Global Ministerial on Road Safety to be held in Marrakech in February 2025.

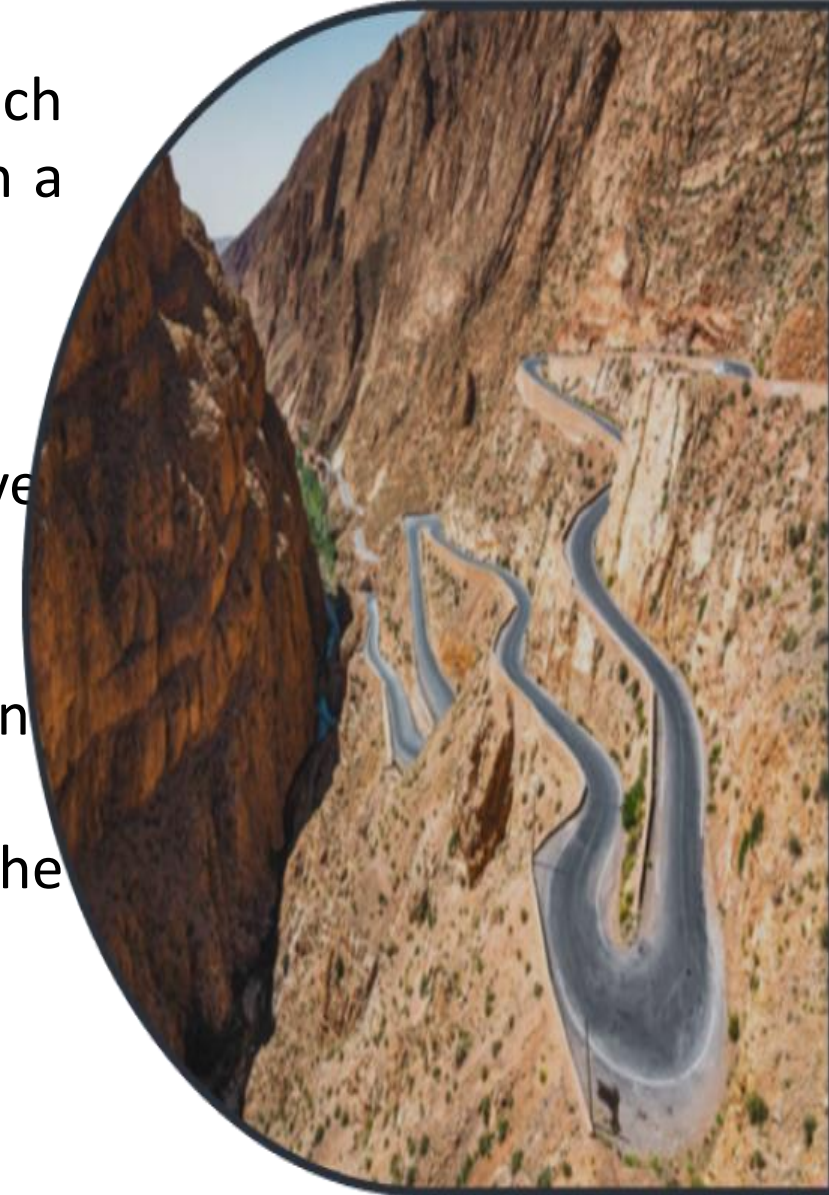
- Caisse pour le Financement Routier (CFR) is a public establishment created in 2004 Main source of revenue is:
 - road user charges- taxes on gasoline,
 - vehicle registration fee and
 - axle-load tax for freight vehicles.
- CFR is allowed to borrow money to be repaid by revenue from RUCs.
-



NARSA Funding & Organisation

In Morocco, the National Road Safety Agency has a much bigger budget— US\$200 million (2021)—which is drawn from a wide range of sources:

- Central government budget allocation
- **Roads Fund (CFR) from RUCs** and
- other revenues eg driver charges (for example, driver license issue)
- Contributions from compulsory insurance premiums
- Contributions from automotive, fuel distribution, and insurance companies
- Fixed speed camera fines (cameras are operated by the road safety agency)



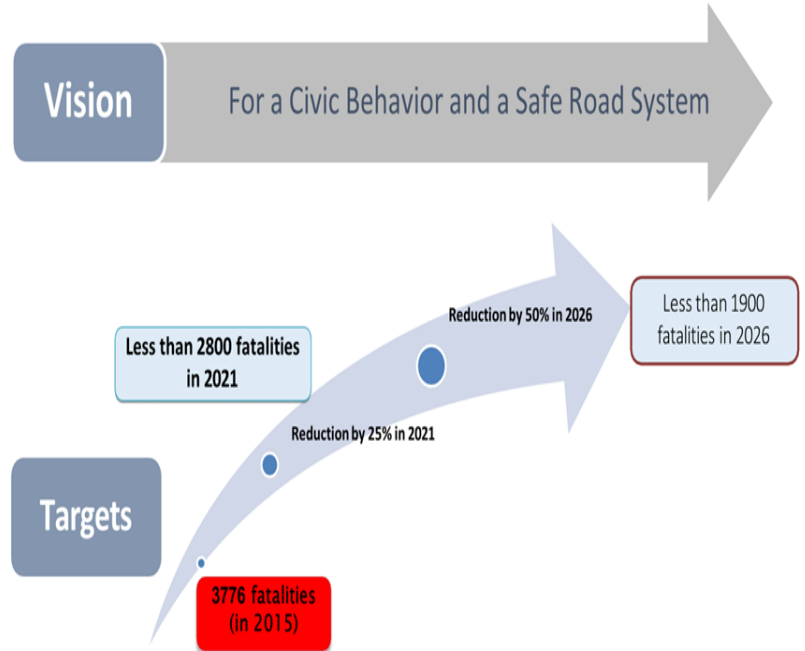
NARSA-Measures to improve road safety

Morocco has taken a number of measures to improve road safety in recent years. These include:

- Adopting a new road safety strategy in 2017. The strategy aims to reduce road deaths by 50% by 2026.
- Enhancing law enforcement
- Improving road infrastructure by investing in road widening and improvement projects to make roads safer.
- Raising awareness of road safety by launching a number of awareness campaigns to educate road users about the importance of safe driving.
- NARSA has increased the number of traffic police officers and has deployed more radars to catch speeders.



Second National Road Safety Strategy 2017-2026



Morocco Roads Authority-NARSA-Measures to improve road safety

- Société Nationale des Autoroutes du Maroc (ADM) est. 1989 is Morocco's state road operator responsible for the construction, operation and maintenance of the country's highways.
- ADM received funds from central government, CFR and from Tolls
- ADM launched, in 2018, an ambitious Plan called "AGIR": Global Action against Road Insecurity.
- Plan aims to reduce the number of accidents on the highways network and reduce the number of deaths by 50% by 2021 and 75% by
- The AGIR plan is based on a global approach involving investment in infrastructure, new technologies, training of Human Resources and consultation with and strengthening of partnership and teamwork with stakeholders who operate on highways.
- Technologies includes Video surveillance throughout the network with new generation cameras;
- ADM Trafic mobile application allowing Customers-Users to be informed in real time, in facts and images on the state of traffic in the network;



Morocco Roads Authority-NARSA-Measures to improve road safety

- Assistance vehicles equipped with real-time information transmission devices;
- Investments in Infrastructure includes widening high-traffic highways and toll plazas
- Monitoring and maintenance of the highway network and engineering structures using innovative techniques
- Safety system: signage, guardrails, reinforcement of fences, construction of pedestrian bridges
- Emergency stop beds for heavy goods vehicles
- Rough strips to combat the phenomenon of drowsiness, etc.
- adoption of service level contracts to ensure the effectiveness and efficiency of upgrade and maintenance operations of the road network. In this type of contract, the company ensures in an initial phase the upgrading of a given route (for example 500 to 1000 km) over a period varying from 3 to 5 years followed by the subsequent maintenance of this route over a period ranging from 10 to 15 years.



Case3: Experience from Dubai Good Practice in Road Safety Management

Overview

- Dubai is one of the fastest growing cities in the world. In 2024 population is estimated at 3,051,016 living in 4,114 square kilometers with 18,255 lane kms of roads
- The economic boom has increased car ownership: For every two people in Dubai, there is a vehicle, one of the highest in the world.
- In 2020 the number of registered vehicles in Dubai has increased to 1.83 million compared to 1.4 million in 2015 and 740,000 in 2006
- The UAE is a shining example for reducing traffic accidents. The UAE death rate from road traffic injuries fell from 10 per 100,000 people in 2010 to 7.4 in 2015 and 3.5 in 2019.

Source: Global Infrastructure Hub of G20

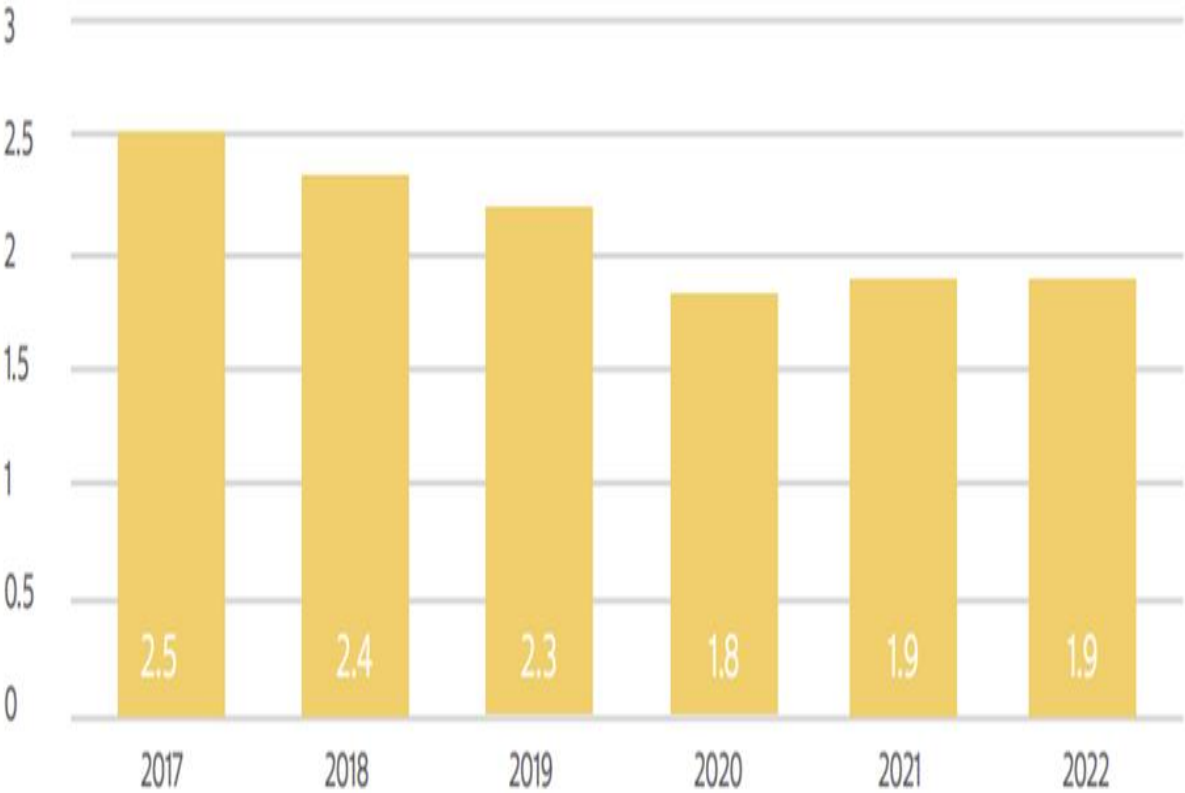


Dubai Traffic and Fatalities

Traffic and Roads

	Total length of cycling tracks (km) ¹ 500+		Total length of roads (lane-km) 18,475
	Total paved area (km²) ² 67.97		Car parking spaces ³ 580,000
	Vehicle bridges and tunnels 884		Pedestrian bridges and tunnels ⁴ 121
	Ground mounted road signs 16,000		Information signs (gantry and cantilever) 1,950
	Traffic signs 170,000		Traffic lights 15,400
	Road light poles 105,973		Street lights 150,287

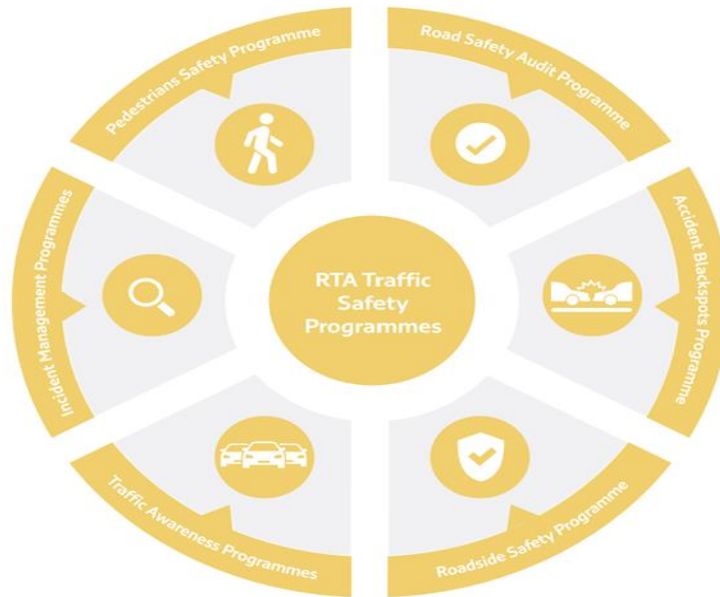
Road Accident Fatality Per 100,000 Population



Road Accident Fatality per 100,000 population

Experience of Dubai: RTA

- The Roads and Transport Authority established in 2006 with the vision of 'safe and smooth transport for all'.
- Responsible for designing, constructing, maintenance of road infrastructure, safety improvement programmes.
- Road safety initiatives and schemes that helped to reduce road fatalities includes:



Global Good Practice: comprehensive road safety strategy is built in five areas dependent on a set of enablers- Vision Zero



Dubai Budget for Transport

- Emirate of Dubai in 2021 had a budget amounting to AED57.1 billion
- The allocation of 41% of the government expenditure to supporting the infrastructure and transportation sector including road safety in the Emirate



Experience of Dubai With PBC and Road Safety

- Dubai Implements PBC maintenance Contracts worth Cost: 27M AED per year
- Performance Based Contract, 2 Years, Possibility to be renewed or extended
- Project started in March 2017, renewed in 2019 and completed in March 2022
- Parties involved (public and private): UAE Ministry of Energy and Infrastructure
- Size: 800KM central carriageway of Highways controlling 12 elements to be kept in good condition and level of service



Source: Global Infrastructure Hub of G20

DUBAI PBC Objective

- The objective was ASSET PRESERVATION AND MAINTENANCE MANAGEMENT of roads
- The contract provided services around the clock (24/7) in the form of the activation of the Call Centre for accidents attention and coordination with Police and Civil Defence authorities
- The project allowed to do road safety audits to determine the sensitive locations (Black Spots) to perform safety activities
- Provided a stronger presence for the ministry through the Masar Initiative which consists of road inspectors roaming around the network (24/7) and is directly linked to the maintenance process.



Dubai PBC: Realized Benefits

Elements contained in the PBC had a range of time in which the contractor was required to act after the report of the incident, depending of the type of the failure:

- Pavements – 48 hours to 1 week
- Shoulders and slopes – 24 hours to 1 week
- Drainage – 48 hours to 1 week
- Fences and camel grids – 24 hours to 1 week
- Lighting – 2 hours to 1 week; Sand removal – 24 hours
- Road Marking – 7 days to 1 month
- Guardrails and safety barriers – 4 hours to 1 week
- Kerbstones – 4 hours to 1 week
- Traffic signs and road furniture – 8 hours to 1 month
- Vegetation control – 72 hours
- Graffiti and stickers removal – 7 days
- ***The cost of the works performed in the contract is 25% less than the traditional maintenance schemes.***



- The time response to accidents significantly decreased compared to the data prior to the application of this contract
- Fast attention to any incident occurring on the road enhanced user and client experience and satisfaction, and gives the Federal Authority a better image to the road users.
- Attending the incidents in the road in the fastest way improves road safety and traffic management (which have direct impact in all of the Sustainability components).
- Maintenance and operation of the roads is improved since the conditions of the road are maintained within the acceptable limits in a longer term.
- The contract allows new technologies to be implemented for better preserved assets (such cold recycling or asphalt reinforcement).



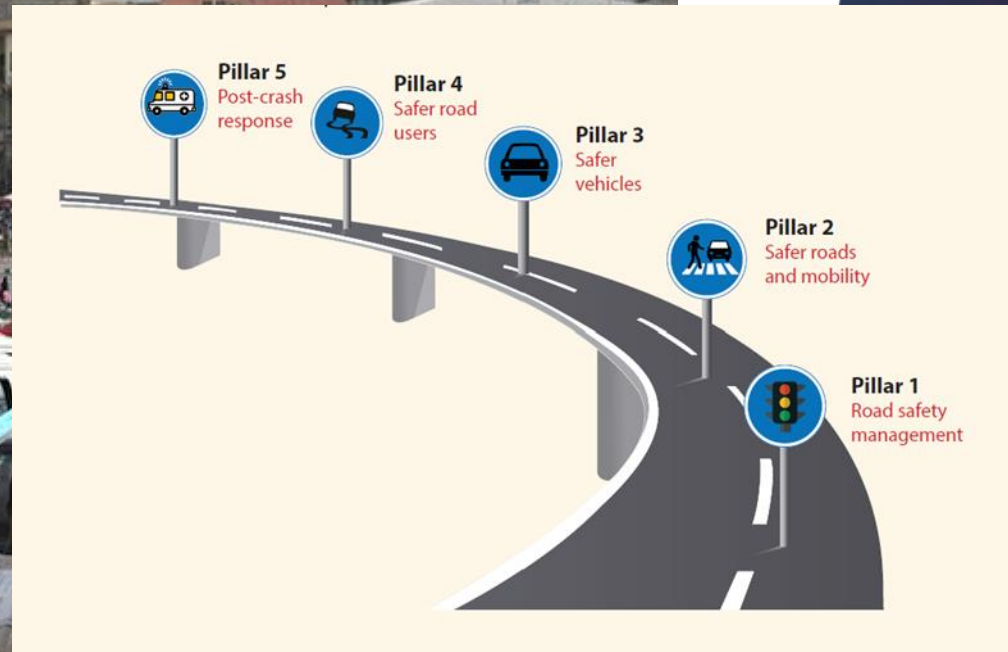
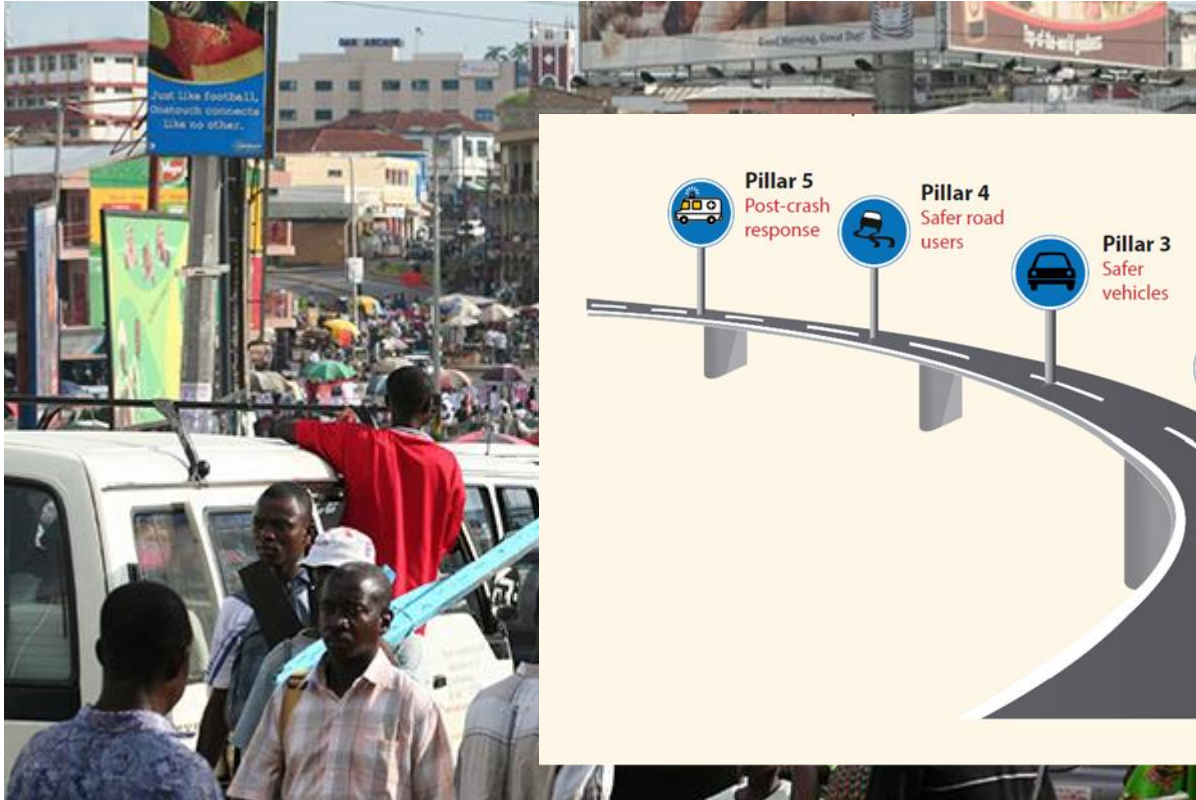
Dubai Traffic Accident report



Traffic accident report 2022 (Accident types)



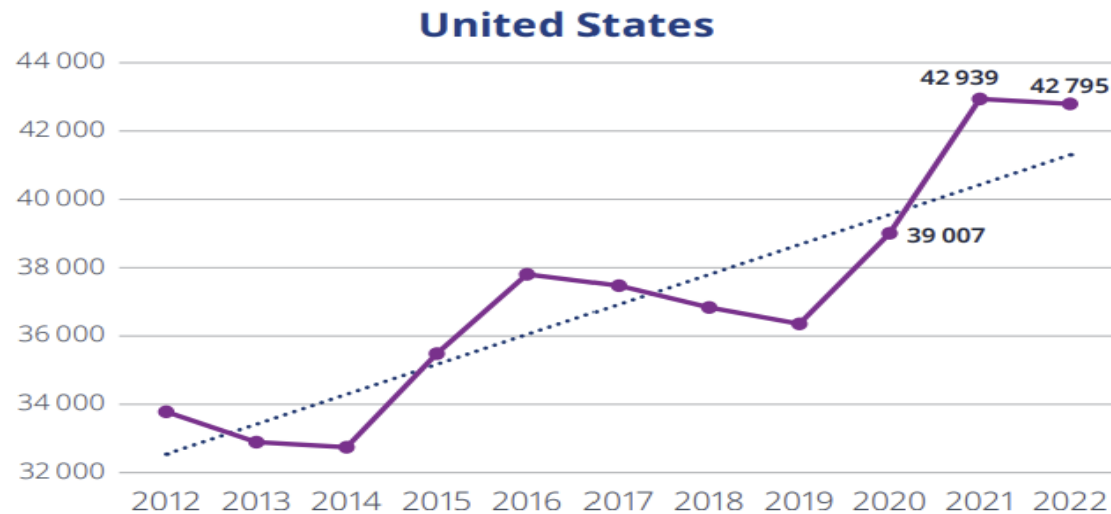
Accident Types	Number of Accident Cases	Injures Cases	Non Injuries Cases	Number of Vehicles	Number of Injuries	Fatal	Serious	Medium	Slight
Other	9	3	6	10	3	0	0	2	1
Partial Separation of Vehicle	2	2	0	5	4	0	1	1	2
Overturn	200	174	26	209	202	7	14	118	63
Pedestrian	364	364	0	383	398	20	29	183	166
Fall of Man	6	5	1	6	5	0	0	0	5
Fall of Container	1	0	1	1	0	0	0	0	0
Fall of Vehicle	2	1	1	2	1	0	0	0	1
Collision with Wall	35	9	26	42	9	0	1	3	5
Collision with Animal	1	1	0	1	1	0	0	0	1
Collision with Trees	12	2	10	13	2	0	0	1	1
Collision with Pole	70	20	50	73	23	1	3	7	12
Collision with Light Pole	16	7	9	16	10	1	1	7	1
Vehicle Collision	2,169	1,139	1,030	4,907	1,478	71	64	682	661
Collision with Gate	31	0	31	33	0	0	0	0	0
Collision with Solid Body	11	0	11	11	0	0	0	0	0
Collision with Radar	2	0	2	2	0	0	0	0	0
Collision with Cement Barrier	55	28	27	57	38	7	7	16	8
Collision with Plastic Barrier	7	2	5	9	4	2	2	0	0
Collision with Iron Barrier	119	42	77	136	65	7	9	24	25
Collision with Sand	7	4	3	7	4	0	0	4	0
Collision with waste container	2	1	1	2	1	0	0	1	0
Collision with Pavement	107	22	85	109	24	1	3	9	11
Collision with Signboard	50	10	40	50	10	3	2	4	1
Collision with Electric Cabels	3	1	2	3	1	0	0	1	0
TOTAL	3,281	1,837	1,444	6,087	2,283	120	136	1,063	964



Case 4: Experience from USA

In 2022 there were:

- 42,795 people killed and an estimated 2,497,657 people were injured.
- 13,384 people killed in alcohol-impaired-driving crashes,
- 12,330 fatalities in speeding-related crashes,
- 7,388 pedestrians killed while walking



Road Safety Annual Report 2023 © OECD/ITF 2023



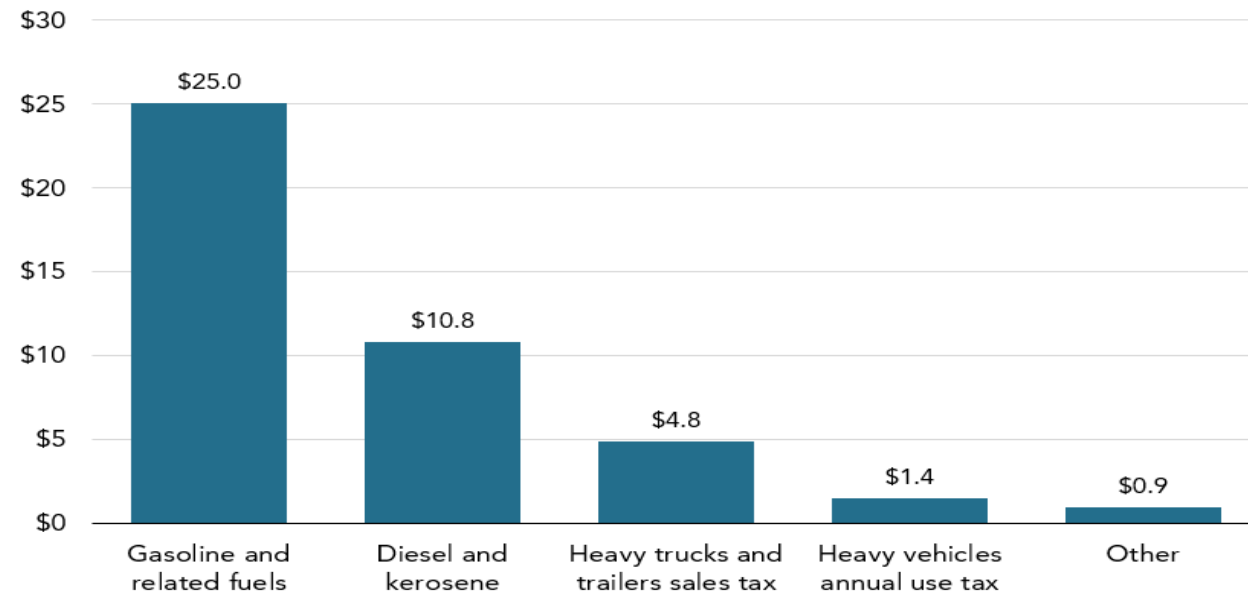
USA Federal Highway Trust Fund

- Three organisations are responsible for road safety namely NHTSA, FHWA and FHTF
- Highway Trust Fund was est. via Highway Revenue Act of 1956 and had revenue budget of \$43 billion in fiscal year 2023
- The United States, the Federal Highway Administration collects fuel taxes, which are then distributed to states to fund road maintenance projects.
- Funds are used for Capital and Maintenance expenditures via states and other agencies

FIGURE 1

Sources of Revenue for Highway Trust Fund

Billions of dollars, fiscal year 2023



Source: Congressional Budget Office. 2023. The Budget and Economic Outlook: 2023 to 2033. Washington, DC.

Experience from the USA

- The National Highway Traffic Safety Administration (NHTSA) has a mission to save lives, prevent injuries, and reduce economic costs due to road traffic crashes.
- Through education, research, development of safety standards, and enforcement activities.
- NHTSA receives funding from Federal Government and from FHTS through FHWA
- In 2022 NHTSA had a budget of 1.2 Bn dollars with an expected number of 857 permanent staff.
- Total budget of FHWA for FY 2024 is \$70,247,060,000 out of which \$3,358,683,000 is dedicated for Road Safety Improvement Program which is 5% of the total budget and number in 4 in budget priority



Highway Safety Improvement Program(HSIP)

- A PBC was first introduced in the USA in Virginia State in 1996 followed by Alaska, Florida, Oklahoma, Texas and Washington, D.C.
- FY 2023 budget for HSIP included \$3.3 billion implementing National Roadway Safety Strategy (NRSS) to reduce fatalities and serious injuries to achieve the goal of zero deaths
- The PSC initiative consists of a collection of proven countermeasures and strategies being implemented via maintenance funds
- The HSIP provides funds to States to address areas of risk, including vulnerable road user safety, with innovative proven safety interventions.
- Integrate safety improvements into resurfacing and restoration projects which may be an effective and efficient method for pursuing infrastructure and safety goals States applying a PBC approach to maintain highways, bridges, tunnels.



Experience from USA: Current PSCs

Categories:

- Roadway Departure
- Intersections
- Pedestrians and Bicyclists
- Crosscutting



Roadside Design Improvement at Curves



Reduced Left-Turn Conflict Intersections



Systemic Application of Multiple Low Cost Countermeasures at Stop-Controlled Intersections



Leading Pedestrian Interval



Local Road Safety Plan



USLIMITS2



Enhanced Delineation and Friction for Horizontal Curves



Longitudinal Rumble Strips and Stripes on Two-Lane Roads



Median Barrier



Safety Edge_{SM}



Backplates with Retroreflective Borders



Corridor Access Management



Dedicated Left- and Right-Turn Lanes at Intersections



Roundabouts



Yellow Change Intervals



Medians and Pedestrian Crossing Islands in Urban and Suburban Areas



Pedestrian Hybrid Beacon



Road Diet



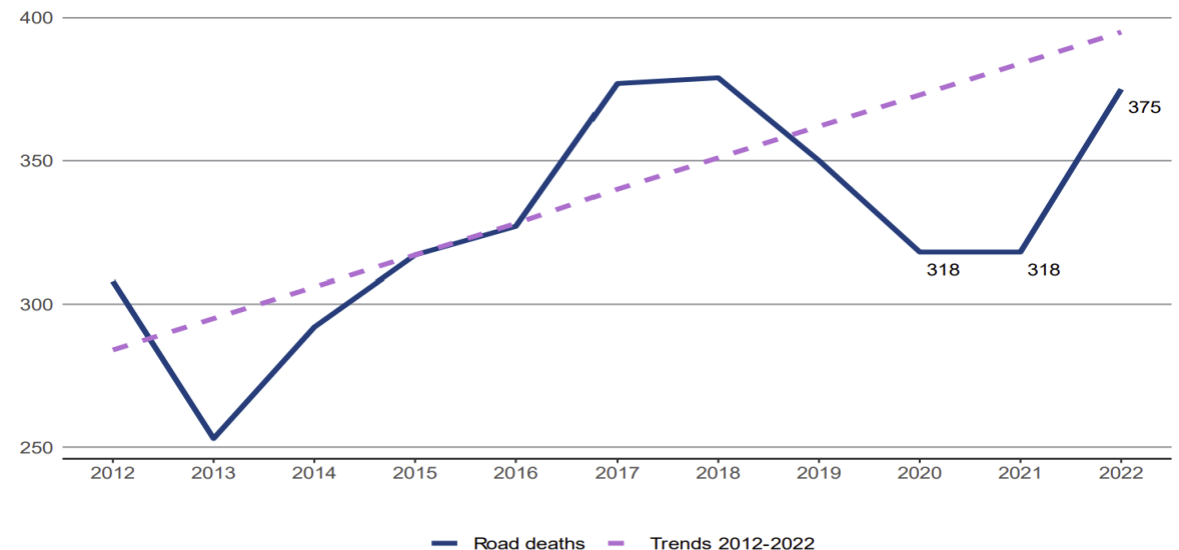
Walkways



Road Safety Audit

Case 5: Experience from New Zealand

- There were 375 road deaths in 2022, an increase of 1.9% compared to the average for 2017-19.
- New Zealand had a mortality rate of 7.3 road deaths per 100 000 population
- The fatality rates were 1.0 deaths per 10 000 motor vehicles
- Car occupants represented the vast majority of casualties (71% of road deaths).
- Motorcyclists accounted for 14% of all road deaths, and pedestrians for 9%
- Inappropriate speed is one of the leading causes of road crashes in New Zealand.



Source: International Transport Forum

New Zealand Roads Authority

- Waka Kotahi NZTA is the government's land transport delivery arm responsible for developing, constructing, maintaining and operating the state highway network and implements road safety policy.
- It was created on 1 December 2004 by the Land Transport Management Amendment Act 2004, was the successor entity to the disestablished Land Transport Safety Authority and Transfund New Zealand
- The NZTA is managing the Roads Fund which is used to support road spending under the jurisdiction of NZTA (national roads) and the local authorities.
- Funds are used to finance:
 - costs of road safety engineering measures (e.g., skid resistance and treatment of hazardous locations).
 - Promotion of road safety and demand management,
 - Promotion of the safe, efficient and effective use of the land transport system through behavioural-based activities. including work and school travel management plans, cycle safety training, ride sharing,
 - promotion of public transport and active modes,



New Zealand Land Transport Plan 2021-2024

Investment by the numbers

Everyone who drives a vehicle makes a contribution to the NLTF.

\$24.3 BILLION

The total investment in land transport under this NLTP

Revenue in the NLTF comes from two main sources – fuel taxes and road user charges. Smaller amounts of revenue come from vehicle licensing.

There is a smaller sum collected from the sale of surplus land/property and rail track user charges.

The majority of this revenue is gathered into the NLTF and allocated to the NLTP. The NLTF is to be solely used for activities in the NLTP, with limited exceptions. These include search and rescue, and regulatory activities.

Funds are also provided by local government, to invest in their local and regional land transport system on behalf of their ratepayers. There is also targeted Crown funding for some activities, such as subsidies under the SuperGold scheme.

In 2021–24, \$24.3 billion of funding is forecast to be managed under the NLTP. This is an increase of 44% compared to 2018–21. It includes an estimated investment of \$15.6 billion from the NLTF, including \$2 billion of assumed financing, \$4.8 billion of local share, \$800 million of Crown funding to help fund the RNIP and \$2.5 billion Crown funding will be managed alongside the NLTP for the New Zealand Upgrade Programme and the Provincial Growth Fund.

\$3.8 BILLION

Investment by the Crown through funding and financing

\$4.8 BILLION

Investment by local government

\$15.6 BILLION

The total investment from NLTF, including \$2 billion of assumed financing

\$1.3 BILLION

Total investment in New Zealand's rail network over the next three years

\$5 BILLION

Investment in public transport

\$1.24 BILLION

Forecast investment in road policing during the next three years

\$1.25 BILLION

Total investment in local road improvements over the next three years

\$910 MILLION

Total investment in walking and cycling networks over the next three years

\$197 MILLION

Forecast investment in road safety promotion during the next three years

\$7 BILLION

Total investment on state highway and local road maintenance

\$2.9 BILLION

Investment to reduce deaths and serious injuries on New Zealand roads through the new Road to Zero activity class

\$2.6 BILLION

Total investment in improving New Zealand's state highway network over the next three years

12.8% of the total budget dedicated for Road Safety



Network Outcomes Contract (NOC): PBC

- Waka Kotahi NZ Transport Agency has moved away from traditional approach of asset management practices and procurement procedures for state highway maintenance to procedures to obtain greater value for money and improved customer satisfaction.
- Network outcomes contracts are performance based using key performance indicators to ensure desired outcomes are achieved
- The Network Outcomes Contract (NOC) delivery is now almost exclusively used throughout the state highway network.

The core maintenance activities covered by the NOC include:

- Network Management – asset management,
- journey management and safety management
- Physical works – maintenance and renewals of sealed pavement, drainage and structures, environmental maintenance,
- traffic services and operational traffic services
- Other network specific maintenance activities (eg tunnels) and local roads can be included as required.



NZ- Safety measures

SAFETY MEASURES					
Measures	Explanation	Method of measurement	Target values by road group		Related NLTP work category
			Urban	Rural	
Sight distance is not restricted by vegetation growth/trees.	Number of deficient locations per 1 km urban/10 km rural route.	Safety inspection.	A – 0 B – 0 C – 0 D – 1 E – 2	B – 0 C – 0 D – 0 E – 3 F – NSV*	Environmental maintenance.
All traffic restraining devices are maintained in an effective operating condition.	Restraining devices, such as: - bridge side rails - guardrails - wire rope barriers - crash cushions	Safety inspection.	All – 100%		Traffic services maintenance; Structures maintenance.
Where shoulders are provided they are maintained in a state that allows safe stopping or recovery by vehicles.	A vehicle wandering from the traffic lane to the shoulder at the 85 th ile road speed shall be able to safely return to the traffic lane.	Safety inspection.	All – 100%		Sealed pavement maintenance.
Roadside safety zones are maintained free of unauthorised obstructions.	Obstructions, such as: - self-sown trees - abandoned vehicles - unauthorised advertising signs - unauthorised storage	Safety inspection.	NSV	All – 100%	Routine drainage maintenance. Environmental maintenance.
Carriageway lanterns are maintained in an effective operational condition.	Maximum number of adjacent defective or non-operating lanterns.	Safety inspection.	A – 0 B – 2 C – 2 D – NSV E – NSV	B – 2 C – 2 D – NSV E – NSV	Traffic services maintenance.
Traffic signals (incl. at rail crossings) operational at all times.	100% of lanterns operational.	Safety inspection.	All – 100%		Operational traffic management.

*NSV = no specified value for this group.

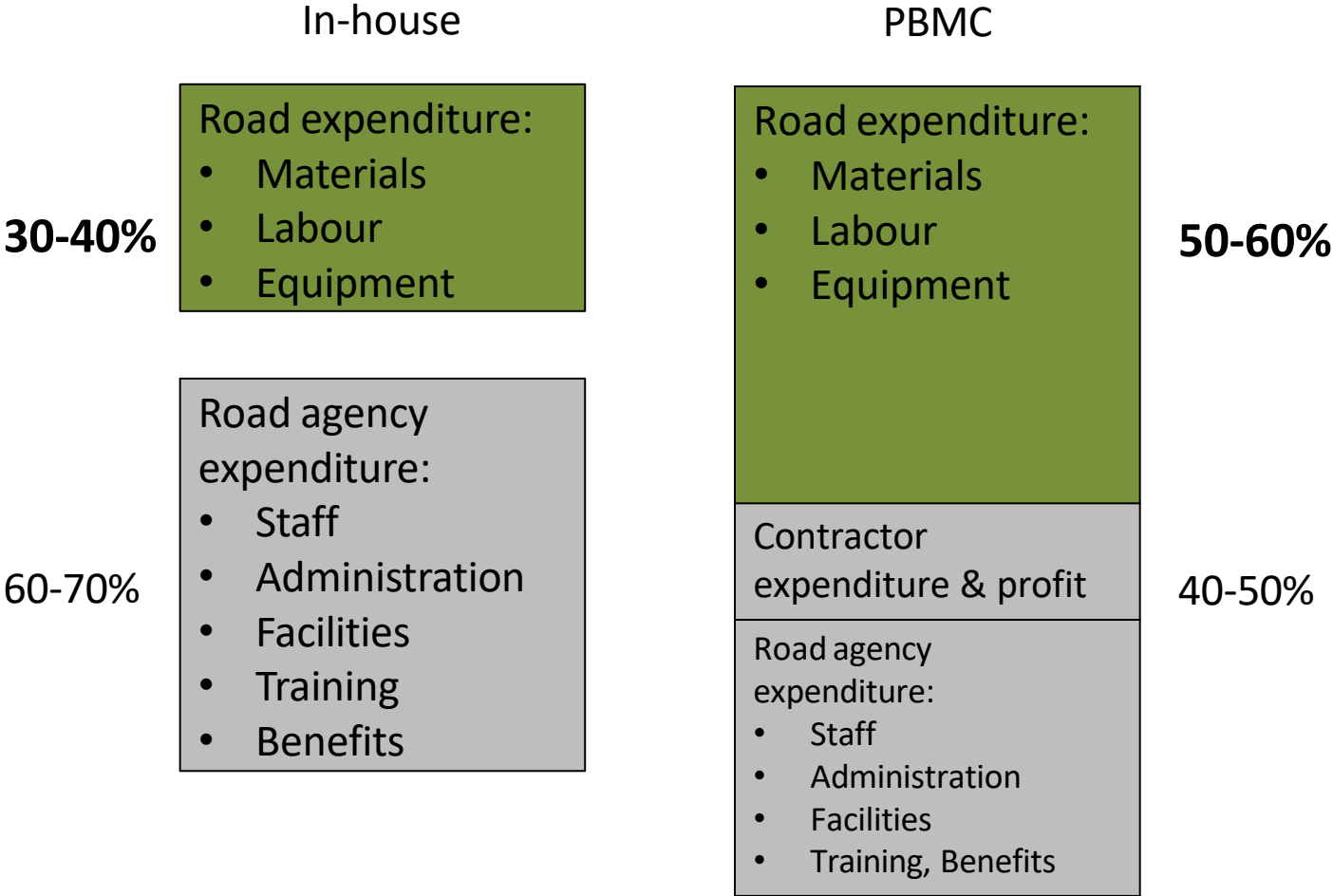


Conclusion: WHO and AU Recommendations

1. Identify a lead agency in government to guide the national road traffic safety effort.
2. Assess the problem, policies and institutional settings.
3. Prepare a national road safety strategy and a plan of action covering soft and hard parts of the strategy
4. Allocate financial and human resources to address the road safety problem.
5. For sustainability the allocation should be a percentage of the Roads Fund

Conclusion: More Efficient Use of Maintenance Funds

% of total maintenance budget spent on the road



AFERA

Association des Fonds
d'Entretien Routier Africains



ARMFA

African Road Maintenance Funds Association

