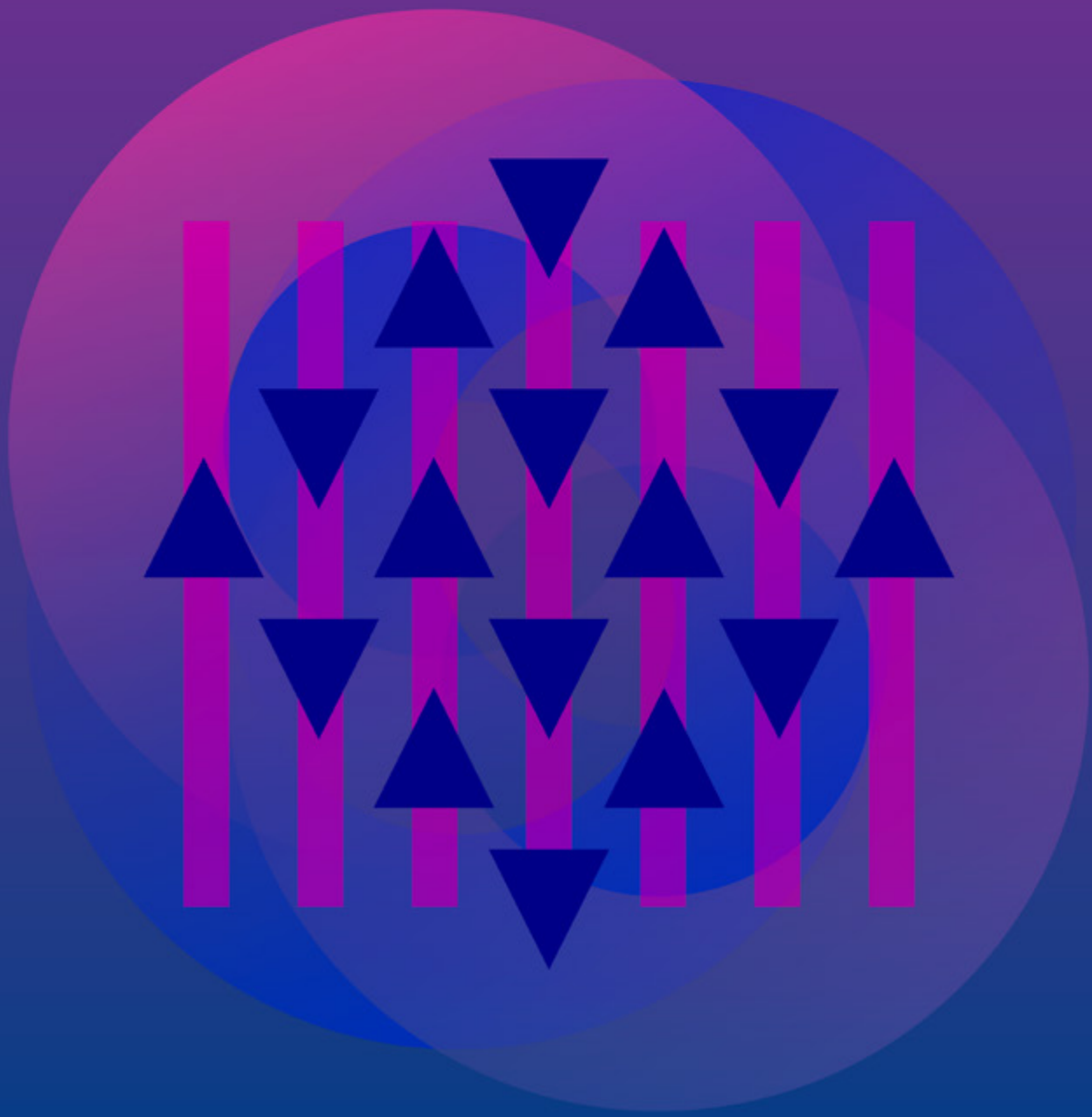
International Transport Forum

irtad Road Safety Data

Road Safety Country Profile

Costa Rica 2023



Overview

Costa Rica joined the ITF as a member country in 2023. This country profile summarises road safety in Costa Rica based on the most recent data in the IRTAD Database.

Between 2012 and 2021, the number of road deaths in Costa Rica decreased for most road users, except motorcyclists, among whom road fatalities increased by more than 50%. In 2021, motorcyclists represented 45% of all road fatalities. However, in 2021, the number of killed motorcyclists decreased by 4.9% compared to the average 2017-19.

Quick facts: Costa Rica (all data from 2021, unless otherwise stated)

Population	5.2 million				
GDP per capita	USD 12 451				
Total number of motor vehicles	2.6 million				
	Cars	Motorcycles	Goods vehicles	Buses	
	64%	29%	3%	2%	
Speed limits	Urban roads		Rural roads		
	40 km/h, except where there is a 50 km/h sign		40-100 km/h (60 km/h where there is no sign)		
Limits on blood alcohol content	General drivers	Professional drivers	Novice drivers		
	0.5 grams/litre (g/l)	0.2 g/l	0.2 g/l		
Road fatalities	707				
	Pedestrians	Cyclists	Car occupants	Motorcyclists	Other and unknown
	16%	7%	11%	45%	20%
Road fatalities per 100 000 population	13.7				
Road fatalities per 10 000 vehicles	2.7				

Short-term trends

Road deaths in 2022

In 2022, 485 persons lost their lives on Costa Rica's roads (deaths on the spot). This is 30% more than in 2021 and 55.9% more than in 2020. Total road deaths in 2020 and 2021, when the country was hit by the Covid-19 pandemic and subsequent mobility restrictions, were particularly low.

Compared to the pre-pandemic period (2017-19), the number of road deaths in Costa Rica increased by 3.2% in 2022 (see Table 1).

Table 1. Road fatalities in Costa Rica, 2017-2022

	2017	2018	2019	Average 2017-19	2020	2021	2022	2022 compared with 2017-19 average
January	45	37	34	39	30	37	56	44.8%
February	35	32	30	32	31	35	45	39.2%
March	53	48	54	52	40	33	44	-14.8%
April	55	40	47	47	14	34	26	-45.1%
May	41	36	34	37	24	26	41	10.8%
June	29	44	27	33	19	34	25	-25.0%
July	33	33	24	30	23	21	44	46.7%
August	31	49	24	35	19	23	34	-1.9%
September	40	32	43	38	23	18	47	22.6%
October	42	30	44	39	31	35	44	13.8%
November	38	37	32	36	20	25	31	-13.1%
December	46	53	58	52	37	52	48	-8.3%
Total	488	471	451	470	311	373	485	3.2%

Note: 2022 data are provisional. Data in this table correspond to deaths on the spot of the crashes. In the other sections of the report, road death data are those within the 30 days of the crash, conforming to the international definition.

Road deaths in 2021

Mobility and road safety in Costa Rica were significantly impacted by the Covid-19 pandemic that hit the world in 2020. Figure 1 illustrates the number of road deaths in 2020, 2021 and 2022 compared to the linear trend before the pandemic. It shows that road death figures for 2020 and 2021 were very much below the trend.

Due to the impact of the Covid-19 pandemic on mobility and road crashes, the data for 2020 and 2021 represent a poor reference point for benchmarking. Therefore, for short-term trends, this report compares data for 2022 and 2021 with the average for 2017-19.

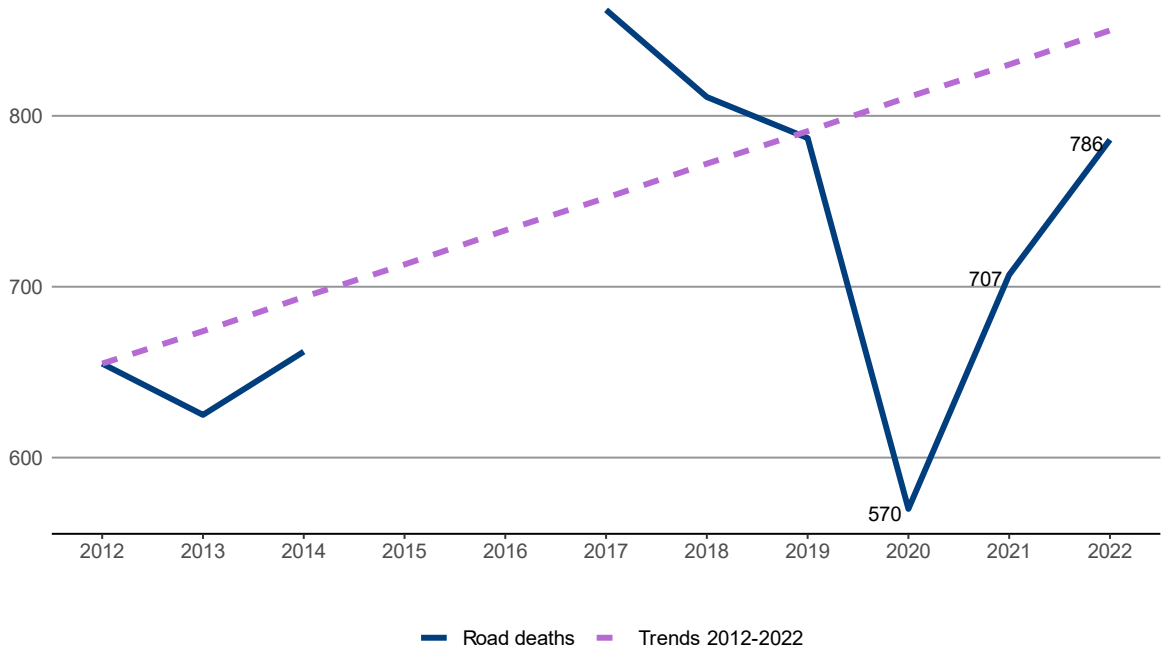
In 2021, 707 people were killed on the Costa Rican roads within 30 days of the crash. This represents a decrease of 13.8% compared to the average for 2017-19 (see Figure 2).

Car occupants and pedestrians benefited the most from the decrease, with a decrease of 36.3% and 26% in fatalities. The number of motorcyclists decreased by 4.9% from 332 to 316. There was one more cyclist killed in 2021 compared to the average for 2017-19.

All age groups benefited from improved road safety, with the largest reduction in road deaths among senior citizens aged 65 and above.

In 2021, the road mortality rate in Costa Rica was 13.7 deaths for every 100 000 inhabitants. The road fatality risk was 2.7 killed per 10 000 registered motor vehicles (Figures 3 and 4).

Figure 1. Road fatalities in Costa Rica in 2020 and 2021 compared to the linear trend since 2012



Note: data are not available between 2015 and 2017.

Figure 2. Evolution of road fatalities in Costa Rica by user category and age group, 2021 compared to the average 2017-19

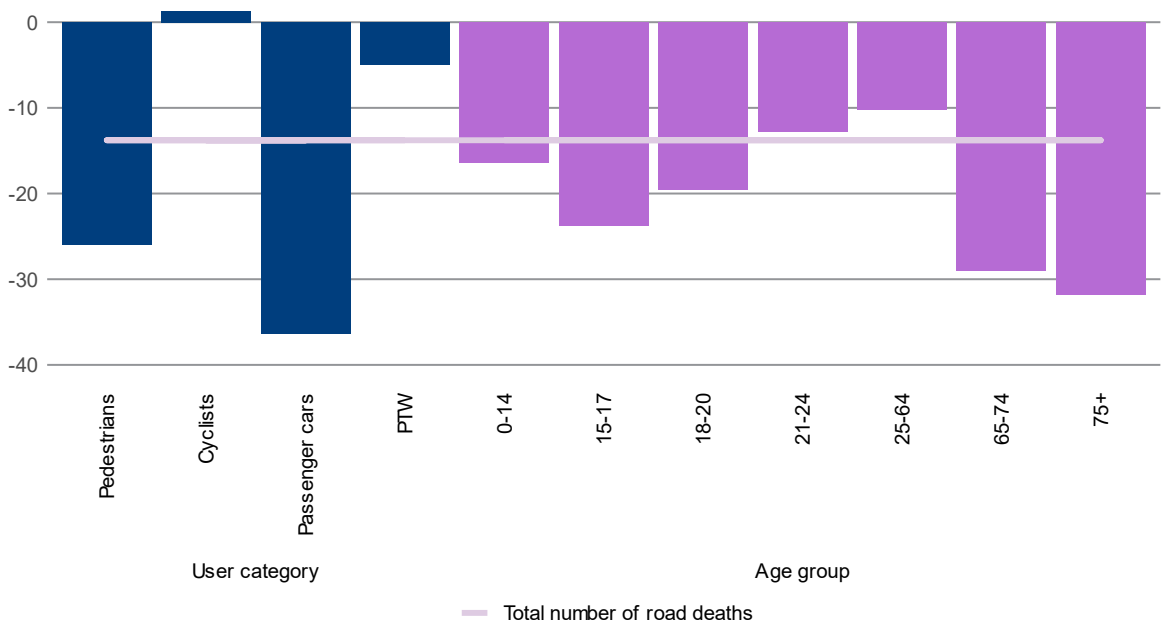


Figure 3. Road fatalities per 100 000 inhabitants in Costa Rica compared to other IRTAD countries, 2022

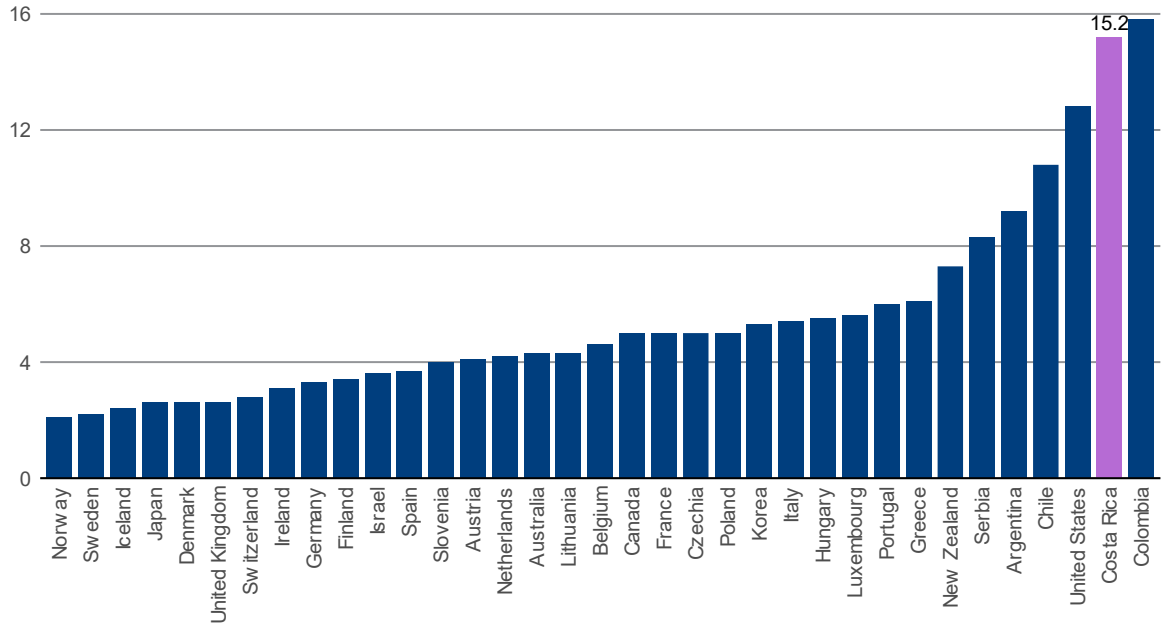
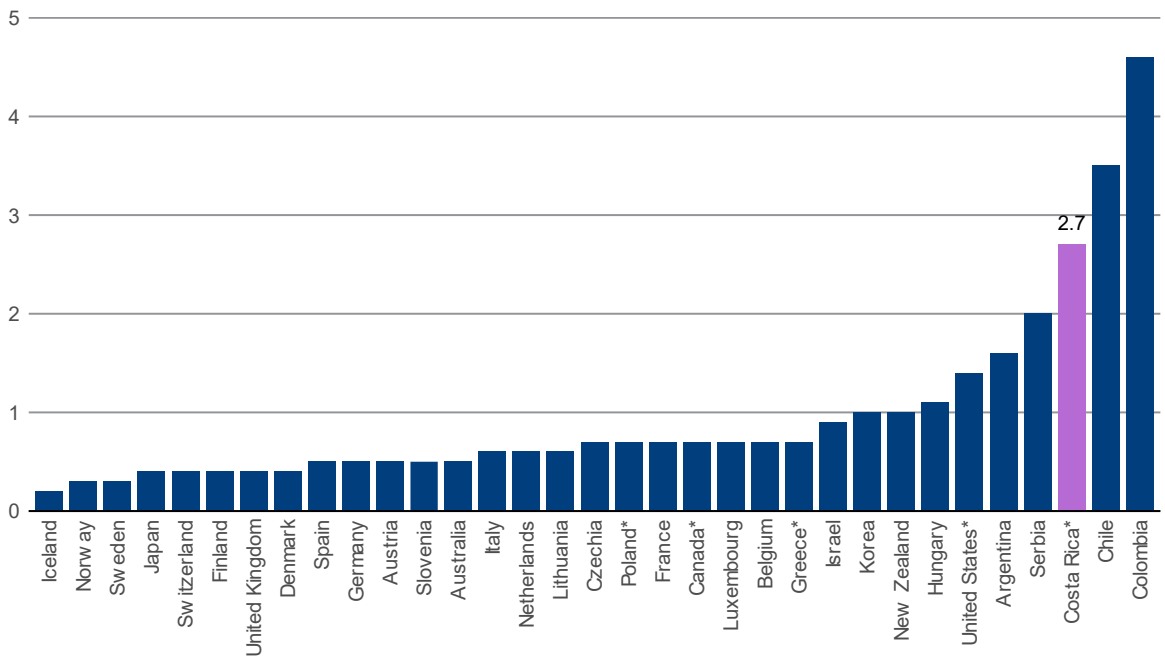


Figure 4. Road fatalities per 10 000 vehicles in Costa Rica compared to other IRTAD countries, 2022



Note: in Belgium, Denmark, Germany and Hungary, registered vehicles do not include mopeds. * 2021 data.

Figure 5. Road fatalities in Costa Rica by user category, 2021

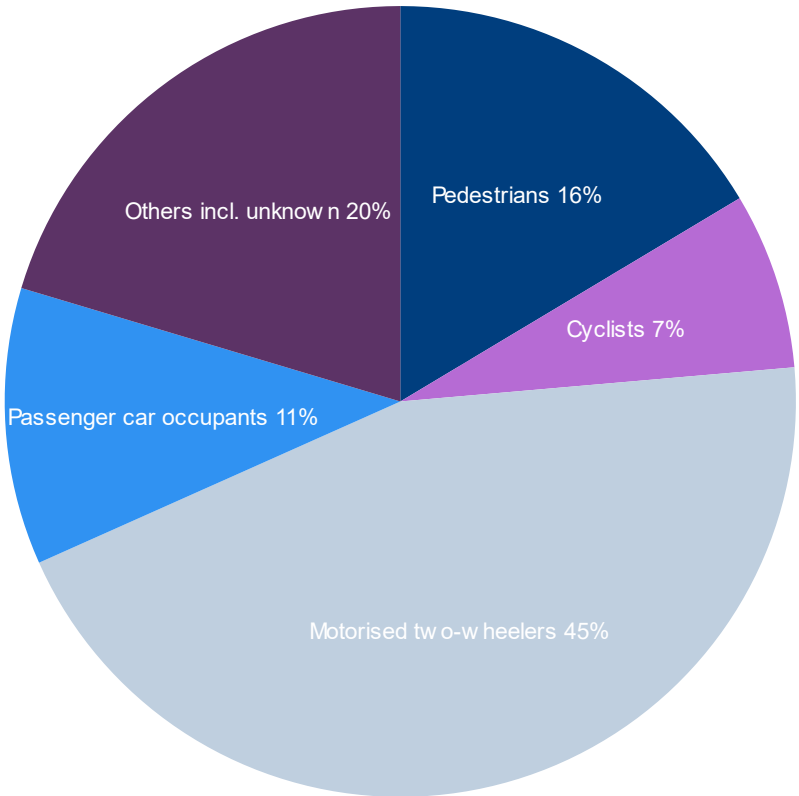
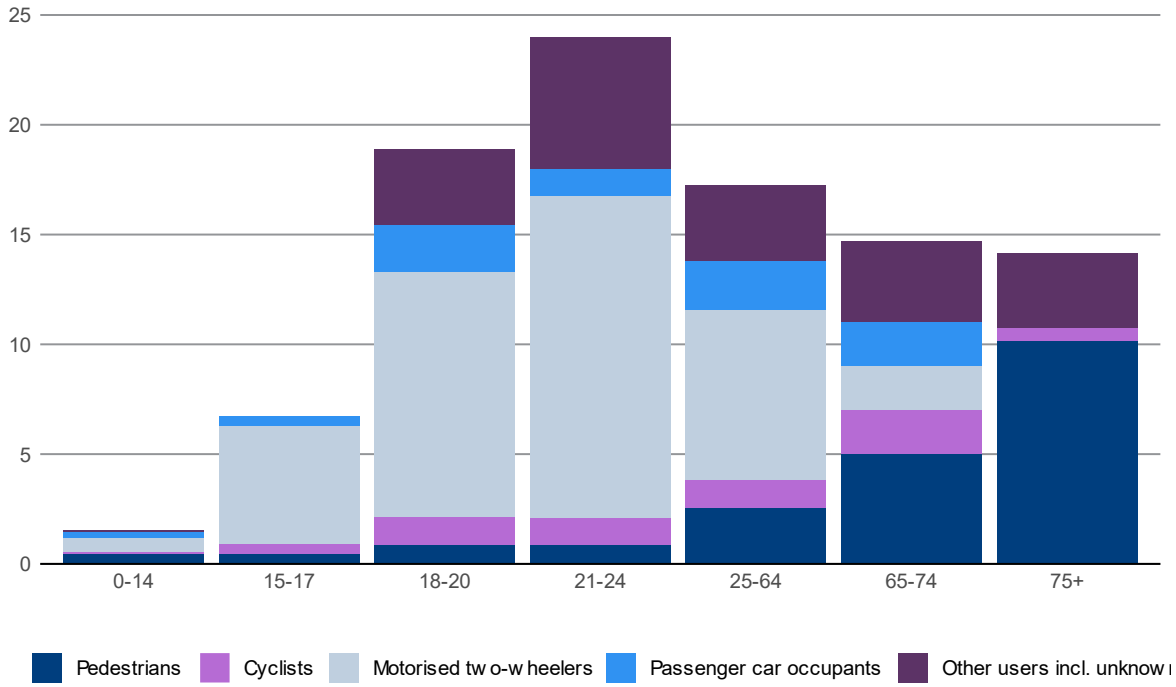


Figure 6. Road fatality rate in Costa Rica by user category and age group, 2021

Rate per 100 000 population in the same age group



Road safety data, 2012-21

Between 2012 and 2021, the number of road deaths in Costa Rica increased by 7.9%. During the same period, the number of registered motor vehicles in the country increased by 60.1%. Motorcyclists account for most of the increase in road deaths, with the number of motorcyclists dying in a crash rising by 55.7%, from 203 in 2012 to 316 in 2021. Meanwhile, road deaths decreased among pedestrians, cyclists and car occupants over the same period.

Table 2. Crash, casualty and traffic data in Costa Rica, 2012-21

	2012	2019	2020	2021	Evolution 2010-21
Reported safety data					
Fatalities	655	787	570	707	7.9%
Injury crashes	..	2 176	1 604	1 941	..
Hospitalised persons	2 077	2 237	1 594	1 998	-3.8%
Deaths per 100 000 population	14.1	15.6	11.2	13.7	-2.7%
Deaths per 10 000 registered vehicles	4.0	3.2	2.2	2.7	-32.6%
Fatalities by road user					
Pedestrians	212	152	120	116	-45.3%
Cyclists	57	50	71	51	-10.5%
Motorcyclists	203	348	218	316	55.7%
Passenger car occupants	164	89	70	80	-51.2%
Other road users	18	147	91	144	700.0%
Fatalities by age group					
0-14 years	28	16	17	17	-39.3%
15-17 years	33	20	4	15	-54.5%
18-20 years	46	48	29	44	-4.3%
21-24 years	63	90	67	80	27.0%
25-64 years	415	518	382	480	15.7%
65-74 years	37	65	42	44	18.9%
≥ 75 years	33	29	29	25	-24.2%
Traffic data					
Registered vehicles (thousands)	1 644	2 484	2 553	2 631	60.1%
Registered vehicles per 1 000 population	353.3	491.2	499.5	509.6	44.3%

Figure 7. Evolution of road fatalities, motorisation and GDP in Costa Rica, 2012-21

Index 2012 = 100

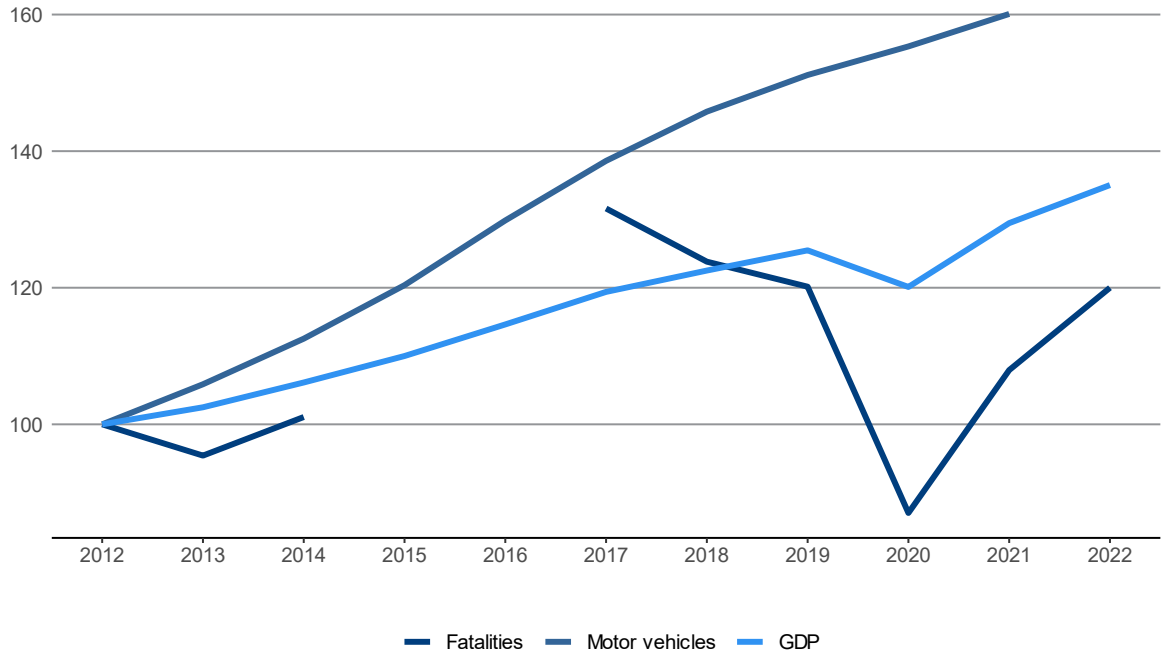
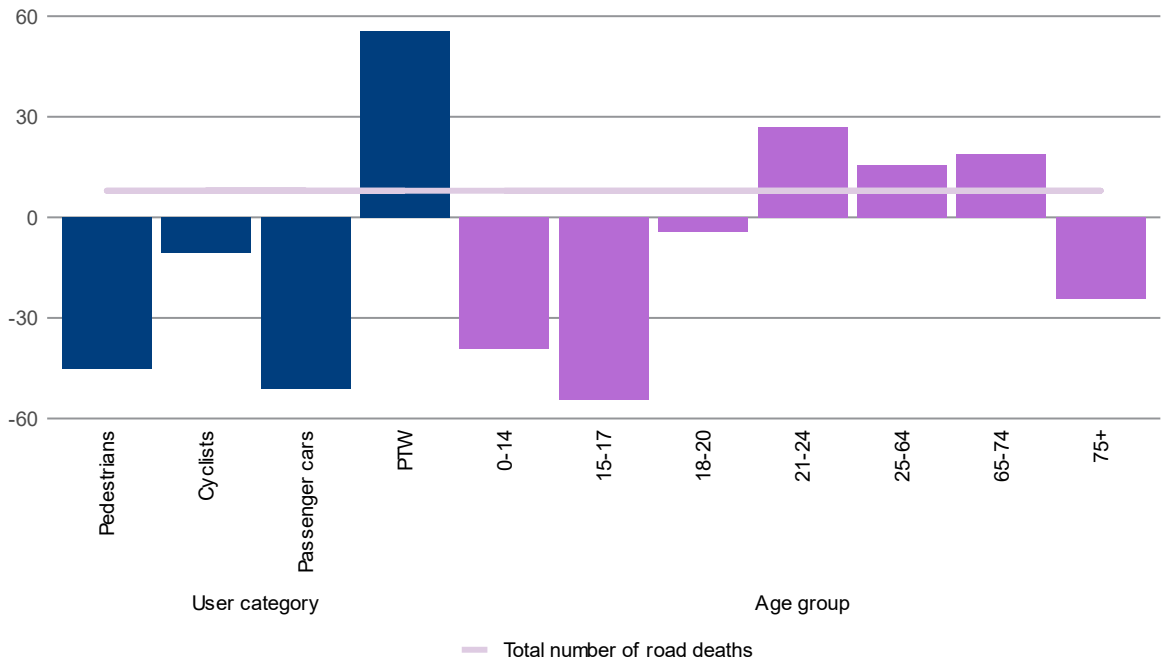


Figure 8. Evolution of road fatalities in Costa Rica by user category and age group, 2012-2021



Safety performance indicators

Speed

No information is available on the share of fatal crashes due to speeding in Costa Rica.

Table 3 summarises the main speed limits for passenger cars in Costa Rica.

Table 3. Passenger car speed limits by road type in Costa Rica, 2023

	General speed limit
Urban roads	40-70 km/h
Rural roads	80-90 km/h

Drink driving

Limits on blood-alcohol content vary by driver category. Table 4 summarises the limits and types of sanctions applied in Costa Rica. In 2016, 25% of drivers killed in a road crash in Costa Rica had a blood-alcohol content above the legal limit.

Table 4. Legal limits on blood-alcohol content and types of sanctions in Costa Rica

	General drivers	Novice drivers	Professional drivers
Administrative sanction	0.51-0.75 g/l	0.21-0.50 g/l	0.21-0.50 g/l
Penal sanction	≥ 0.76 g/l	≥ 0.51 g/l	≥ 0.51 g/l

Costa Rica has put in place several measures to combat drink driving.

A 2013 traffic law (No. 9078) includes several administrative and penal sanctions for drink driving. The traffic police can perform alcohol breath testing during regular police control or following a traffic crash.

Costa Rica's Road Safety Council (COSEVI) has run several campaigns against drink driving. Following the adoption of the 2013 law, COSEVI launched a campaign to make young people aware of the dangers of drink driving and the associated penalties. In 2016-2022, the *El Chassis sos vos* ("You are the Chassis") campaign targeted motorcycle drivers and passengers and focused on the risk of consuming alcohol and riding a motorcycle.

Drugs and driving

In 2016, drugs were detected in less than 1% of all drivers killed in a road crash.

Use of mobile phones while driving

In Costa Rica, drivers are prohibited from driving while using a hand-held phone or other electronic device. Hands-free devices are tolerated. There is no information on the share of fatal crashes due to the use of mobile phones while driving.

Seat-belt and helmet use

Traffic law No. 9078 states that all vehicle occupants must wear a seat belt. Children under the age of 12 or less than 1.45 metres in height must travel in the back seat of a vehicle with an adapted child restraint system.

A helmet and reflective clothing are compulsory for drivers and passengers of powered two-wheelers. Wearing a helmet is also mandatory for cyclists.

Table 5. Seat-belt and helmet wearing rates in Costa Rica, 2020

Percentages

Front-seats		
	Drivers	71*
	Passengers	63*
Rear-seats		
	General	36*
Helmets		
	Motorcycle drivers	97
	Motorcycle passengers	90

Note: *On national roads.

Cost of road crashes

Road traffic crashes represent a high cost for Costa Rica; however, no quantified estimate of this cost is currently available.

Road safety management and strategy

Responsibility for the organisation of road safety in Costa Rica lies with the National Road Safety Council (COSEVI), which was created in 1979 as an independent agency of the Ministry of Public Works and Transport. COSEVI formulates road safety policies and facilitates the funding and implementation of road safety projects. It aims to create, promote and maintain a road safety culture in society.

Costa Rica's road safety strategy for 2021-30 was still under development as of June 2023.

The country's previous road safety strategy covered the period 2015-2020. Its main target was to reduce by 20% the road mortality rate. The strategy was based on the following pillars:

- Improvement of the regulatory framework for road safety
- Improvement of road safety in urban areas
- Modernisation of the Statistics and Research in mobility and road safety
- Infrastructure improvement, including the development of "forgiving" roads
- Strengthening the vehicle safety system
- Police enforcement focused on the main risk factors
- Driver education and promotion of safe behaviours
- Modernisation of the driver training and accreditation system

- Co-operation with all stakeholders, including civil society, non-governmental organisations and the private sector.

Latest road safety measures

Several measures have been implemented to improve the safety of motorcyclists, who represent a large and growing share of traffic casualties.

Enforcement efforts have focused on helmet use, alcohol consumption, possession of a licence and vehicle inspections. Local police officers have been trained to contribute to enforcement operations.

The *El Chassis sos vos* ("You are the Chassis") campaign conducted in 2016-2022 highlighted motorcyclists' specific risks and vulnerabilities and raised awareness about the danger of alcohol consumption, speeding and dangerous manoeuvres.

A new motorcycle technical inspection manual, as well as a specific inspection protocol, has been put into operation.

A new manual was released in 2022 to support driver training.

Costa Rica has adopted new laws concerning technical standards for motorcycle helmets and using motorcycles in the workplace.

Costa Rica adopted a new law in 2021 that gives local municipalities more power to protect pedestrians and cyclists better.

In 2019, Cosa Rica adopted a law regarding the mobility and safety of cyclists. This law aims to improve health conditions, develop alternative means of transport in urban and rural areas, and reduce the use of fossil fuels in transport.

Road safety is now included in the school curriculum. 200 000 road safety manuals have been distributed in primary schools nationwide.

Research and resources

Publications

Road safety data and indicators in Costa Rica (2022):
https://www.csv.go.cr/documents/20126/50815/Perfil+de+los+accidentes+de+tr%C3%A1nsito+e+indicadores+de+desempe%C3%B1o+en+Costa+Rica+2022.pdf/50493169-63fa-5069-004f-222a3cacc722?t=1679582294435

Costa Rica: National study on the use of child restraint systems (2021):
https://www.csv.go.cr/documents/20126/50815/Estudio+sobre+uso+de+SRI_2021_vl.pdf/7033bf75-e9c4-04ca-8d5b-64dc2ce4ed20?t=1659123096504

Costa Rica's annual road safety report (2021): https://www.csv.go.cr/documents/20126/50694/1_Anuario+estad%C3%ADstico+de+accidentes+de+tr%C3%A1nsito+con+v%C3%ADctimas+en+Costa+Rica+2021.pdf/ef2b3260-fa5d-dc72-d7f8-6351f255d281?t=1662576397628

National study on the use of passive safety devices, protective equipment and distracting factors (2020): https://www.csv.go.cr/documents/20126/50815/Estudio+uso+de+dispositivos+de+seguridad+pasiva+2020+Cosevi+VL.pdf/4b3845c6-bc3c-5e1e-8549-f4831a1a05e7?t=1659123722314

Perception of the public regarding road safety in Costa Rica (2019): https://www.csv.go.cr/documents/20126/50815/Investigaci%C3%B3n+percepci%C3%B3n+en+seguridad+vial+y+movilidad++Cosevi+2019.pdf/49cbd968-6b25-0664-b8b4-cb1947f7133f?t=1601053619485

Websites

Consejo de Seguridad Vial: www.csv.cr

Road safety data (open source): https://datosabiertos.csv.go.cr/home

Definitions, methodology and data collection

Term	Definition
Road death	A death whose cause, as defined in the International Statistical Classification of Diseases and Related Health Problems (ICD-10), corresponds to a traffic crash without limitation in time. Suicides are excluded. To match the international definition of deaths within 30 days of the crash, a correction factor of 0.97 is applied in the IRTAD database.
Person injured	Any person involved in a traffic crash with casualties who was categorised as slightly injured or seriously injured.
Person seriously injured	Any person involved in a traffic crash with casualties who was categorised by a traffic officer as seriously injured. No medical or hospitalisation criteria are applied; the responding police officer makes the assessment.

Costa Rica maintains two main databases:

1. A traffic crash database fed by the police and managed by COSEVI
2. A vital registry database fed by forensic practitioners and managed by the National Institute of Statistics and Censuses (INEC)

Road crashes are usually notified to the police through the single national emergency number (911), which is widely used nationwide. Traffic police attend all crashes involving injuries, using hand-held electronic devices to collect data at the crash site, which is then downloaded into a single national database at COSEVI.

COSEVI cross-checks data relating to people killed at a crash site with those included in the vital registry. No checks are performed against healthcare sources. For all fatal crashes, the variables

on location, date, time and role are checked against supplementary administrative information held by the national police.

Data on serious injuries only come from the traffic police.

COSEVI publishes on its website road-death data reported by the police (at the crash site) and by the National Institute of Statistics and Census (INEC) (year of death): https://datosabiertos.csv.go.cr/dashboards/19737/informacion-general-de-costa-rica/.

About the IRTAD Database

The IRTAD Database includes road safety data, aggregated by country and year from 1970 onwards. It provides an empirical basis for international comparisons and more effective road safety policies.

The IRTAD Group validates data for quality before inclusion in the database. At present, the database includes validated data from 35 countries: Argentina, Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czechia, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Lithuania, Luxembourg, the Netherlands, New Zealand, Norway, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, the United Kingdom and the United States.

The data is provided in a common format based on definitions developed and agreed by the IRTAD Group. Selected data is available for free; full online access requires IRTAD membership.

Access the IRTAD Database via the OECD statistics portal:

https://stats.oecd.org/Index.aspx?DataSetCode=IRTAD_CASUAL_BY_AGE

About the International Transport Forum

The International Transport Forum (ITF) is an intergovernmental organisation with 66 member countries that organises global dialogue for better transport. It acts as a think tank for transport policy and hosts the Annual Summit of transport ministers. The ITF is the only global body that covers all transport modes. The ITF is administratively integrated with the OECD, yet politically autonomous.

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About the IRTAD Group

The International Traffic Safety Data and Analysis (IRTAD) Group is the ITF's permanent working group for road safety. It brings together road safety experts from national road administrations, road safety research institutes, international organisations, automobile associations, insurance companies, car manufacturers, etc. With 80 members and observers from more than 40 countries, the IRTAD Group is a central force in promoting international co-operation on road-crash data and its analysis.

www.itf-oecd.org/irtad

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Data in this country profile have been provided by countries to the database of the International Traffic Safety Data and Analysis (IRTAD) Group. Where data has not been independently validated by IRTAD, this is indicated.

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https://www.itf-oecd.org/road-safety-annual-report-2023

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