



 Climate Dot | Travelogues

Goa's Mobility Landscape

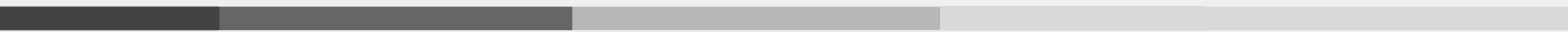
An opportunity for electrification and integration





Ready to Go?

Roadblocks in Goa's mobility sector





Lack of public transport

While Goa is often seen as a paradise, navigating its serene beaches and historic forts can be exhausting. Limited public transport makes accessibility a challenge, turning travel into a tedious affair. For a state reliant on tourism, this lack of connectivity is a major challenge not only for travellers but Goans as well.

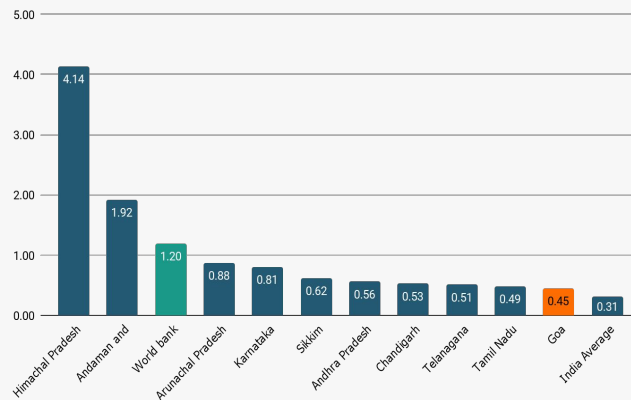
“Goa deserves better public transport”

One of [many](#) reddit posts where the Goa's lack of public transport options is heavily criticized

“Goa's public transport system mainly revolves around a fragmented network of buses, taxis and auto-rickshaws”

reads an [article](#) that summaries the current issues with public transport options in Goa

Bus Density per 1000 people | 2023



Source

[STU fleet book - 2024 | ASRTU](#)

Goa ranks **10th** among Indian states in **public transport accessibility**, with a bus fleet density of just 0.45 per 1,000 people—less than half of the [World Bank's recommended benchmark](#). This also means that **many areas** except for heavy footfall traffic **are not connected**.



Reliance on private buses - A lack of interconnection

Public vs Private Transport



537

Buses, Kadamba Transport Corporation



30

Ferries across 18 routes



11,327

Buses, private operators



4,411

Autos



19,698

Taxis for hire



27,073

Motorcycles for hire

State buses account for only **1%** of transport in Goa

Private transportation is burdened for transport solutions for **15 lakhs Goans and 75 lakhs tourists annually**

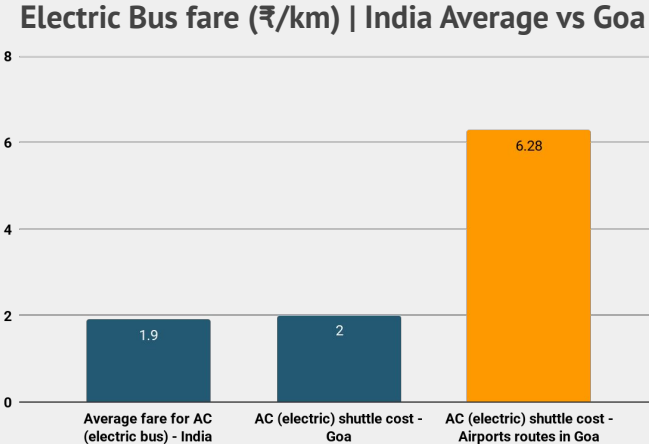
Source
[Case Study - Comprehensive Mobility Plan for Goa](#)

Source
[Goa Electric Mobility Promotion Policy - 2021](#)



Cost of transport

With public transport virtually nonexistent, the high cost of commuting for shuttles connecting the Goa airports burdens both locals and tourists alike.



Source
[Kadamba Transport Corporation - Fare price](#)

Goenkar, taxi price aikun bhiyeta- A Goan gets scared just hearing taxi prices.

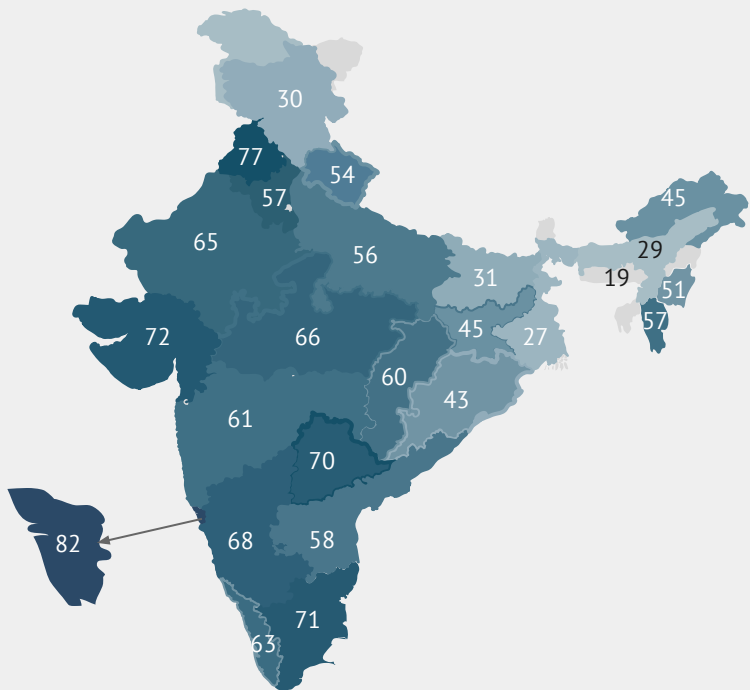
The limited availability of public transport in Goa has created a challenging environment for mobility. In this gap, traditional taxi networks have become dominant, often resisting the entry of app-based ride-hailing services like Uber and Ola. As a result, Goa remains one of the few high-footfall states where such services are not yet operational

In addition, taxi and auto-rickshaw fares, far exceed [government regulated rates](#). Our team encountered this firsthand during our on-ground research, highlighting this issue.

Commute Type	Trip length (kms)	Regulated fare price (₹/km)	Fare paid (₹/km)	Difference (%)
Rickshaw	4	12	50	316%
Taxi (WagonR)	35	15	46	220%



High vehicle ownership



Percentage share of households owning two-wheelers | 2023

The lack of public transport and its high cost has fueled private vehicle ownership, causing congestion and chaos.

3

Vehicles per household

10_x

Vehicle growth rate compared to population growth rate

Source

[Case Study - Comprehensive Mobility Plan for Goa](#)

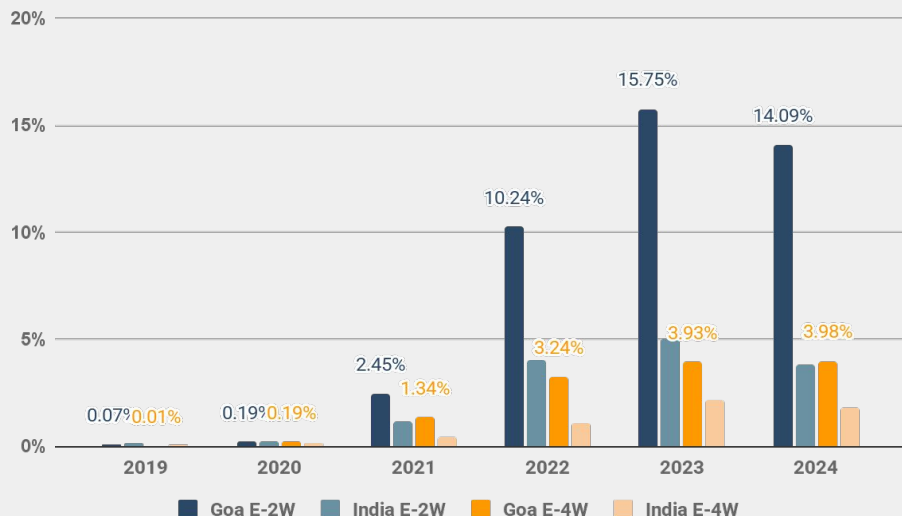
It is Goa and not Delhi, that holds the title of India's vehicle capital on a per capita basis

Delhi, usually springs to mind first when one talks about vehicle population in the states. However, **Goa has the highest overall vehicle ownership** of 82% for two-wheelers and 36% for four-wheelers, far greater than Delhi's 57% and 12% respectively.



A similar trend in the EV sector

EV penetration for 2/4-wheelers | 2019-2024



The high cost and lack of public transport have driven private vehicle ownership, leading to congestion and chaos. At the same time, high fuel prices and inadequate public transport have naturally accelerated EV adoption among Goans. As a result, **Goa currently has the highest EV penetration in India.**

2024 Stats

3.7x

Goa E-2W penetration
compared to national
average

2.2x

Goa E-4W penetration
compared to national
average

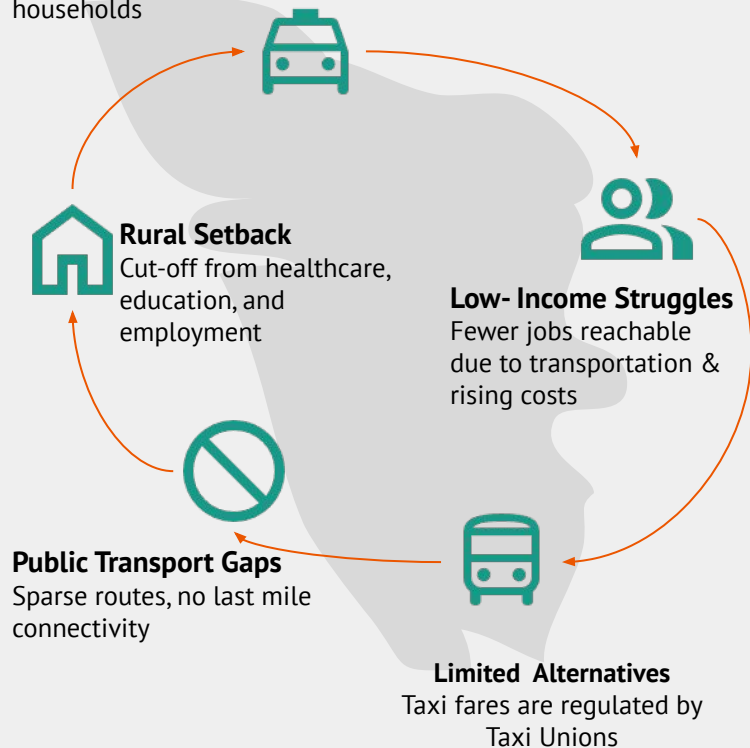
Source
[Climate Dot | E-mobility dashboard](#)



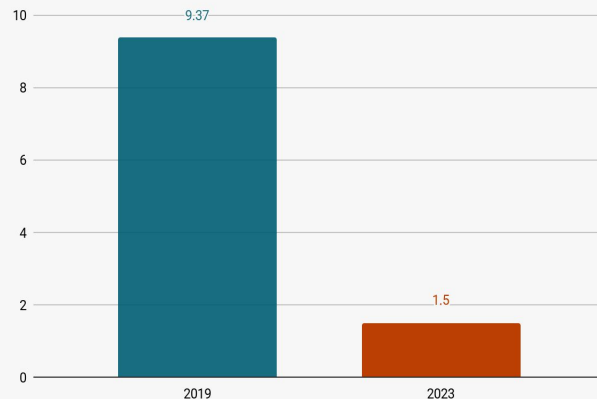
EV growth hasn't made transport affordable or equitable

EV Access is Limited

Too expensive for low income households



Foreign visitors in Goa (in millions) | 2019 vs 2023



Source

[CEIC- Visitor Arrivals: Foreigner: Goa](#)

Foreign tourist footfall in Goa has dropped over **five times**, from **9.4 million** in 2019 to **1.5 million** in 2023.

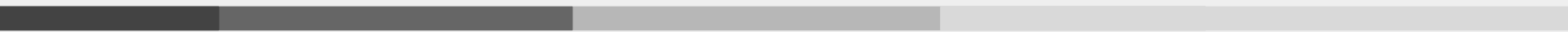
The decline is driven by:

- Overcrowding
- Unregulated taxi services,
- Rising service costs



State policy measures and mobility strategies

Mapping Goa's electric mobility promotion scheme and its comprehensive mobility plan





Goa Electric Mobility Promotion Policy - 2021

Policy Objectives | 2021

30%

| EV sales starting from 2025
| Achieved | **3.51% (Q1, 2025)**

100%

| E-2W commercial vehicles by 2025
| Achieved | **0% (2021-2025)**

100%

| E-2W beyond 2030
| Achieved | **10.95% (2021-2025)**

500

| E-buses by 2025
| Achieved | **16.6% (83 E-buses)**

50%

| Electric ferries by 2025
| Achieved | **1 (Total fleet of 30)**

100%

| Electric fleet - Govt. of Goa by 2022
| Achieved | Data not available

10,000

| Direct and indirect jobs by 2025

Startups

| Promote businesses and innovation

| Source

[Goa Electric Mobility Promotion Policy - 2021](#)
[Policy Amendment - 2024](#)

Policy Amendment | 2024

2W

| Demand Incentive | ₹8,000/kWh
| Upto INR 15,000 | 5,000 Nos.
| Retrofitting Incentive | ₹15,000
| 30 Nos.
| Scrapping Incentive | ₹5,000
| 200 Nos.

3W

| Demand Incentive | ₹8,000/kWh
| Upto INR 65,000 | 50 Nos.
| Retrofitting Incentive | ₹50,000
| 50 Nos.
| Scrapping Incentive | ₹10,000
| 25 Nos.

4W

| Demand Incentive | ₹8,000/kWh
| Upto INR 1,00,000 | 600 Nos.
| Retrofitting Incentive | ₹1,00,000
| 150 Nos.
| Scrapping Incentive | ₹10,000
| 50 Nos.



Goa Comprehensive Mobility Plan | 2020

Mobility Goals

- 1** | Ensure that the urban road structure is organized and suited to the land use
- 2** | Public transport that is accessible, economical, efficient and effective
- 3** | Promoting Non-Motorised Transport (NMT) and ensures clean environment and livable towns
- 4** | Traffic management and engineering solutions that increase safety and optimize the efficiency of network
- 5** | Goods movement that is organized and doesn't interfere with passenger movement
- 6** | A parking policy and parking master plan that is sustainable and smart

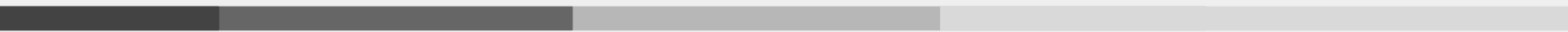
Mobility Strategies Mapped

- 06** | Mass Rapid Transport Routes
- 33** | Trunk Bus Routes
- 49** | Feeder Bus Routes
- 10** | Intermediate Public Transport Routes
- 12** | Inland waterways



Potential Solutions

Quick recommendations and long term strategies to promote sustainable and equitable transportation





Promoting shared mobility

Vehicle ownership

Vehicle ownership across India is an aspirational (positional) good. It is very difficult to change cultural norms and avoid vehicle purchases. The auto industry is also a significant source of revenues & employment.

≠ Vehicle use

However, vehicle use can be **disincentivized**. People own vehicles, but choose to use public transit.

How to transition to shared transport?

Disincentivize

Taxes, duties and bans

A politically challenging solution

Educate

Encourage group-based public transit use among office, students, and others

A long-term solution that requires social change

Incentivize

Make public transit safer, faster, convenient, cheap

A solution that will require sustained budget & commitment



Rethinking transport KPIs

Goa could establish "**Clean-Shared Kilometers**" as a core Key Performing Index (KPI)— i.e., total km travelled on **shared**, **electric**, and **low-carbon modes**. This becomes a metric for funding, incentives, and performance review across departments.

#1

No. of clean kilometers travelled (km)

Accelerate the transition from internal combustion engine (ICE) vehicles to cleaner alternatives such as CNG, electric vehicles (EVs), retrofitted systems, and hybrids.

#2

No. of shared kilometers travelled (km)

Make public and intermediate transport more convenient and comfortable for users, while supporting cleaner mobility choices such as EVs and fuel-cell vehicles through subsidies.



Building sustainable and equitable transport

The 5C framework of transport planning

1

Comfort

Air Conditioned buses, well-lit stops and stands, verified drivers, in-app SOS, night mode trip planning

2

Convenience

Express routes should take **no more than 15% longer** than private vehicle travel time, integrated access through **single app**

3

Connectivity

Seamless integration across modes (bus, railways, ferries) with **common ticketing and a unified mobility platform**

4

Consistency

On-time arrivals, duration taken, live alerts, predictive delay notifications

5

Cost

Fares aligned with national and other states, cost should be **50%- 70% lower than monthly outgo using a private vehicle**

Source:
Climate Dot's design philosophy for public transport planning



Goa Moves | Integrated mobility infrastructure

Introducing the Concept | Goa Moves

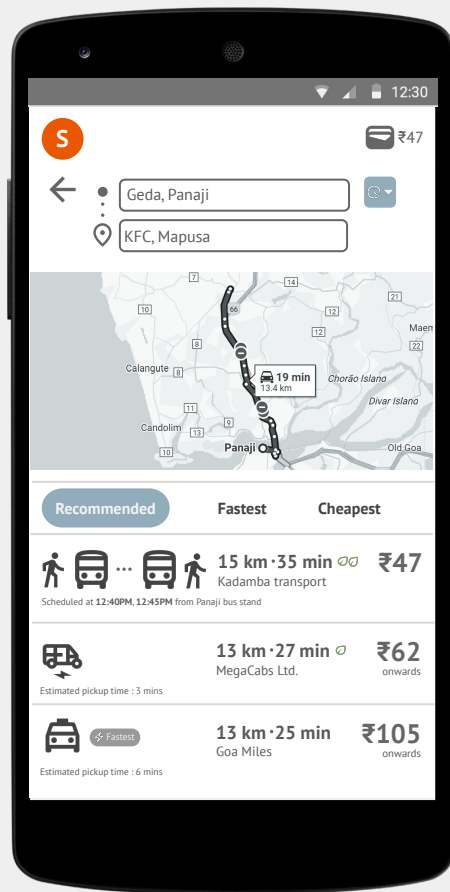
| An open-source initiative, based on ONDC platform, to on-board multiple mobility options (buses, ferries, taxis and autos) and build a multi-modal mobility solution.

For the commuters, by the providers

| Unlike for-profit ride-hailing platforms, the Goa Moves initiative partners with operators such as KTCL, Goa Miles, and local transport providers on a fixed per-trip fee model instead of a commission-based structure. This approach directly benefits service providers while offering cost-effective options for users.

How to on-board taxi and rickshaw unions?

| Introduce a conditional, short-term incentive scheme offering a substantial subsidy—such as 100% fare coverage for the first 1,00,000 kilometers traveled—targeted at private transport operators. This approach not only encourages operator participation but also drives customer adoption by offering free rides.





Policy recommendations

- 1 | Improving intra and inter-city public transit**
Investments in increasing bus density with a target penetration of 1.2 buses/1000 people by 2030 i.e., **1500+ buses**.
- 2 | Improving and electrifying inland waterways**
Taking inspiration from the Kochi metro initiative, Goa can implement the vision of all ferry mobility electric by 2025 under EV policy. Integrate it to Goa Moves app.
- 3 | Mapping EV charging infrastructure deployment**
Subsidize deployment of fast EV chargers on Public-Private Partnership (PPP) basis along all national, state and district highways. Identify key tourist spots and set up both 2W and 4W fast public chargers in restaurants, coffee-shops, resorts, etc.
- 4 | High frequency Metro/Railway connecting North and South Goa**
Work with Railways to massively increase Mainline Electric Multiple Unit (MEMU) North south and east west services aiming for a 15 min frequency connecting airports to improve domestic and international tourist footfall.



Climate Dot

Energy Transition | E-Mobility | Climate Policy