International Transport Forum

Decarbonising Transport Initiative

9/10 February 2023

Decarbonising Transport in Azerbaijan

Regional Dialogue Event

Federal Ministry for Economic Affairs and Climate Action

IKI INTERNATIONAL CLIMATE INITIATIVE

Wuppertal Institut

OECD

Decarbonising efforts at the local/city level

Insights into the DTEE/ITF Model results for Baku

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The Baku Mobility Model

A **strategic** model to assess CO_2 mitigation measures for urban passenger transport in the Baku urban area.

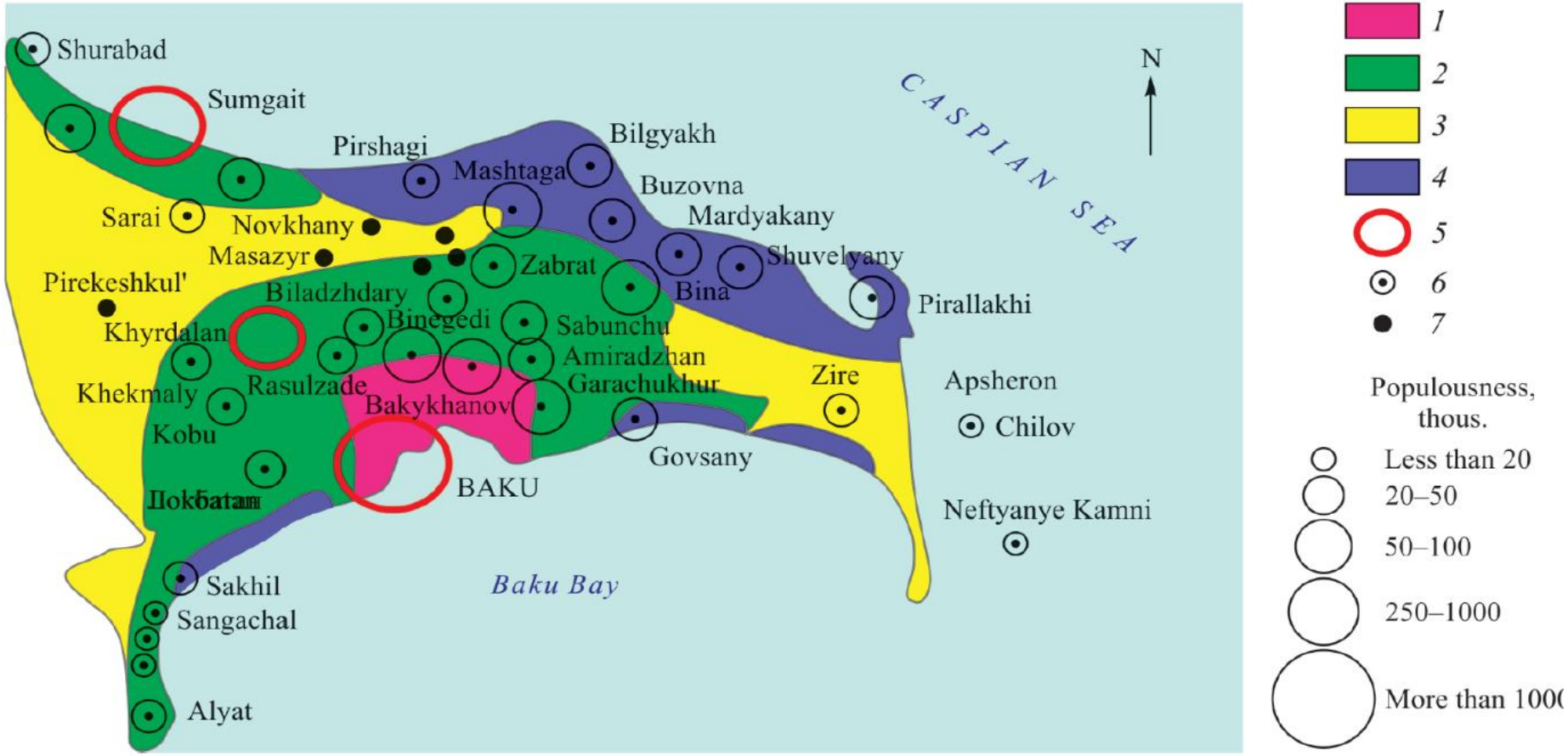
Test policy scenarios from 2015 to 2050 and estimate transport activity and related emissions

Based on the ITF Global Urban Passenger model 2020

Developed via consultations with:

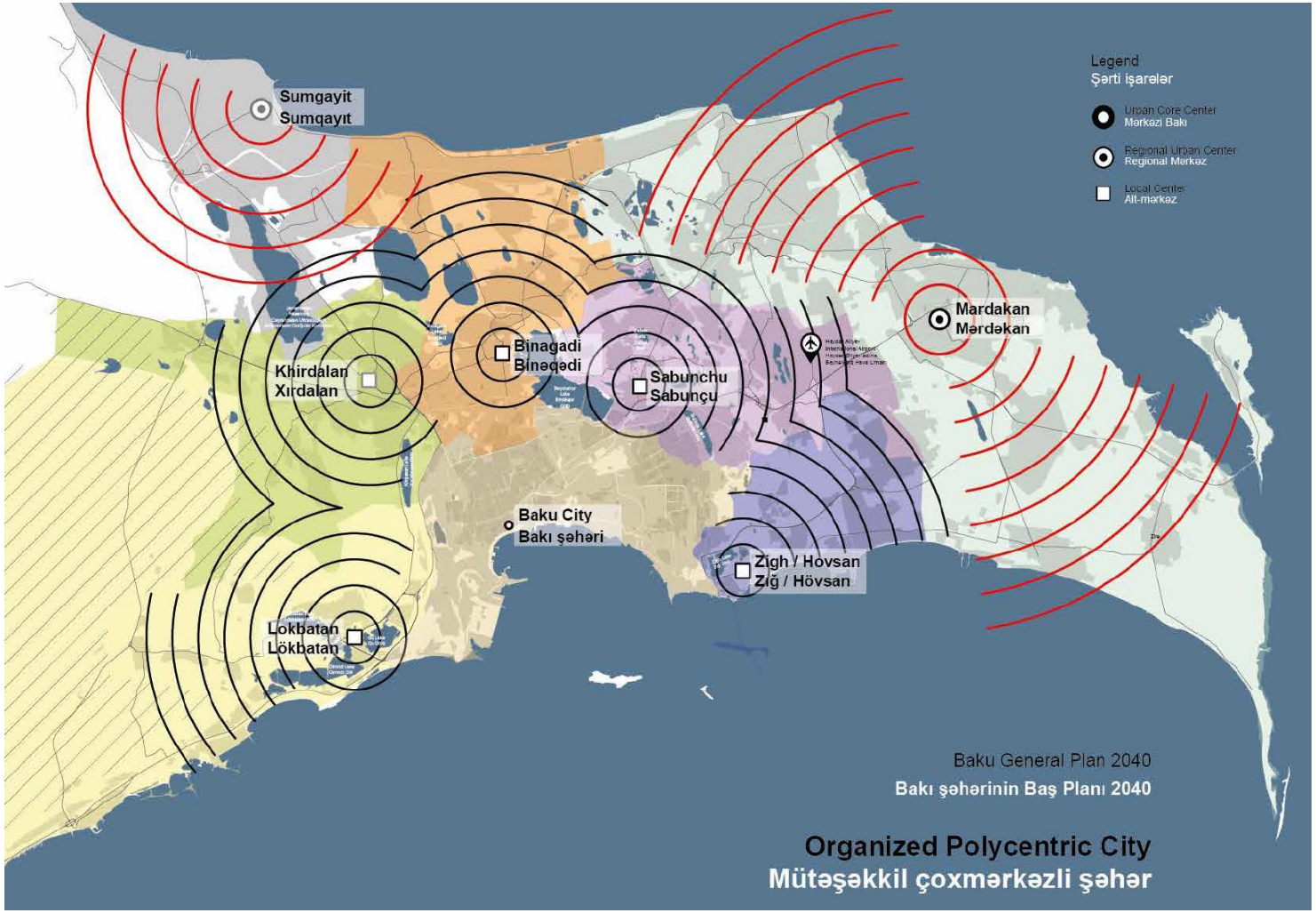
- Ministry of Transport of Azerbaijan
- Baku Transport Agency

Geographical scope



Schematic map of regionalization of the Baku urban agglomeration.
Zones: *1* – core, *2* – industrial, *3* – industrial-agricultural, *4* – recreational. Settlements: *5* – cities, *6* – villages, *7* – rural settlements.

Geographical scope



Source: Baku General Plan 2040

Level of disaggregation

18 modes (current and possible future ones)

2 genders and 5 age cohorts

6 trip distance bins

5 fuel types (gasoline, diesel, electric, methane, H2)

5 years step from 2015 to 2050

Active modes	Public transport modes	Private vehicle modes	Shared mobility modes	Paratransit modes
Walking Biking Scooter sharing Bike sharing	Light Rail Rail Metro Bus BRT	Motorcycle Car	Taxi Private ride sharing Motorcycle sharing Car sharing Minibus sharing (“Taxi bus”)	Informal Bus Informal 3-wheelers

Policy scenarios for CO2 reduction

The ITF and the Azerbaijan Ministry of Digital Development and Transport worked closely to identify and design **three distinct scenarios** for urban mobility in Baku:

1

Baseline

No measures are implemented

-> Do nothing

2

Current policies

Azerbaijan's transport policy measures currently planned are carried out. It reflects the most likely future for Azerbaijan.

3

Climate ambition

Additional measures are introduced to better align Azerbaijan's transport CO_2 emissions with reaching the Paris Climate Agreement.

Transport scenario definitions
Baku passenger transport

Current policies scenario

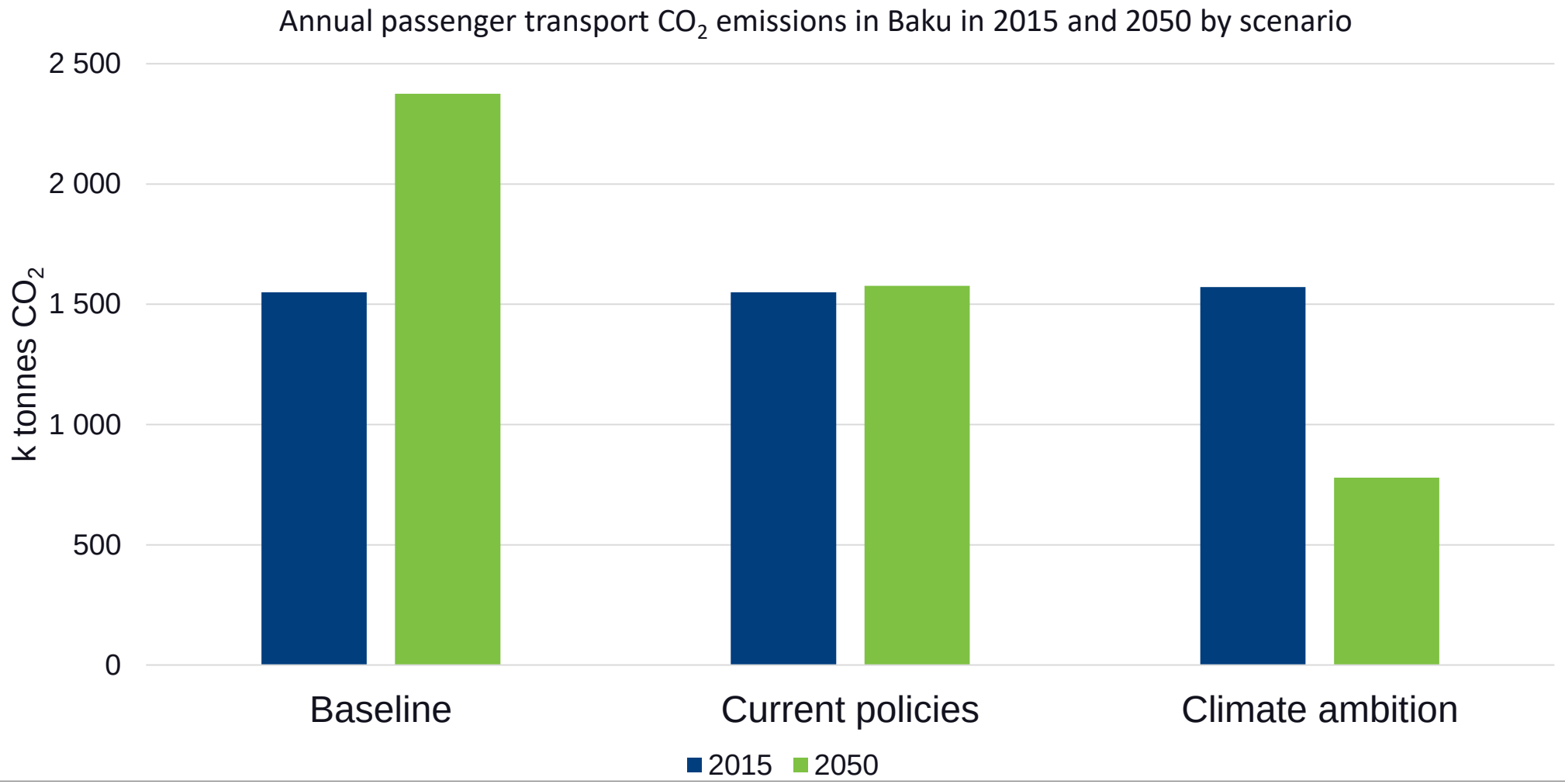
Measures	Assumptions
Prioritising public transport	15% of the bus network gets priority on the roads over other modes (e.g. with dedicated corridors)
Suburban rail improvement	An increase from 26 to 55 rail stations
Light-Rail Transit (LRT) development	Increase the length of LRT from 0 km to 67 km between 2020 and 2040
Bus-Rapid Transit (BRT) development	Increase the length of bus lanes from 8.5 km to 115 km between 2020 and 2040
Private car technology	Car sales composition to be 10% for electric vehicles and 30% for gasoline-hybrid vehicles by 2050
Bus technology	Bus fleet composition of 50% LPG/CNG and 50% electric vehicles by 2050
Bike and pedestrian infrastructure	Six times the current number of bike infrastructure by 2050

Transport scenario definitions
Baku passenger transport

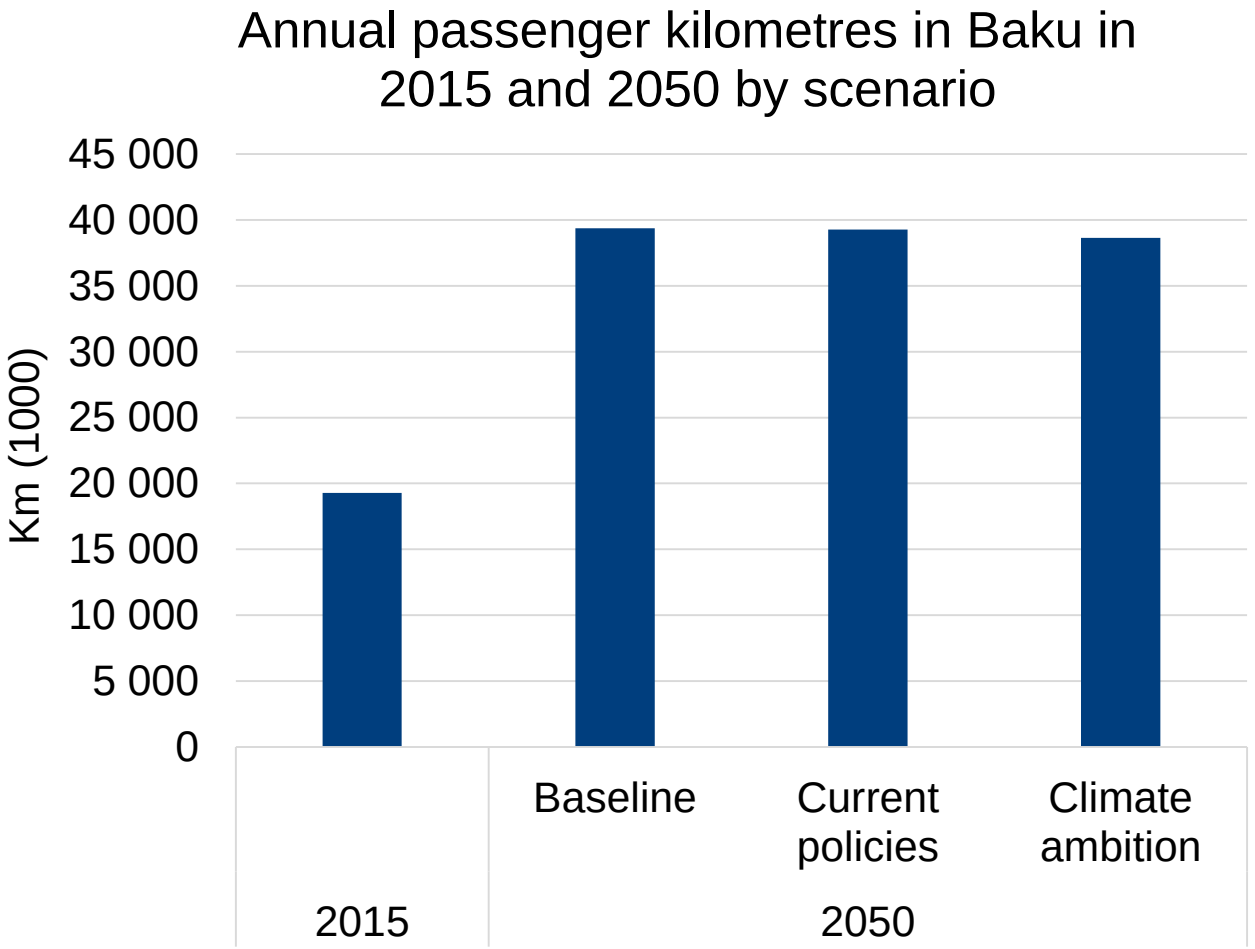
Climate ambition scenario

Measures *(in addition to current policies scenario)*	Assumptions
Carbon pricing	Set a carbon tax of USD 150 per tonne ofCO_2
Incentives for shared minibuses	Incentives supporting services with 4 minibuses per 1 000 inhabitant
Public transport service improvement	5% enhancement of PT service frequency for metro, 10% for buses.
Private car and bus technology	Follows the IEA Sustainable Development Scenario (SDS scenario)
Teleworking	Support teleworking practices and increase the number of regular teleworkers in the overall workforce by 6%
Transit-Oriented Development	Increases the average land-use as mixed-use developments by 5%

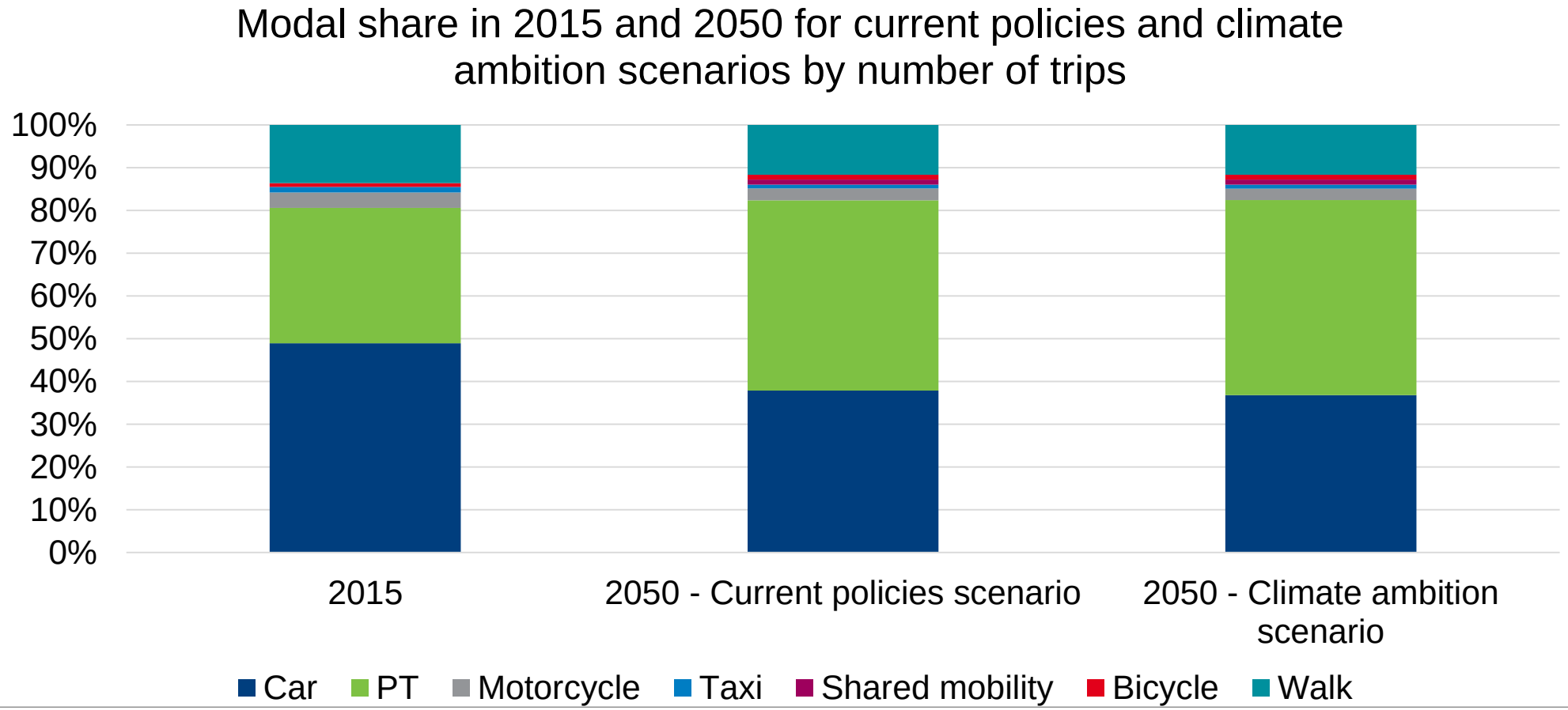
Current passenger transport policies allow Baku to keep CO_2 emissions in check



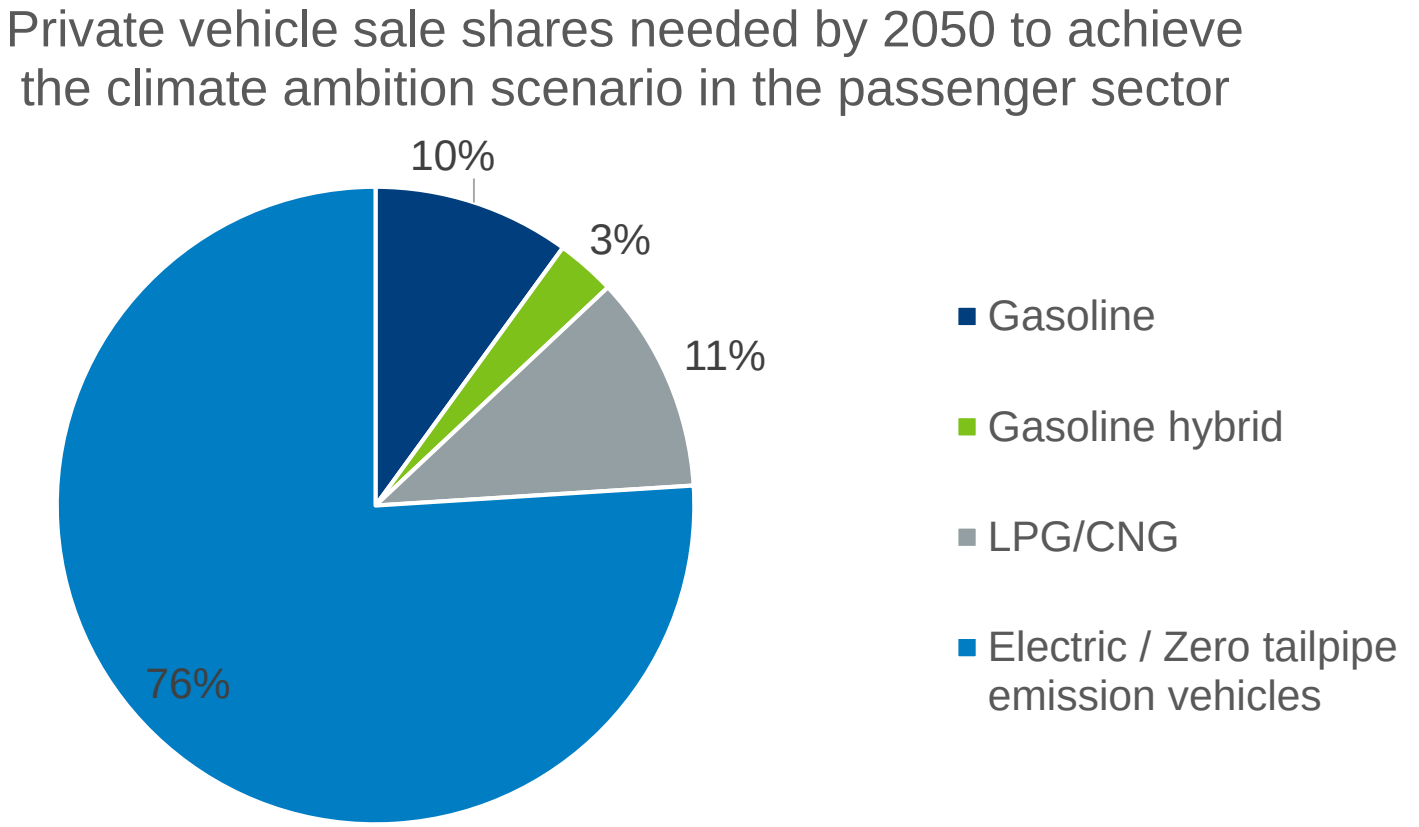
Changes to land-use planning can reduce passenger transport activity



More support for active and shared mobility will reduce Baku's transport emissions further



Cleaner vehicles are essential for achieving significant emission cuts



ITF work on cleaner vehicles:

https://www.itf-oecd.org/cleaner-vehicles

Calls-to-action for policy makers

Invest in mass-transport to densify the network and increase service quality to enhance the sustainability of the transport system overall

Support the uptake of a cleaner vehicle fleet across all transport sectors and increase stringent environmental/CO_2 standards for vehicle imports

Support active and shared mobility; prioritising mixed-use developments will boost such modes of travel and reduce private and motorised vehicle demand

Thank you for your attention

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