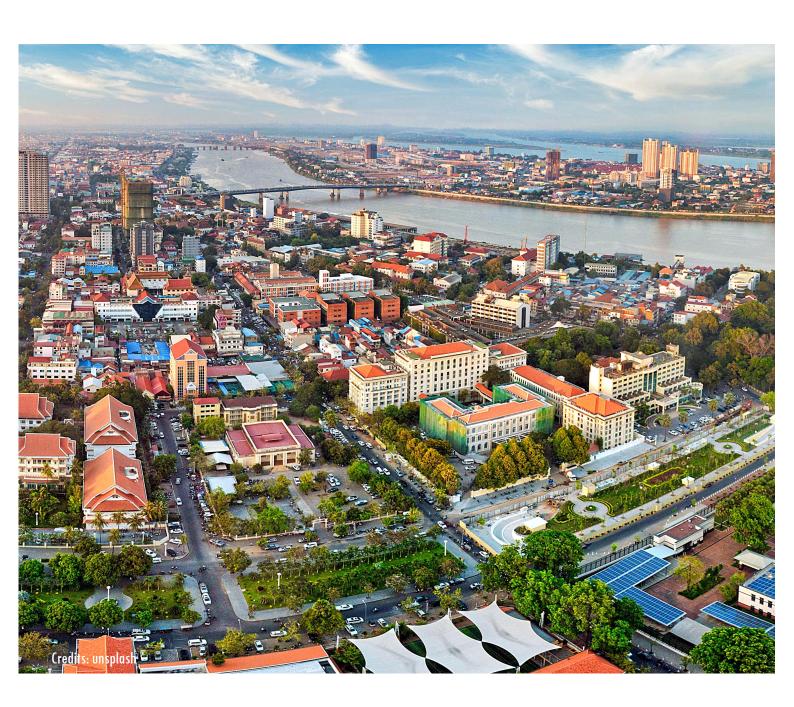
# Aichi 2030 Declaration on Environmentally Sustainable Transport (EST): Country Profile

# Cambodia



**Developed by:** 



Developed with the support of:







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Aichi 2030 Declaration on Environmentally Sustainable Transport (EST): Country Profile (Cambodia)

2024

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Cambodia, a country in the South East Asia region, having Low and lower middle income status, was recorded to have a national population of about 17 million in the year 2024.

The urban population share in total is about 26%. The age wise distribution of the national population accounts for 35% and 10% of <18 years old (minors) and >60 years old (seniors) population, respectively. The GDP per capita (PPP) for the year 2022 was 5,355 USD.

The motorisation rate of the road transport vehicles for the year 2022, for all vehicles combined, stood at 54 vehicles per thousand population. Similarly, the rate for 2&3 wheelers, LDV, freight vehicles and buses were 53, 0, 1, and 0 respectively.

**Introduction to the profiles:** The Asian Transport Outlook (ATO) project serves as a comprehensive data repository that organizes transport-relevant data and information from various official and secondary sources. These profiles are meticulously crafted using data from this extensive collection and draw upon a carefully curated selection of key indicators from a pool of over 500 transport-related metrics (visit https://asiantransportoutlook.com/snd for more information).

These profiles also provide comprehensive summaries of national targets that are relevant to the Aichi 2030 Declaration goals as contained in ATO's national policy trackers. The profile is structured by goals, followed by policy insights and enumeration of sample projects by the MDBs corresponding to the 6 Goals.

#### Contents:

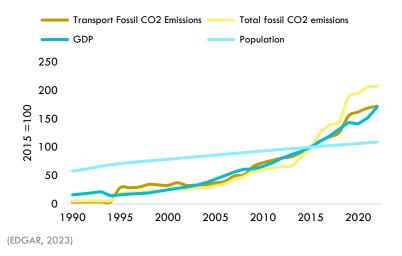
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#### Goal 1a - Low-Carbon (climate change mitigation):

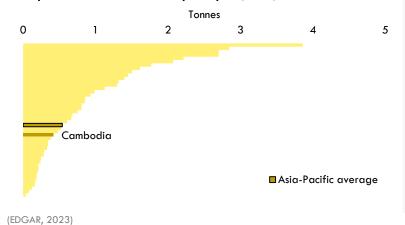
By 2030, aim to peak transport CO2 emissions and initiate reductions in transport related CO2 emissions with the intention to move towards decarbonization of the transport sector by 2050, or shortly thereafter (Based on SDG 7.2, 9.1, 13.2, Paris Agreement)

#### Transport CO2 emissions (fossil)

# Growth of transport fossil CO2 emissions, total fossil CO2 emissions, population and GDP (PPP) (1990 - 2022)

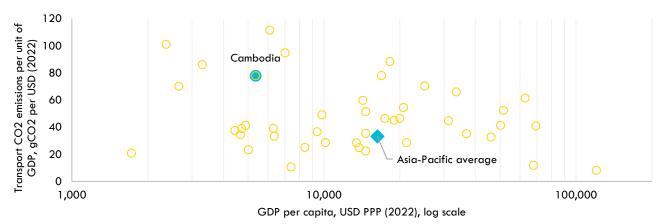


#### Transport fossil CO2 emissions per capita (2022)



- CO2 emissions: Cambodia's transport fossil CO2 emissions have been increasing at a faster rate (8% annually) than the Asia-Pacific average (1%).
- Per capita emissions: While per capita emissions are slightly lower than the regional average, the emissions intensity (CO2 emissions per unit of GDP) is significantly higher, indicating less efficient transport systems.
- Transport energy: Cambodia's transport energy consumption is minimal compared to the Asia-Pacific region, reflecting a lower level of development and motorization.
- Road transport dominance: Road transport accounts for the majority (85%) of transport CO2 emissions, highlighting the need to focus on improving the efficiency and sustainability of this sector.

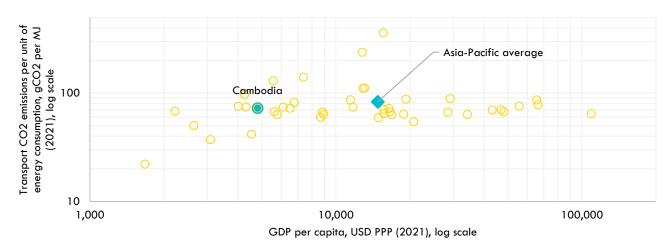
Transport CO2 emissions per unit of GDP (2022)



(EDGAR, 2023)

#### Transport energy consumption

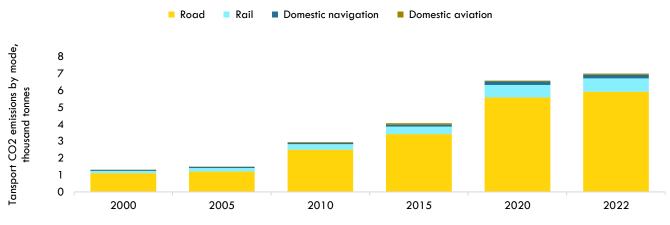
#### Transport CO2 emissions per unit of energy consumption and GDP per capita (2021)



(EDGAR, 2023)

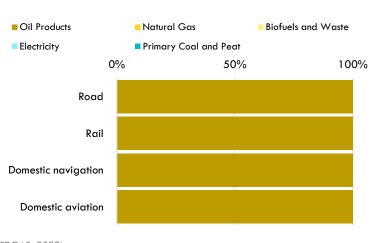
#### Transport CO2 emissions (fossil) and energy consumption modeshare

#### Growth of transport CO<sub>2</sub> emissions by mode



(EDGAR, 2023)

# Share of transport energy consumption by mode and by source (2021)



Share of transport in renewable energy consumption:

(Data not available)

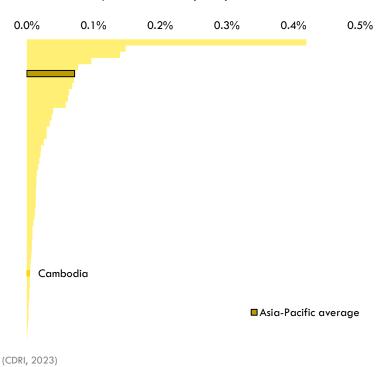
(EDGAR, 2023)

#### Goal 1b - Resilience:

By 2030, increase resilience and adaptive capacity of transport system to climate-related hazards and pandemics such as COVID-19. (Based on SDG 13, Paris Agreement and the Sendai Framework for Disaster Risk Reduction 2015-2030)

# Estimated average annual losses to transport infrastructure due to hazards

Average annual losses to transport infrastructure due to hazards, as a share of GDP, in Asia-Pacific (2023)

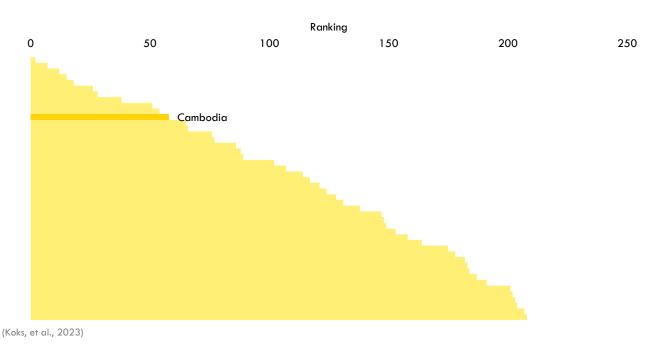


- Vulnerability to hazards: Road infrastructure is particularly vulnerable to hazards, emphasizing the need for climateresilient infrastructure investments.
- Coastal population: A small but significant portion of the population lives in lowelevated coastal zones, making them susceptible to sea-level rise and coastal flooding.
- Network redundancy: Cambodia's relatively low ranking in the National Road Vulnerability Index indicates potential disruptions to transport networks due to climate hazards.

Note: National road vulnerability index ranking (NRVI), highest rank = 1 means fewer disruptions to trips after climate hazards due to sufficient network redundancy.

#### Climate change vulnerability

#### National road vulnerability index (NRVI) ranking (2023)

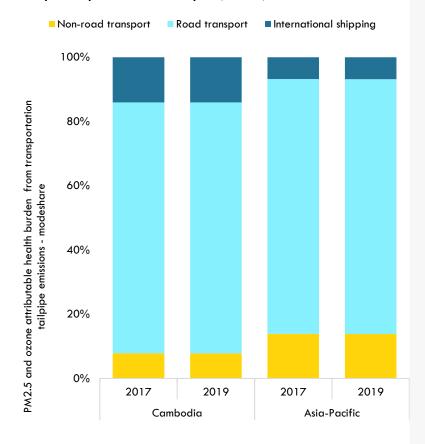


#### Goal 1c - Air pollution:

By 2030, reduce air pollution and contamination caused by traffic, including PM2.5, other air pollutants and noise. (Based on SDG 3.9, 11.6).

#### Transport air pollution health impact

#### Transport air pollution health impact (PM 2.5)

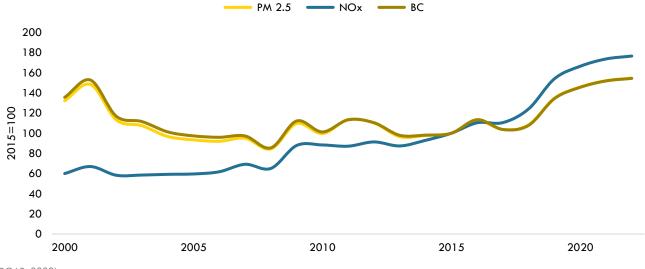


- Air pollutant emissions: While Cambodia has experienced some increases in air pollutant emissions from transport, these increases have been lower than GDP growth, suggesting some progress in decoupling emissions from economic activity.
- Road transport's impact: Road transport is a major contributor to NOx and BC emissions, indicating the need for cleaner vehicle technologies and improved fuel quality.
- Health impacts: Air pollution from transport is a significant health concern, with an increasing number of deaths attributed to PM2.5 and ozone pollution.
- In Cambodia, the total attributable deaths due to the PM2.5 and ozone air pollution from the transport sector changed from 191 to 215 between 2017 to 2019.
- The numbers for Asia-Pacific were about 236 thousand and 253 thousand, respectively, for the same time period.

(McDuffie et al., 2021)

#### Transport air pollutant emissions

#### Growth of road transport air pollutant emissions

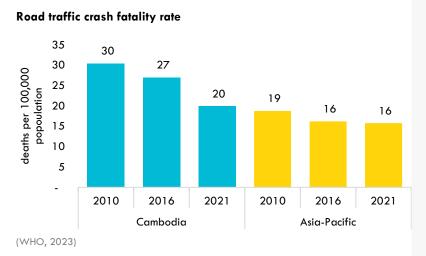


(EDGAR, 2023)

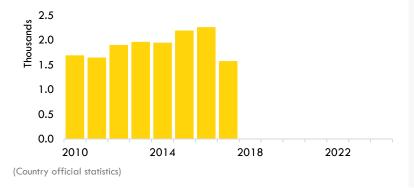
#### Goal 2 - Road safety:

By 2030, halve the number of deaths and injuries from road traffic accidents in Asia compared to 2020, with specific attention to vulnerable road users. (Based on SDG 3.6 and second UN Decade of Action on Road Safety 2021 – 2030, Stockholm Declaration on Road Safety)

#### Road traffic crash fatalities



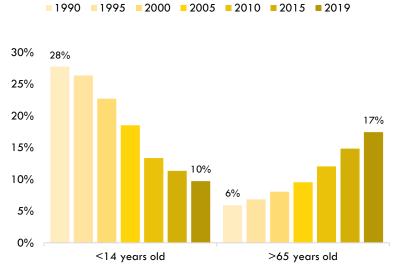
#### Road traffic crash fatalities (absolute values)



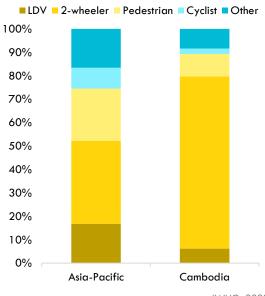
- High fatality rate: Cambodia's road traffic fatality rate is higher than the Asia-Pacific average, highlighting the urgent need to improve road safety.
- Economic costs: Road traffic crashes impose a significant economic burden, equivalent to 5% of Cambodia's GDP.
- Vulnerable road users: Minors, seniors, pedestrians, and cyclists are particularly vulnerable to road traffic crashes, emphasizing the need for targeted safety interventions.

#### Share of vulnerable groups

#### Share of road crash fatalities by age



#### Share of road crash fatalities by mode



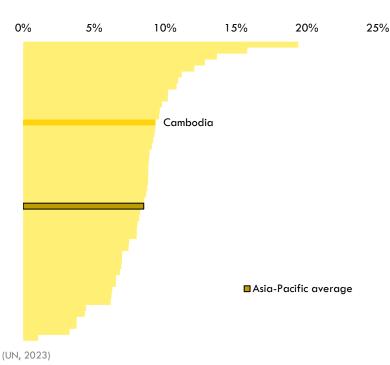
(GBD, 2021) (WHO, 2023)

#### Goal 3 - Economic sustainability:

By 2030, realize sustainable economic and employment growth by leveraging science, technology and innovation and green investments in quality passenger and freight transport infrastructure and services in a manner that fully incorporates environmental and social impacts throughout the lifecycle of the transport infrastructure and services, (Based on SDG 8.4, SDG 9.1, 12.1 and 12.c)

#### Transport sector and GDP

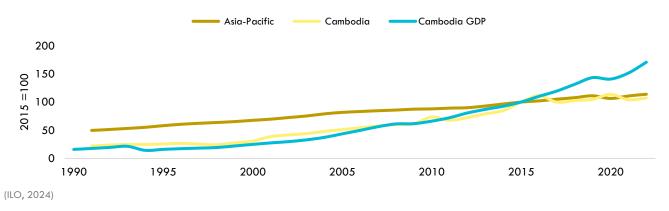
#### Transport as a share of GDP



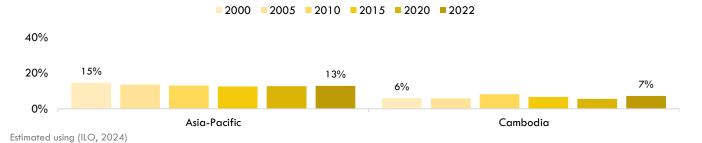
- Transport sector contribution: The transport sector's contribution to GDP has remained stable, while transport investments as a share of GDP have declined.
- Employment: The transport sector's employment growth has been slower than the Asia-Pacific average.
- ODA and PPP: The transport sector has received significant ODA, primarily for road infrastructure, and some PPP investments.
- Logistics performance: Cambodia's logistics performance has declined in recent years, indicating challenges in trade facilitation and supply chain efficiency.

#### Transport employment

#### Growth of transport sector employment

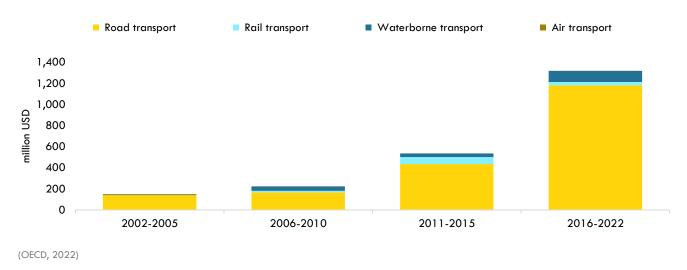


#### Female share in the transport employment



#### **Transport** investments

#### Official development assistance for Transport

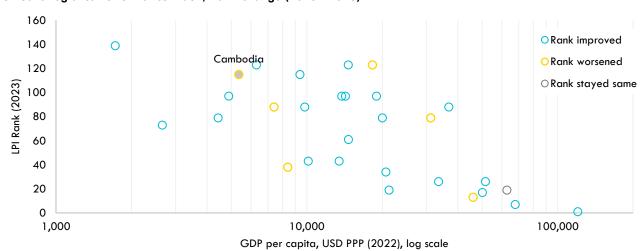


#### **Public Private Partnership in Transport**



#### Freight sector

#### Domestic Logistics Performance Index, Rank change (2016 - 2023)



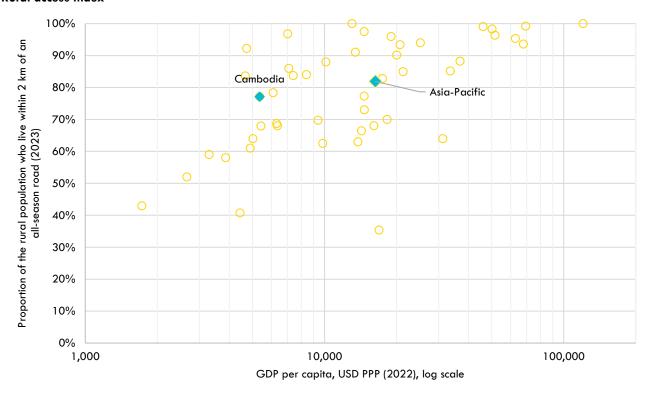
(WB, 2022)

#### Goal 4 - Rural access:

By 2030, realize accessible, inclusive, safe, affordable, and resilient rural transport infrastructure and services, thus facilitating improved access to markets, basic utilities and services including health and education by the farming community, and other rural population including physically disabled and vulnerable groups (Based on SDG 2 and SDG 9.1)

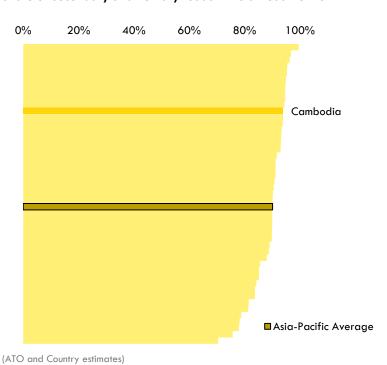
#### Rural access

#### Rural access index



(CIESIN-rural, 2023)

#### Share of Secondary and Tertiary roads in Total road network



• Rural access: A majority of the rural population lives within a reasonable distance of an all-weather road, but a significant number (3 million) still lack decent rural access.

#### Goal 5 - Urban access:

By 2030, ensure access to accessible, inclusive, safe, efficient, affordable, and sustainable transport facilities, systems and services for urban dwellers, including physically disabled and vulnerable groups through the development of urban transport infrastructure and services (Based on SDG 11.2 and 11.7)

#### Urban rapid transit infrastructure

Rapid transit infrastructure to resident ratio (RTR)

(Data not available)

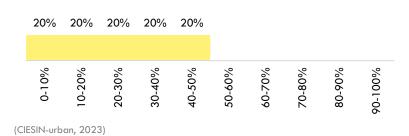
#### Urban rapid transit infrastructure length

(Data not available)

#### **Urban** access

Share of cities by level of urban access (out of 5 cities)

• Limited data: Available data on urban access to public transport is limited, but suggests room for improvement in providing accessible and sustainable transport options in cities.



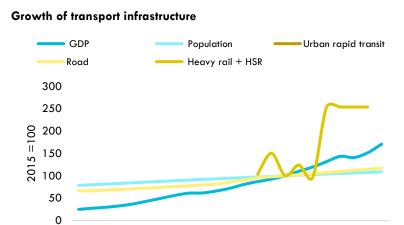
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#### Goal 6 - National access and connectivity:

By 2030, facilitate inclusive multi-modal national (including rural-urban) and regional (cross-border) connectivity through the provision of sustainable multi-modal freight and passenger transport infrastructure and services (Based on SDG 9.1)

#### Transport infrastructure

2000



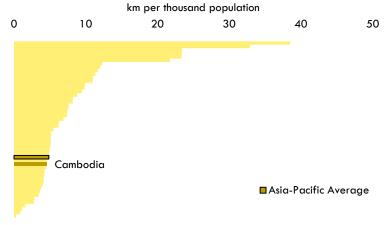
2010

2015

2020

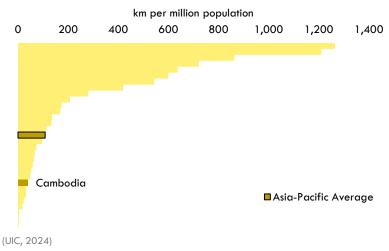
2005 (IRF, 2024) (UIC, 2024) (ITDP, 2022) (ATO and Country estimates)

#### Road transport infrastructure availability (2022)



(IRF, 2024) (ATO and Country estimates)

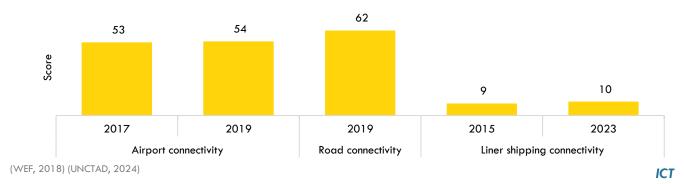
#### Rail transport infrastructure (including HSR) availability (2021)



- Infrastructure development: Road and heavy rail infrastructure has expanded in recent years, but bus motorization has declined.
- Connectivity: Cambodia has made some progress in improving air and maritime connectivity, but further improvements are needed.
- Telecommunications: Mobile network coverage is extensive, and internet usage has increased significantly.

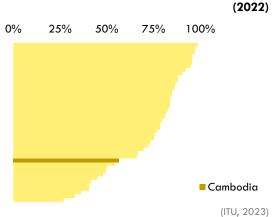
#### **Transport connectivity**

#### **Transport connectivity**



#### Container port traffic (TEU)

## Percentage of individuals using the internet



(Data not available)

#### **Transport Policy insights:**

The insights are based on the transport policy trackers developed by the ATO. Trackers include analysis of policy measures and targets from all the transport relevant policy documents for a country published after the adoption of the Aichi 2030 Declaration, i.e. 2021.

- Policy focus: A significant number of policy documents have been adopted since 2015, with a focus on low-carbon transport, air pollution, and road safety.
- Aichi 2030 Declaration: A growing number of policy documents have been published since the adoption of the Aichi 2030 Declaration, indicating increasing attention to sustainable transport.
- Climate change mitigation (Goal 1a) is the dominant focus, with extensive coverage in 68% of the documents.
- Air pollution (Goal 1c) is also addressed significantly, covered extensively in 42% of documents.
- National access and connectivity (Goal 6) receives extensive coverage in 32% of documents.
- Road safety (Goal 2) is covered extensively in 16% of documents.
- Goals related to resilience (Goal 1b), economic sustainability (Goal 3), rural access (Goal 4), and urban access (Goal 5) are notably absent from extensive coverage in the analyzed documents.

#### Transport relevant policy documents

Red - Poor coverage; Orange - Moderate coverage; Green - Extensive coverage

Doc. No.	Document Name	Year	Goal 1a	Goal 1b	Goal 1c	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6
1	Law on Land Traffic	2015								
2	Cambodia Industrial Development Policy 2015-2025	2015								
3	Intended Nationally Determined Contribution - KHM	2015								
4	Law on Road Traffic	2017								
5	National Environment Strategy and Action Plan 2016-2023	2017								
6	Logistics Master Plan	2017								
7	Rectangular Strategy Phase IV	2018								
8	National Strategic Development Plan 2019-2023	2019								
9	Cambodia Basic Energy Plan	2019								
10	Rural Development Strategic Plan 2019-2023	2019								
11	Cambodia Biennial Update Report	2020								
12	Updated Nationally Determined Contribution - KHM	2020								
13	Long-Term Strategy for Carbon Neutrality	2021								
14	Cambodia EV Roadmap	2022								
15	Truck Modernization Strategic Plan	2022								
16	Cambodia's Third National Communication	2022								
1 <i>7</i>	Clean Air Plan of Cambodia	2022								
18	Cambodia State Action Plan	2023								
19	Second Voluntary National Review	2023								

(ATO National policy tracker)



#### Transport relevant national targets

Doc. No.	Target	Year	Goal 1a	Goal 1b	Goal 1c	Goal 2	Goal 3	Goal 4	Goal 5	Godl 6
3	Intended Nationally Determined Contribution - KHM									ľ
	Energy industries, manufacturing industries, transport, and other sectors: Cambodia intends to undertake actions as listed in Table 1, the impact of which is expected to be a maximum reduction of 3,100 Gg CO2eq compared to baseline emissions of 11,600 Gg CO2eq by 2030.	2030	x		x					
	Reduction as Gg CO2eq and % in the year 2030 compared to the baseline = 390	2030	х							
9	Cambodia Basic Energy Plan									Г
	Biofuel, especially bioethanol, is one of the options for reducing imports of gasoline. In addition, biofuel affects the economic growth of Cambodia, such as through agriculture and industry activities and reductions in CO2 emissions. The General Department of Petroleum is seeking business opportunities for biofuel (E3 gasoline will be possible by 2025).	2025	х		x					
	The power generation mix in 2030 will be coal (35%), hydro (55%), and renewable energy (10%), consisting of biomass and solar/photovoltaics (PV). This mix will maintain affordability and security	2030	x		x					
	The major use of gasoline and diesel oil as well as LPG is transportation (vehicle), so that Cambodia can shift to highly efficient vehicles under the appropriate regulations (reduction by 10% from the business-as-usual [BAU] scenario).	2040	х							
11	Cambodia Biennial Update Report									Г
	3% reduction in 2030 compared to BAU	2030	х							Г
12	Updated Nationally Determined Contribution - KHM									Г
	The estimated emissions reduction with the FOLU by 2030 under the NDC scenario will be approximately 64.6 million tCO2e/year (41.7% reduction of which 59.1% is from the FOLU).	2030	x		х					
	30 vehicle inspection centres in operation by 2030	2030	х		х	х				Г
13	Long-Term Strategy for Carbon Neutrality									
	Moderate penetration of electric vehicles – 70 percent for motorcycles and 40 percent for cars and urban buses by 2050	2050	х		х					
	CNG penetration of 80 percent for interregional buses and 80 percent for trucks until 2050	2050	х		х					
	Increase in solar, hydro, biomass and other renewables to 35 percent of the generation mix by 2050, of which 12 percent is from solar	2050	х		х					
	More use of public transportation – 30 percent modal share in urban areas by 2050	2050	x		х	х				
14	Cambodia EV Roadmap									
	Long-Term Strategy for Carbon Neutrality is the guiding document that aim to introduce 70% of electric motorcycles, 40% of electric cars and urban buses in Cambodia vehicle fleet by 2050	2050	x		x					

## Cambodia

	Updated NDC is the key document that set the target for Cambodia to reduce 41.7% of CO2 by 2030.	2030	x	х			
16	Cambodia's Third National Communication						
	Updated NDC was submitted to the UNFCCC in 2021, outlining the actions planned to reduce GHG emissions by 41.7% compared with the BAU scenario.	2030	х	х			
	390 MtCO2e reduction	2030	х				
	30 vehicle inspection centers in operation by 2030	2030	х	х	х		
1 <i>7</i>	Clean Air Plan of Cambodia						
	Sulfur level to meet Euro V level	2024	х	х			
	Imported cars to meet Euro V in 2027	2027	х	х			
	Reducing import of used cars 30% in 2030	2030	х	х	х		
	COP26 declaration on accelerating the transition to 100% zero emission cars and vans						
	All sales of new cars and vans being zero emission by 2040 or earlier, or by no later than 2035 in leading markets	2040	х	х			х
	As cities, states, and regional governments, we will work towards converting our owned or leased car and van fleets to zero emission vehicles by 2035 at the latest + Policies	2035	х	х		х	
	Call on all developed countries to strengthen the collaboration and international support offer to facilitate a global, equitable and just transition	0	х	х		x	х

(ATO National policy tracker)



#### Transport relevant sample projects:

A sample list of projects by the MDB highlights their focus with respect to the Aichi 2030 Declaration Goals.

#### Transport relevant projects

Year	Project name	Amount (million USD)	Goal 1a	Goal 1b	Goal 1c	Goal 2	Goal 3	Goal 4	Goal 5	Goal 6
2024	Additional Financing to Road Connectivity Improvement Project	35		х		х	х			х
2021	Road Network Improvement Project (Phase 2)	82		х			х			х
2022	Improving Road Safety	1		х		х	х			
2022	Cambodia Southeast Asia Disaster Risk Management Project 2	170								

(MDB Projects database)

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GDP data is sourced from (WB, 2022) and Population data from (UN, 2022)