



**TANZANIA**

# SHIFTING TO CLEANER AND MORE FUEL-EFFICIENT VEHICLES



THE GFEI IS SUPPORTED BY:



## Background

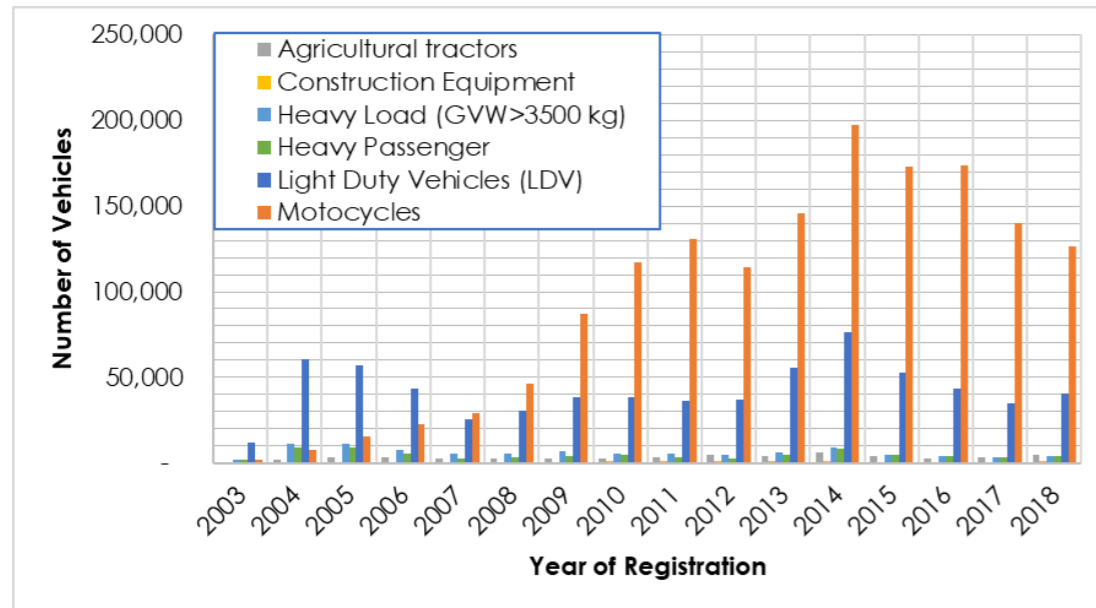
Tanzania has a relatively low vehicle ownership with about only 685,000 cumulative vehicles in 2018. It is projected that there will be 4.35M vehicles in 2030 and over 7.8M vehicles in 2050. The country largely relies on imported used vehicle with 97% of all new vehicle registrations being imported as used vehicles (see Table 1 below).

**Table 1: Cumulative vehicle registration and proportion of used and new LDV: 2003-2018**

Year of Registration	New	Used	Total	%New
2003	624	11,268	11,892	5.2
2004	712	59,873	60,585	1.2
2005	1,032	56,365	57,395	1.8
2006	1,142	42,208	43,350	2.6
2007	1,1317	24,425	25,742	5.1
2008	1,653	29,298	30,951	5.3
2009	1,133	37,255	38,388	5.3
2010	1,098	37,639	38,737	2.8
2011	1,562	34,918	36,480	4.3
2012	1,330	35,785	35,115	3.6
2013	1,505	54,188	55,693	2.7
2014	1,852	74,430	76,282	2.4
2015	1,278	51,624	52,902	2.4
2016	1,331	42,320	43,651	3.0
2017	871	33,942	34,813	2.5
2018	1,311	39,632	40,943	3.2
<b>Grand Total</b>	<b>19,751</b>	<b>665,170</b>	<b>684,921</b>	
<b>Percentage</b>	<b>2.9</b>	<b>97.1</b>	<b>100</b>	

As at 2018, 91% of all new vehicle registrations were petrol powered with only 9% being diesel powered. Like the other East African countries, there has been a surge in the import of motorcycles, increasing from 8.4% of vehicle imports in 2004 to 75.7% of total imported vehicles in 2016 as shown in figure 1. This was followed by light duty vehicles decreasing from 66.4% of total imported vehicles in 2004 to just 18.7% in 2017.

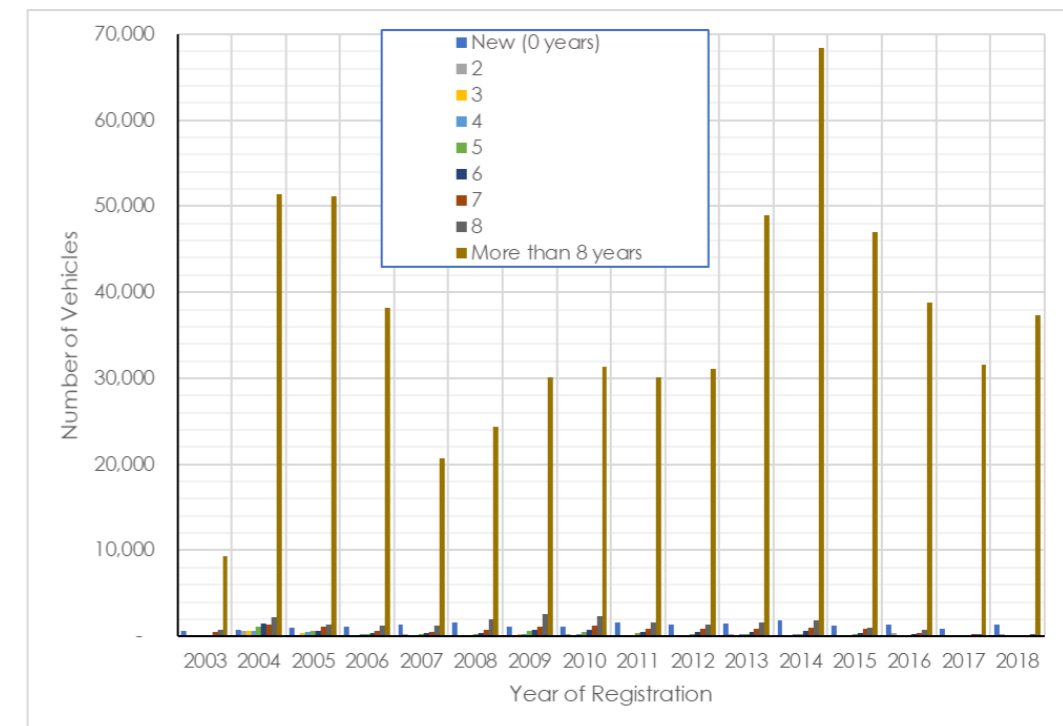
**Figure 1: Yearly Motor Vehicle Registration by Category**



Despite the country imposing higher taxation on vehicles older than 8 years (between 50% and 65% of the CIF value), vehicles more than 8 years old are predominately imported (Figure 2).

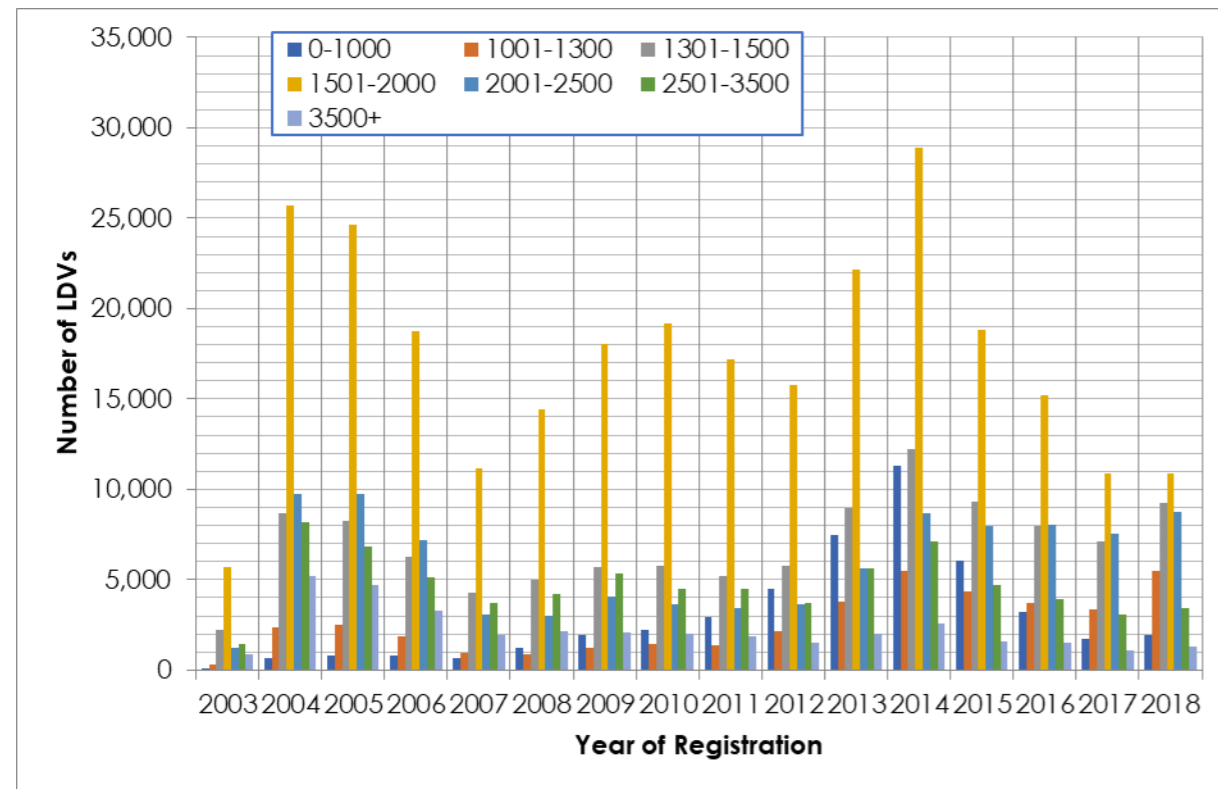


**Figure 2: Tanzania's Average LDV Import Age: 2003-2018**



At the same time, the bulk of LDVs imported are seen to have an engine displacement of 1501 to 2000 cc as shown in Figure 3 below.

**Figure 3: LDV by Engine Displacement**



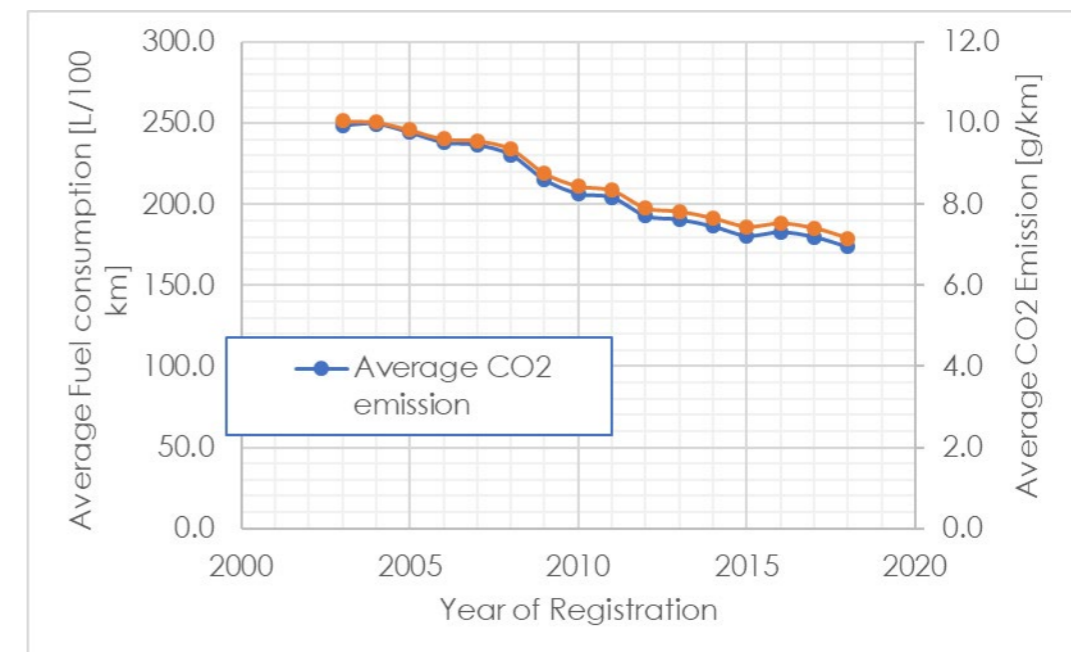
In Tanzania, UNEP partnered with the Bureau for Industrial Cooperation (BICO), under the College of Engineering and Technology, University of Dar es Salaam to carry out the fuel economy vehicle inventory and develop proposed policy measures to promote cleaner and more fuel-efficient vehicles. A fuel economy task team comprising of the Tanzania Revenue Authority, National Environmental Management Council (NEMC), Land Transport Regulatory Authority (LATRA) and Energy and Water Utilities Regulatory Authority (EWURA) for was established to run the project and provide requisite data for analysis.



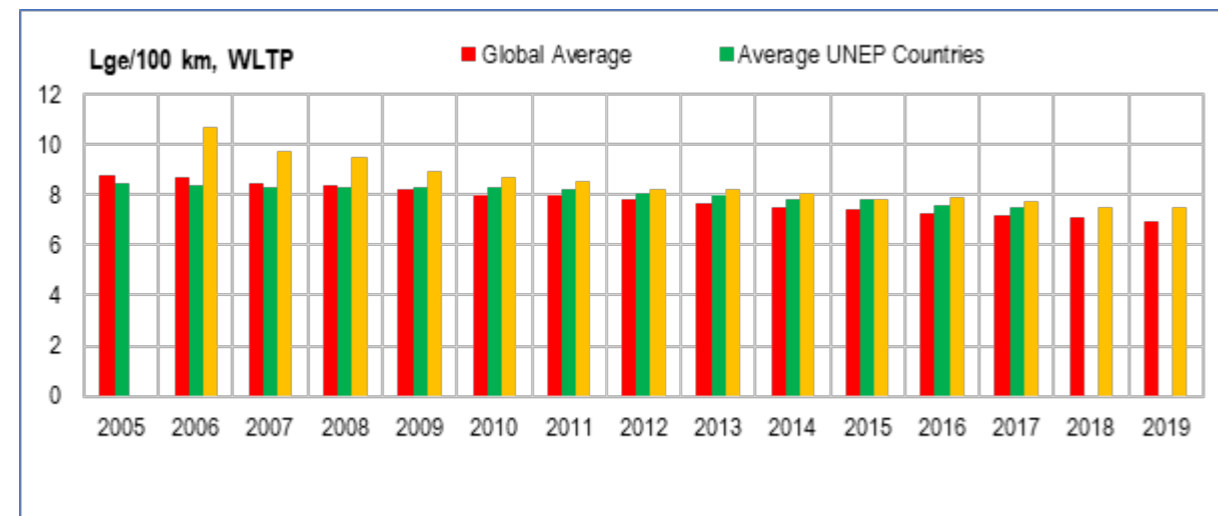
## Key Fuel Economy Findings

The average fuel efficient of petrol vehicles was slightly better than for diesel vehicles, due mainly to the import of bigger diesel engine vehicles. The combined fuel economy and CO2 emission of the LDVs in Tanzania has improved since 2005, the baseline year to 2018 as depicted in Figure 4. However, the average fuel economy is still significantly above the global average as seen in Figure 5, and the EU and Japan levels where most of the vehicles are manufactured. The trend indicates that by 2030 fuel economy is projected to reach 5.7 and 7.7 L/100 km respectively for petrol and diesel vehicles, which is above the GFEI of 4.2 L/100 km.

**Figure 4: Trends in LDV fuel consumption and CO2 emission**



**Figure 5: Trends in LDV fuel consumption and CO2 emission as compared to other countries**



The study also revealed that in addition to being a major source of carbon dioxide emissions, most of the vehicles imported into Tanzania also lacked the requisite vehicle emission control technologies to reduce harmful pollutants. Assuming all vehicles manufactured after 2005 fulfil Euro 4 emission standard, it was found that hardly 25% of the LDVs registered in Tanzania met this standard and hardly 4% and 6% of vehicle imports met Euro 5 and 6 emission standards respectively in subsequent years.

This therefore calls for concerted efforts by all stakeholders, led by government to put in place policies and incentives to promote the importation of cleaner, and more fuel economy vehicles. Consumer outreach towards purchase of cleaner and more efficient vehicles coupled with the expansion and deployment of cleaner soot-free buses along the DART bus system, will ensure a low carbon pathway for Tanzania. The country today has abundance of natural gas which is currently used to generate more than 50% of the grid electricity. This electricity can be used to power electric vehicles. At the same time, there has been an expression of using CNG to run the DART bus fleet. Any low carbon mobility measures will also need to target 2&3 wheelers motorcycles that are now leading the vehicle market growth. A sub-regional harmonized approach may also be ideal for some of the proposed policies, standards and measures flowing the regional harmonization of fuels and vehicle emission standards.



## Proposed policies to improve fuel economy/ electric mobility

Over the years, Tanzania has had strategies geared towards attracting better quality vehicles including graduated taxation based on the vehicle age at importation. Import duty, Value added excise duty and an additional vehicle age tax are charged at the point of import and registration of vehicles in Tanzania leading to a total taxation for imports between 50% - 109% of CIF value (see Table 2 below).

**Table 2: Tanzania's Graduated vehicle age-based taxation**

Vehicle age	Total Taxation on import
0-8 years	50% and 65% of CIF value
8 – 10 years	73% and 87% of the CIF value
More than 10 years	96% and 109% of the CIF value

The graduated tax was conceived with an aim of driving the importation of newer vehicles and environmental protection but has been ineffective because of the low CIF values of older vehicles.

From the GFEI study, the following policy interventions were proposed for consideration:

- Creating consumer awareness on the economic, health and climate benefits of mainstreaming fuel efficiency in the vehicle purchase considerations.
- Setting national automotive fuel economy targets to encourage the development of policies that will drive the purchase of fuel-efficient vehicles.
- Revision of the current taxes based on vehicle age and Introductions of fiscal incentives (duty and tax exemptions) for battery electric and hybrid vehicles to encourage the importation of cleaner and fuel-efficient vehicles.
- Providing for low-emission zones where only vehicles with fuel economy labels/ low emission issued at first registration and annual inspections are allowed to enter



## Conclusion

Reducing emissions in the transport sector needs a multi-pronged approach with elements besides improving fuel economy also being employed. Tanzania has already embraced mass rapid transit system which has significantly improved the efficiency of the urban transport system. Besides the proposals on improving fuel economy, Tanzania has opportunity to promote the transition to electric 2&3 wheelers which offer last mile connectivity to the Mass transit system. In addition, the country can take advantage and use the natural gas resources and use soot free bus technology to enable an incremental transition towards zero emission buses. In addition, establishing smart city transport system will improve on transportation efficiencies and ensure equitable allocation of transport modes especially the active mobility. Introducing car free days in dedicated areas will also go a long way in encouraging active mobility and reducing the vehicle emissions footprint for more livable cities.

