



Global Fuel Economy Initiative (GFEI) Jamaica Project Overview

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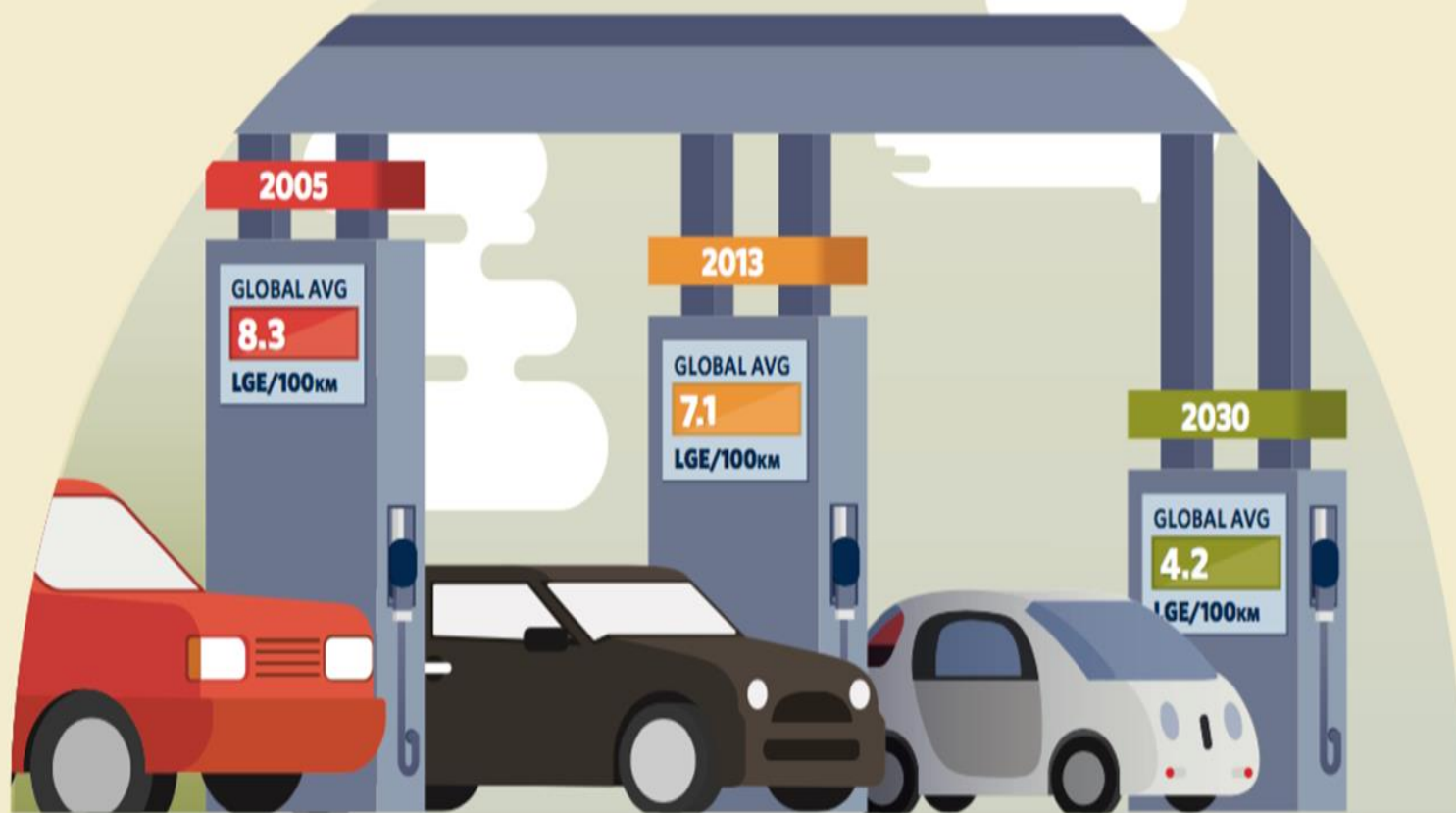
Outline

- 0 Objectives of GFEI Jamaica Project
- 0 Achievements
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- 0 Recommendations
- 0 Next steps

The Global Fuel Economy Initiative (GFEI) and 50 by 50

- Established in 2009
- UC Davis, FIA Foundation, IEA, International Transport Forum, ICCT, CEGESTI, Centro Mario Molina Chile et al
- Funded by GEF, European Union (DG clima), FIA Foundation
- UNEP acts as coordinator
- Promotes the introduction of cleaner and more efficient in emerging economies
- Efficiency standards in developing countries
- Best practices from more established market leaders
- Objective: Stabilize emissions from the transportation sector by improving the fuel economy of global LDVs by 50% by 2050 in relation to 2005 levels.

DOUBLE AVERAGE FUEL ECONOMY OF NEW CARS BY 2030 AND ALL CARS BY 2050

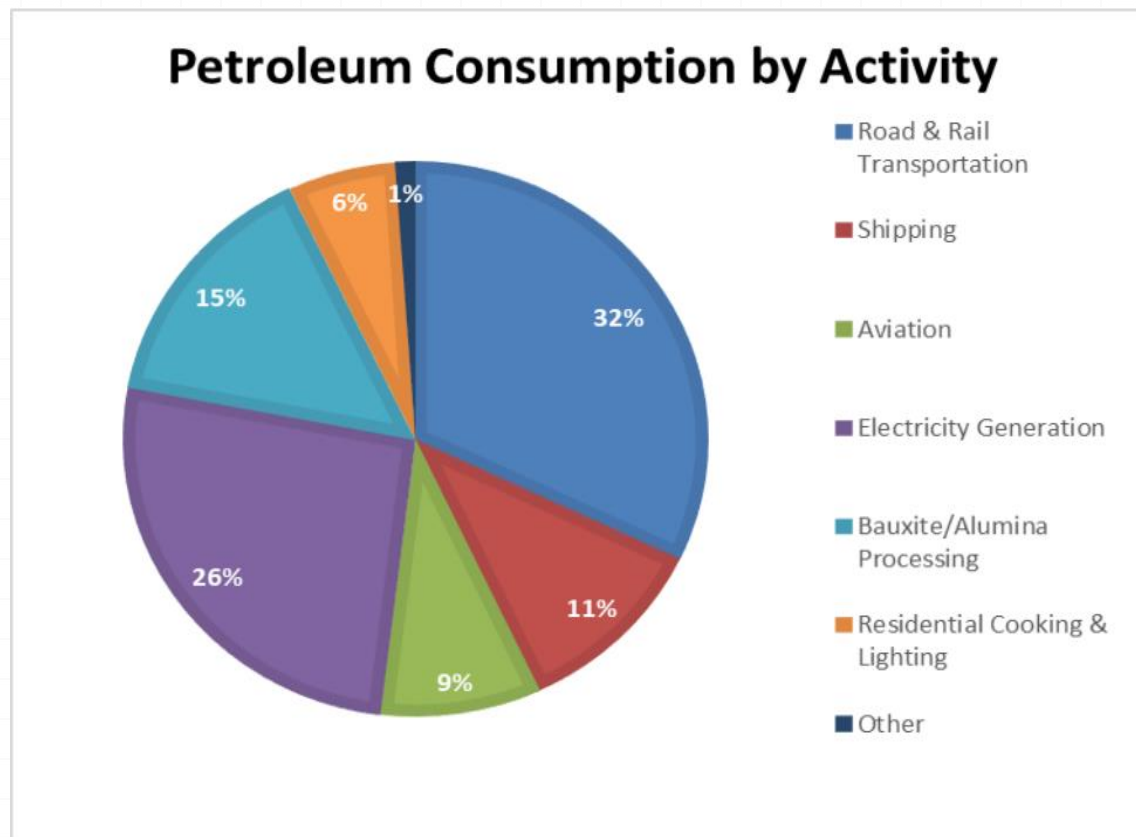


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GFEI- Jamaica

- o The 3 core activities are:
 - o data development and analysis of fuel economy potentials by country and region;
 - o support for national and regional policy-making efforts;
 - o outreach and awareness raising to stakeholders (e.g. vehicle manufacturers).
- o Consulting partners: CEGESTI (Costa Rica) & Centro Mario Molina Chile (Chile)
- o Supported by UN Environment, FIA Foundation

Petroleum Consumption by Activity- Jamaica



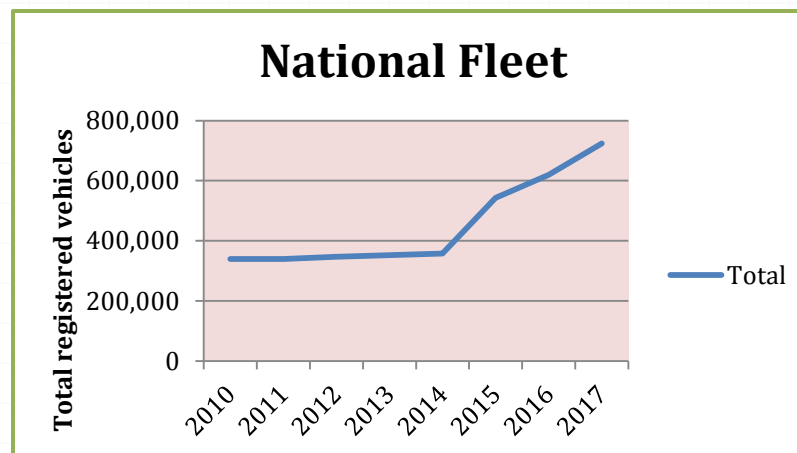
Source: Energy Economics and Planning Unit, Energy Division, Ministry of Science, Energy and Technology, 2018.

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National Vehicle Fleet



Estimated unregistered fleet is approx. 15%.

Vehicle Type	2010	2011	2012	2013	2014	2015	2016	2017
Motor Cars	252,894	252,961	259,764	265,122	269,524	366,002	424,701	507,797
Motor Cycles	7,223	7,353	7,789	8,779	10,024	48,073	53,149	58,705
Motor Tractors	445	418	425	431	405	1,299	1,340	1,402
Motor Trucks	77,179	76,900	76,965	76,370	76,100	122,262	134,408	150,470
Trailers	1,689	1,721	1,707	1,745	1,602	5,128	5,395	5,661
Total	339,430	339,353	346,650	352,447	357,655	542,764	618,993	724,035

Tax Administration Jamaica

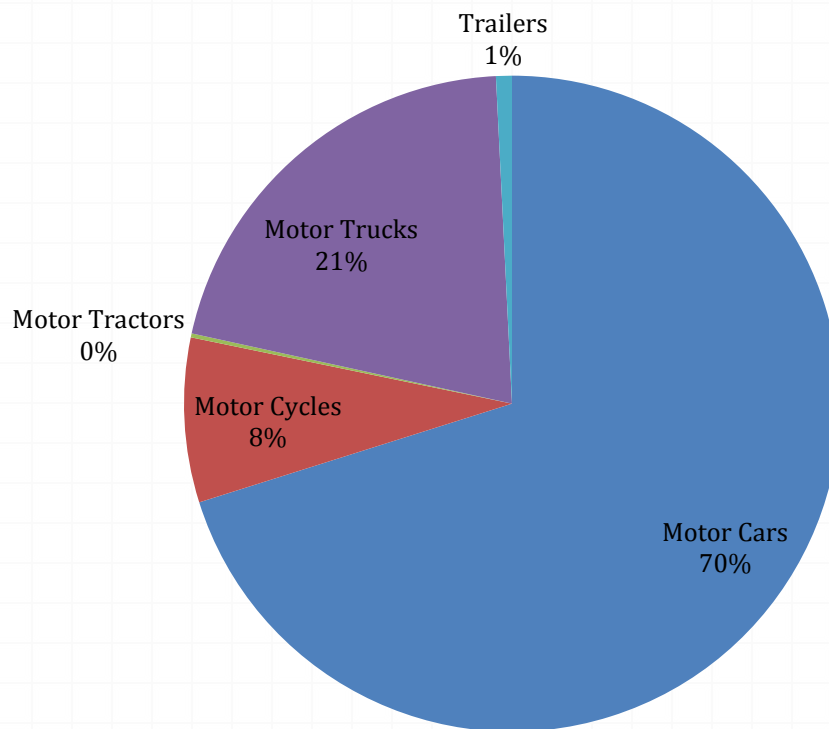
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Jamaica Vehicle Type Profile (2017)

Motor Vehicles 2017



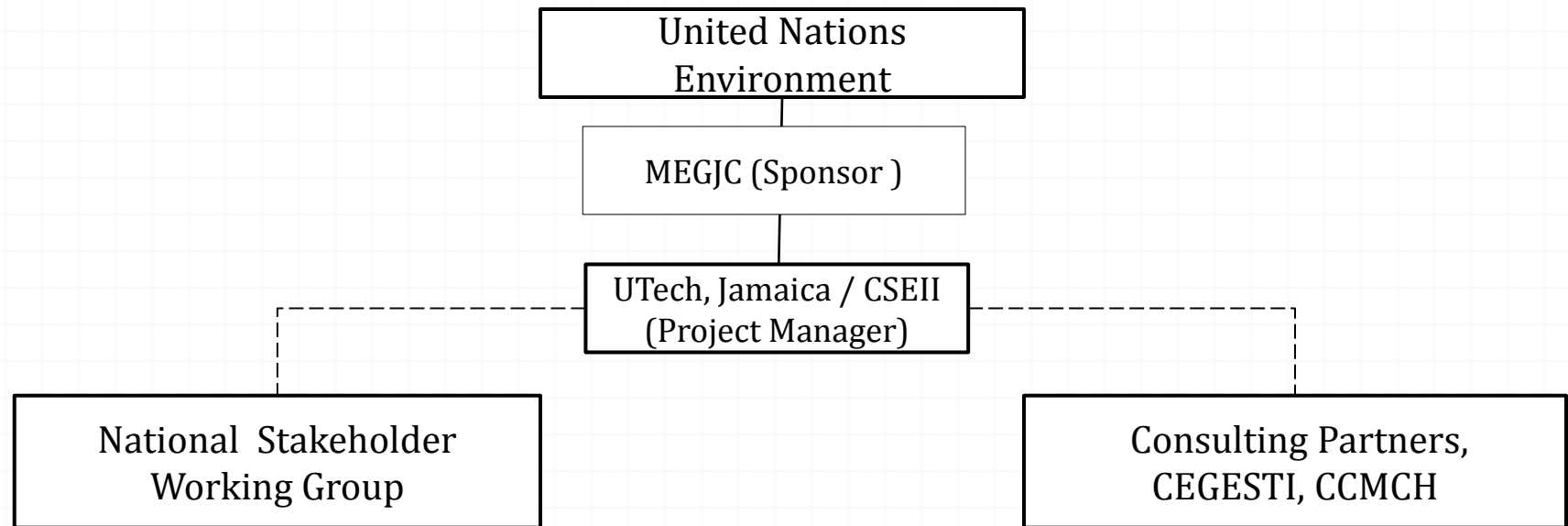
Source: Tax Administration Jamaica, 2017

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PROJECT ORGANISATION



PROJECT OUTPUTS



○ Phase 1- 2015-2017

- Project Launch
- Two National Capacity Building Workshops
- Specialized Training – Developing the Vehicle Emissions Baseline
- Development of Baseline (2005, 2008, 2010, 2012 and 2014)
- National Working Group Meetings
- Public exhibitions
- National Reports - *Report on Existing Motor vehicle and Fuel Policies & Regulations and Report on Fuel Economy Trends*

○ Phase 2- 2017- 2019

- National Stakeholder Consultations
- Specialized Training – Fuel Economy Policy Implementation Tool
- Updated Vehicle Emissions Baseline (2015, 2016 and 2017)
- Air Quality Diagnostic Study
- Film- Progress of GFEI in Jamaica
- Website development
- National Workshop to develop Action Plan
- Sub-Regional Workshop to discuss Caribbean Sustainable Transportation Road Map and Strategies

Benefits from GFEI Intervention: Jamaica



Improving fuel economy will result in:

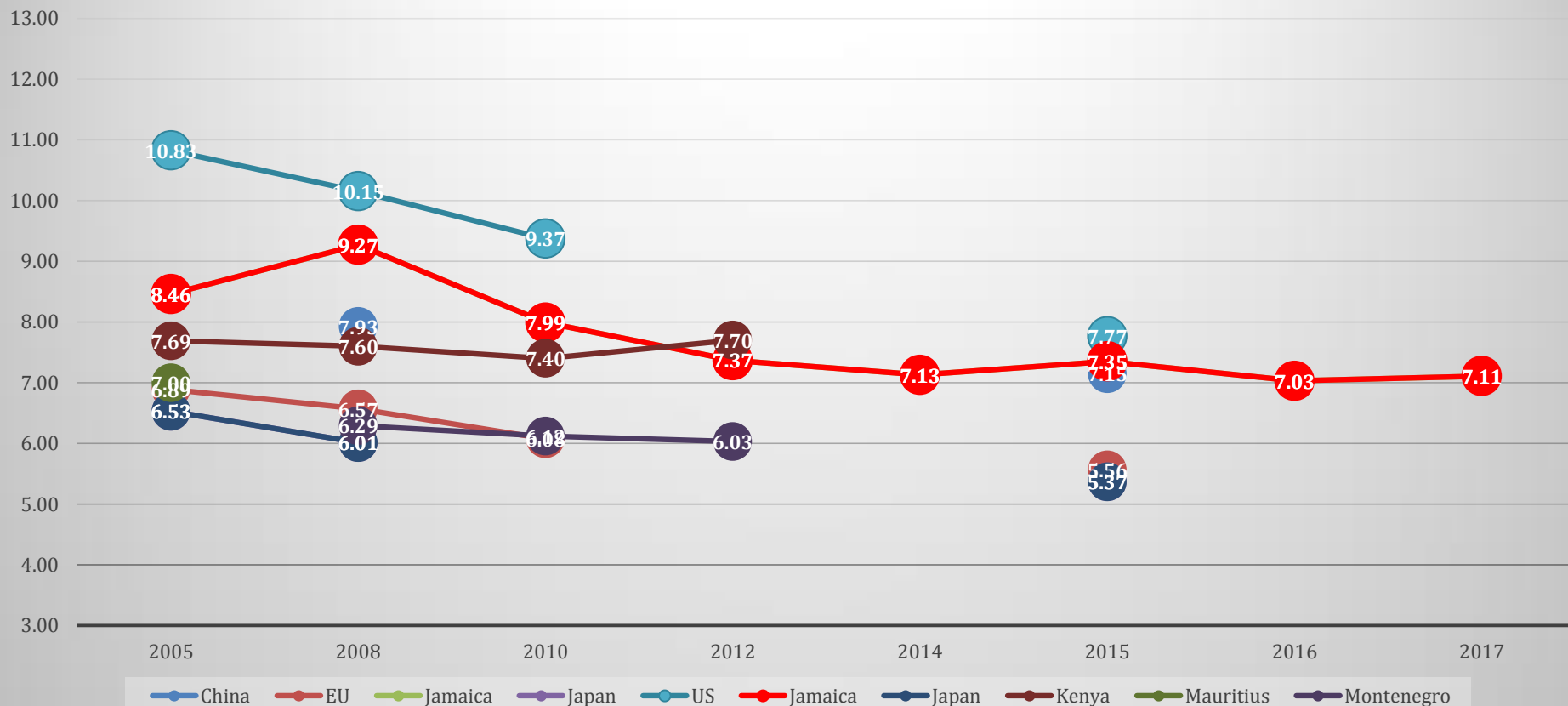
- ◊ Reduction in greenhouse gas emissions (CO₂,
- ◊ Reduction in particulate matter and other harmful gaseous emissions e.g. NO_x SO_x
- ◊ Support Nationally Determined Contributions(NDC) targets (Paris Agreement)
- ◊ A reduction in oil dependence (fuel diversification)
- ◊ Improved balance of payments
- ◊ Improved health
- ◊ Contribution to the domestic economy / job creation

GFEI Database requirements

- Data of newly registered Light duty fleet (< 4000 kg)
- Emissions data calculated on minimum 85% of newly registered vehicles
- Methodology and data using GFEI tools
- CO2 emissions information from manufacturer data
- Verification by consulting partners (CEGESTI, CMMCh)
- Motorcycles are not included

Findings- Fuel Economy trend comparison

Baseline Light-Duty Vehicle Fuel Economy Trends



Source: UNEP, 2015

Liters per 100 kilometers (L/100km) normalized to NEDC Test Cycle

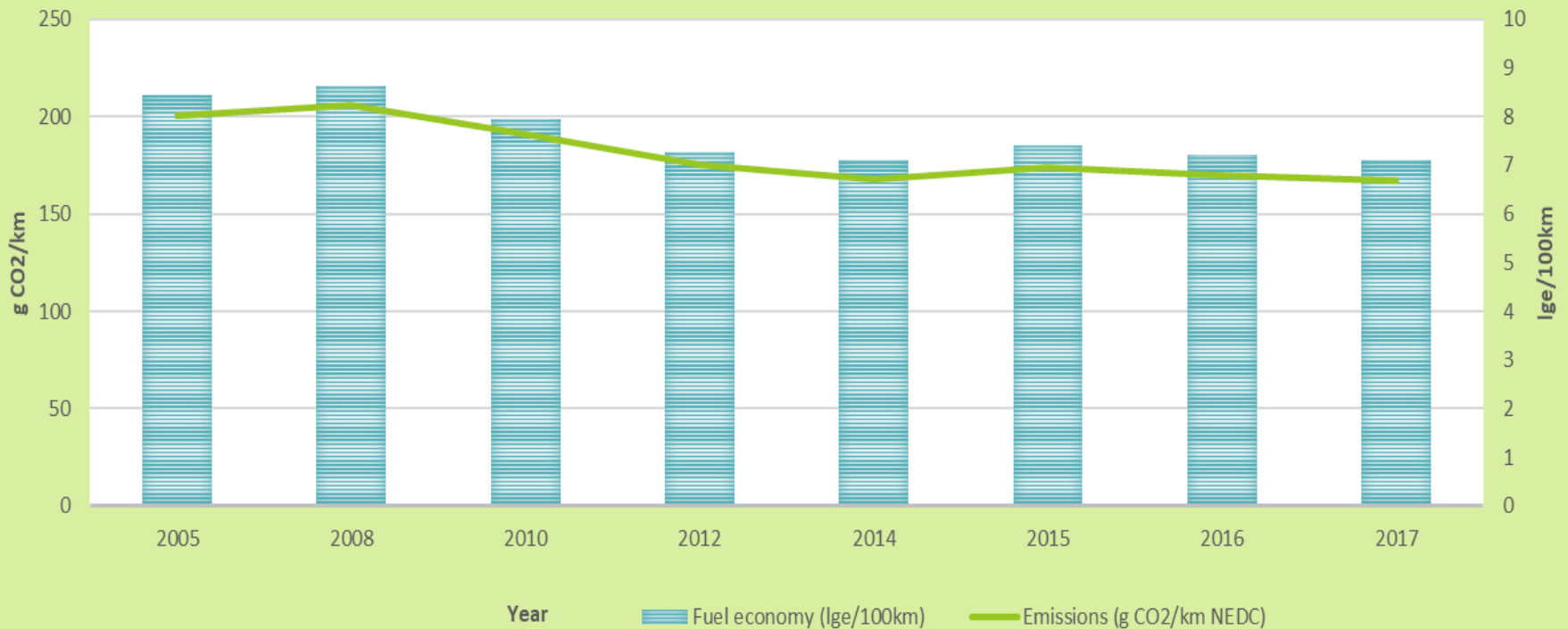
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Findings

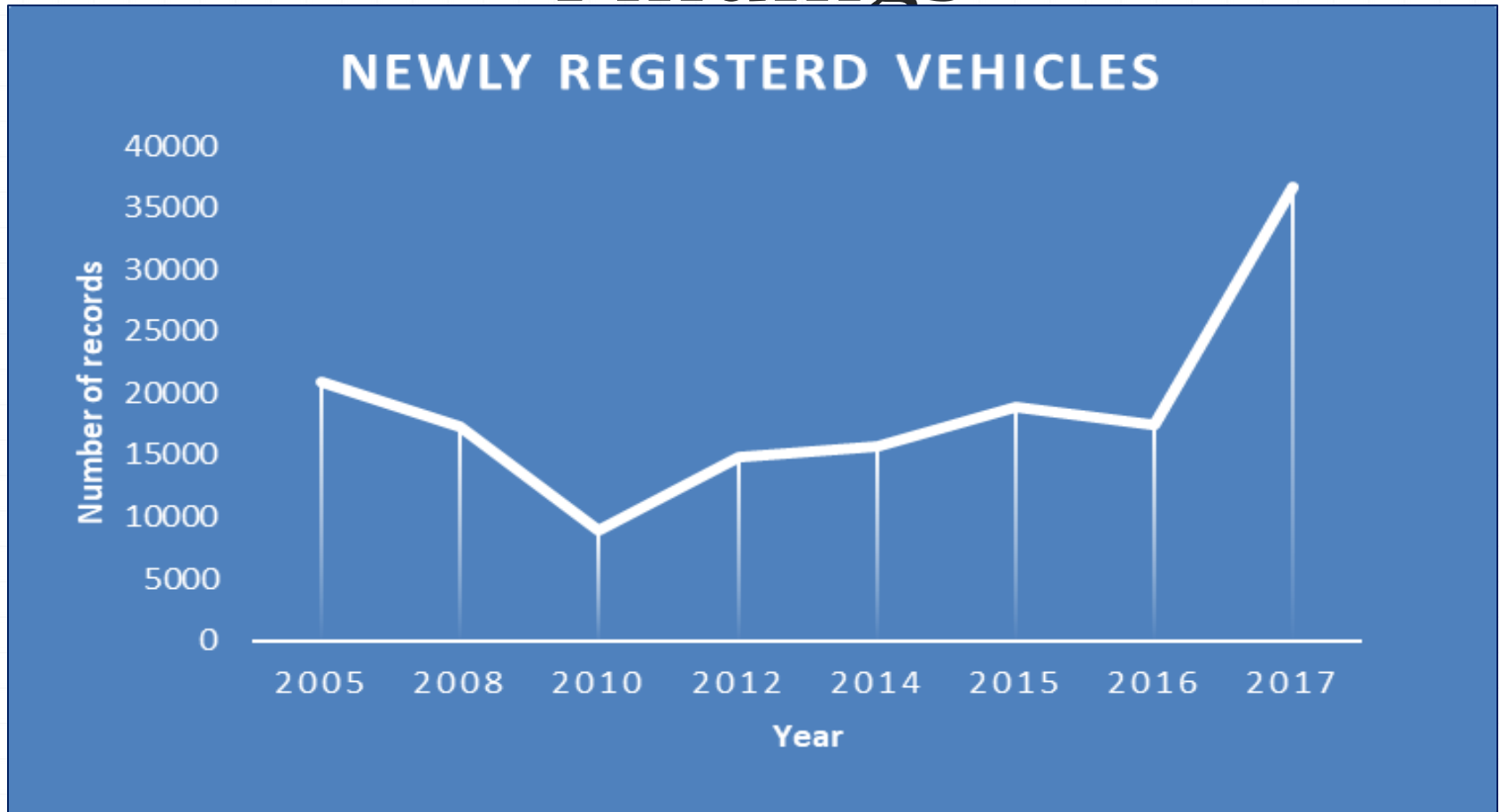
FUEL ECONOMY AND EMISSIONS



	2005	2017	Average % change
<i>Fuel economy (lge/100km)</i>	8.43	7.11	15.6%
<i>Emissions (g CO2/km NEDC)</i>	200.63	167.30	16.6%

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Findings

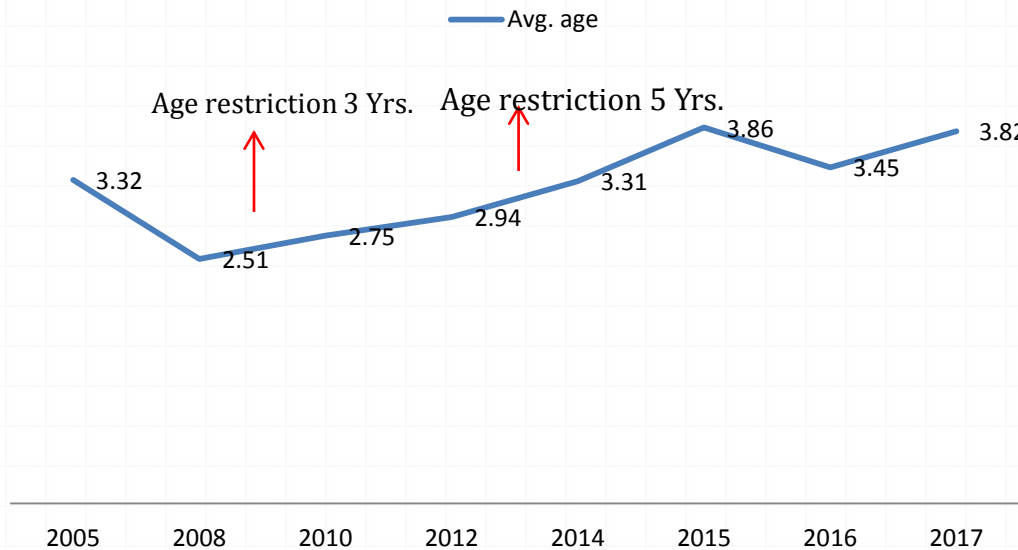


- The global recession
- increased demand from other markets for 3 year-old cars
- unfavorable movements of the Japanese currency

(JIS, 2011)

Findings

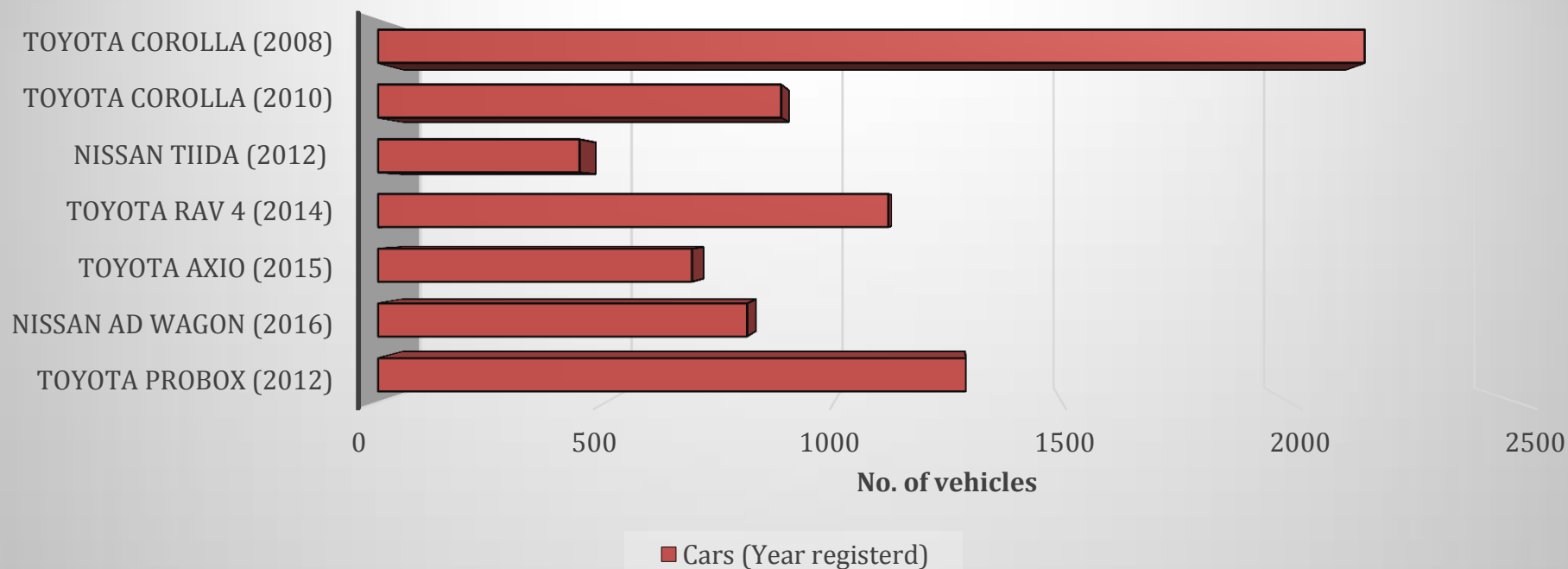
Average age of newly registered vehicles



2017
3.82
years

Findings

Most Popular Imports



There is a preference for on Asian brands so particular attention must be paid to what is happening in these vehicle markets.

Key Findings

Summary Table

GFEI Jamaica				
<i>Year</i>	<i>Number of Records</i>	<i>g CO₂/km</i>	<i>MPG</i>	<i>lge/100km</i>
2005	20837	200.57	30.30	8.46
2008	17337	220.75	26.57	9.27
2010	8830	191.2	31.54	7.99
2012	14763	174.48	33.39	7.37
2014	15748	168.05	35.01	7.13
2015	18923	172.45	33.87	7.35
2016	17493	164.24	35.29	7.03
2017	36639	167.25	35.02	7.11

Results

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Key Findings

Air Quality Diagnostic Study

Study conducted December 2017

Key Findings



Map showing trends in annual average concentrations for PM_{10} in KMA. Red line indicates Jamaican Standard for ambient PM_{10} . Out-of-compliance stations are highlighted with a red line border. The stations with saturation conditions (close to being out of compliance) are highlighted with an orange line border.

Almost half of the monitoring stations in KMA recorded an annual average above $50 \mu\text{g}/\text{m}^3$, which is the national air quality standard for the one-year period.

- The annual PM_{10} concentration that is recommended by WHO ($20 \mu\text{g}/\text{m}^3$)
- All the monitoring stations in KMA would be below the standard that is recommended for public health.

(Centro Mario Molina Chile, 2018)

Policy Recommendations



Revise and adopt National Vehicle Emissions Standards.

Monitoring of vehicle emissions

Improve fuel quality standards

Incentivize more energy efficient vehicles

Regulate age limit of used vehicle imports

Fast track new technology use (EVs and Hybrids)

Voluntary vehicle labeling schemes

Improvements in road infrastructure and traffic management systems

Build public awareness and capacity on new technologies, vehicle maintenance and climate change

Policy Recommendations



Revise and adopt National Vehicle Emissions Standards.

- **Status** - To be promulgated under the Road Traffic Act. This will repeal and replace the existing 1938 Act. The new Bill was passed in the House of Representatives Feb 6, 2018
- Primary responsible agencies: NEPA & MTM

Monitoring of vehicle emissions

- **Status**- No systematic scheme in place to monitor tailpipe emissions. Limited monitoring by Island Traffic Authority (ITA) with Police.
- **Recommendation** - Introduce tailpipe emissions testing scheme on a phased basis.
- Primary responsible agencies: ITA & MTM

Improve fuel quality standards

- **Status** – Standards are in place through the Petroleum (Quality Control) Act (1990), regulations.
- **Ultra low sulphur diesel (15 ppm)**
- **Regular diesel fuel- (5000 ppm)**
- **Recommendation**- Reduce sulphur content in diesel fuels to meet international trends and future requirements.
- Primary responsible agencies: BSJ, MTM, OPM- Energy Portfolio, Industrial and Allied Products (ICAP) Committee

Policy Recommendations



Incentivize more energy efficient vehicles

- **Status-** No incentives for efficient vehicles.
- **Recommendation:** Review existing scheme (taxation, registration) to incentivize more efficient vehicles.
- Primary responsible agencies: MOFPS, TAJ

Regulate age limit of used vehicle imports

- **Status-** Age limit set for vehicle imports-
 - Motor cars – Five (5) years.
 - Light Commercial Vehicles unladen weight less than 3000 kg or 3 tones) - six (6) years.
 - Taxi fleets – Seven (7) years.
- **Recommendation** - Reduce age limit of imports to encourage newer vehicles, remove older inefficient and polluting vehicles from national stock
- Primary responsible agencies: MOFPS-Jamaica Customs & Trade Board

Fast track new technology use (EVs and Hybrids)

- **Status** – some incentives for hybrid and electric vehicles
- Existing aggregated duty

Vehicle Type	Individual	Dealers
Electric vehicles	40%	46%
Hybrid	52%	58%
Motor vehicles (Gas)	54%- 82%	46%- 75%
Motor vehicles (Diesel)	40%-68%	46%- 65%

Source : Jamaica Customs Agency
<https://www.jacustoms.gov.jm/contact-us-1>

- **Recommendations** – Provide improved fiscal incentives to propel the uptake of Evs and hybrid vehicles for example GCT exemptions on electric vehicles (16.5%).
- Introduce electric vehicle/ hybrid fleets for public transportation.
- Introduce EVs/ Hybrids for up to 50% of Government owned vehicle fleets by 2022.
- Prepare workforce capable of maintaining and repairing EVs
- Primary responsible agencies: MOFPS-Jamaica Customs Agency, Auto dealers

Policy Recommendations



Voluntary vehicle labeling schemes

- **Status** – no schemes in place.
- **Recommendation** - Introduce vehicle efficiency labelling
- Primary responsible agencies: BSJ, Auto dealers & Consumer Affairs Commission

Build public awareness and capacity on new technologies, vehicle maintenance and climate change

- **Status** – Vibrant climate change education initiatives in place, no direct link to transport sector.
- **Recommendation:** create more targeted communication campaigns for road transport
- Primary responsible agencies: MEGJC, JIS, MTM, Consumer Affairs Commission, OPM- Energy Portfolio & MOFPS

Improvements in road infrastructure and traffic management systems

- **Status** – Peak hours traffic congestion due to strained road infrastructure. Road improvements and upgrading of traffic management systems underway
- **Recommendations** – incorporate smart traffic management systems
- Primary responsible agencies: ITA, KSAC & MTM

Next Steps

- Prepare draft policies and strategies towards more efficient vehicles and cleaner fuels
- Conduct cost benefit Analysis
- Prepare National Action Plan
- Launch GFEI- Jamaica website

*Thank
you*