

The Global Fuel Economy Initiative (GFEI) a case study from Mauritius

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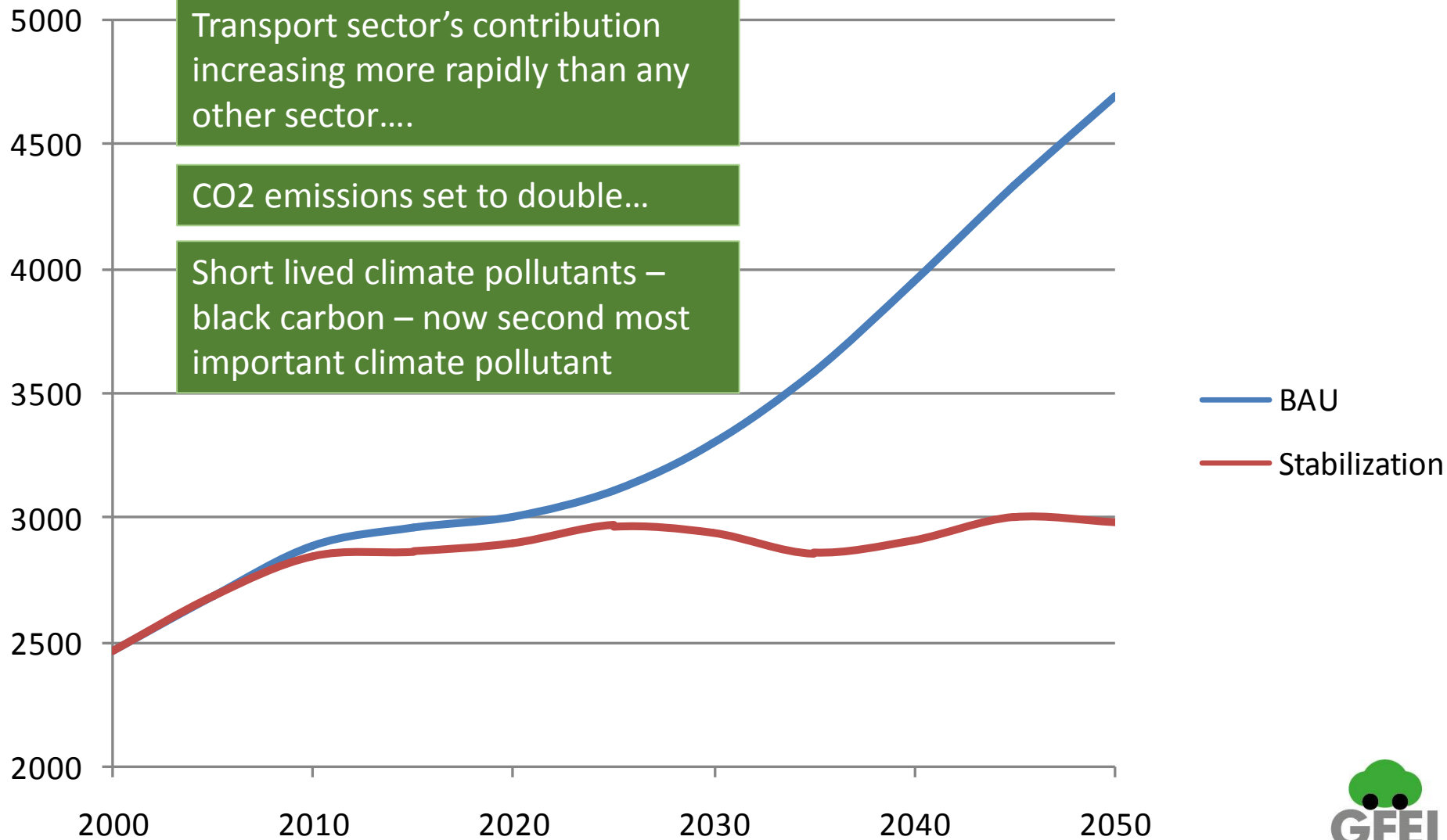


Climate Change

Transport sector's contribution increasing more rapidly than any other sector...

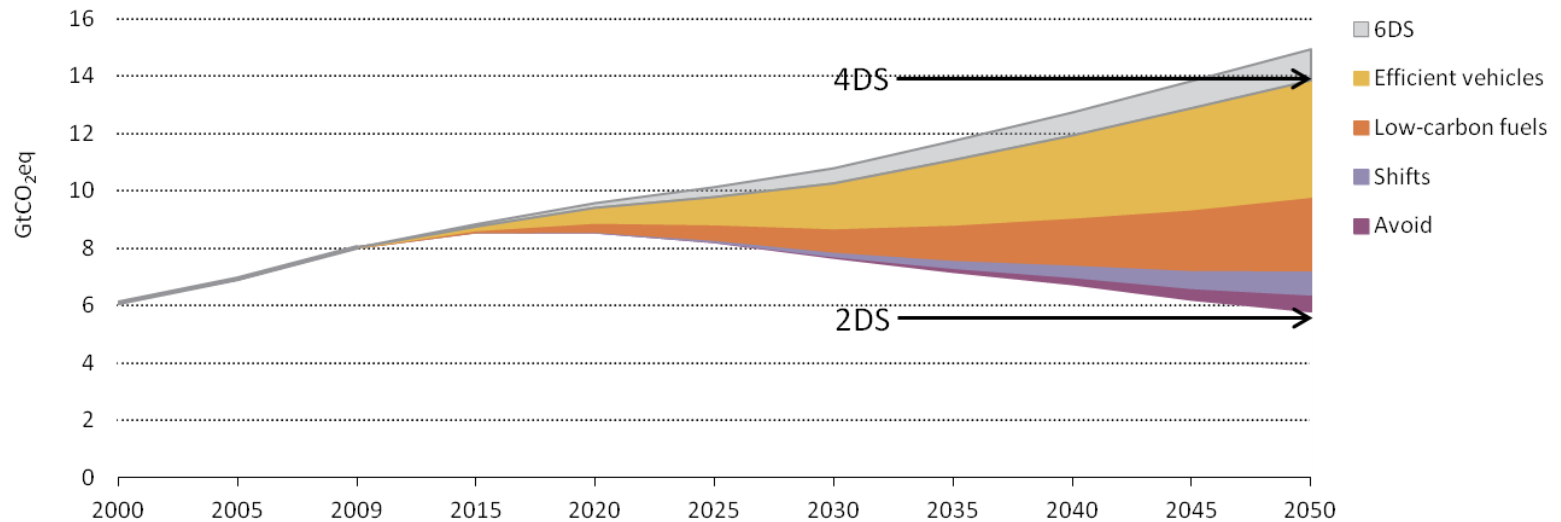
CO2 emissions set to double...

Short lived climate pollutants – black carbon – now second most important climate pollutant



CO2 emissions from the global light duty vehicle fleet – GFEI 2009

Carbon Reduction Potential Transport



- Potential for transport to reduce 4 GT/yr in 2030 and 8 GT/yr in 2050 (IEA MOMO model 2015)
- Comprehensive approach needed:
 - **Avoid** transport, for example through better city planning
 - **Shift** to efficient transport modes, like public transport
 - **Improve** through cleaner vehicles
- Biggest potential with **improving vehicle efficiency** – the yellow wedge



Launched in 2009, with target of doubling fuel economy ('50by50')

Six core partners: FIA Foundation, UNEP, IEA, ITF, ICCT and UC Davis. Financial support from FIA Foundation, GEF and European Commission

THE GFEI FUEL ECONOMY TARGETS

From 2005 baseline:



reduction in L/100km by 2020 in all new cars in OECD countries



by 2030 in all new cars globally



by 2050 in all cars globally

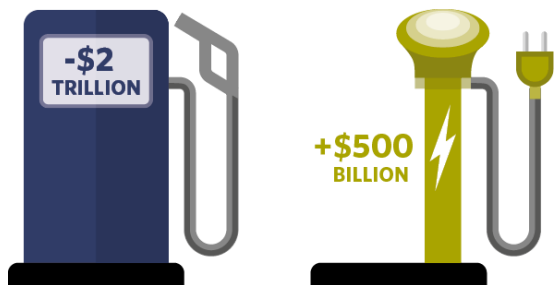
GFEI recognized as leading vehicle efficiency initiative

Achim Steiner 'a model alliance that should inspire other sectors'



WHAT CAN FUEL EFFICIENCY DELIVER?

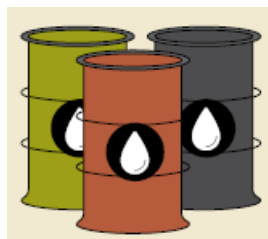
Financial Savings



\$2 trillion savings

A total of **\$2 trillion** could be made in fuel savings by 2025, **\$500 billion** of which would fund the costs of initiating a transition to electric vehicles.

Reduced dependence on oil



Lower carbon emissions



300 fewer power stations

The **33Gt** of CO₂ that could be saved between 2015 and 2050 is roughly the equivalent of closing **300** coal power stations over the same time period.

Air quality benefits

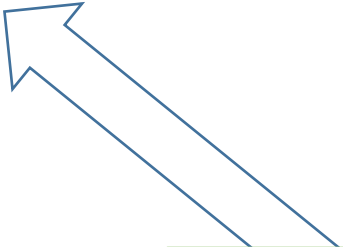


From associated improved vehicle emissions standards

WHAT DOES GFEI DO?

RAISING
GLOBAL
AWARENESS

IN-COUNTRY
POLICY
SUPPORT



RESEARCH AND
EVIDENCE



SUSTAINABLE DEVELOPMENT GOALS



- 
ABOUT GFEI
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USER'S GUIDE
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QUESTIONNAIRE
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CONTACTS

Introduction

Instruments

Case Studies

Resources

Global View

Global View

- Europe
- North America
- Latin America
- Africa
- MEWA
- Asia Pacific

GLOBAL VIEW



NAVIGATOR



INSTRUMENTS

- Fuel Economy Standards
- Import restrictions
- Tech mandate
- Fuel Taxes
- Fee-bate

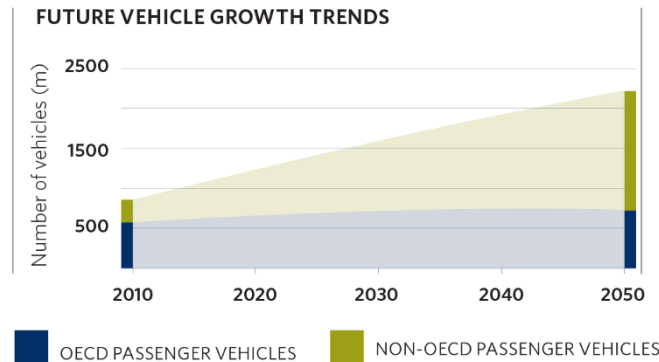
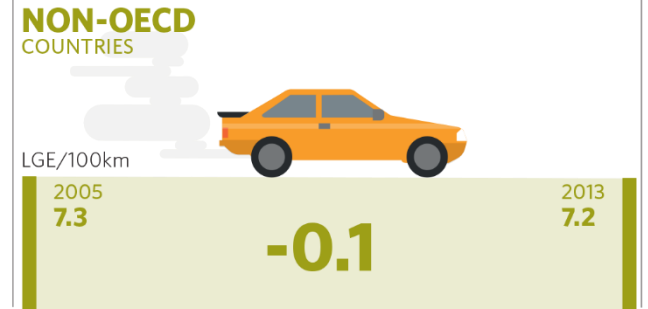
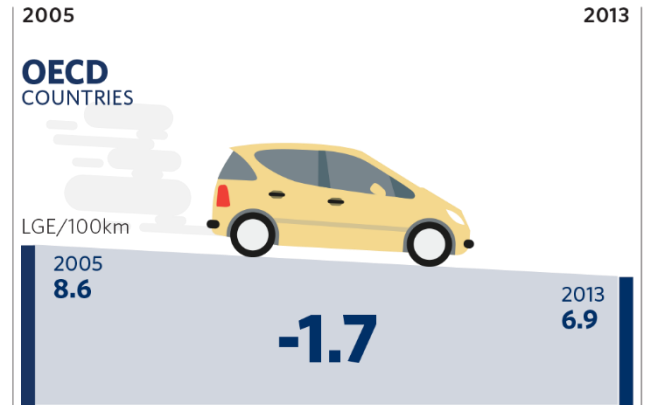


FUEL ECONOMY STATE OF THE WORLD 2016



Global Progress

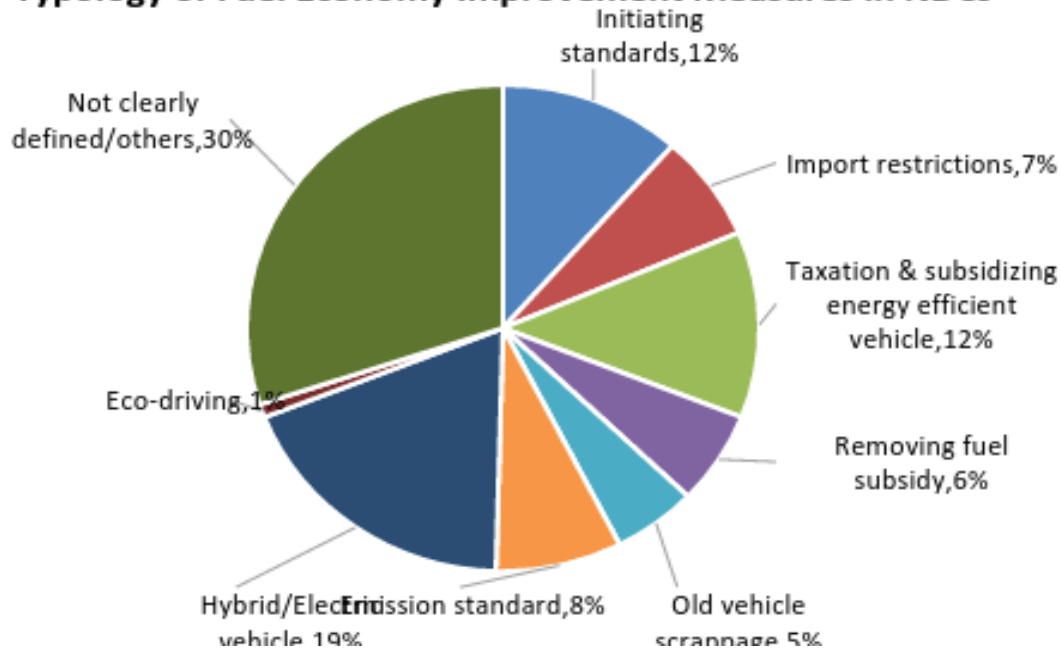
FUEL ECONOMY Average LGE/100km



Out of 159 NDCs:

67% of NDCs (112 NDCs) have highlighted specific transport mitigation measure and 45% of NDCs (71 NDCs) have proposed measures to improve fuel economy of vehicles

Typology of Fuel Economy Improvement Measures in NDCs



Action since COP21

GLOBAL FUEL ECONOMY INITIATIVE
FOCUS ON AFRICA

Africa has some of the fastest growing cities in the world. A huge increase in vehicle numbers, predominately imports of older vehicles, together with poor fuel quality is causing major health and environmental challenges. The Global Fuel Economy Initiative is working to address this and to bring about a step change in vehicle emissions, working closely with the Partnership for Clean Fuels and Vehicles (PCFV) and other sustainable transport initiatives to fundamentally alter the emissions trajectory of the African vehicle fleet.

An important step is to address the quality of the vehicles imported onto the continent. Despite the projected growth, almost all the countries in the region lack regulations to promote importation of cleaner and fuel efficient vehicles, with just a few opening for vehicle import restrictions. A GFEI study in Kenya, showed that 99% of the cars imported were used vehicles in 2010-2012. In Uganda another study found the average age of imported used cars was over 16 years old. With many used vehicles predating some key standards in the markets of origin, this is a major policy challenge.

Addressing fuel quality and fuel economy simultaneously is vital. Vehicles from developed markets such as the EU are subject to tight vehicle standards which include specialised particulate filters designed for high quality, low-sulphur fuel. These emissions controls may become ineffective without accompanying improvements in fuel quality, which is a key reason that GFEI works in tandem with the Partnership for Clean Fuels and Fuel Quality, which is a key reason that GFEI works in tandem with the Partnership for Clean Fuels and Fuel Quality. Improved fuel economy can also help oil importing countries improve their balance of payments and public finances, as well as saving consumers money.







COLLABORATION
At the GFEI training and networking event in Paris, representatives from African countries met to discuss ways of collaborating to improve vehicle fuel economy. They agreed to co-ordinate their efforts, share information, and to work to gain stakeholder acceptance of such policies.

FOCUS ON AFRICA





GLOBAL FUEL ECONOMY INITIATIVE
Global Fuel Economy
An update for COP22


Mauritius

2010 – Initial engagement with GFEI

2011 - adopted a fee-bate scheme that puts a fee for cars emitting above 158 CO₂ g/km and give buyers a rebate if the car they are buying emits less than 158 gr/km.

- immediate shift to cleaner and more efficient cars.
- Fuel economy improved from an average of 7 L/100km in 2005 to 6.6 L/100km in 2013 and 5.8 L/100km in 2014.
- rapid increase of new hybrid vehicle sales registrations from 337 in 2011 to 1418 in 2013.

2013 - national workshop to launch further Work with 3 output reports on Vehicle Inventory, Fuel and Vehicle Legislation, and Cost-Benefit Analysis of Policy Options.



Mauritius

2013 - Feebate adjusted - CO₂ threshold reduced from 158 CO₂g/km to 150 CO₂g/km.

2014 - A national workshop to present the findings to stakeholders. Short, medium and longer term measures to encourage import of more efficient vehicles such as vehicle labelling, a review of the fee-bate CO₂ threshold, eco-driving and public sensitisation campaigns were recommended.

2015 – further work eg updates to light and heavy duty vehicle fuel economy & implementation roadmap for the policies

2016 – new policy - clean and efficient vehicles pay less tax, but without a rebate. – benefits new technologies like hybrid and electric vehicles.

Lessons learned from Mauritius are used in almost all other GFEI Country projects.



2017 – A focus on Africa

1 KENYA

As a result of GFEI's support, Kenya is now adapting its vehicle tax policies to incentivise imports of newer, more efficient vehicles.

GFEI hosted a stakeholder workshop in Nairobi on the 12th May 2016 to discuss new proposals for a vehicle taxation scheme to promote the importation of cleaner, more fuel efficient vehicles in Kenya. The event shared the findings of a report developed by the Kenyan Energy Regulatory Commission in collaboration with the University of Nairobi, and supported by GFEI through UNEP with DFID funding.

The report reviewed vehicle fuel economy trends and identified policy proposals to improve vehicle fuel economy in Kenya. The report proposed two policy instruments: a 'feebate' tax system and a vehicle labelling scheme. A feebate tax structure proposes a fee or levy on inefficient vehicles and a rebate or refund on efficient vehicles while a vehicle labelling scheme provides information on vehicle fuel efficiency to consumers. The report also illustrates what a Kenyan vehicle label could look like.

2 SOUTH AFRICA

Fuel economy baseline and policy development

GFEI has been supporting South Africa to develop a fuel economy baseline, including data analysis and stakeholder workshops. The baseline analysis is the first step towards new vehicle FE/CO₂ emissions standards development as it sets the initial input to model the potential benefits of adopting new vehicle FE /CO₂ standards.

As part of the baseline analysis project a workshop was held in Pretoria (Aug 25th) on fuel economy standards. The workshop was attended by a local and state government officials from the departments of Transport, Energy, and Environmental Affairs, City of Tshwane, Johannesburg Metrobus, as well as technical experts from the South African National Development Institute, and NGOs, all involved in transport and climate issues.

The purpose of the workshop was to present preliminary results of the baseline study, to have a chance to describe how FE and CO₂ standards work, and to listen to stakeholders' questions and comments on the idea of potentially adopting standards. The baseline analysis report will be finalised by the end of November 2016.

3 BOTSWANA

Botswana is developing a new fuel economy baseline to inform policy

On 22-23rd March 2016, the Department of Energy hosted a national workshop to discuss opportunities for improving fuel economy. Around 35 participants attended the workshop, including a range of stakeholders from the energy, environment and transport sectors. Both the Botswanan Deputy Permanent Secretaries for Energy and Environment participated in the workshop. It was proposed that a Botswanan vehicle inventory be undertaken and Botswana has subsequently signed an agreement with GFEI to work on fuel economy baseline analysis and policy development.

4 COTE D'IVOIRE

Focus on improving fuel efficiency of vehicle imports

GFEI has been working with Cote D'Ivoire since 2012. In 2015, ICCT supported the development of a vehicle fleet baseline and analysis. This showed a relatively high average fuel economy. As a result, Ivory Coast allocated GEF STAR funds to support work, including vehicle import analysis to calculate the average fuel economy for subsequent years. 2013- 2015 is currently ongoing, and a data entry tool that will help capture fuel economy data at the point of vehicle import registration is being developed. The next steps will be to develop fuel economy policies that will support imports of cleaner, more efficient vehicles.

5 BENIN

Finalising vehicle baseline

GFEI has been supporting work in Benin since 2013, and an inter-agency task force was established to coordinate the project and review vehicle importation in Benin with the objective of promoting cleaner, more fuel efficient vehicles. The government is looking at collaborating with various partners and regional players to support finalisation of the fuel economy inventory.

6 UGANDA

Developing new policies as part of Nationally Determined Contribution (NDC)

GFEI has been working with Uganda since 2013, and finalised a baseline analysis of the vehicle fleet in 2015 which shows that the average age of vehicles is very high and they are not very efficient. GFEI is supporting the government to take forward a range of improvements, which are included in the INDC. These include a fuel economy policy and new vehicle standards, age limits, inspection and maintenance systems and a vehicle labelling scheme.

7 ALGERIA

GFEI has been working with the Algerian government since 2014, and held a workshop in June 2015, which proposed introducing vehicle labelling and a review of vehicle taxation system.

NEW COUNTRIES

As part of GFEI's '100 for 50 by 50' campaign, GFEI is finalising agreements to work with the following:

- | | | |
|------------|--------------|------------|
| A Botswana | S Malawi | X Tanzania |
| B Burundi | G Mali | L Togo |
| C Djibouti | H Mozambique | M Zambia |
| D Ghana | I Nigeria | N Zimbabwe |
| E Liberia | J Rwanda | |



NORTH AFRICA

8 MOROCCO 9 TUNISIA 10 EGYPT

GFEI has supported the development of fuel economy baselines in Morocco, Tunisia and Egypt, which were published in 2015, alongside proposals for fuel economy improvements.

11 MAURITIUS

Successful feebate scheme

GFEI has been working with Mauritius since 2010. Since then, Mauritius has introduced a series of measures to improve fuel economy, including a feebate scheme which incentivised vehicles with lower emissions. These incentives resulted in an immediate shift to cleaner and more efficient cars. Fuel economy improved from an average of 7 L/100km in 2005 to 6.6 L/100km in 2013 and 5.8 L/100km in 2014. GFEI is currently working with Mauritius to monitor the ongoing impact, propose additional policy measures for light and heavy duty vehicles and replicate the scheme in the region. This year the government replaced the feebate tax system with a new tax structure to further encourage importation of electric and more efficient vehicles. Lessons learned from Mauritius are used in almost all other GFEI country projects.

12 ETHIOPIA

GFEI developed fuel economy policy proposals with the Ethiopian Transport Authority and the Addis Ababa Institute of Technology in 2010. The vehicle fleet has doubled since then, and the country is considering policy options.

ECOWAS

GFEI, through UNEP, is working with the Economic Community of West African States (ECOWAS) to support the development of a West African regional clean and efficient vehicles roadmap that will contribute to reduced vehicle CO₂ emissions worldwide in line with the GFEI target of doubling vehicle fuel efficiency by 2050. The ECOWAS Commission brings together 15 West African countries - Benin, Burkina Faso, Cape Verde, Cote d'Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal and Togo. Already several West African countries are developing GFEI baseline data, and policy proposals. The

ECOWAS Commission has been active in promoting cleaner, lower sulphur fuels in the region, as well as promoting a regional outlook to vehicle importation. The ECOWAS Commission recommended implementation of vehicle fuel economy work as the next step for the sub-region at regional workshops held in May 2015 in Abidjan and in June 2016 in Abuja. The support to the ECOWAS to develop a regional fuel economy roadmap will build on past and on-going support to some of the ECOWAS countries on the GFEI. Some of the countries that the GFEI has been initiated or is planned are Cote d'Ivoire, Benin, Liberia, Togo, Mali, Ghana and Nigeria.



AFRICA



FOCUS ON AFRICA





THANK-YOU

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