

Promoting Cleaner and More Efficient Vehicles - The Global Fuel Economy Initiative

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CO2 Emissions from Transport

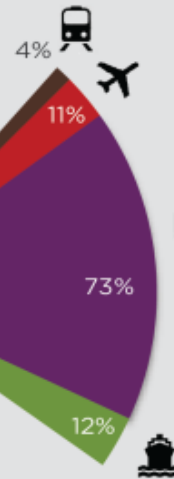
THE TRANSPORTATION SECTOR

A major contributor to global energy-related CO₂ emissions

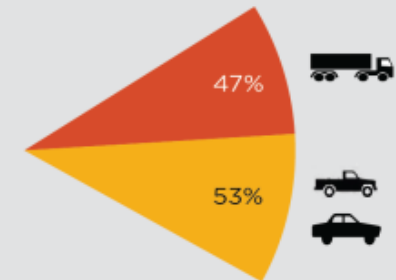
GLOBAL ENERGY-RELATED
EMISSIONS
≈ 30 Gt CO₂



TRANSPORT EMISSIONS
≈ 7 Gt CO₂



ROAD TRANSPORT
EMISSIONS
≈ 5 Gt CO₂



LEGEND

RAIL

AIR

ROAD

SEA

HEAVY-DUTY
VEHICLES

LIGHT-DUTY
VEHICLES

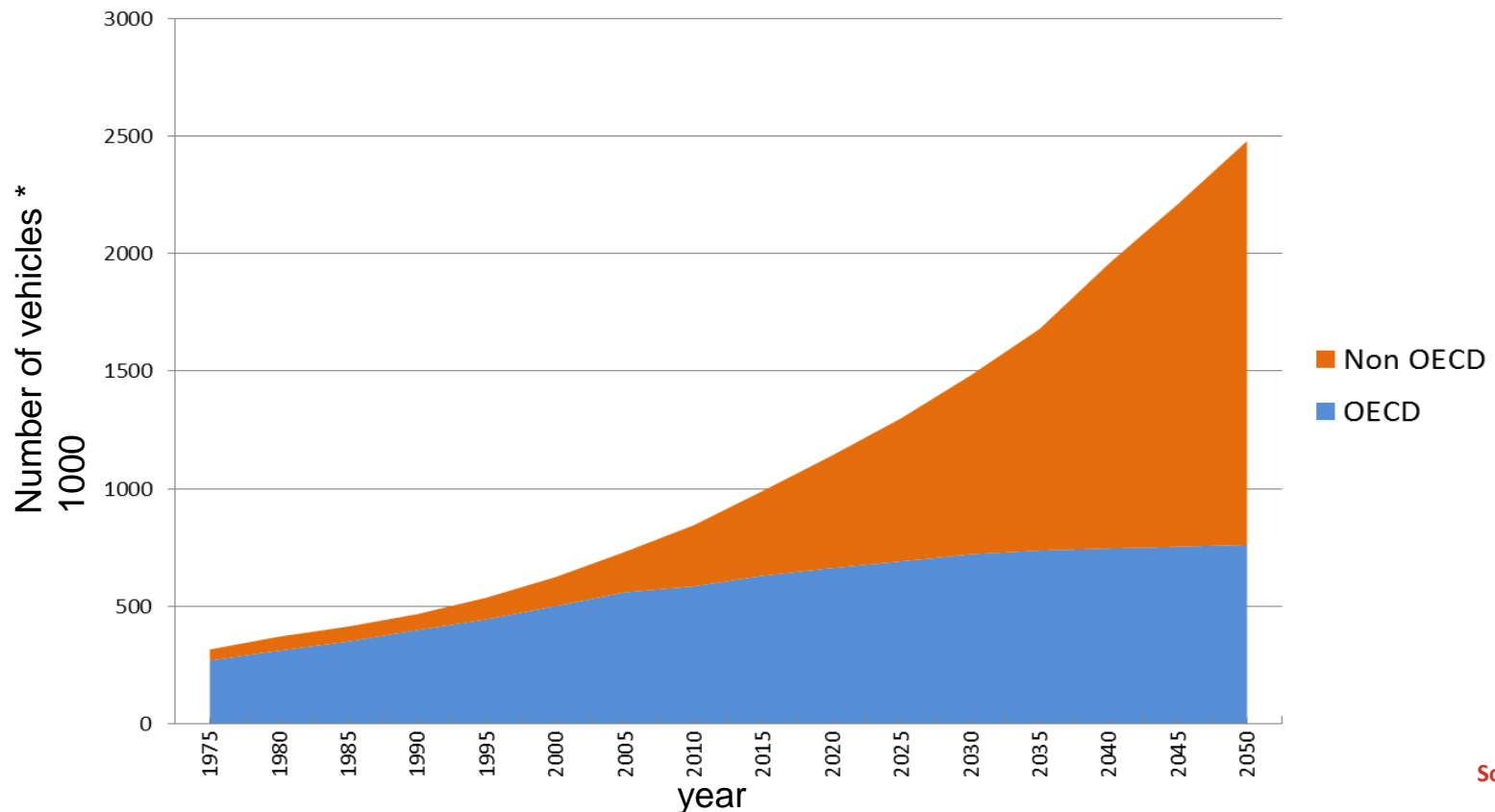
Sources:

ICCT (2014). Global Transportation Roadmap Model. Version 2.0. More information available at <http://www.theicct.org/global-transportation-roadmap-model>.

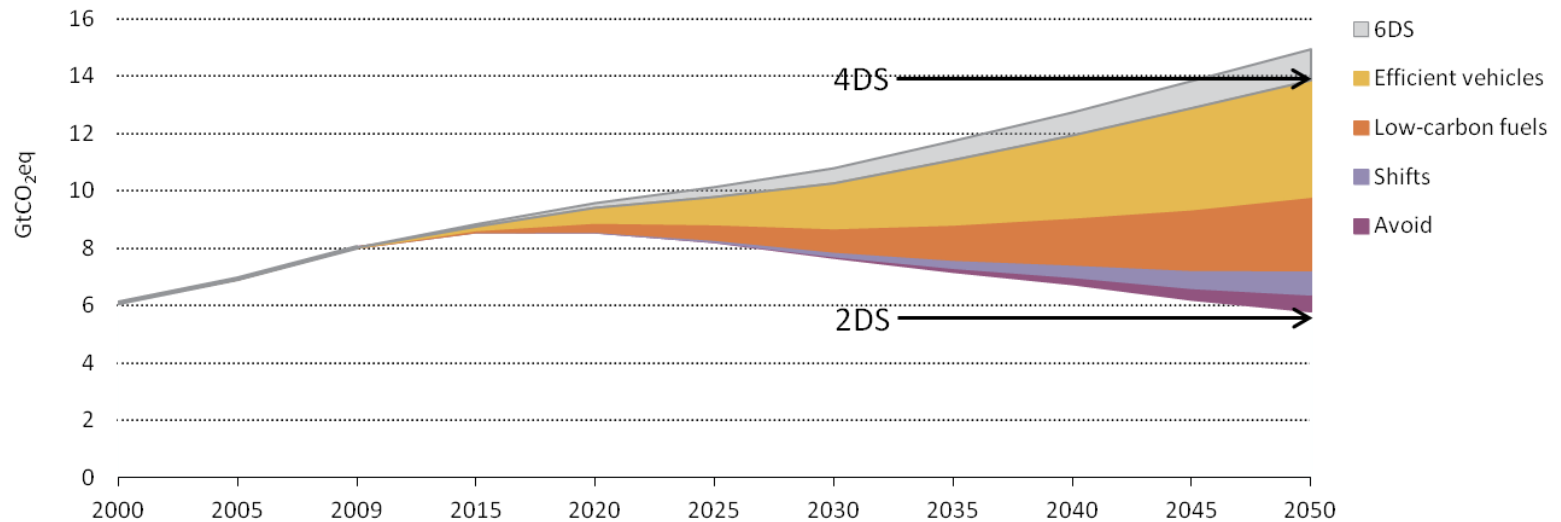
IEA (2012). CO₂ Emissions from Fuel Combustion: Highlights. 2012 edition. Retrieved from <https://www.iea.org/co2highlights/co2highlights.pdf>.

Cars a growing reality in emerging and developing markets...

- ~ 1 billion today...over 2.5 billion by 2050
- 90%+ of growth in developing, emerging economies
- Opportunity for energy efficiency, green economy innovation



Carbon Reduction Potential Transport

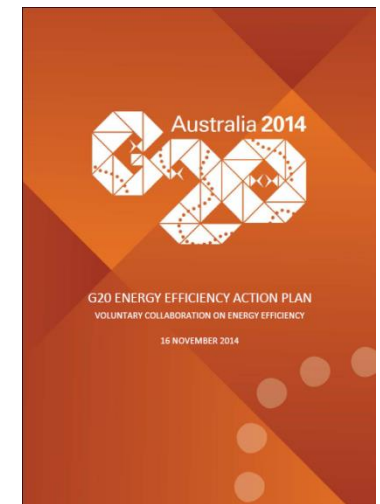
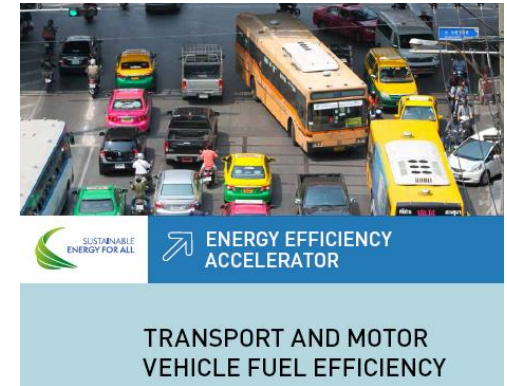


- Potential for transport to reduce 4 GT/yr in 2030 and 8 GT/yr in 2050 (IEA MOMO model 2015)
- Comprehensive approach needed:
 - **Avoid** transport, for example through better city planning
 - **Shift** to efficient transport modes, like public transport
 - **Improve** through cleaner vehicles
- Biggest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

About the GFEI



- GFEI promotes and supports a doubling of fuel economy of global fleet
- GFEI links with G20 Energy Efficiency action plan, SE4ALL, Paris Climate Agreement
- Target to double the efficiency of the global fleet by 2050.... all new vehicles by 2030
- Going from an average of 8.3 l/100km (2005) to 4.2 l/100 km
- Activities at global, regional and national level
- Six partners:



THE GFEI FUEL ECONOMY TARGETS

From 2005 baseline:

30%

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

50%

by 2030 in all new cars globally

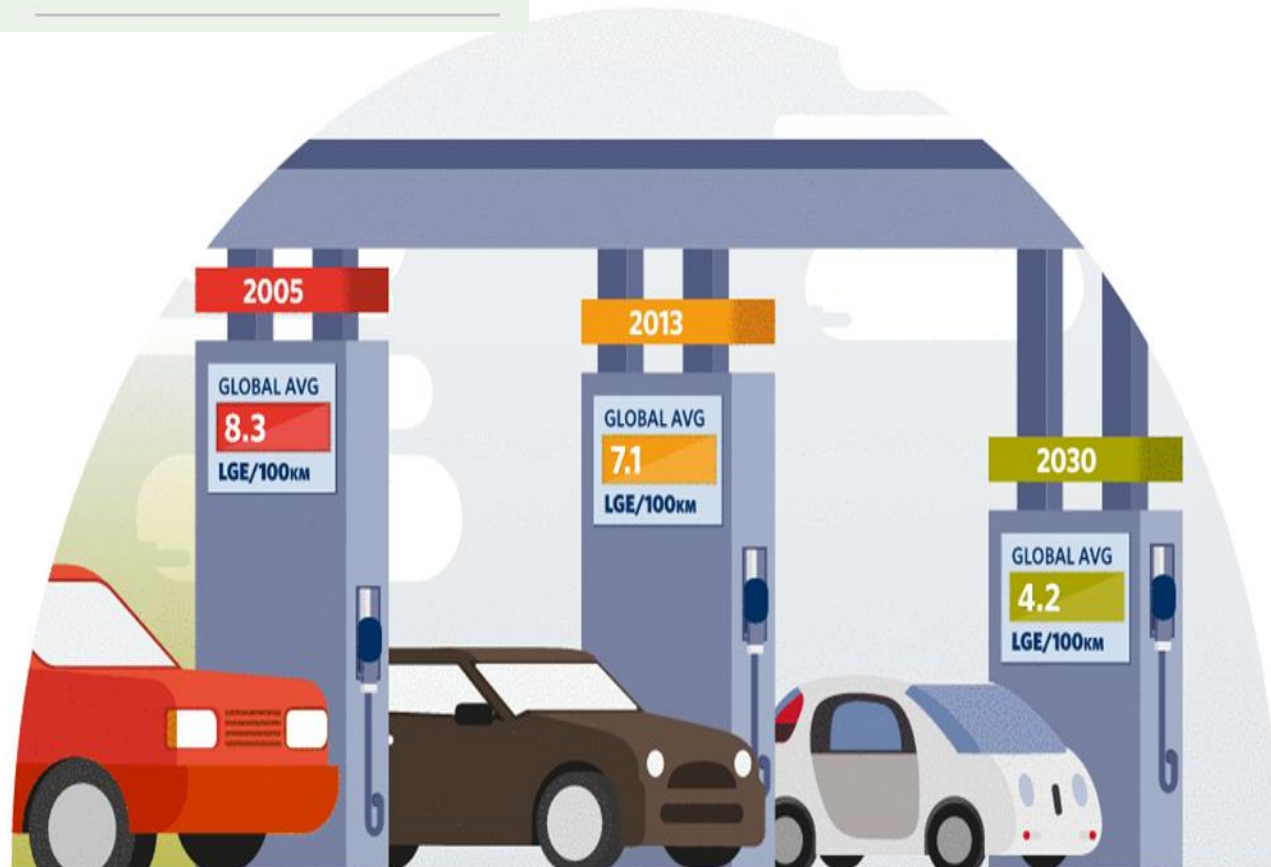
50%

by 2050 in all cars globally

THE GLOBAL GOALS:
FUEL ECONOMY

**DOUBLE
AVERAGE
FUEL
ECONOMY**

**OF NEW CARS BY 2030
AND ALL CARS BY 2050**



Doubling the efficiency of the global fleet by 2050

		2005	2008	2011	2013	2030
OECD average	average fuel economy (Lge/100km)	8.6	7.9	7.3	6.9	
	annual improvement rate (% per year)	-2.7%	-2.6%	-2.6%		
Non-OECD average	average fuel economy (Lge/100km)	7.3	7.4	7.3	7.2	
	annual improvement rate (% per year)	0.5%	-0.4%	-0.9%		
Global average	average fuel economy (Lge/100km)	8.3	7.7	7.3	7.1	
	annual improvement rate (% per year)	-2.3%	-1.9%	-1.8%		
GFEI target	average fuel economy (Lge/100km)	8.3				4.2
	required annual improvement rate (% per year)	2005 base year				
		2014 base year				

OECD: rates close to target

Non-OECD: little improvement

Global: Right trend at slow pace

2030: Improve global FE by 50%

GFEI Focus:

* RESEARCH

* COUNTRY PROJECTS

* GLOBAL CAMPAIGNS

GLOBAL FUEL ECONOMY INITIATIVE
www.globalfuelconomy.org

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Working Paper 9



Read 'How vehicle fuel economy improvements can save \$2 trillion...'
>

View all Working Papers >



Fuel Economy and the UN's Post 2015 SDGs

Click here to download the leaflet >

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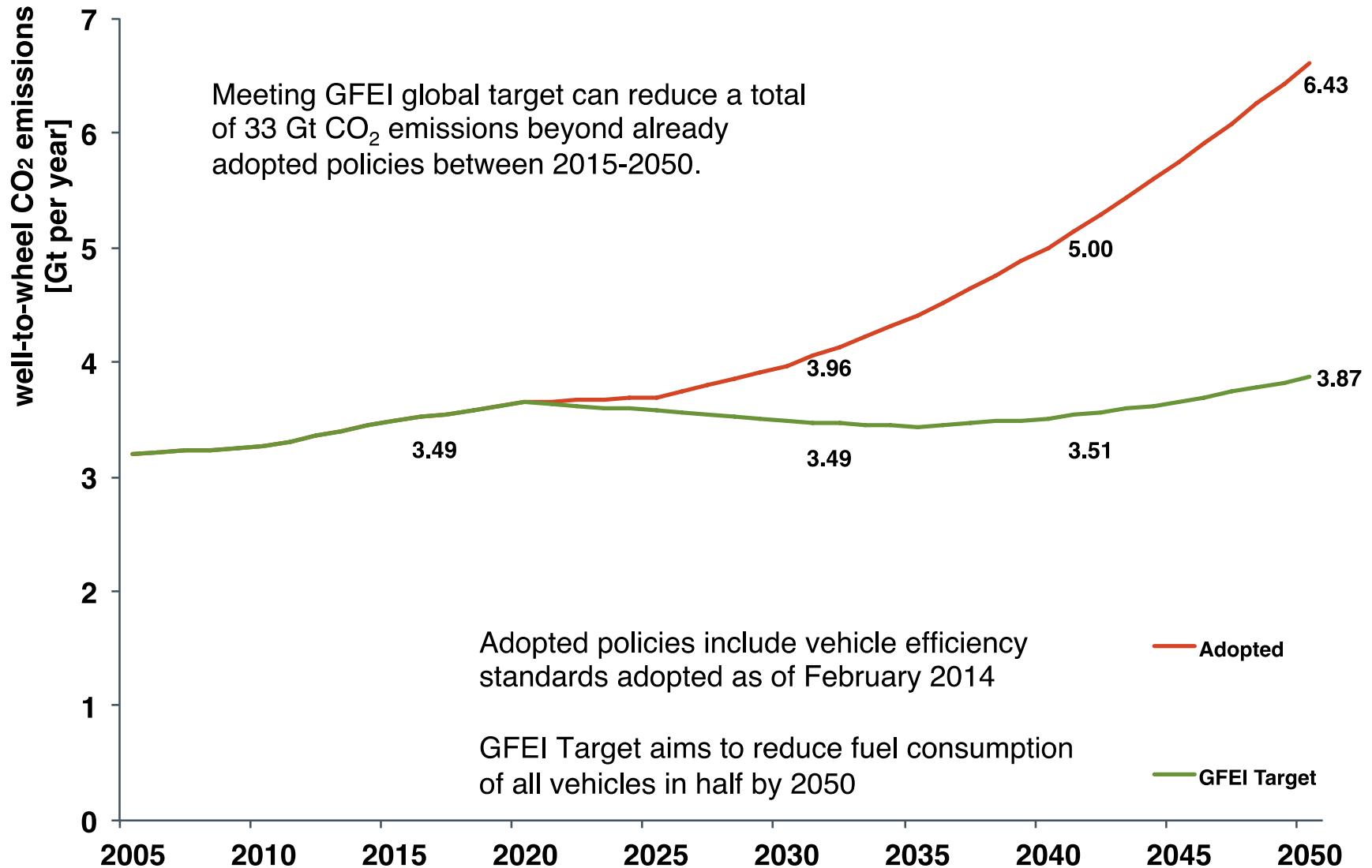
GFEI Updates

- US Foundation urges G20 to act on Fuel economy
- Global Environment Fund (GEF) Funding supports GFEI's next steps
- GFEI Co-Organizes Russia's First Specialized Auto Fuel Economy Event



GFEI State of the World 2014

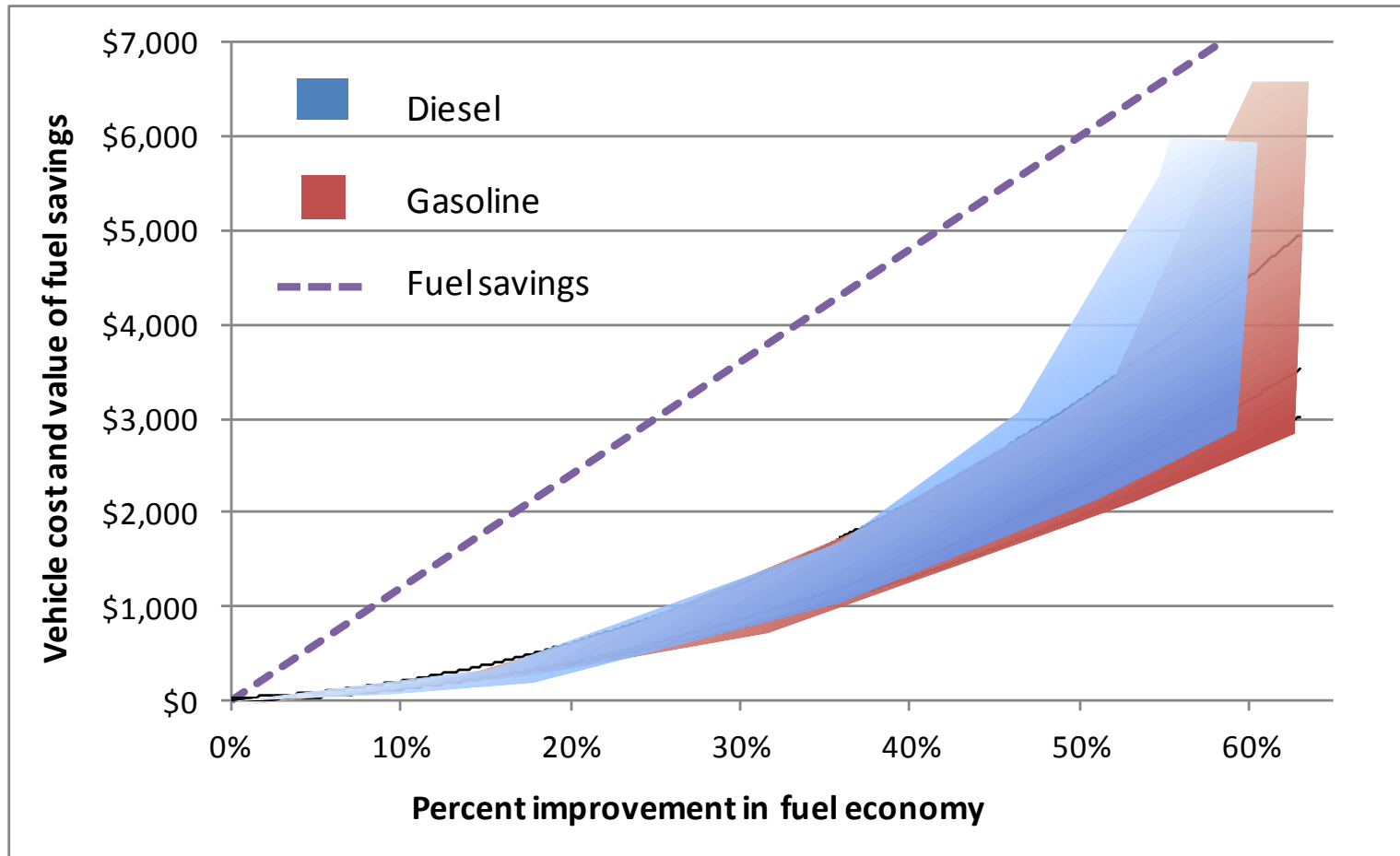
Meeting GFEI targets can stabilize global light-vehicle CO₂ emissions, despite a near tripling of vehicle fleet



Source: ICCT Roadmap Model

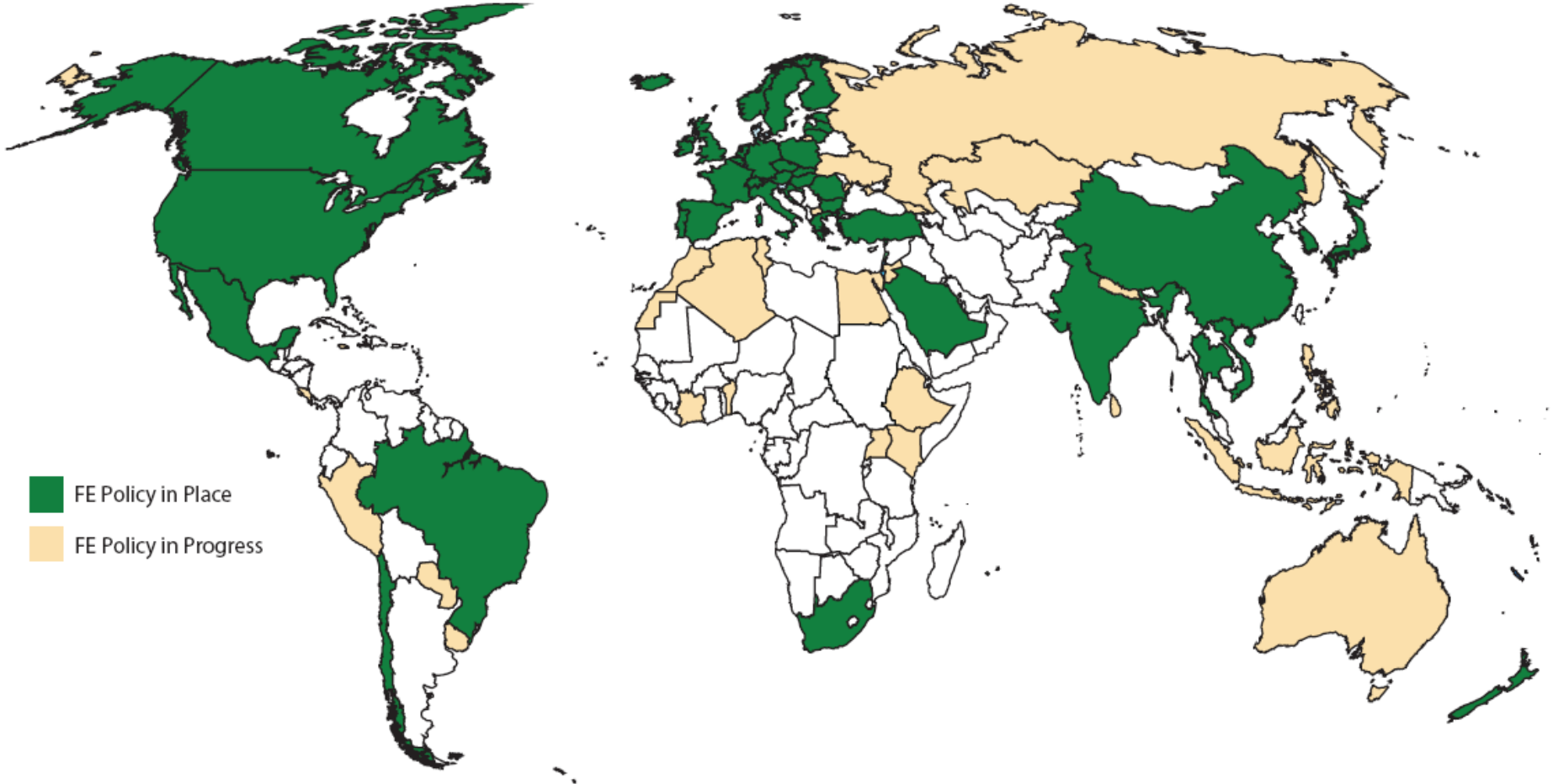
Fuel Economy Improvements are Cost-effective

Fuel savings more than pays for fuel economy improvements in light-duty vehicles



Source: IEA Fuel Economy Roadmap, July 2012

Global Progress on Fuel Economy Policy (2016)



■ FE Policy in Place
■ FE Policy in Progress

GFEI Country Engagement 2016

countries with ongoing projects	new countries 2016	Countries expressed interest
1Chile	28Malaysia	63Panama
2Ethiopia	29Bangladesh	64Iran
3Indonesia	30Kazakhstan	65Angola
4Kenya	31Mali	66Bhutan
5Georgia	32Nigeria	67Burkina Faso
6Ivory Coast	33Togo	68Burundi
7Mauritius	34Tanzania	69Cambodia
8Jamaica	35Rwanda	70Cameroon
9Montenegro	36Bolivia	71Cape Verde
10Macedonia	37Argentina	72D.R. Congo
11Costa Rica	38Ecuador	73Eritrea
12Vietnam	39Ukraine	74Fiji
13Morocco	40Jordan	75Guinea
14Bahrain	41Colombia	76Iran
15Tunisia	42Djibouti	77Kyrgyzstan
16Thailand	43Dominican Republic	78Laos
17Peru	44Guatemala	79Lesotho
18Russia	45Moldova	80Marshall Islands
19Benin	46Pakistan	81Mongolia
20Algeria	47Barbados	82Namibia
21Uruguay	50St. Lucia	83Niger
22Nepal	51Lebanon	84Papua New Guinea
23Paraguay	52Zambia	85Senegal
24Sri Lanka	53Ghana	86Sierra Leone
25Philippines	54Malawi	87Solomon Islands
26Uganda	55Zimbabwe	88South Africa
27Egypt	56Honduras	89Tajikistan
	57Nicaragua	90Turkmenistan
	58El Salvador	91Turkey
	59Botswana	92Armenia
	60Mozambique	93Azerbaijan
	61Myanmar	94Serbia
	62Liberia	95Samoa
		96Gambia
		97Uzbekistan
		98Bosnia-Herzegovina
		99Albania

Policy Options

VEHICLE FUEL EFFICIENCY STANDARDS

- Introduce and regularly strengthen mandatory standards
- Establish and harmonize testing procedures for fuel efficiency measurement.

FISCAL MEASURES

- Fuel taxes and vehicle taxes to encourage the purchase of more fuel-efficient vehicles.
- Infrastructure support and incentive schemes for very fuel-efficient vehicles.

MARKET-BASED APPROACHES

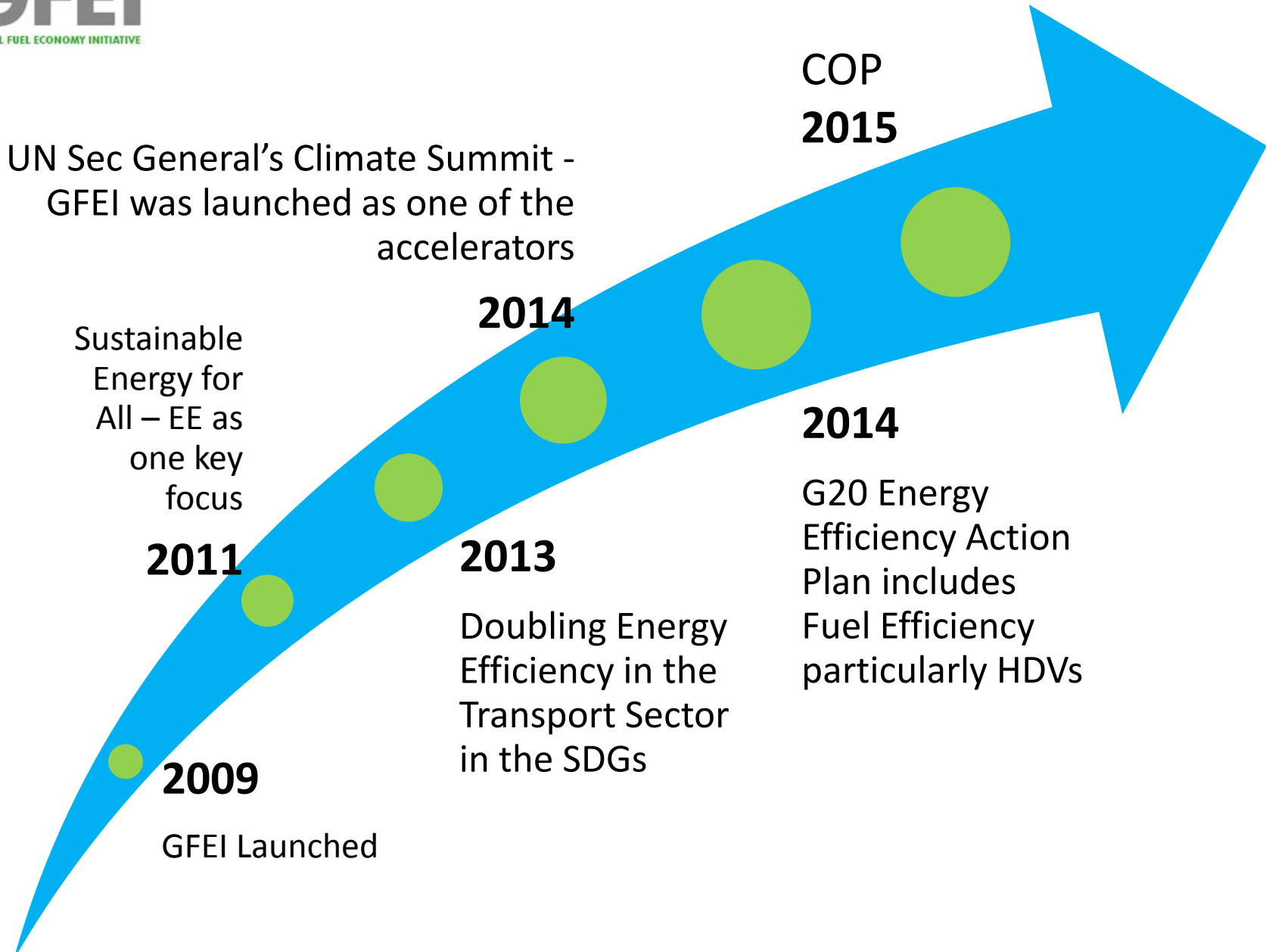
- Voluntary programs such as U.S. SmartWay and other green freight programs

INFORMATION MEASURES

- Vehicle fuel economy labels
- Improving vehicle operational efficiency through eco-driving and other measures.

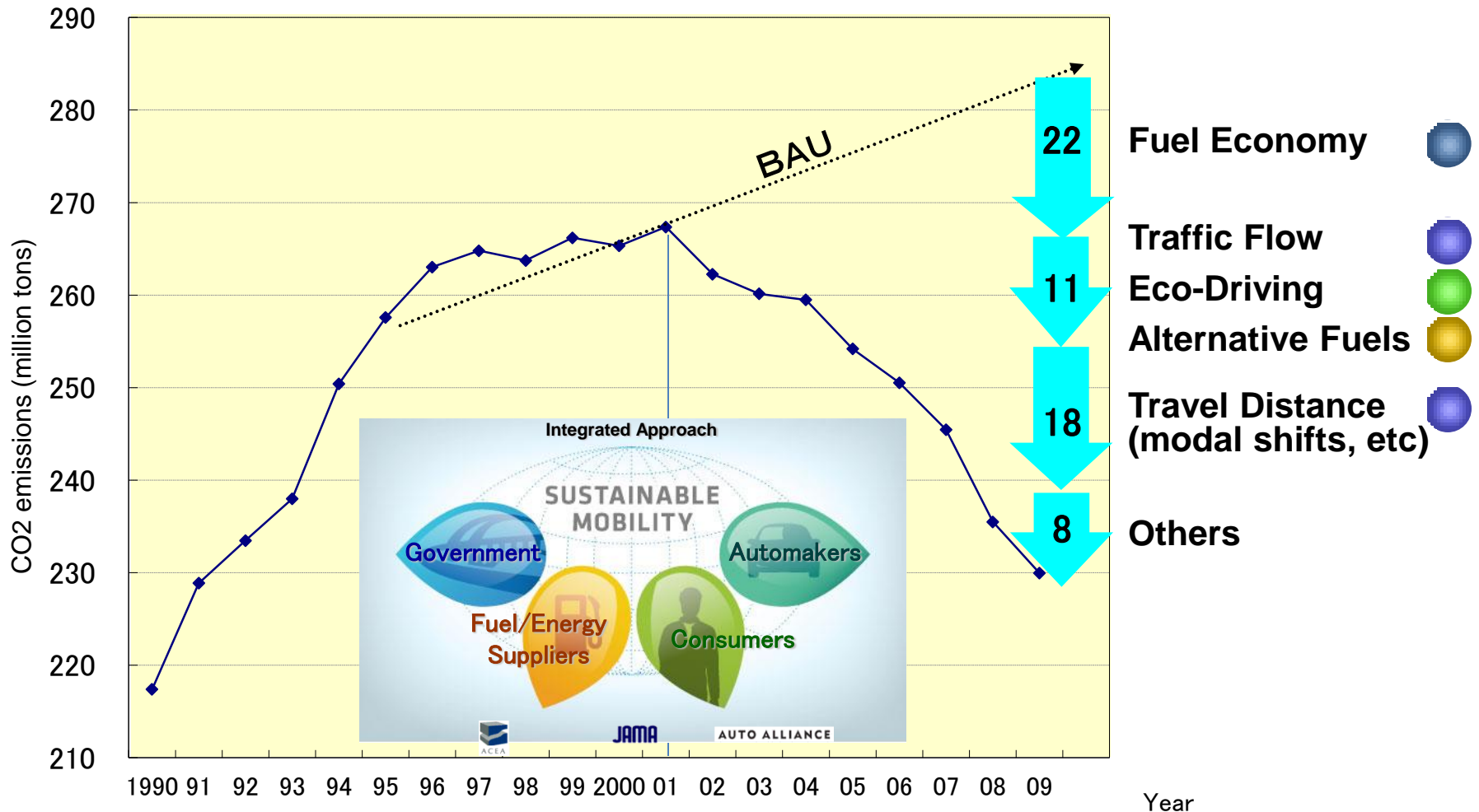


GFEI at the global stage



A few case examples: Japan

◆ CO2 Emission Reduction in Japanese Transportation Sector



Chile

- Adopted a mandatory **fuel economy labelling scheme** from February 2013 becoming the first Latin American country to adopt such a scheme
- In September 2014 adopted a **taxation scheme that puts a tax on less efficient and polluting vehicles**, based on CO₂ and NO_x ratings
- In 2015 adopted a scheme to provide **subsidies for cleaner and more efficient taxis** based on the fuel economy labelling scheme, with the aim to replace the 60,000 taxi fleet over the next 8 years

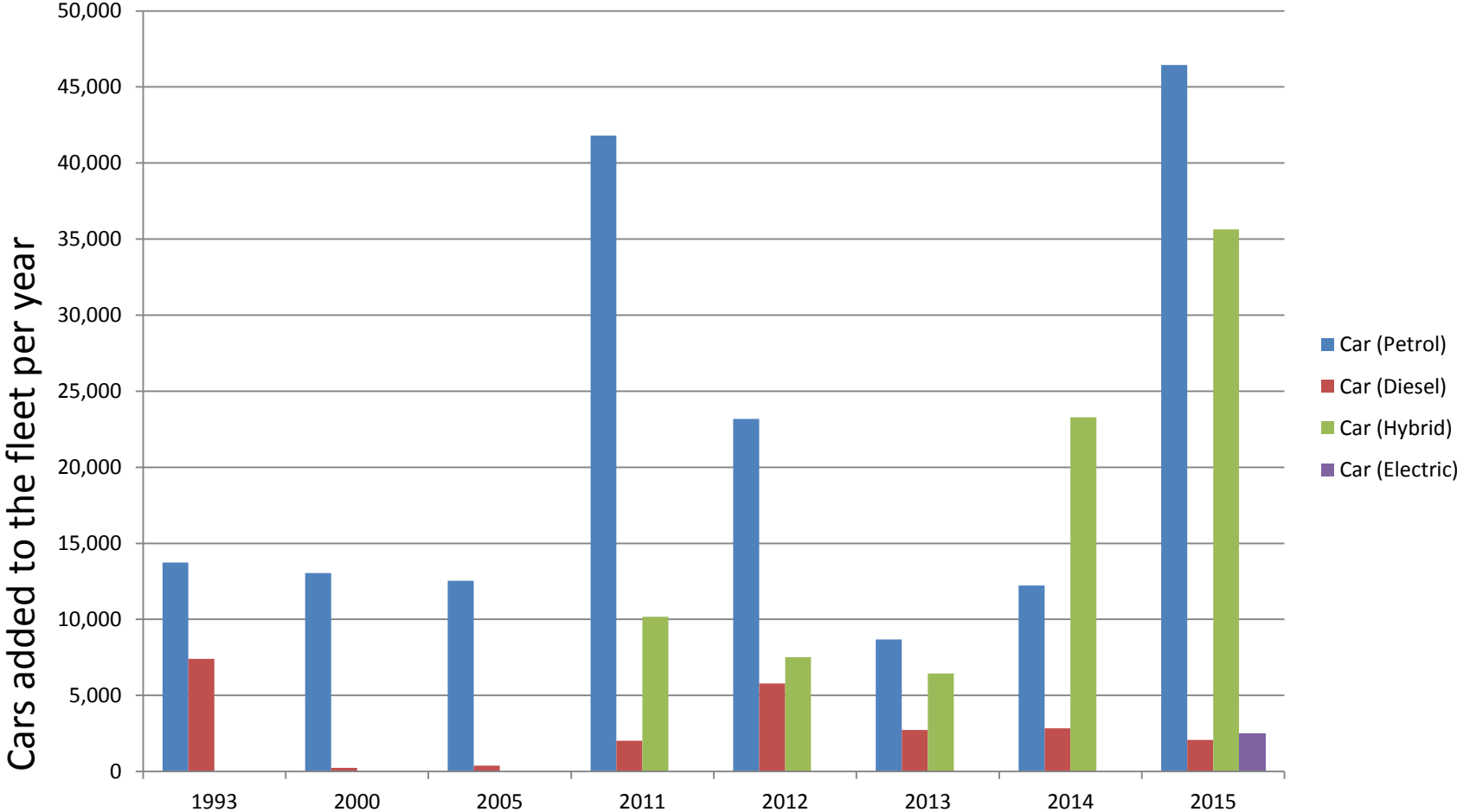
Eficiencia Energética	
Marca: Modelo: Combustible: Norma de emisión: Emisiones de CO ₂ : Código de Informe técnico:	 Rendimiento de combustible
Mixto 14,5 km/l	Ciudad 12,1 km/l
Carretera 18,3 km/l	
<p>Los valores reportados en esta etiqueta son referenciales.</p> <p>El rendimiento de combustible y emisiones de CO₂ corresponde al valor constatado en el proceso de homologación desarrollado por el Ministerio de Transporte y Telecomunicaciones, a través del Centro de Control y Certificación Vehicular (3CV).</p> <p>El rendimiento efectivamente obtenido por cada conductor dependerá de sus hábitos de conducción, de la frecuencia de mantenimiento del vehículo, de las condiciones ambientales y geográficas, entre otras.</p> <p>El CO₂ es el principal gas efecto invernadero responsable del cambio climático.</p> <p>informate en www.xxx.cl</p>	
	

Fiscal Levies on Motor Vehicles – 2015 January

Sri Lanka

	Present						Cumulative		
	CD	PAL	Excise	VAT	NBT	Cess	Total	Excise	Total
Petrol Car									
Golf Cars	25%	5%	45%	12%	2%	0%	124%	100%	115%
Less than 1,000 CC	25%	5%	92%	12%	2%	0%	202%	150%	173%
1,000 - 1,599 cc	25%	5%	92%	12%	2%	0%	202%	150%	173%
1,600 cc - 1,999 cc	25%	5%	92%	12%	2%	0%	202%	150%	173%
2,000 cc - 2,999cc	25%	5%	122%	12%	2%	0%	251%	200%	230%
Exceeding 3,000 cc	25%	5%	137%	12%	2%	0%	276%	220%	253%
Diesel - Car									
Less than 1,600 CC	25%	5%	122%	12%	2%	0%	251%	200%	230%
1,600 CC - 2,000 CC	25%	5%	137%	12%	2%	0%	276%	220%	253%
2,000 CC - 2,500 CC	25%	5%	152%	12%	2%	0%	301%	240%	276%
Exceeding 2,500 CC	25%	5%	183%	12%	2%	0%	352%	300%	345%
Hybrid Petrol Car									
Less than 1,000 CC	15%	5%	14%	12%	2%	0%	60%	50%	58%
1,000 - 1,599 CC	15%	5%	14%	12%	2%	0%	59.75%	50%	57.50%
1,600 cc - 1,999 cc	15%	5%	14%	12%	2%	0%	60%	50%	58%
2,000 cc - 2,999cc	15%	5%	40%	12%	2%	0%	100%	85%	98%
Exceeding 3,000 cc	15%	5%	57%	12%	2%	0%	126%	100%	115%
Hybrid Diesel Car									
Less than 1,600 CC	15%	5%	21%	12%	2%	0%	71%	60%	69%
1,600 CC - 2,000 CC	15%	5%	21%	12%	2%	0%	71%	60%	69%
2,000 CC - 2,500 CC	15%	5%	40%	12%	2%	0%	100%	85%	98%
Exceeding 2,500 CC	15%	5%	57%	12%	2%	0%	126%	100%	115%
Electric Car									
Car - Electric	15%	5%	0%	12%	2%	0%	34%	2.5%	25%

Results of tax incentives in Sri Lanka



Next steps

- GFEI implemented in 27 countries
- In Africa 7 countries directly supported to develop baseline and 3 through our regional partner
- In Eastern Africa Kenya, Ethiopia and Uganda have developed baseline
- Kenya through DFID funding has prepared policy proposals
- An additional 13 countries in Africa will be supported to develop baseline
- In total 40 additional countries to be supported globally = ~ **70 countries**
- East Africa and Africa can benefit from global fuel economy improvements just by policy interventions as no manufacturing industry yet (except South Africa which has a CO2 tax already)





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