Global Fuel Economy Initiative

For cleaner, more efficient vehicles

Vered Ehsani

Transport Unit, UNEP

Vered.Ehsani@unep.org

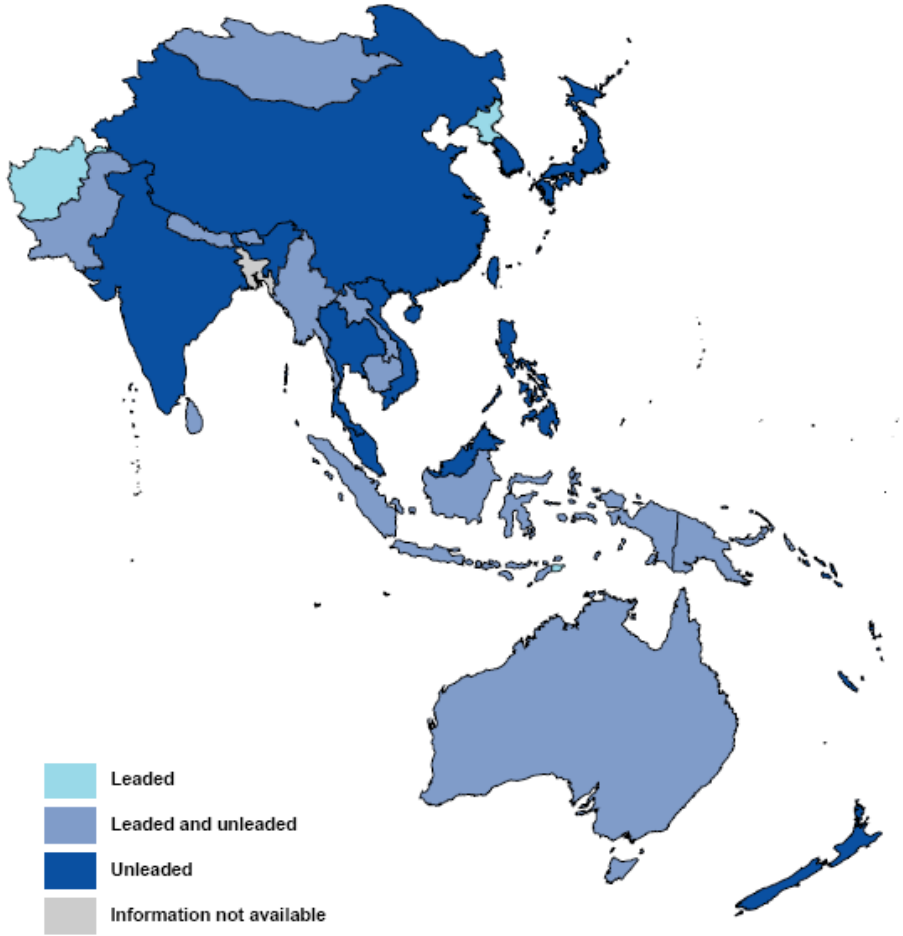
Bangkok, August 2010

Partnership for Clean Fuels and Vehicles

Status of leaded gasoline phase-out in the Asia-Pacific region

□ □ January 2002

UNEP

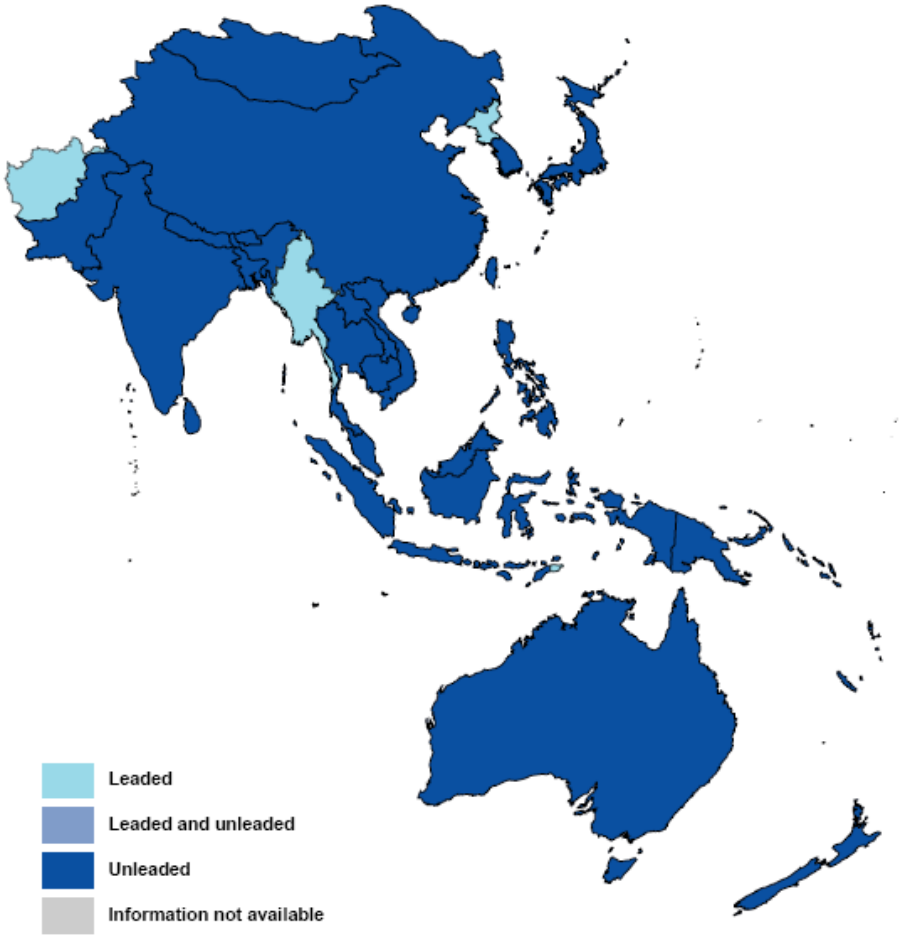


Partnership for Clean Fuels and Vehicles

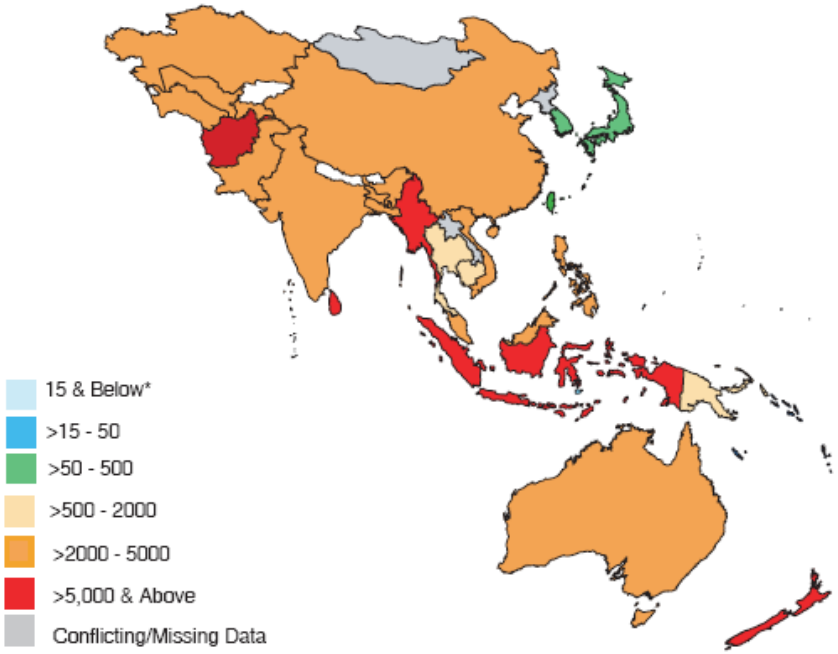
Status of leaded gasoline phase-out in the Asia-Pacific region

□ □ □ April 2010

UNEP

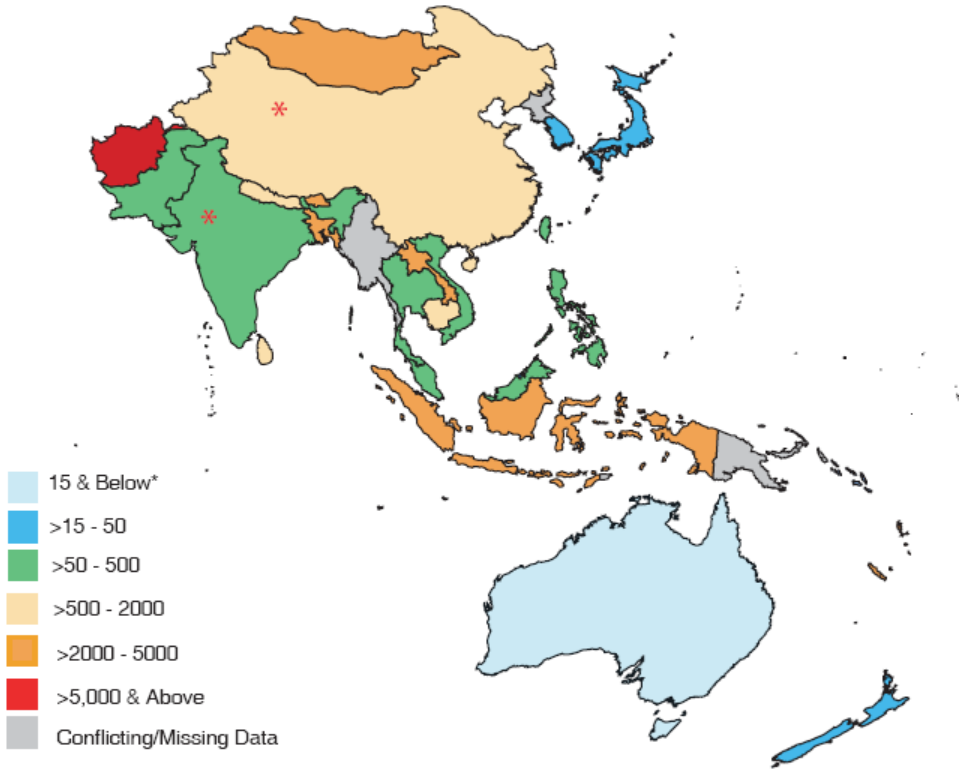


Diesel Fuel Sulphur Levels: Asia-Pacific
January 2002



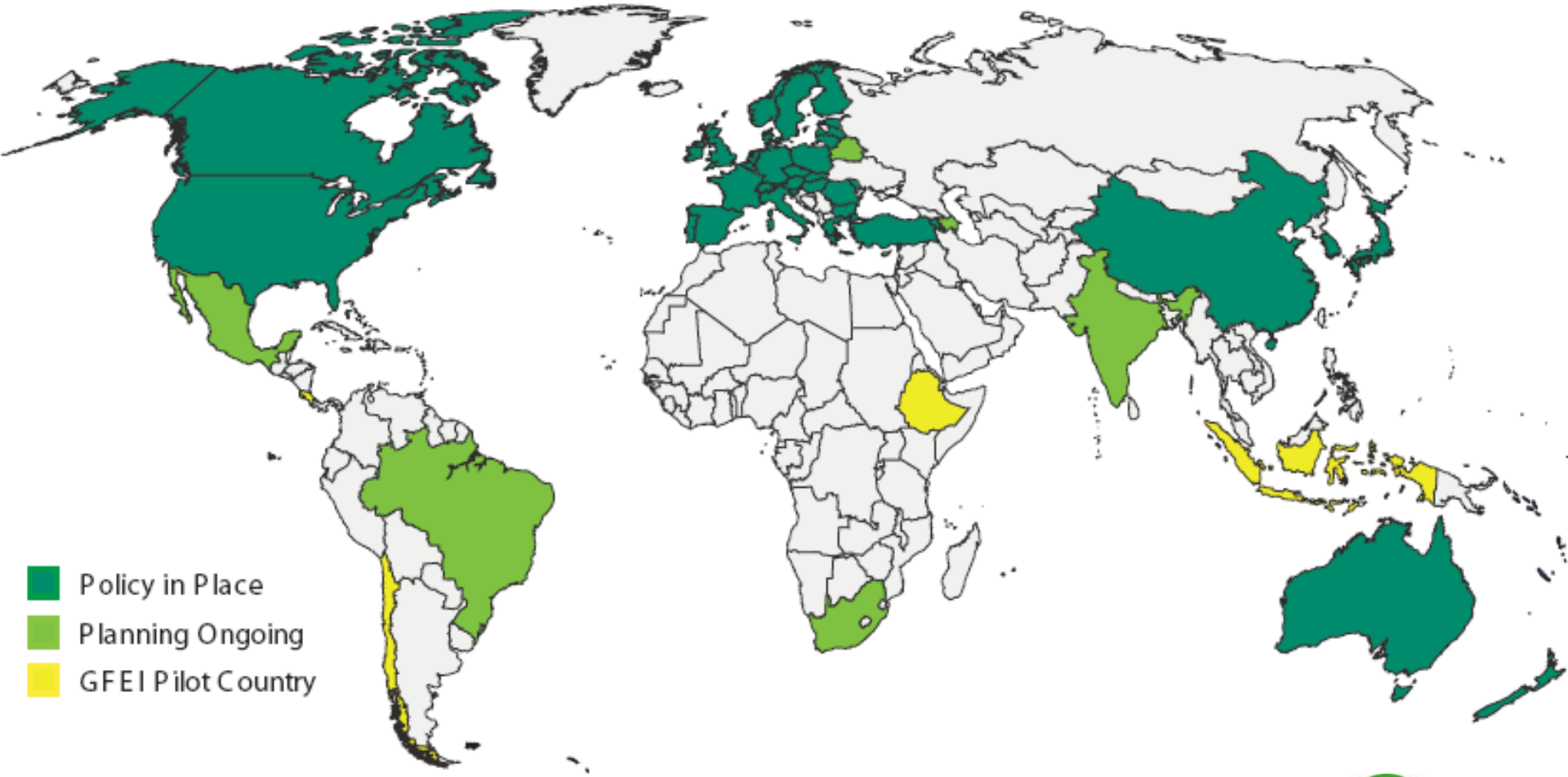
* Information in parts per million (ppm)
For additional details and comments per country, visit www.unep.org/pcfv.

Diesel Fuel Sulphur Levels: Asia-Pacific
March 2010



* Information in parts per million (ppm)
* China (Beijing, Hong kong and Macao Sar). - 50ppm
* India (metro cities). - 350ppm
For additional details and comments per country, visit www.unep.org/pcfv.

Next step: A Global Approach to LDV Emissions



Status as of 1 March 2010, see www.50by50campaign.org for updates

International Transport Forum

FIA Foundation for the Automobile and Society

UNEP

50BY50
GLOBAL FUEL ECONOMY INITIATIVE
www.50by50campaign.org

GFEI Fuel Efficiency Targets (relative to a 2005 baseline)			
	2020	**2030**	**2050**
New Cars	**30%** average fuel economy improvement for new vehicles worldwide, mainly from incremental efficiency improvements to engines, drive trains, weight, aerodynamics, accessories.	**50%** average improvement for new vehicles worldwide from incremental improvements and full hybridisation of most models of vehicles.	**50%+** improvement: Additional improvements in new car fuel economy are possible from on-going light-weighting, shifts to electric motor drive, possible adoption of fuel cell vehicles.
Stock of all cars	Improvement in average on-road efficiency, due to improvements in new car fuel economy and additional measures such as eco-driving, better maintenance.	**30%** improvement in stock, roughly trailing new car improvements plus on-road improvement measures.	**50% (50 by 50: the Ultimate Goal)** improvement from the current global fuel economy average of **8L/100km** to an average of **4L/100km** (25km/L) .

Main Priorities of the GFEI

• **Collect, analyze, and communicate data and analysis** on fuel economy, and monitor trends and progress towards a 50% improvement by 2050;

• **Promote and support the development of national fuel economy policies** that encourage fuel economy improvements over time for vehicles produced and/or sold in-country – the Tool serves to open the door to national discussions and planning;

• **Technical Harmonization** – Labeling requirements, testing standards and drive cycles, for example.

• **Provide consumers and decision makers with information** on options, costs, and available resources to improve fleet performance and reduce emissions through a global database, GFEI website and tool.

GFEI Pilot countries

Costa Rica, Chile, Ethiopia, Indonesia

- Data gathering on vehicle fleet
- Analysis of existing policies
- Baseline setting
- Training using Auto Fuel Efficiency Tool
- GFEI expertise, best practice for policy and appropriate technology
- National Working Groups
- Sub-regional consultations

GFEI tool for national strategy development

Goals: To emphasise the importance of fuel economy to governments; and
To provide basic information and resources for designing a fuel economy policy

Answers *Why*, *What* and ***How*** of considering and designing a fuel economy policy

I. Why?

1. **Understanding the problem**
2. **The benefits of action**
    a. Energy Security
    b. Savings – fiscal implications
    c. Trade and harmonization
    d. Environment

II. What?

1. **Case Studies**
2. **Approaches to Auto Fuel Economy and Types of Interventions**
3. **Fiscal Measures**
4. **Information & Communication**
5. **Additional technical information**

III. How? Implementing and Comparing Auto Fuel Economy Programs

1. **Cost/benefit comparison of programs and elements**
2. **Developing a strategy for tracking your progress**
3. **Developing a baseline**

The Basics

Instruments

Next steps

Intro

AUTO FUEL EFFICIENCY AND CLIMATE CI

BACK TO MAP

Home | About GFEI | FAQ | Case Studies | Events | Contact Us

Home

Welcome to the GFEI fuel efficient vehicle standards tool – your guide to understanding automotive fuel efficiency policies, practices, and technologies.

This product is designed to provide an overview of available policy instruments for improving fleet-wide auto fuel efficiency and case studies that depict approaches from both developed and developing countries.

This tool presents: - The Basics [link to The Basics section] designed to answer questions about the need to set standards for car fuel use; - Instruments [link to Instruments section], describing best available practice in designing policies to improve fuel efficiency performance; - Case Studies which looks at examples – through the interactive mapping and descriptions [link to map and case studies here] – of policy and incentive packages around the world; and - Next Steps [link to next steps here] to help apply this knowledge.

Case Studies

+ Europe
+ North America
+ Africa
+ Latin America
+ Middle East Asia
+ Asia Pacific

Regulatory policies

Economic Instruments

Traffic control measures

Information

The Basics

Instruments

Next steps

Intro

AUTO FUEL EFFICIENCY AND CLIMATE CI

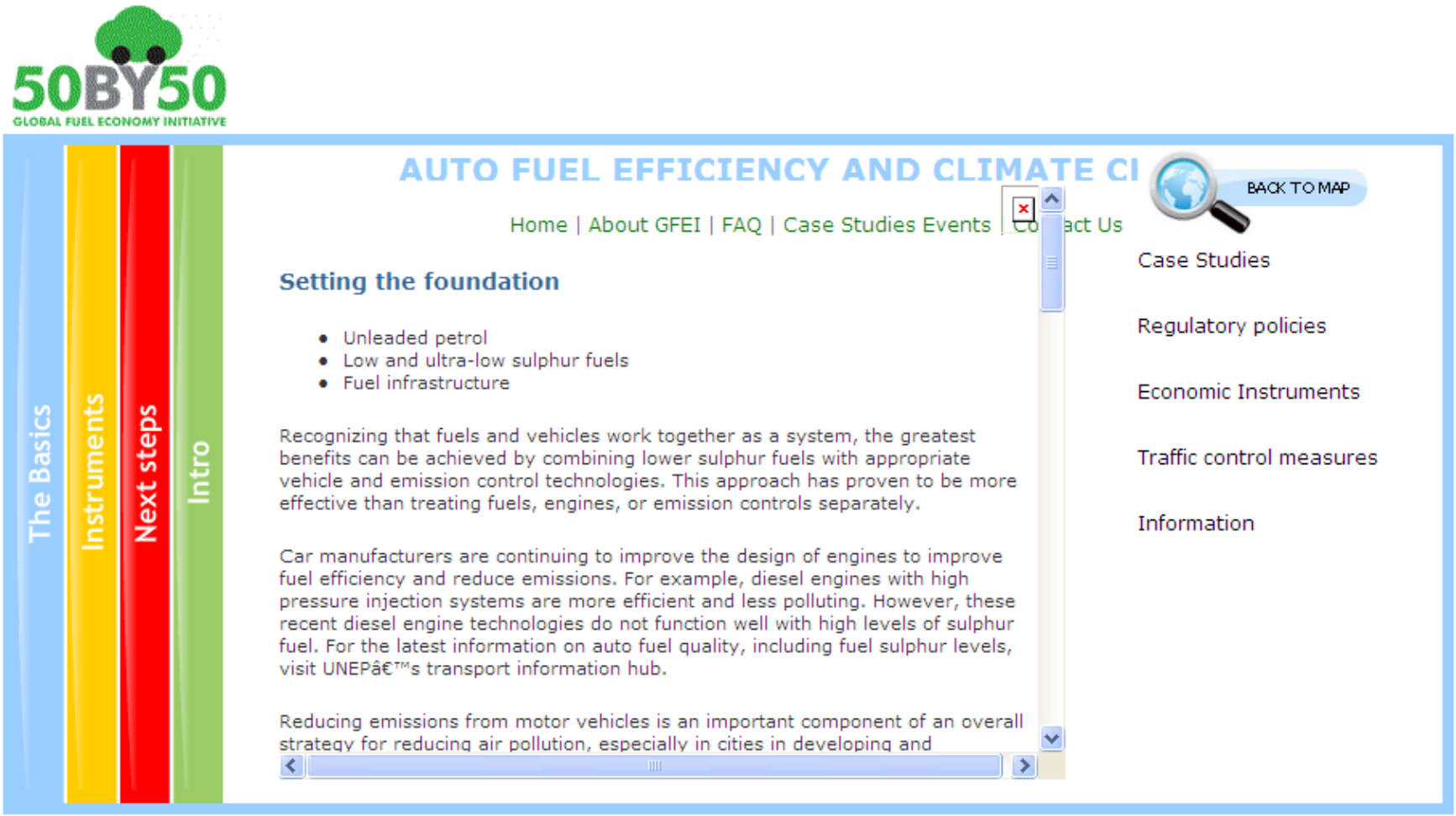
BACK TO MAP

The Basics

Why should all countries adopt fuel economy standards for light duty vehicles? This section looks at the reasons for improving automotive fuel economy and the potential gains of working together for increasing the global light duty vehicle fleet's fuel efficiency.

read more...

MapTool


50BY50
GLOBAL FUEL ECONOMY INITIATIVE
The Basics
Instruments
Next steps
Intro
AUTO FUEL EFFICIENCY AND CLIMATE CI
BACK TO MAP
Home | About GFEI | FAQ | Case Studies Events | Co act Us
Setting the foundation
Unleaded petrol
Low and ultra-low sulphur fuels
Fuel infrastructure
Recognizing that fuels and vehicles work together as a system, the greatest benefits can be achieved by combining lower sulphur fuels with appropriate vehicle and emission control technologies. This approach has proven to be more effective than treating fuels, engines, or emission controls separately.
Car manufacturers are continuing to improve the design of engines to improve fuel efficiency and reduce emissions. For example, diesel engines with high pressure injection systems are more efficient and less polluting. However, these recent diesel engine technologies do not function well with high levels of sulphur fuel. For the latest information on auto fuel quality, including fuel sulphur levels, visit UNEPâ€™s transport information hub.
Reducing emissions from motor vehicles is an important component of an overall strategy for reducing air pollution, especially in cities in developing and
Case Studies
Regulatory policies
Economic Instruments
Traffic control measures
Information

50BY50
GLOBAL FUEL ECONOMY INITIATIVE

The Basics | Instruments | Next steps | Intro

AUTO FUEL EFFICIENCY AND CLIMATE CI

BACK TO MAP

Home | About GFEI | FAQ | Case Studies Events | Co[illegible]act Us

Flanking measures: complementing auto fuel efficiency initiatives

Non-motorized transport

The GFEI aims to facilitate large reductions of greenhouse gas emissions and oil use through improvements in automotive fuel economy in the face of rapidly growing car use worldwide. The initiative targets an improvement in average fuel economy (reduction in fuel consumption per kilometre) of at least 50% worldwide by 2050. With efficiency related complementary, or flanking, measures designed to shift of personal mobility to less polluting and energy-intensive modes, this is likely to result in at least a stabilisation of CO2 emissions from the global car fleet.

Going beyond stabilization and reducing emissions below 2005 levels would require a combination of strong measures and support from policy makers. This could include, for example, achieving the 50% improvement in fuel economy of new vehicles globally by 2030 (or before) and maintaining progress beyond that target, e.g. via vehicle electrification and deploying other advanced technologies.

But further reductions will also require a variety of measures to help manage

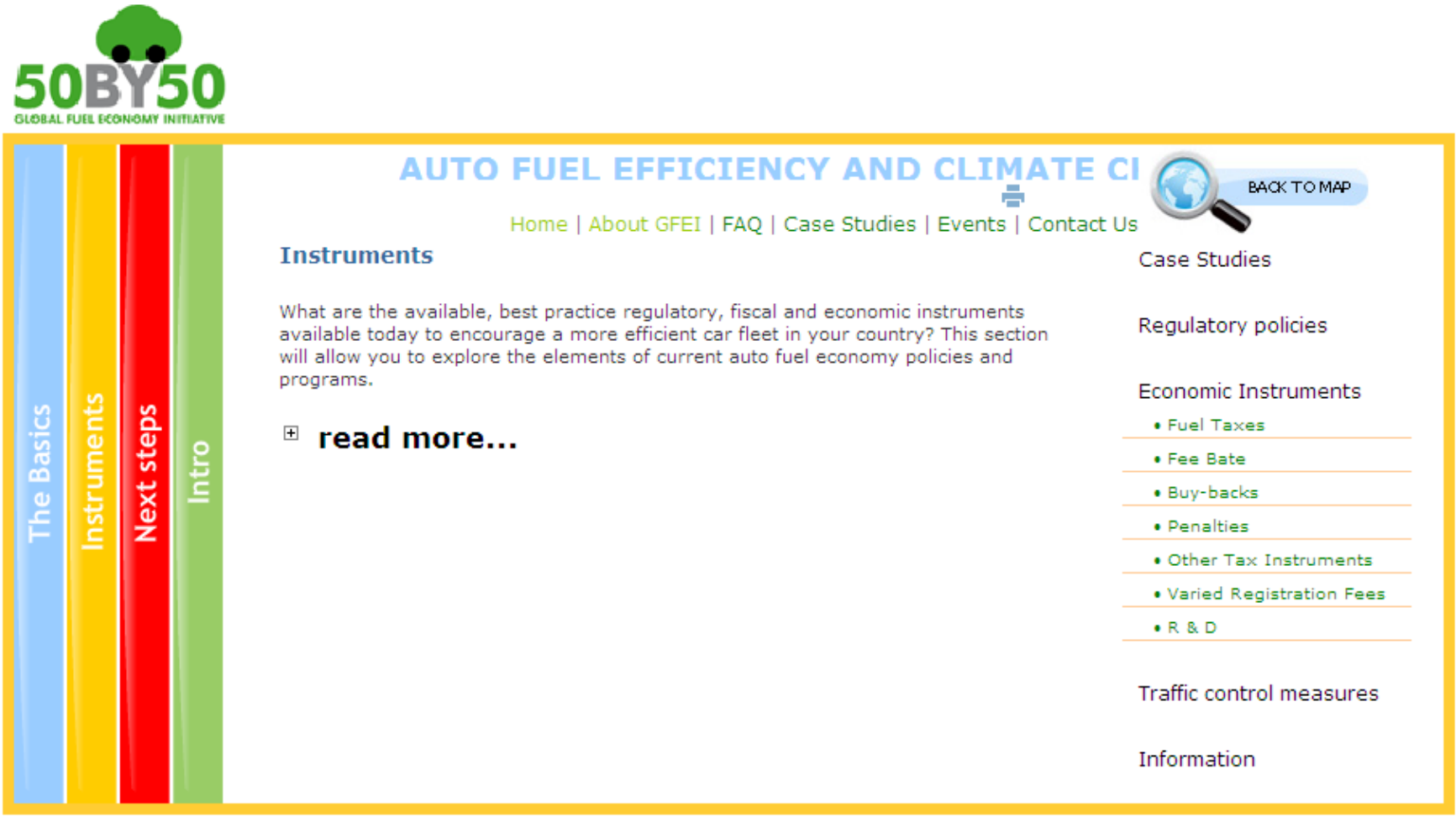
Case Studies

Regulatory policies

Economic Instruments

Traffic control measures

Information


50BY50
GLOBAL FUEL ECONOMY INITIATIVE
The Basics
Instruments
Next steps
Intro
AUTO FUEL EFFICIENCY AND CLIMATE CI
BACK TO MAP
Home | About GFEI | FAQ | Case Studies | Events | Contact Us
Instruments
What are the available, best practice regulatory, fiscal and economic instruments available today to encourage a more efficient car fleet in your country? This section will allow you to explore the elements of current auto fuel economy policies and programs.
read more...
Case Studies
Regulatory policies
Economic Instruments
• Fuel Taxes
• Fee Bate
• Buy-backs
• Penalties
• Other Tax Instruments
• Varied Registration Fees
• R & D
Traffic control measures
Information

50BY50
GLOBAL FUEL ECONOMY INITIATIVE

The Basics
Instruments
Next steps
Intro

AUTO FUEL EFFICIENCY AND CLIMATE CI

BACK TO MAP

Instruments

What are the available, best practice regulatory, fiscal and economic instruments available today to encourage a more efficient car fleet in your country? This section will allow you to explore the elements of current auto fuel economy policies and programs.

read more...

Case Studies

Regulatory policies

Economic Instruments

Traffic control measures

- Priority Lanes
- Parking
- Road Pricing

Information

The Basics | Instruments | Next steps | Intro

AUTO FUEL EFFICIENCY AND CLIMATE CI

BACK TO MAP

Instruments

What are the available, best practice regulatory, fiscal and economic instruments available today to encourage a more efficient car fleet in your country? This section will allow you to explore the elements of current auto fuel economy policies and programs.

read more...

Case Studies

Regulatory policies

Economic Instruments

Traffic control measures

Information

- Labeling
- Consumer Awareness
- Reporting
- + Technology...
- Vehicle Weight
- Vehicle Power
- Test Cycles

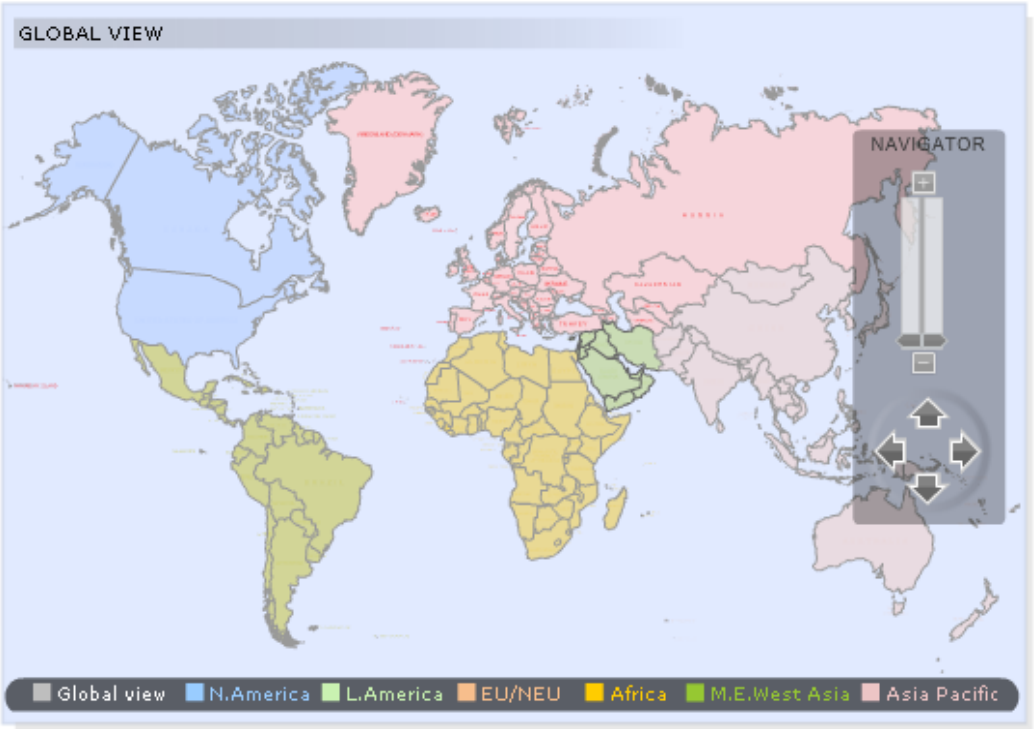
50BY50
GLOBAL FUEL ECONOMY INITIATIVE

The Basics
Instruments
Next steps
Intro

Global View
Europe
N America
L America
Africa
M.East Asia
Asia Pacific

INSTRUMENTS

Fuel Economy Standards
Import restrictions
Tech mandate
Fuel Taxes
Fee-bate
Buy-back
Penalties
Other tax instruments
Registration fees



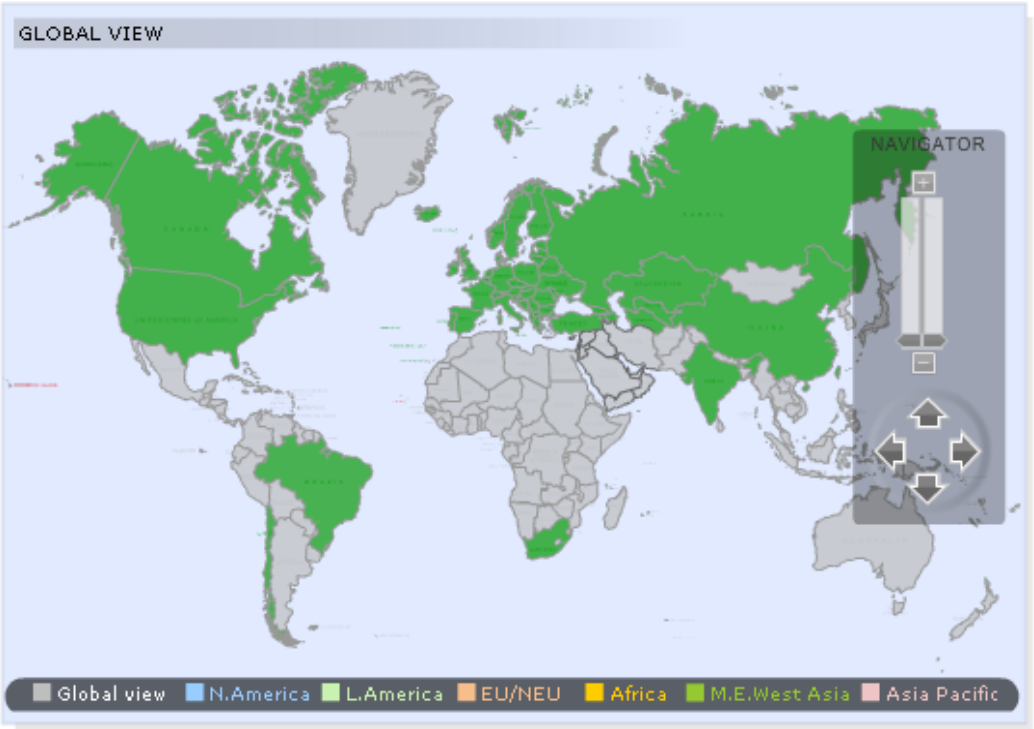
50BY50
GLOBAL FUEL ECONOMY INITIATIVE

The Basics
Instruments
Next steps
Intro

- Global View
- Europe
- N America
- L America
- Africa
- M.East Asia
- Asia Pacific

INSTRUMENTS

- Registration fees
- R&D
- Priority lanes
- Parking
- Road pricing
- Labeling
- Public info
- Industry reporting



50BY50
GLOBAL FUEL ECONOMY INITIATIVE

The Basics
Instruments
Next steps
Intro

Global View
Europe
N America
L America
Africa
M.East Asia
Asia Pacific

INSTRUMENTS

Fuel Economy Standards
Import restrictions
Tech mandate
Fuel Taxes
Fee-bate
Buy-back
Penalties
Other tax instruments
Registration fees