



# UNITED NATIONS ENVIRONMENT PROGRAMME

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 Программа Организации Объединенных Наций по окружающей среде    برنامج الأمم المتحدة للبيئة

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## PROJECT DOCUMENT

### SECTION 1: PROJECT IDENTIFICATION

- 1.1 Project title:** The Global Fuel Economy Initiative (GFEI)
- 1.2 Project number:** GFL/  
PMS:
- 1.3 Project type:** MSP
- 1.4 Trust Fund:** GEF
- 1.5 Strategic objectives:**
- GEF strategic long-term objective: CC7 To facilitate market transformation for sustainable mobility in urban areas leading to reduced GHG emissions
- Strategic programme for GEF IV: CC-SP5 Promoting sustainable innovative systems for urban transport
- 1.6 UNEP priority:** Climate Change
- 1.7 Geographical scope:** Global and Regional
- 1.8 Mode of execution:** Internal
- 1.9 Project executing organization:** UNEP/DTIE
- 1.10 Duration of project:** 32 months  
Commencing: September 2010  
Completion: April 2013

**1.11 Cost of project** US\$ %

Cost to the GEF Trust Fund	<b>980,000</b>	<b>31</b>
Co-financing		
Cash		
<b>UNEP-DTIE</b>	<b>200,000</b>	<b>6</b>
<b>Bilaterals (US)</b>	<b>1,205,000</b>	<b>39</b>
<b>Private sector</b>	<b>50,000</b>	<b>2</b>
<b>FIA Foundation</b>	<b>250,000</b>	<b>8</b>
<i>Sub-total</i>	<i>2,685,000</i>	<i>86</i>
In-kind		
<b>UNEP-DTIE</b>	<b>35,000</b>	<b>1</b>
<b>FIA Foundation</b>	<b>100,000</b>	<b>3</b>
<b>IEA</b>	<b>300,000</b>	<b>10</b>
<i>Sub-total</i>	<i>435,000</i>	<i>14</i>
<b>Total</b>	<b>3,120,000</b>	<b>100</b>

## 1.12 Project summary

UNEP, the International Energy Agency (IEA), the International Transport Forum (ITF) and the FIA Foundation, with support from the GEF and other international funds and organizations, have launched a new global initiative – the Global Fuel Economy Initiative (GFEI, [www.50by50campaign.org](http://www.50by50campaign.org)), which combines expertise and resources from all four partners for a comprehensive program to improve global automotive fuel economy within the next few decades. GEF support will be used to enable the participation of non Annex I countries in this global effort to stabilize and reduce emissions from passenger vehicles.

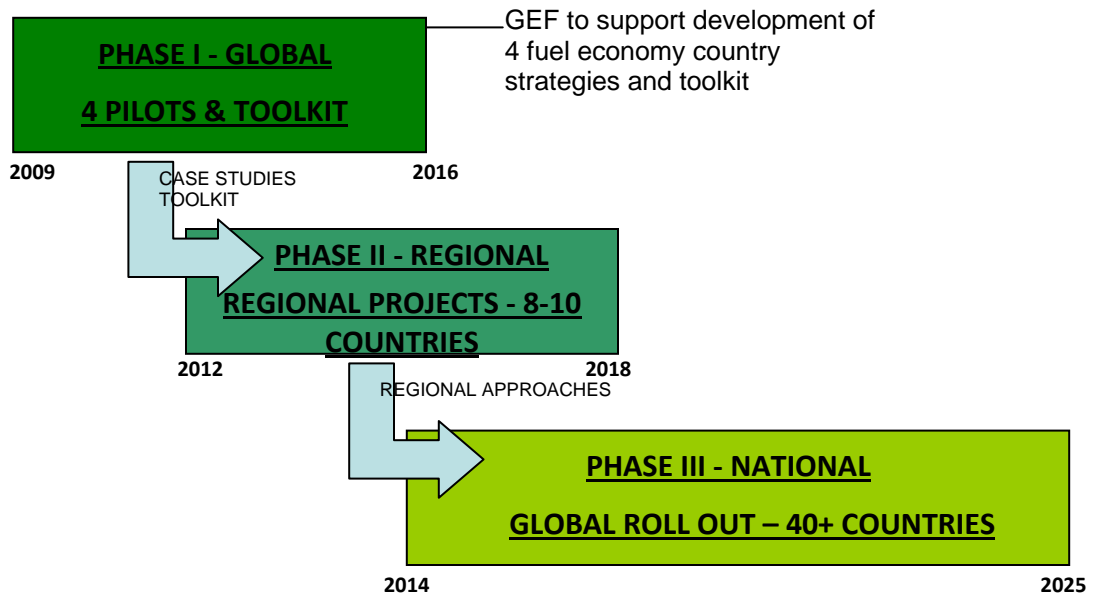
The overall objective of the GFEI is to stabilize greenhouse gas emissions from the global light duty vehicles fleet through a 50 percent improvement of vehicles fuel efficiency worldwide by 2050. This project's objective is to support Phase I of the GFEI: to develop plans and strategies for improved auto fuel efficiency policies in 4 developing countries and develop a global fuel economy toolkit. The pilot projects and toolkit will be used for phase 2 and Phase 3 rolling out the GFEI to the global level.

This project for Phase I has the following planned outcomes:

1. National-level strategies and plans prepared in 4 GFEI pilot countries with supporting expertise and resources from the GFEI;
2. A global database including auto fuel efficiency information at the national level for developing and transitional countries;
3. The Auto Fuel Efficiency and Climate Change: a tool for national strategy development tool finalized, field tested and ready for roll out in Phase II to additional countries, available in online and CD versions;
4. Methodology for creating a baseline for emissions and basic data for existing fleets in developing countries, to be used in the pilot countries and toward building greater regional and global tracking of emissions and reductions from the light duty vehicle sector toward 50:50.

This first phase of the GFEI global roll out is a preparatory stage where the essential approaches and tools are developed for a global roll out of national actions for the adoption of plans and policies that lead toward a global improvement of 50 percent in auto fuel efficiency worldwide by 2050. This will require technical, networking and financial support to governments and their partners, including those in the fuel and vehicle industries.

## The Global Fuel Economy Initiative (GFEI) Strategy Development and Implementation



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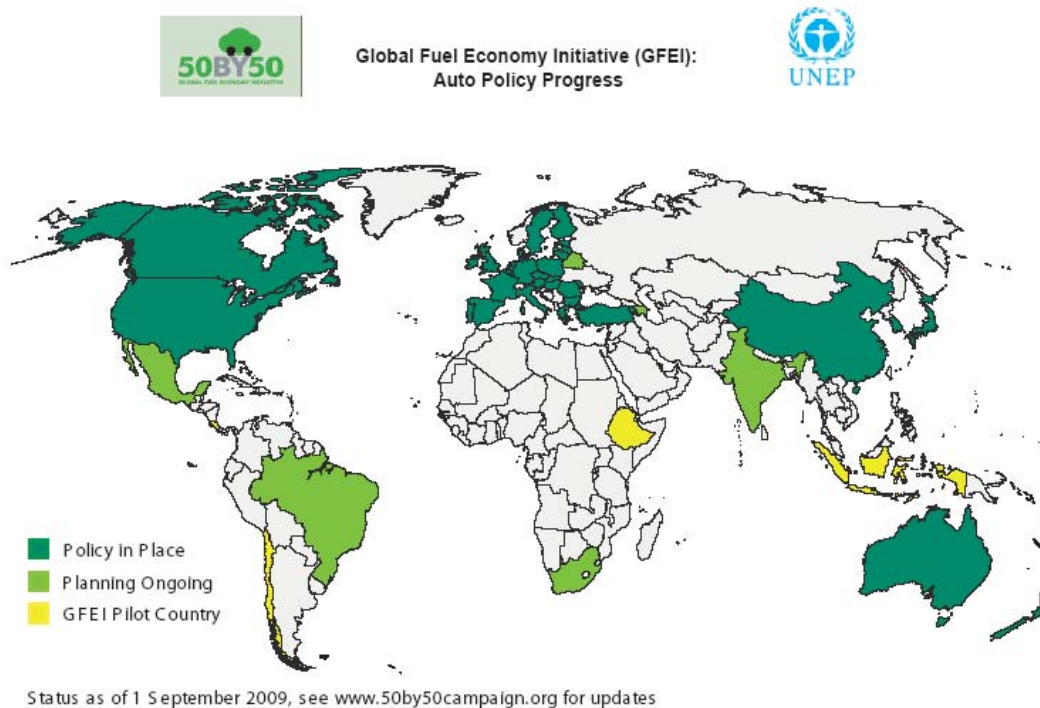
## ACRONYMS AND ABBREVIATIONS

BRT	Bus Rapid Transit
CAFE	Corporate Average Fuel Economy
CEE	Central and Eastern Europe
CMMCh	Centro Mario Molina Chile
CO	Carbon monoxide
CO <sub>2</sub>	Carbon Dioxide
EC	European Commission
EOU	Evaluation and Oversight Unit
EPA	US Environmental Protection Agency
ETP	Energy Technology Perspective
EUR	Euros
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GFEI	Global Fuel Economy Initiative
GHG	Green-House Gases
GWh	Gigawatt Hour
IEA	International Energy Agency
IPCC	Intergovernmental Panel on Climate Change
ITF	International Transport Forum
LAC	Latin American Countries
LDV	Light Duty Vehicle
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MENA	Middle East North Africa
MINAET	Ministry of Environment, Energy and Telecommunications
MoMo	Mobility Model (IEA)
MPG	Mile Per Gallon
NGO	Nongovernmental Organization
NMT	Non-Motorized Transport
OECD	Organization for Economic Co-operation Development
PCFV	Partnership for Clean Fuels and Vehicles
PIR	Project Implementation Review
PPEE	National Energy Efficiency Program
PPM	Parts Per Million
SEIA	Sistema de Evaluación de Impacto Ambiental <sup>0</sup>
TDM	Travel Demand Management
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar

## SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

### 2.1. Background and context

Overall global GHG emissions targets and in specific international stabilization targets from the road transport sector, will not be met without a global approach towards a major improvement of the efficiency of the global vehicle fleet. The majority of future growth of the global fleet will take place (more than 90% of the total) in non-OECD countries (see Figure 2). However, while most OECD countries have put in place fuel economy policies, only a few non-OECD countries have done so to date (Figure 1).



**Figure 1: Auto Fuel Economy Policy Progress Worldwide, as of 1 September 2009**

Research shows that there is a real opportunity to improve new vehicles' fuel economy by 30% by 2020 through the use of currently available, off-the-shelf technologies (some efficiency improvement will also have to come from further hybridization and electrification of fleets). This is a necessary step to achieve a 50% fuel economy improvement of all vehicles globally by 2050. At the moment, there are major opportunities, especially in developing countries, to reduce emissions of the in-use fleets, while fleets are being renewed through new vehicles or second-hand imports.

#### *Vehicle ownership growth rates in non-OECD markets*

- By 2050: a projected tripling of the global light-duty vehicle fleet with at least a doubling of CO<sub>2</sub> emissions from road transport.
- The importance of fuel efficiency in transport is already on global and national environment, energy and climate change agendas;

## Climate Change

- Emission models show that world transport energy use and emissions will increase by more than 50% by 2030 and more than 100% by 2050.
- Road transport is responsible for 17-18% of global CO<sub>2</sub> emissions from fossil fuel combustion and in most countries transport CO<sub>2</sub> emissions are growing at a faster rate than total CO<sub>2</sub> emissions. The transport sector as a whole accounted for approximately 13% of overall GHG emissions and 24% of CO<sub>2</sub> emissions from fossil fuel combustion in 2006. On a well-to-wheel basis, the IEA estimates that transport accounts for nearly 27% of total CO<sub>2</sub> emissions from fossil fuel combustion.

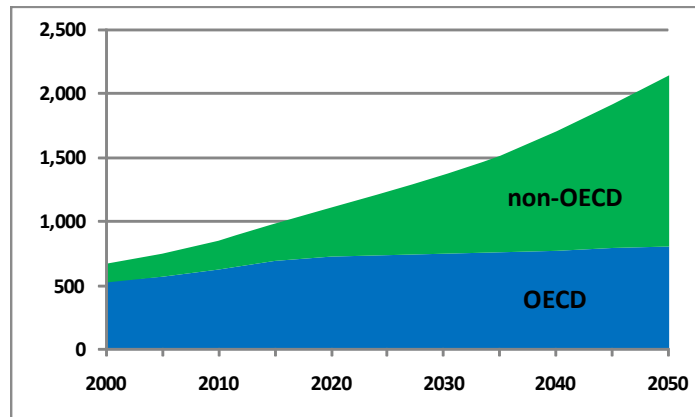


Figure 2: Global Growth in Light Duty Vehicles (in millions); a tripling of the non-OECD fleet is foreseen by 2050  
Source: WBCSD 2004 and IEA 2008

## An International Policy and Technology Response

- To achieve stabilization of GHG emissions from road transport global fuel economy needs to improve by 50 percent by 2050 (from an OECD average of 8L/100km today to a global 4L/100km by 2050). This target is in line with IPCC and G8 recommendations.
- Only a global effort to double vehicle fuel efficiency will stabilize emissions from road transport. As almost all future vehicle growth will take place in non-OECD countries, the biggest challenge is to work with these countries to manage their fleets and the fuel economy of their fleets. The GFEI supports a regional and national approach to the adaptation, adoption, and implementation of fuel economy policies to reach global fuel economy requirements in intermediate steps with a final target of full fleet efficiency doubling by 2050.
- Doubling the fuel efficiency of road vehicles (in particular light duty cars, vans and trucks) is one of the most cost-effective and accessible measures towards achieving global stabilization of CO<sub>2</sub> emissions from road transport. Few non-OECD countries are vehicle producers and only a few, e.g. China, already have fuel economy policies and plans. Fuel economy policies in non-OECD countries such as India and China, where car fleets are growing fastest, are crucial.
- Emission savings from a doubling of efficiency of the global vehicle fleet can add up to over 2 gigatonnes (Gt) of CO<sub>2</sub> annually from 2025 onwards and fuel cost savings are expected to equal 6 billion barrels of oil per year by 2050.

Given the projected vehicle growth rates in non-OECD countries, it is clear that the global effort to address climate change can only succeed when it also addresses the growing non-OECD vehicle fleet and involves these countries in a solution. In response, UNEP, IEA, FIA Foundation and ITF set up the Global Fuel Economy Initiative (GFEI) that promotes a doubling of fuel



economy of the global vehicle fleet. One of the aims of the GFEI is to significantly improve automotive fuel economy in developing and transitional countries.

As a necessary ingredient to sustained growth, mobility need not contribute to the rising costs of more emissions, more global warming, and more pollution. In fact, by contributing to safe, sustainable and affordable mobility, the lives of the poor can be improved – the overall target of Millennium Development Goal efforts. Further, no matter what conditions people live under, better mobility means better living. The transport sector’s role in realizing the MDG’s – a crucial and central role – has long been neglected.

There are also sound economic motives for improved auto fuel economy – namely, reduced government and consumer expenditure on oil. Many non-OECD countries are net fuel importers; increasing efficiency will contribute to lower dependency on expensive imports, helping to reduce high fuel expenditures and subsidies and helping to free up finances for basic service provision and investment toward the MDGs. With GEF support, the fuel economy campaign can make a significant contribution to the efforts of countries to move toward less oil dependent, low carbon societies and accelerate leap-frog adoption of low carbon technologies and policies. Pilot countries in Africa, Asia and Latin America have already been identified; these countries are Costa Rica, Chile, Ethiopia and Indonesia. Currently, the UNFCCC emissions data for all 4 countries is not available when it comes to the transport sector and the road sector in particular; but private data from Polk exists for some of these pilot countries. However, all countries are progressive in their approach to vehicle emissions, in particular within their regions; thus, they provide useful case study potential for other countries to follow, along with a political will to address automotive fuel economy through a national, regional and global approach through the GFEI.

**The proposed GFEI Phase I project includes the following inter-related components** that work toward the deliverance of the project’s outcomes as stated above:

1. **Collect, analyze and communicate improved data** and analysis of the current situation on fuel economy around the world and at the national level via a robust but practical baseline measurement, including assessing the potential for improvements, and monitor trends and progress over time towards a 50% improvement by 2050. While data is available to track general transport emission trends, the quality and coverage of data needs to be improved, along with baseline and monitoring data gathering, to facilitate the setting of targets, measure progress, and to encourage emission trading markets that include the transport sector. Data is needed to help set the fuel economy baseline for countries and also to determine the vehicle flow patterns (new and second hand) globally. Data is also needed to refine existing models that will allow tracking of fuel economy and GHG emissions from vehicles at the national and global levels. UNEP will work closely with the IEA on this component;
2. **Engage partners at the regional, subregional and national levels** by developing GFEI launch events at the regional and subregional levels in Latin America, Europe and Africa to create networks of auto fuel economy practitioners and develop a GFEI working presence in the regions of implementation – this also includes engaging new partners and agencies in GFEI implementation and tapping into already-existing networks and initiatives related to auto emissions and climate change;
3. **Engage national governments and industry partners to develop sound, consensus-driven plans and strategies** for policies that encourage fuel economy improvements over time for vehicles produced and/or sold in-country, and (as appropriate and

- reasonable) to improve consistency and harmonization in the targets and policies across countries, within regions, and worldwide to help lower transaction cost and maximize the benefits of improving vehicle fuel economy in a global approach. This element focuses on working with 4 countries to develop national approaches to lowering emissions from the LDV fleet, and building a GFEI working method at the regional, subregional and national levels;
4. Work with industry leaders and stakeholders (e.g. auto makers and technology R&D groups) to better understand the potential for fuel economy improvement in new and used vehicle markets and engage their expertise toward improved fuel economy in non Annex I countries;
  5. Develop and support global and regional awareness efforts to provide consumers and decision makers with information on options, costs, and available resources to improve fleet performance and reduce CO<sub>2</sub> and non-CO<sub>2</sub> emissions. This will include publicly-available information, including via a global database with data elements on fuels and vehicles comparative across countries and regions, information material for decision makers and consumers, the GFEI website ([www.50by50campaign.org](http://www.50by50campaign.org)) and training and guidance on best-available policies and technologies via the GFEI *Auto Fuel Efficiency and Climate Change: a tool for national strategy development* tool.

UNEP's assistance to countries to improve auto fuel efficiency through the GFEI is based on the successful Partnership for Clean Fuels and Vehicles (PCFV) approach to improving fuel quality and vehicle standards in developing and transitional countries, forming a natural extension of the first generation cleaner fuels and vehicles work that focused on establishing the building blocks of cleaner road transport systems – lead-free, low sulphur fuels and vehicle emission standards.

Using its existing networks for regional, sub regional and national implementation, UNEP works with governments and the private sector to develop regional and national frameworks and strategies for improved automotive fuel economy, based on baseline analysis of fleet development and trends and available, cost effective policy, planning and technology alternatives. This includes tailored fuel economy policies and programmes in developing markets that are also the fastest-growing to help double automotive efficiency at the global level (e.g. baseline evaluations of fleets, incentive regimes, import restrictions in a global and regional context.

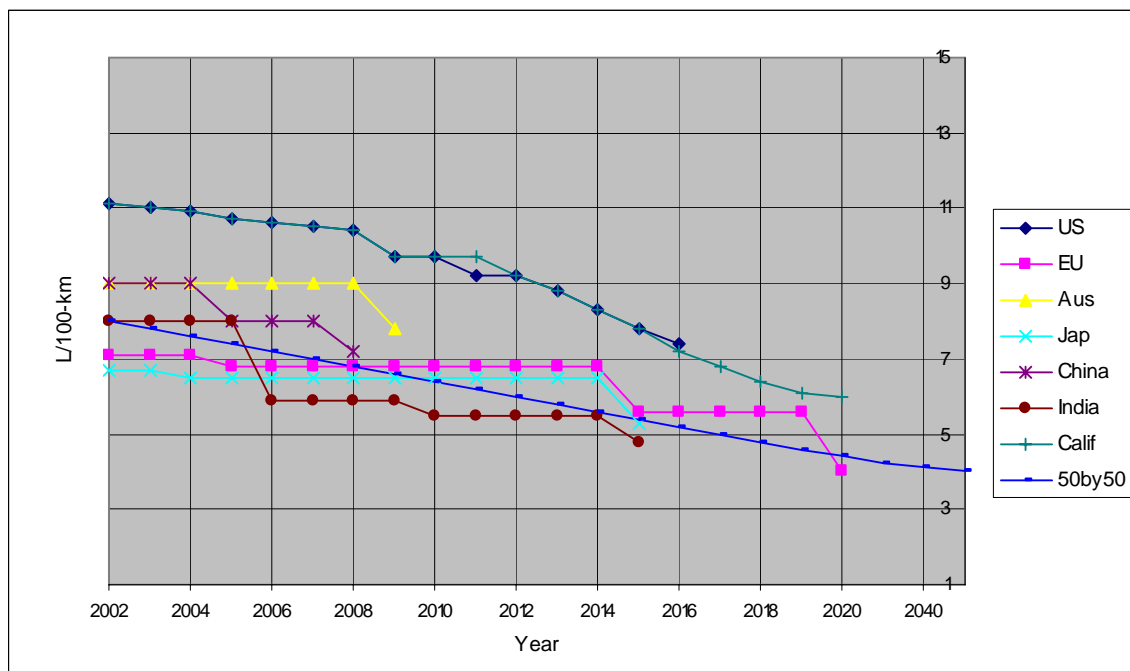
**The expected accomplishments** for the current project, and the results of GEF support for Phase I of implementation, include:

- Fuel economy strategies and plans developed in 4 non-Annex I countries and prepped for adoption and implementation by relevant national agencies (agreements or draft agreements already developed with Ethiopia, Chile, Costa Rica and Indonesia);
- Development and refinement of the GFEI *Auto Fuel Efficiency and Climate Change: a tool for national strategy development* tool, and its use as a training tool and also as a repository for best available information on current policies and technologies that promote auto fuel economy;
- A global vehicle and fuel efficiency knowledge campaign that helps to establish the GFEI approach and brings additional partners and countries on board for the implementation of Phase II and Phase III;
- Publicly available data on vehicle fleets and emissions is improved through the UNEP PCFV/GFEI Fuels and Vehicles Database;

- A practical methodology for baseline setting and monitoring of emission reductions over time for the purposes of this project and Phase II & III continuation of the GFEI rollout globally, along with improving available data for global modeling (e.g. improved IEA MoMo modeling).

**Indicators of Achievement:**

- 4 countries have developed plans and/or implementation strategies for improved auto fuel efficiency on a fleet-wide level and have documented their experiences and approaches;
- National strategies, plans, and/or standards announced;
- The GFEI *Auto Fuel Efficiency and Climate Change: a tool for national strategy development* tool is finalized, field tested and trainings held for its use in the 4 pilot countries and in at least 2 additional regional/national fora. Toolset also available online and in CD format;
- Baseline fleet assessment and inventory methodology developed and in use in pilot countries;
- Online database of vehicle standards and automotive fuel economy publicly available and regularly updated for developing and transitional countries globally;
- Additional countries for GFEI implementation identified for Phase II implementation;
- Information and communication products available on promoting national fuel economy issues in developing and transitional countries. Increased media and international fora documentation references made to fuel economy in general and the GFEI’s cleaner and more efficient fuel economy campaign in specific.



**Figure 3 National automotive fuel economy targets and standards in reference to GFEI 50% by 2050 target (in L/100km) (including India’s planning tentative figures)**

## 2.2. Global significance

Currently available, off-the-shelf technology<sup>1</sup> allows improvements in the average fuel economy of new light-duty vehicles of up to 30% by 2020 in OECD countries, and large-scale hybridization of major vehicle markets can double efficiency in these countries by 2030. Global technology transfer through vehicle renewal and import/export markets can distribute and magnify the efficiency gains worldwide by 2050. Even if vehicle kilometers travelled double by this time, fuel efficiency improvements on a global scale together with complementary systemic transport measures can effectively stabilize emissions from cars. Emission reduction strategies can save over 1 gigatonne (Gt) of CO<sub>2</sub> annually from 2025 onwards, increasing to 2 Gt by 2050. Fuel cost savings are expected to equal 6 billion barrels of oil per year by 2050.

In addition, improvements in air quality will add to the economic savings due to lower air quality-related morbidity and mortality. An even stronger shift to fully electric vehicles can lead to a decrease in global vehicular CO<sub>2</sub> and non-CO<sub>2</sub> emissions (e.g. atmospheric black carbon). On average, road transport is responsible for an estimated 70-90% of air pollution in urban areas - especially in developing countries where fuel quality, vehicle technology, and inspection and maintenance regimes are inadequate, causing millions of premature deaths and reductions in GDP of up to 5%. While the transport sector is an engine of economic growth, the sum of associated social and environmental costs - including air pollution, congestion, road injuries and fatalities - is of increasing concern to both local and national governments. Promoting more efficient vehicles will also make them lighter and slower and thus safer – both for the occupants and the public. Improving fuel efficiency will also reduce the dependency of many countries on expensive oil and fuel imports.

In many countries governments play a central role in fuel supply, especially for poor countries where the foreign funds needed to pay for oil and fuel imports put a heavy burden on government budgets. All these additional local co-benefits further enhance the case for national governments active participation and in-kind support of the project. Further, cleaner and more efficient fuels and vehicles will have other benefits as well, such as efforts to ensure the availability of low sulphur fuels to buses and thus clean public transport systems, especially important with the popularity of BRT and other transport planning system in developing and transitional countries.

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<sup>1</sup> The technology required to improve efficiency of vehicle by 30% by 2020 will include incremental change to conventional internal combustion engines and drive systems, along with weight reduction and improved aerodynamics. Examples of specific technologies include: idle-off stop-start systems, low rolling resistance tires, low friction lubricating oils, and smaller engines with turbo-chargers.

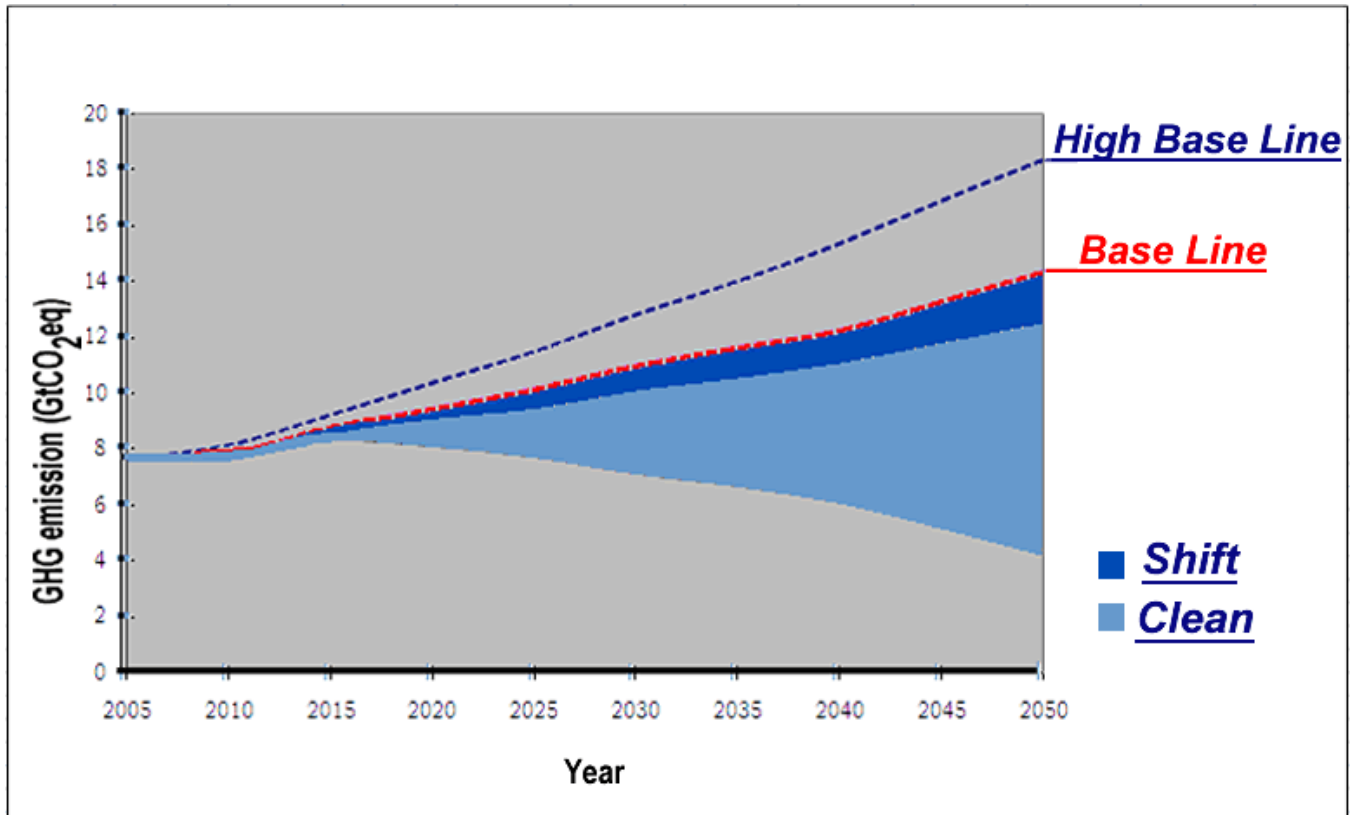


Figure 4 Contribution of emissions reductions from baseline GHG scenarios to IEA Blue Map/Shift scenario. While both modal shift (“Shift”) and clean technologies (“Clean”) play a role in avoiding the high base line, clean tech makes up the majority of reduction potential overall.

Conventional LDV technology can take us up to a 30% increase in efficiency, but the remaining 20% will require widespread global hybridization and the use of flanking transport measures. Therefore, the adoption of enabling policies and incentive structures and the uptake of appropriate cost-effective technology in developing and transitional countries is crucial.

The next decade presents a window to deflect current trends and determine the trajectory of future emissions. Even though the target is long-term – stabilization at 2050 – changing the trend will depend on the actions that will need to be taken in the next 10 years.

### 2.3. Threats, root causes and barrier analysis

General assumptions and risks associated with the proposed action include: i) existing and adequate political will at the national level in targeted countries over the lifetime of the project to address cleaner fuels and vehicles issues; ii) implementation of regional and national policies in a timely and cooperative manner and in accordance with ongoing related mechanisms and processes (e.g. transport, climate change, air quality); and iii) continuing cooperation of government agencies and all stakeholders, including civil society and industry sectors to promote and implement the recommendations of national action plans, legislation and standards even after the current project phase.

As the GFEI is based on IEA and ITF projections and modeling, it also incorporates the assumptions inherent in the stated projections and baseline models.

#### *Legal, Regulatory, Institutional Barriers*

- Insufficient legal, regulatory, and institutional frameworks to support GFEI initiatives at the national level;
- Lack of cooperation between different government bodies (e.g. those in charge of automotive emission standards, fuel quality, energy policy, air quality, and automotive fuel economy standards and policies).
- Institutional weakness and lack of local champion for GFEI at regional, sub regional and national levels;
- Lack of cooperation and participation from international and national automotive industries.

#### *Technical Barriers*

- Lack of information on vehicles in-country, imports and production, and any data needed to construct a workable baseline for fleet emissions and growth;
- Lack of management and planning capacity to identify, prepare and implement national GFEI projects on behalf of local institutions;
- Lack of tools and information to allow decision makers to choose and prioritize cleaner, more efficient automotive approaches (e.g. cost data, feasible technologies);
- Lack of cleaner fuels (lead free, low sulphur) required to utilize currently available technology at its optimal potential.

#### *Market Barriers*

- Insufficient demand for cleaner, more efficient technologies by government procurement and consumers;
- Lack of national climate change/GHG targets and transport emission reduction targets/vision;
- Cost of new technology – or perceptions thereof.

#### *Investment Risk and Financial Barriers*

- High actual (and perceived) up-front investment costs in cleaner fuels and automotive technologies, policies, incentive regimes, and manufacturing costs;
- Fluctuating fuel costs are a risk and of themselves, affecting risk averse investments in incentive structures and technologies.

## **2.4. Institutional, sectoral and policy context**

The pilot countries chosen for the GFEI project represent a spectrum of national challenges and levels of implementation and institutional capacity to develop automotive fuel economy policies and plans. Therefore, they reflect the variety of contexts found today in developing countries seeking to address road transport emissions, and fuel economy in particular. A detailed overview of the national situations and institutional setting of the four pilot projects is included in section 3.3, including current capacity for the generation of electricity from renewable sources, and ongoing plans to improve vehicle and fuel standards (complementary and supporting developments to automotive fuel economy regimes).

While preliminary background and institutional analyses have been carried out, national and regional partners identified for implementation, and draft agreements and project concepts drawn up (in the case of Costa Rica, Chile and Indonesia), national working groups set up during pilot

project implementation will carry out detailed analysis of the local institutional, sector and policy context that will inform the approach chosen for GFEI implementation at the national level.

Governments and their partners can take action to facilitate the introduction of cost effective fuel efficient technologies.

- They can improve the information on fuel consumption and CO<sub>2</sub> emissions available to consumers. For example, some fuel efficiency tests can be somewhat misleading as they do not accurately reflect average in-use fuel economy;
- they can set regulatory standards for fuel consumption or CO<sub>2</sub> emissions that remove the uncertainty over how much investment in fuel efficiency is viable;
- they can differentiate vehicle taxes according to CO<sub>2</sub> emissions or fuel economy to encourage consumers to prefer improved efficiency;
- they can provide incentives and set regulations for vehicle components that fall outside current vehicle testing, incentive and regulatory systems;
- they can provide end-user financing and incentive systems to manufacturers, distributors and dealers.

Governments also have a responsibility to minimize the costs of intervention, for example by keeping the differentiation of vehicle taxes simple and similar across regional markets and ensuring coherence with vehicle fuel efficiency labelling systems.

Few countries outside the OECD have developed fuel economy policies. Such policies will be needed to ensure progress and achieve the full potential for improvements over time. Possible interventions include fuel efficiency and emission standards; standards for vehicle components; import controls; taxes and incentives for cars and car components; information campaigns backed by improved testing and labelling of cars; and fuel taxes. These are described below. Different approaches may make sense for different countries, depending on their individual situations, nature of their automobile markets and consumer demand profiles, etc.

## **2.5. Stakeholder mapping and analysis**

The primary beneficiary of the GFEI project will be the pilot countries involved directly in its implementation, surrounding and regional countries, and global efforts to curb emissions from the road sector; GEF itself and the GEF transport portfolio in general.

The GFEI project involves various stakeholders at the international, regional and national levels, along with industry groups and private sector cooperation:

### *National Level*

National governments and government agencies in Costa Rica, Chile, Indonesia and Ethiopia: Given that an increasing number and share of new vehicles will be sold in the developing and transitional economies in coming decades, it is essential for rapidly developing countries to establish their own fuel economy strategies and systems (regulations, incentives, etc). The GFEI targets automotive fuel efficiency improvement through enabling policies and cleaner technology adoption and transfer, complementing energy security and efficiency (including clean energy)

agendas and policymaking in developing and transitional countries. Keen on budgetary savings and improvements in environment and health, governments and their partners in the private sector will be invited to adopt a more pro-active approach in setting efficiency targets and ensuring their cost-effective implementation.

For example, two countries in Latin America and the Caribbean have been selected as pilot projects for the GFEI, Chile and Costa Rica. These two pilots will assist to develop an approach for the GFEI in the region and will serve as global case studies for GFEI implementation at the national level.

In **Chile** the GFEI and UNEP will partner with the Ministry of Energy, and the National Energy Efficiency Program – PPEE - Andres Romero Celedón – Executive Director for the implementation of the pilot project, along with sub regional and national partner organization Centro Mario Molina Chile (CMMCh). A cooperation agreements has been jointly developed and is pending signature at the Ministry.

In **Costa Rica** UNEP will partner with the Costa Rican Ministry of Environment, Energy and Telecommunications (MINAET) - Alexander Miranda Rivera, Director de Despacho del Viceministerio de Energía and Gloria Villa de la Portilla, Directora de la Dirección Sectorial de Energía.

The Directorate of Transport will take the lead in the project in **Ethiopia (Director Yigzaw Mekonen)**, with close involvement of an NGO – Forum for Environment (Mr. Negusu Aklilu).

In **Indonesia** the project will be implemented by the Ministry of Environment (Mr. Ade Palguna, Assistant Deputy for Mobile Source Pollution Control) and an NGO – KPBB (Mr. Ahmad Safrudin). The Ministry of Transport will also be involved in the project. In pilot implementation in Indonesia, the Clean Air Initiative – Asia (CAI-Asia) group will be the lead regional partner.

See section 3.3. for details on the national projects.

#### *International Level*

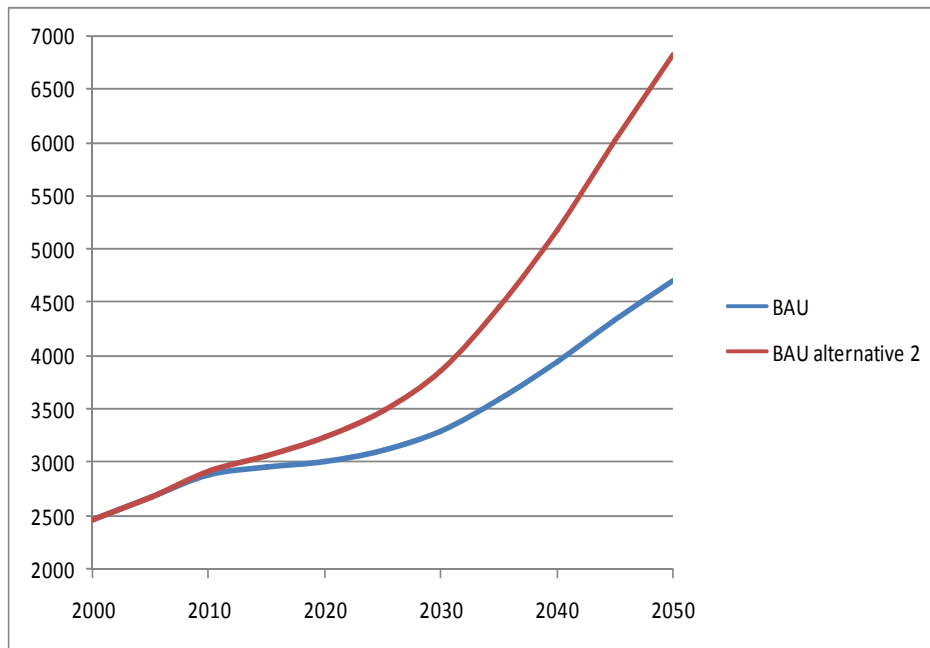
International agencies dealing with transport and the environment: the GFEI partners (IEA, ITF, FIA Foundation and UNEP) will draw on their networks of expertise and in-house capacity to lend the necessary implementation and planning support to the pilot countries, in addition to developing the necessary tools for GFEI global roll out. In addition, the GFEI partners with the International Council on Clean Transportation and various regional centers of expertise (e.g. Centre for Science and Environment, India and Innovation Center for Energy and Transportation Asia) through its Advisory Board.

Global partnerships on energy, transport, and low carbon technologies: The UNEP-based PCFV and its more than 120 partners, complements the GFEI and provides the necessary expertise from governments, industry groups, and NGO's active in cleaner fuels and vehicles.

The final beneficiaries of this project include urban residents, vulnerable groups (women, children and the elderly) and low income residents who are most vulnerable to the effects of climate change and poor air quality.



## 2.6. Baseline analysis and gaps



**Figure 5 World CO<sub>2</sub> emissions from cars (Mt of CO<sub>2</sub> equivalent).** The figure presents IEA business as usual (BAU) case and an alternative that assumes demand for driving in non-OECD countries will grow strongly with growing incomes. Source: ITF calculations using the IEA MoMa Model Version 2008 [OECD/ITF 2008b].

According to the IEA ETP Baseline scenario (IEA ETP 2008), world transport energy use and emissions will increase by more than 50% by 2030 and will more than double by 2050. The fastest growth is expected to come from air travel, road freight and light-duty vehicle (car, small van and SUV) travel. Regionally, growth will be led by the developing world, especially China and India, as a function of expected high rates of income growth and increases in vehicle ownership. In the Baseline scenario, nearly all future fuel use in transport will continue to be fossil fuel. While conventional oil production is expected to peak and begin to decline, the shortfall is likely to be made up with non-conventional oil (such as tar sands) and fossil resources such as gas-to-liquids and (especially in China) coal-to-liquids. On average, these fuels are likely to be significantly more carbon intensive than oil. Such a future will be even less sustainable than present practice and creates even greater urgency to shift to a more sustainable, low-carbon transport system. Biofuel systems will be included as part of baseline surveys and methodology.

Despite rising oil prices and concerns about the climate, energy use for transport is increasing around the world. High growth rates are forecast for most travel modes for decades to come. Two main factors influence the sector's emissions: changes in the volume of travel and changes in the efficiency of the mode of transport used.

Regarding volume, between 1990 and 2004, travel in light-duty vehicles in OECD countries increased by about 20%, from about 13 000 to 15 000 kilometres per person per year. Truck travel (tonne kilometres per capita) increased by 36%. Air travel has grown by over 5% worldwide per year since 1990. While these growth rates are likely to slow down over time, there are no indications that they will reverse. In the developing world, precise growth rates are often uncertain, but given the still very low average rates of automobile ownership, and high expected GDP growth rates, vehicle travel is expected to show strong growth for many years to come.

Increases in transport efficiency have only partially offset this growth in volume. And the rate of efficiency improvement has been declining. As a result, in recent years transport energy use and GHG emissions have steadily increased. Across IEA countries, the average energy intensity of the car stock decreased by around 10% between 1990 and 2004 (although there are wide variations by country).

		Baseline
Definition	Baseline projection	
LDVs	<b>New LDV fuel economy improvement</b>	10-25% lower fuel use in 2050, depending on region
	<b>Gasoline and diesel hybrids</b>	5-15% market share in 2050 depending on region
	<b>Electric plug-in hybrids</b>	none
	<b>Electric vehicles</b>	none
	<b>Fuel cell vehicles</b>	none
Travel	Total worldwide LDV travel about triples between 2000 and 2050	

**Figure 6 IEA Baseline scenario (BAU) assumptions, IEA ETP 2008**

Current average fuel economy levels vary considerably by country. Across the OECD the average figure in 2005 was around 8 litres per 100 km for new cars (including both gasoline and diesel vehicles). With a 50% fuel economy improvement, the average new car performance in OECD markets would improve to around 4 litres per 100 km (about 90 g/km of CO<sub>2</sub>). In the United States, fuel consumption is considerably higher than the OECD average; a doubling of tested fuel economy would mean moving from the current new car (and light truck) average of 26 mpg to 52 mpg (about 9 to 4.5 litres per 100 km). In non-OECD countries, more work is needed to better understand current fuel economy levels, but a level of 4 litres per 100 km (or even lower) should be attainable in most countries over the time frame considered. This will depend also on considerations related to variations in the test cycles used in different countries – an area where a consistent measurement and comparison approach is still under development. The overall change in CO<sub>2</sub> emissions will also depend on the types of fuels used, the rate of growth in vehicle ownership and annual distance driven per vehicle, and in-use conditions that can cause vehicles to perform far below their tested efficiency rating. Improving fuel efficiency and promoting newer, more fuel efficient cars, will also reduce other vehicular emissions that contribute to global climate change, especially N<sub>2</sub>O and black carbon. Recent studies show that black carbon is likely to be the second most important contributor (next to CO<sub>2</sub>) to global warming.

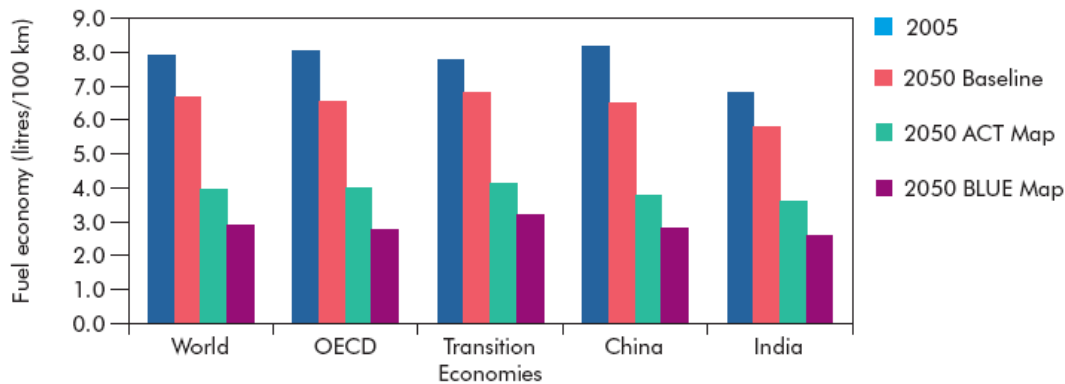


Figure 7 Gasoline LDV fuel economy projections by region and IEA ETP scenario, IEA ETP 2008

Current developments, including fleet rates of growth and plans for automotive efficiency in the 4 pilot countries of Chile, Costa Rica, Ethiopia, and Indonesia are discussed in section 2 above.

## 2.7. Linkages with other GEF and non-GEF interventions

The GEF Scientific and Technical Advisory Panel (STAP) will be notified of GFEI meetings, including project Steering Committee meetings (see section 4). The relevant contact is, at the moment, Lev Neretin, Ph.D.

The overarching goal under GEF-4 is to reduce GHG emissions through transforming markets. That is exactly what the GFEI will do – through a global/ regional/ national approach - transform markets resulting in major global GHG reductions at the long term (reduction of 1 Gigatonne or more per year in 2025 and beyond and 2 Gigatonnes CO2 reduction per year by 2050) and short term (though reduction of black carbon emissions). Although the project fits into the scope of several SPs, the main Sp is SP5 -Transport-Promoting Sustainable Innovative Systems for urban transport as a mitigation.

The proposed guidelines for GEF 5 Planned Programming for Activity in the Transport Sector identify the following relevant focal areas, among others, to which the GFEI contributes:

- Institutional and technical capacity for low-carbon transport and urban system strengthened (hereafter labeled "Capacity Building")
- Innovative technologies, practices, and financing mechanisms introduced (hereafter labeled "BRT/Transit", "NMT/Non-Motorized Transport", "TDM/Travel Demand Management", "Clean Vehicles" or "Other")
- Public awareness raised about climate (hereafter called "Awareness Raising")

The GFEI, in addition to serving as a case model for global, regional and national policy approaches and policy-based projects, will also serve to strengthen GEF activity in clean vehicle technology interventions. It will also complement ongoing clean vehicle projects, including the Fuel Efficiency in the Road Transport Sector project (391) in Pakistan.

GEF guidelines state that support in the climate change focal area is most effective when it is used to facilitate, leverage and complement other sources of financing. This project promotes and support the issue of fuel efficiency and thus facilitates regions and countries to take action to reduce the GHG emissions of their vehicles. The project provides information, case studies, technical data, contacts and networks, technical support, some financial support to allow stakeholders to agree on common action and develop and implement policies that will result in measurable reductions in GHG emissions. This project has attracted interest from major stakeholders and has already received co-funding for several partners. The GFEI partners have committed for this phase of the GFEI a total of USD 1 million in-kind and USD 1 million in financial contributions to the GFEI. Additional donor support is expected from the European Commission, USEPA and other donors.

UNEP will execute a major part of its project component through the PCFV for which UNEP serves as the Clearing-House. The PCFV has active clean fuels and vehicles programs in over 50 developing and transition countries. The PCFV also has experience with developing interactive tools for national policy development. The PCFV will develop a fuel economy campaign that will take the lead in the Policy Development component of the GFEI. The other GFEI partners will take the lead in information gathering and communications, as indicated.

### **SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)**

#### **3.1. Project rationale, policy conformity and expected global environmental benefits**

The IEA report *Energy Technology Perspectives 2008* includes a scenario called “ACT”, (accelerated technology). This scenario is consistent with the IPCC scenarios that cap atmospheric CO<sub>2</sub> concentrations at 550ppm and require that global energy-related CO<sub>2</sub> emissions return to 2005 levels by 2050. In this scenario, the reduction needed in CO<sub>2</sub> emissions from cars is achieved mainly through efficiency improvement, with some supporting measures. The 50% improvement in fuel economy (i.e. cutting stock energy intensity in half) by 2050 stabilises CO<sub>2</sub> at just above 2005 levels, down from the more than 100% increase that occurs in the baseline (business-as-usual) projection. Reducing emissions below current levels would require a combination of strong measures. 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. It may also require a variety of measures to help manage growth in travel demand, encourage modal shift to more efficient modes like transit, and spur a shift to much lower carbon fuels like low CO<sub>2</sub> biofuels or electricity.

Based on IEA, ITF and UNEP analysis, we believe that we now have a clear and unique opportunity to improve new car fuel economy up to 30% by 2030 through widespread application of available efficiency technologies and a 50% total increase by 2050 with more widespread hybridization of fleets, mostly or completely in a cost-effective manner (e.g. low or negative cost per tonne of CO<sub>2</sub>). Improving the efficiency of new cars at this rate would make possible a 50% improvement in the average fuel economy of all cars on the road worldwide by 2050 given vehicle turnover rates. This view is supported by academics, engineers and the auto industry. With flanking measures this increase in vehicle fuel efficiency can result in at least a stabilization of CO<sub>2</sub> emissions from the global car fleet, and can serve as the foundation for additional CO<sub>2</sub> reduction measures. The potential benefits are large and greatly exceed the expected costs of improved fuel economy. Cutting global average automotive fuel consumption (L/100 km) by

50% (i.e. doubling MPG) would reduce emissions of CO<sub>2</sub> by over 1 gigatonne (Gt) a year and result in savings in oil import bills alone worth over USD 400 billion (based on an oil price of USD 100/bbl).

Professor Julia King of Aston University in a report to the UK Government identified a potential to improve fuel efficiency of new cars by 30% within a decade with conventional technologies. For the United States, a team at the Massachusetts Institute of Technology found a similar potential for improvement without significant change in the quality of vehicles marketed, if all the technological potential available is channeled to improving fuel economy rather than the performance of new model cars. Already a number of major car manufacturers have strategies to incorporate technologies in their main car models to achieve this level of improvement over the coming decade. The introduction of battery electric vehicles (probably first as “plug-in” hybrids) will also contribute to efficiency improvement (in addition to fuel shifts toward electricity), assuming sustained progress in battery technology. Electric vehicles offer substantial savings in gasoline and diesel in general, although their potential to reduce larger amounts of CO<sub>2</sub> emissions depends on whether low carbon electricity is available. Battery and low carbon electricity issues will be incorporated into the GFEI tool.

While doubling automotive fuel economy is a necessary step to stabilization, other complementary measures, such as travel demand management and strong shifts to low-carbon fuels, will be needed to help move toward outright reductions in CO<sub>2</sub> from road transport. But in either case, cutting vehicle fuel use per kilometer by half by 2050 is central to transforming current trends into a more sustainable picture. Worldwide, cars currently account for close to half of the transport sector’s fuel consumption and CO<sub>2</sub> emissions. Their dominant position in the sector is set to remain although their share will fall to just under 40% by 2050, with aviation set to grow to match road freight at around 22% of fuel consumption and emissions each. A major challenge is the rapid growth of the vehicle fleets in developing and transition countries. While relatively little additional vehicle growth is expected in OECD countries, the vehicle fleet in non-OECD countries is predicted to grow 5 or 6 fold until 2050 at which time it is predicted to be double the size of the OECD fleet.

The technologies required to improve the efficiency of new cars 30% by 2020 and the global car fleet by 2050 mainly involve incremental change to conventional internal combustion engines and drive systems, along with weight reduction and better aerodynamics. To achieve a 50% improvement by 2030, the main additional measures would be full hybridisation of a much wider range of vehicles (possibly including, but not requiring, plug-in hybrid vehicle technologies). Vehicle technology is changing rapidly and more cost-effective technologies are likely to emerge in coming years, increasing the potential and/or lowering costs further. Beyond technology-based improvements to new cars, further low-cost efficiency improvements are possible for the entire global stock of cars, affecting actual “on-road” efficiency.

These include programmes to promote efficient after-market products like replacement tyres, fuel-efficient driving style (eco driving), improved traffic and speed management, better maintenance of the stock of vehicles and better management of mobility in cities. Finally, regulation or incentives to promote the fuel economy of imported second hand vehicles might improve fleet efficiency in the developing world and has been used effectively to reduce the number of grossly polluting vehicles in circulation in a number of countries. These measures represent an important complement to technology measures for new cars and are also included in this initiative. Biofuel systems will be included as part of baseline surveys and methodology.

### 3.2. Project goal and objective

The objective of this 3 phase GFEI initiative is to stabilize greenhouse gas emissions from the global light duty vehicles fleet through a 50 percent improvement of vehicles fuel efficiency worldwide by 2050. To address this, a global approach will be needed with emphasis on the rapid vehicle fleet growth especially in GEF eligible countries covered in this proposal. This will require support governments and their partners, including those in the fuel and vehicle industries, to develop a common approach to and work towards a target of a global auto fuel economy improvement of 50% by 2050. All new light duty vehicles (LDVs) worldwide have the potential to be 50% more fuel efficient by 2050 over baseline levels in 2005.

Specific aims of this project include:

- 1) policy development and national implementation to support the role of the road transport sector in the reduction of global CO<sub>2</sub> and non-CO<sub>2</sub> emissions by supporting the development of fuel economy polices at regional and national levels in non-Annex I countries, including launch of pilot projects in 4 countries and the establishment of the foundation for a global GFEI rollout;
- 2) information dissemination, capacity increase, and communication: implementation activities on automotive fuel economy supported with a global awareness campaign and tools to provide information that enables behavioral change and supports markets for fuel efficient technology. This includes the development of a global fuel and vehicle database and toolset - the first of their kind.

### 3.3. Project components and expected results

#### *Project components (Summary)*

As stated earlier, the main expected accomplishments for the current project, and the main activities and results of GEF support for Phase I of implementation, include:

- A. Fuel economy strategies and plans developed in 4 non-Annex I **Pilot Countries** and prepped for adoption and implementation by relevant national agencies (e.g. agreements or draft agreements already developed with Ethiopia, Chile, Costa Rica and Indonesia);
- B. Publication and refinement of the **GFEI Auto Fuel Efficiency and Climate Change: A tool for national strategy development** and its use as a training tool and also as a repository for best available information on current policies and technologies that promote auto fuel economy;
- C. A global vehicle and fuel efficiency knowledge campaign that helps to establish the GFEI approach and brings additional partners and countries on board for the implementation of Phase II and Phase III;
- D. Publicly available data on vehicle fleets and emissions is improved through the UNEP PCFV/GFEI Fuels and Vehicles Database; and
- E. A practical methodology for baseline setting and monitoring of emission reductions over time for the purposes of this project and Phase II & III continuation of the GFEI rollout

globally, along with improving available data for global modeling (e.g. improved IEA MoMo modeling).

In addition, as a connector to the ensuing phases of the GFEI project, at least 8 countries lined up for Phase II implementation on the basis of Phase I deliverables and outcomes.

The descriptions below will detail each of the activities above.

### **A. Pilot Countries**

#### **Costa Rica**

Aspiring to carbon neutrality by 2021, Costa Rica has taken steps in recent years that make this an ideal time to address fuel economy in the automotive sector. Currently, transport emissions make up 59% of overall CO<sub>2</sub> emissions (WRI, 1999 reporting year). Overall CO<sub>2</sub> emissions have increased by 151.5% from 1990-2007 (IEA) and CO<sub>2</sub> emissions from oil combustion have increased 139.8% from 1990-2007 (IEA). Per capita emissions by sector in 2007 for the transport sector as a whole were 959kgCO<sub>2</sub>/capita, of which road emissions were 957kgCO<sub>2</sub>/capita (IEA).

In 2009 Costa Rica adopted lower sulphur standards for fuels, moving to 500 ppm for diesel and 1,000 ppm petrol. LDV's form approximately 45% of the country's fleet and are on average 12-13 yrs old. Part of the work of the GFEI would be to set a workable baseline in terms of the LDV fleet, its average efficiency, growth trends and scenarios. With over 80% of its electricity now generated through renewable sources, including hydro and wind, Costa Rica is a prime candidate for greater electrification of its fleet. In 2006, CR generated the following amounts of energy from renewable sources: 14GWh from biogas, 1,215 GWh from solar thermal, 6,601 GWh from hydro, and 274 GWh from wind – currently the transport sector uses 0 GWh of electricity. There is massive potential to electrify road transport in the country.

All vehicles are imported – new and second hand - and vehicles must pass the EPA Smog Test (US 87 (Tier 0) or EC 93 (Euro 1)) signed off by the local consulate. All imported vehicles must have catalytic converters, but there are no import age limits exist. Several proposals have been made to restrict the importation of used vehicles, although none have successful. Due to this, it is estimated that approximately 80% of the fleet is greater than 10 years old. In addition, the Ministry of Environment, Energy and Telecommunications reports production of 40 million litres of ethanol p/year, making Costa Rica one of the most well prepared countries to receive investment and expand the bio-fuel industry. However, there are a number of challenges to be considered in terms of efficiency of production, ecosystem effects, and missed opportunities for more efficient and cleaner (over life-cycle) technologies and fuels for vehicles.

- determine the characteristics of the vehicle fleet and supply of fuels for ground transportation in Costa Rica;
- determine the technical and economic feasibility of improving the performance of the vehicle fleet and the reduction in content of sulphur in fuels in Costa Rica; and
- produce a comprehensive strategy proposal for improving fleet performance in Costa Rica.

Planned national activities include:

1 - Develop an analysis of the vehicle fleet and supply of fuels for ground transportation in Costa Rica, including:

a) Vehicle Fleet

- Characterization of the vehicle fleet by category (heavy, light-duty buses, particularly taxis, motorcycles, etc..) depending on fuel, age and emission control technologies.
- Projected number of vehicles depending on different categories by 2030, according to fuel type.
- Survey and investigation of use and maintenance according to categories (trips, consumption, times, zones, tuning, tire changes, data from Vehicle Technical Review (RiTeVe), etc.).

b) Supply of fuels

- Description of the infrastructure capacity of the supply of fuels in Costa Rica (refineries, infrastructure of management and distribution, etc.).

2 - Model and strategic proposal for improving vehicle fleet efficiency and for reducing the sulphur content in fuels, including:

a) Initial research:

- Global trends in energy efficiency in vehicles, projection on the marketing of efficient technologies at the global level.
- Performance monitoring mechanisms at international level.

b) Modeling to maximize the cost/benefit for improving vehicle fleet efficiency over time with projection to 2030, considering the following aspects:

- Socio-environmental (health, climate change, etc.).
- Technological options for the vehicle fleet and international best practice expertise;
- Link the requirements of the vehicle technology with changes in fuel parameters.
- Regulations on vehicle efficiency.

c) Proposal for a national strategy for reducing sulphur in fuels and energy efficiency improvement in vehicle fleet considering the following aspects:

- Current legal framework, policies and strategy and modifications necessary at the time
- Implementation phases of standards for vehicle efficiency and sulphur content in fuels by 2030, differentiated by categories of vehicle fleet.
- Mechanisms for monitoring and control of energy efficiency standards for vehicles and fuel quality in Costa Rica.
- Institutional framework.
- Incentives (financial, fiscal, etc.) and their feasibility in Costa Rica.

**Status:** We discussed the GFEI project with the Vice minister of Environment in Nairobi in 2009. We had follow-up talks since that time, including in a fuel economy meeting in Mexico City , Mark 2010. We have developed a project document, in consultation with the Costa Rica Government and the document is now with the Ministry of Environment (MINAET) for final review and signature. We plan to start the project second half 2010.



## Chile

80% of Chile's total primary energy comes from fossil fuels. However, with diesel sulphur levels now at 500 ppm nationwide, and 50 ppm in Santiago, Chile has already instituted the necessary groundwork for introducing advancing vehicle emission standards and the introduction of cleaner, more efficient LDVs. The country is moving towards US Tier 2 or Euro 5 vehicle emission standards in 2010, and with plans to institute a fuel economy standard of 7.5 L/100 km fleet wide, consistent with the average fuel economy of the five best-selling LDV models in the country. Currently there is an incentive scheme in place by which hybrid electric vehicles are not required to pay road license fees for 3 years. To further encourage the transition to a cleaner fleet, Chile has banned the importation of used vehicles, registering 2,637,000 new LDVs in 2008. The GFEI will support further progress on a full-fledged policy for automotive fuel efficiency, along with an incentive regime.

At present, Chile has about 892 MW of wind energy projects under evaluation by the SEIA (Sistema de Evaluación de Impacto Ambiental: Environmental Impact Assessment System), but this represents only a minor proportion of the total wind potential for Chile. The non-conventional renewable energy law (NCRE Law), enacted on 1 April 2008, aims to fulfill future energy requirements and increase the development of non-conventional renewable energy sources, such as geothermal, wind, solar and tidal, biomass and small hydroelectric plants. The latter will be considered as non-conventional sources to the extent that their energy injections are less than 20MW. However, it should be noted that investment in new coal-fired power plants is expanding at a much faster rate than in renewable energy sources (IEA 2009).

The transport sector is responsible for about 28% of GHG emissions in Chile. Of the total GHG emissions from transportation, 45% are from cars and taxis, 22% from trucks, 13% from ships, 9% from airplanes, 10% from buses, and less than 1% from trains. Passenger transportation accounts for about 2/3 of transportation sector GHG emissions, while about 1/3 are from freight (data from 2003). The average annual growth rate of the fleet is 5-6% (Pew Centre of Global Climate Change).

GFEI support to Chile, Phase I will combine the following activities through the Ministry of Energy of Chile and the Centro Mario Molina Chile (CMMCh):

- National training and project development workshops on automotive fuel efficiency and CO<sub>2</sub> standards, with global examples, including formation of a project working team and institutions Ministry of Energy, CONAMA, etc.) with international GFEI experts and UNEP consultation;
- Testing and refinement of the GFEI Automotive Fuel Economy toolset product with UNEP consultation and GFEI experts;
- Baseline survey work (to be carried out by CMMCh with cooperation from the Ministry of Transport of Chile) on Chile's vehicle fleet and its CO<sub>2</sub> emissions and trends.
- Drafting a clean and efficient vehicle plan/strategy for Chile, with pilot in Santiago;
- Launch a public awareness campaign on automotive fuel economy, transport and climate change for Chile through relevant institutions, including automotive clubs.

Expected results/outputs to be achieved include:

- Catalyze the development of a national auto fuel economy plan in Chile;

- Auto Fuel Economy Plan drafted and consulted nationally and regionally;
- National and sub-regional consultation meetings held on auto fuel economy;
- Testing of GFEI Auto Fuel Economy Toolset at national level through national training events, feedback from Chile project team incorporated;
- Toolset used at the national level for auto fuel economy trainings and in support of development of national plan(s)
- Improved understanding of fuel economy and what is required for a national Clean & Efficient Vehicles Strategy;

**Status:** In 2009 we have had regular consultations with PPEE (Energy Department under the Energy Ministry). Early 2010 a new Ministry of Energy has been created and we are working with the Ministry for the GFEI project. We recently had meetings with them in Mexico City and Washington DC. A project document has been jointly developed and is now with the legal Department of the Ministry of Energy, after which it will be signed. Implementation is expected to start not later than second half 2010. UNEP already has a strategic partnership agreement with the Mario Molina Centre (in Chile) that includes support to the GFEI project in Chile. UNEP is in the process of finalising a project agreement with the Ministry for Transport on several transport activities in Chile, and the GFEI projects is part of this.

### **Ethiopia**

It is estimated that a total of 13-15,000 vehicles are imported annually into Ethiopia, with the government estimating that two-thirds of the imported light vehicles and one-third of heavy duty transport vehicles are second hand. There are approximately 200,000 registered vehicles in Ethiopia, 65% of which are 15 years old and above. There is no age restriction for imported vehicles although draft legislation sets 15 years as the maximum age limit with a penalty for every year after the first 10 years. The only import restrictions include: Electronic Fuel Injection (EFI) or better for petrol engines and no restriction for diesel engines; wheel position (left), height (4.2m), carrying capacity, and length (12m). There are also no regulations on maintenance but vehicles need to have an annual inspection which includes proper functioning of wheels, gauges, lights, brakes, rain wipers etc.

Ethiopia was among the first countries in sub-Saharan Africa to phase-out leaded gasoline and was fully unleaded by January 2004. The government-owned Ethiopian Petroleum Enterprise (EPE) is responsible for oil importation into the country and was instrumental in the switch-over to unleaded gasoline. EPE has participated in regional and sub-regional meetings organised by the PCFV and other partners to discuss clean fuels and clean vehicles initiatives including the benefits of unleaded gasoline.

GFEI support to Ethiopia, Phase I: The planned project support in Ethiopia includes baseline-setting, data gathering on the vehicle fleet and GFEI Tool trainings for basic knowledge building on auto emissions and policy and technology options in Ethiopia. EPE has held several consultative meetings with the Ministries of Transport, Energy, Trade and Industry. The Ministry of Transport will take the lead in the project, with FfE carrying out the vehicle inventory. It is important to also note that a large part of the electricity generated in the country is hydroelectric.

**Status:** Talks with the Ethiopian Government started end 2009. A draft project has been developed and submitted for their approval. The project will be a joint undertaking with the Directorate of Transport and an Ethiopian NGO – Forum for Environment. A Steering Committee for the implementation will be set up, which will also include the Ethiopia Petroleum Enterprise.

Phase I of the project will be an inventory of the existing vehicle fleet and is planned to start in June, pending the signature of the project document.

### **Indonesia**

Completed the phase out of leaded petrol in 2006; currently available diesel levels range between 4,600 to 500 ppm, with a planned transition to 350 ppm in 2010. Petrol sulphur is currently at 1000ppm with a planned reduction to 50 ppm by 2012. Although Euro 2 emission standards were adopted from 2007, sulphur in fuels remains high and these targets are difficult to meet. Used vehicle imports were banned from 2007; for used commercial vehicles, there is currently a 10- year age maximum on imports. There is a general lack of information on the vehicle fleet in the country and the GFEI national pilot project in Indonesia will serve to collect fleet information and utilize the GFEI fleet inventory baseline methodology to be developed in conjunction with the GFEI Toolset product. Information needed for vehicles in the country includes: vehicle type (manufacturer and model), quantity, serial number, chassis number, color, purpose/usage, location(s) at which vehicle will be used, condition (new/used), engine capacity (cc). Euro II standards to apply from 2006, with Euro 4 standards planned to be in place from 2012. A progressive taxation system will be implemented in 2010, aimed at people with more than one motorized vehicle – the tax is up to 10% of the vehicle value, but is expected to have little effect on Jakarta's traffic problem. The average annual fleet growth rate is 6.5%, with 46.1 million vehicles expected by 2030 (in 2002 the country had 6.2 million).

GFEI support to Indonesia, Phase I will include:

- Development of an outline of the project design;
- Hosting of a national consultative workshop to raise awareness and provide more detailed inputs for the project design;
- Creation of a draft national fuel economy policy;
- Launching a public awareness campaign.

The first steps in the GFEI project for Indonesia will entail:

- The establishment of a national Steering Committee and three working groups. Membership of the Steering Committee will include senior government officials from relevant ministries (Environment, Energy, Transport, Foreign Affairs, Finance, etc) plus the National Energy Council and the National Climate Change Council, and will have the capacity to undertake critical decision making regarding the project. Members of the working groups will be substantive people with technical understanding of the topic of their respective group: 1) Economic Instruments, which will look at taxes, incentives, subsidies, regulations etc that impact on fuel economy; 2) Policy, which will look at vehicle and fuel standards, labelling, enforcement and the development of a fuel economy policy; and 3) Research and Development, which will focus on testing facilities, baseline data, refinery issues etc;
- An initial briefing for the Steering Committee and a training for its working groups, conducted by experts in fuel economy and policy, legal, social and economic implications;
- Preparation of TORs for the Steering Committee and development of a concept paper, design outline (indicating the depth and breadth of the project, the framework, areas to be included etc) and budget for the project, based on knowledge gained through the training;
- Conducting a Cost-Benefit Analysis of a fuel economy policy in Indonesia;
- Hiring a resource person to assist the Working Groups in their investigations and contributions to the concept paper and design outline, including: collecting and analysing national data in order to identify the current situation with respect to fuel quality, vehicle standards and clean vehicle technologies; incorporating the information into the UNEP's

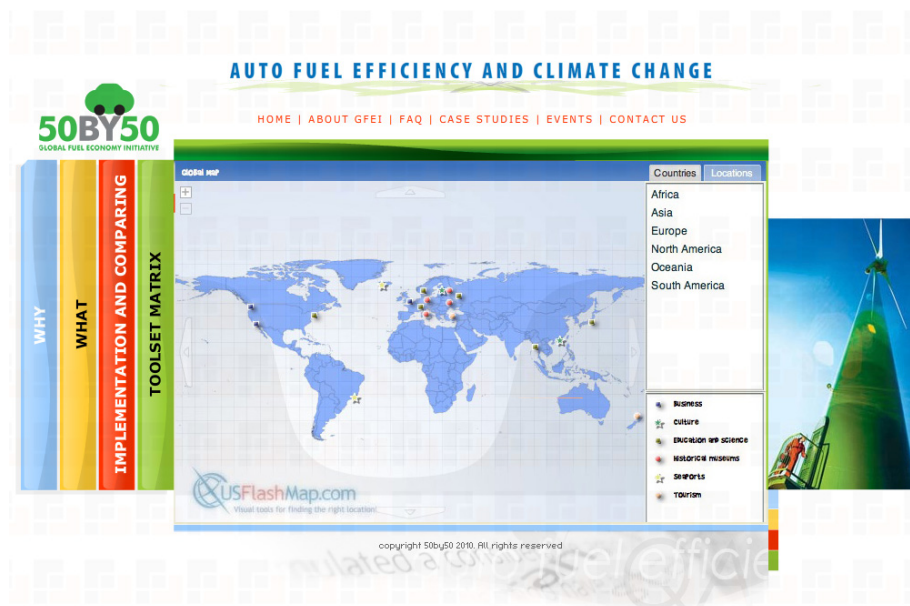
- Fuels, Vehicles and Fuel Economy database by filling in the PCFV's National Questionnaire; and compiling relevant 'Best Practices';
- Organising a 2-day national Fuel Economy sensitization workshop for broader stakeholders' engagement and presenting a draft report of the Steering Group, including recommendations, for endorsement;
  - Coordinating a public awareness campaign in Indonesia on the benefits of a fuel economy programme to include:
    - Parliamentarians
    - Public Transport co-ops (2/3 wheeler especially)
    - Municipalities
    - General public through a TV, Radio, and leaflets campaign
  - Reviewing current legislation for amendment and preparing a new draft national legislation that will support implementation of fuel economy policies and programmes that also include promoting clean fuels and cleaner, more efficient vehicles;
  - Ensuring that other ongoing and related initiatives, programmes and projects are included in the above mentioned processes in order to create and maximise synergy. Examples of such projects include the GTZ project for smaller cities and the Environmentally Sustainable Transport project.

The expected outputs of the project in Indonesia are:

- Extensive national baseline database and fuel economy parameters, as well as a cost / benefit study on fuel economy;
- Increased awareness among the public and decision makers on the health, environmental, economical and global benefits of a Fuel Economy Policy;
- A draft national Fuel Economy Policy, including a national clean fuels and vehicles programme, in Indonesia, with a corresponding action plan and timeframe to implement a Fuel Economy Policy, prepared in collaboration with stakeholders;
- Legislation to support lowering sulphur in fuels, promoting cleaner vehicles and improving fuel economy in Indonesia.

**Status:** The Indonesia project is most advanced of the four GFEI pilot countries. An overarching project document has been signed with the Ministry of Environment and with KPBB, the NGO supporting the implementation of the Indonesian pilot project. In addition, a project document detailing the first phase (there will be in total three phases in the Indonesian project) has also been signed and implementation of this has now started. As a first step a cost-benefit analysis will be prepared, to be followed by awareness raising of the outcomes and a national workshop. UNEP and the Indonesia Government are now in the process to identify a local partner to do the CBA.

## B. GFEI Auto Fuel Efficiency and Climate Change: a tool for national strategy development tool:



The Tool is designed to function as a repository of best available knowledge on auto fuel efficiency policies and technology approaches worldwide, and to act as an effective GFEI training tool at multiple levels of policy-making. It is designed to answer questions about the need to set national standards in both developed and developing countries on the *Why, What and How* of considering and designing the right policy interventions for national targets and plans

The Tool will comprise of the following 3 main sections:

### 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
  - a. Europe: EU
  - b. N. America: U.S.
  - c. Africa: South Africa
  - d. Latin America: Chile, Brazil, Mexico
  - e. Asia: India and China
2. Approaches to Auto Fuel Economy and Types of Interventions
  - a. Regulatory Policies
    - i. National Standard (e.g. CO<sub>2</sub>, l/km, l/100km)

- ii. Import restrictions
- 3. Fiscal Measures
  - a. Fuel Taxes
  - b. Financial Incentives for certain types of vehicle technologies (e.g. HEV)
  - c. Fee-bate
  - d. Buy-back programs
  - e. Varied registration fees
  - f. Access to priority lanes
  - g. Preferential parking programs
  - h. Road pricing exemptions
  - i. Investment in research and development
- 4. Information & Communication
  - a. Labeling programs
  - b. Consumer awareness campaigns/education programs/public information
  - c. Industry self-reporting

*Additional technical information*

- a. Availability of clean fuels
- b. Technology affecting fuel economy
  - i. Gasoline direct-injection engines
  - ii. Turbo or Supercharging engines
  - iii. Clean diesel
  - iv. Electric vehicles
  - v. Hybrid-electric vehicles
  - vi. Plug-in hybrid electric vehicles
  - vii. Alternative-fuel vehicles
  - viii. Hydrogen-fueled vehicles
  - ix. Dual-clutch transmissions
  - x. Continuously variable transmission
  - xi. Cylinder deactivation
  - xii. Integrated Starter Generator
  - xiii. Advanced reduced friction losses
  - xiv. Extra strong downsizing with turbo-charging
  - xv. Heat recovery
- c. Advanced lightweight materials
- d. Vehicle Size
- e. Vehicle Weight
- f. Vehicle Power
- g. Emissions and Fuel Consumption Test Cycles

**III. How? Implementing and Comparing Auto Fuel Economy Programs**

1. Cost/benefit of programs and elements: A matrix comparing programs in a preliminary, yet meaningful way (++ to –)
2. Developing a strategy for tracking your progress: A tracking mechanism is essential to showing results
3. Developing a baseline: Discussion of examples of other countries' approaches to systems for the collection of vehicle fleet and fuel economy data and calculations

The case studies featured in section II will illustrate the various policies and technologies described in the Tool.

Status: UNEP has hired a consultant that has started developing the toolkit. A preliminary design has also been developed (see illustration). The first draft should be available third quarter of 2010. A Nairobi based NGO is also involved in providing inputs (mainly background data/ desk studies) for the toolkit.

**C. A global vehicle and fuel efficiency knowledge campaign:** The activities mentioned above will be accompanied by a global awareness campaign to provide consumers and decision makers with information on options. From sponsored research, to events, publications and competitions, the GFEI will work with partners across the globe to create the sort of momentum for change that is needed. The four GFEI partners, FIA Foundation, IEA, ITF and UNEP, are developing a global State of the World report showcasing progress in automotive fuel economy worldwide, to be launched in 2010.

**D. Publicly available data on vehicle fleets and emissions & E. A practical methodology for baseline setting and monitoring of emission reductions:** Better data and information would greatly improve understanding of the current state of fuel economy in various countries and regions around the world, and the potential to improve fuel economy and at what cost. There is a particular lack of data for many non-OECD countries. The GFEI will work in this area, including efforts to:

- Better determine the fuel economy baseline (e.g. average value for cars in 2008) for all countries and regions worldwide, including a better understanding of differences due to different testing procedures and actual driving conditions in different countries.
- Identify and estimate other average vehicle characteristics (such as average size, weight and power) and the structure and distribution of vehicle sales (e.g. sales share by vehicle size and/or weight class).
- Conduct similar structure analysis for the entire stock of vehicles, with particular attention to age distributions and differences across vehicle vintage.
- Identify trade and flow patterns.
- Summarize and evaluate vehicle-related policies in individual countries, identifying opportunities for policy improvements and optimal policy formulation. These data and analysis will be used to improve our understanding of the current situation, likely future trends and opportunities. The GFEI will aim to set a more precise baseline to measure future changes against, and to refine existing models to allow tracking of fuel economy and CO<sub>2</sub> emissions from the vehicle fleet at national and global level. There are obvious shortfalls in the availability of data for many countries, an issue the GFEI will work closely with governments and research institutes around the world to ameliorate.

The project will benefit from the IEA's Mobility Model (MoMo) and Data System, from on-going analysis efforts by the ITF, and from the information available in the UNEP-led PCFV. The GFEI will actively seek co-operation from governments and vehicle manufacturers in the sharing of relevant data, to the benefit of all interested parties.

### Engagement of Stakeholders – GFEI Launch Events

The GFEI engages governments, the fuels and vehicles industry, civil society organizations and international organizations through regional and sub regional GFEI events (including launch events) to build networks of knowledge and support for auto fuel efficiency and build up to the global roll out of the GFEI approach in Phase II and III. The GFEI also presents the GFEI Tool in this fora, and works to build understanding on the substantive policy and knowledge base (including data at the national level) needed to implement the 50:50 target. The GFEI also uses existing for a – e.g. the OECD Leipzig events on sustainable transport – to build momentum for 50:50 and keep OECD countries involved. In addition, the GFEI teams up with partner organizations, such as the ICCT, to include GFEI side sessions into related meetings.

### **3.4 Intervention logic and key assumptions**

The Project Results Framework identifies as the overall goal the stabilization and eventual reduction of GHG emissions from LDV's in developing and transitional countries. This is to be achieved by the development of and implementation of a regional, sub regional and country-by-country approach toward improved auto fuel efficiency policy and standard development and endorsement through technical, networking, and knowledge support and the preparation and roll out of an interactive auto fuel economy toolset on different approaches to fuel economy improvement (economic instruments, legal, standards, import regulations, etc) and allowing policy makers to compare the impacts and costs and benefits of different options. Ultimately this should lead to the development and implementation of automotive fuel economy standards and strategies in at least 4 countries in Phase I, followed by a full global roll out in Phase II. Countries will be prepared to evaluate automotive fuel economy options to achieve their targets for cleaner, more efficient road transport and LDV fleets that will ensure at least a stabilization of emissions from the sector despite projected growth in addition to energy and balance of payments savings. Key risks and assumptions are highlighted earlier in the document and in the Framework, but one important assumption is that the GFEI remains a priority for all partners, including the GEF, and that automotive fuel economy as a practical and cost-effective means of reducing GHG from the transport sector gain and retains the interest of policy makers for implementation.

### **3.5 Risk analysis and risk management measures**

Project risks, as evaluated by UNEP, for regional and nation implementation, in addition to a global GFEI campaign, include:

- a lack of national data and information to gain an adequate understanding of fleet characteristics and vehicle flows;
- a lack of political interest in countries on the issue of fuel efficiency and the necessary urgency to deal with transport emissions;
- a lack of substantive and political support from industry groups – in particular vehicle groups and manufacturers; and
- a lack of high-level support from GFEI partner agencies and shifting donor and institutional priorities.

These issues have been included in the project design and thus will be actively addressed within the project. It is estimated that these risks are low as the issue of climate change and promotion of cleaner, more efficient vehicles will be high on the agenda because the issue has both a global (climate change) and local (air pollution) dimension and in addition also has economic and developmental dimensions that will ensure it will be highly relevant, especially for non-OECD



countries. It is expected that civil society and consumer will support this initiative, as they are keenly in favor of cleaner and more efficient vehicles. Governments will be interested because the initiative will combine climate, health and economic issues. Already several governments have contacted GFEI for support. While some governments may have reservations on some possible elements of a fuel economy policy (e.g. promotes smaller more efficient vehicles), it is expected, as evidence has shown in the case of Indonesia and Ethiopia that the project will attract a lot of positive political interest as it reduces oil dependency and expensive oil imports. Creating public awareness of the benefits of a national fuel economy policy will enhance civil society support expected by this initiative. It is expected that the reaction of vehicle manufacturers will be mixed. Some will be careful as the project is promoting, cleaner and more efficient vehicles while others will be keen to collaborate in this initiative as they are already planning smaller, cleaner, more efficient vehicles. This will be the case in both existing and new vehicle companies in developed and developing countries.

### **3.6 Consistency with national priorities or plans**

All 4 pilot countries have expressed, through formal communication with UNEP, their interest in working with UNEP and the GFEI to strengthen their national auto programs and gain access to international expertise on developing such policies and programs. We have commitments from three countries already secured who have indicated their interest to work with the GFEI to address fuel efficiency – in Asia Indonesia, in Africa Ethiopia and in Latin America and the Caribbean Chile. In Asia, additional attention will be paid to the growing fleet of motorcycles in addition to LDVs. A fourth pilot country will be identified. The rationale for selecting these countries, in addition to the fact that they requested UNEP for support, is that these countries are among the medium sized in their specific regions – they are not the biggest nor the smallest countries in their specific regions, thus they are ideal for piloting.

Indonesia - This project is consistent with Indonesia's National Environment and Health Action Plan (Chapter 7 – Atmospheric Pollution) as well as with the agreement from the 2nd Governmental Meeting on Urban Air Quality in Asia. In addition the Indonesian Government has formally asked UNEP for support to develop a fuel economy strategy.

Chile - This project is also consistent with Chile's national and regional priorities in Latin America. At the Sixteenth Meeting of the Forum of Ministers in Latin America and the Caribbean ministers agreed to prioritize cleaner and more efficient fuels and vehicles for better air quality and reduced GHG emissions. Ministers asked UNEP for support in implementing this decision.

Ethiopia - This project is also consistent with Ethiopia's regional and national priorities as agreed by Ministers in the Eastern Africa Regional Framework Agreement on Air Pollution to explore and adopt modern technologies that promote vehicle fuel efficiency. Ethiopia has made a request to UNEP to help in developing a fuel economy policy.

### **3.7 Incremental cost reasoning**

Costs for improved fuel economy of conventional engines and drive trains by some 30% are likely to be relatively small since increases in vehicle purchase price are likely to be mostly or fully compensated by savings on fuel within a few years of vehicle operation. Even cutting fuel use in half (50% improvement), including full hybridisation, will in many cases be paid for over the first half of vehicle life even with lower oil prices, when using a social cost/benefit calculation (with low discount rates). With higher fuel prices and/or high fuel taxes, hybridisation can pay for itself even using a private (e.g. 10%) discount rate for fuel savings. However, despite the

apparently good economics of improving fuel economy, consumers are unlikely to demand a 50% improvement in fuel economy without government intervention and pro-active industry action for several reasons:

- First, many technologies that can improve fuel economy can instead be used to increase the power of vehicles, a traditionally strong selling point for cars;
- Secondly, given consumer aversion to risk, and the presence of risks such as fluctuating fuel prices, manufacturers will not invest in new technology unless they are sure of selling cars equipped with it;
- Thirdly, consumer need additional information and experiences when new vehicle technologies are introduced, e.g. hybrid vehicles, to ensure that they do work properly, that they provide performance similar to standard technologies, and that they actually do provide the cost efficiency claimed.

Car buyers are naturally averse to taking risks. They are not inclined to pay a premium for improved fuel economy in the face of oil price instability. Even at times of rising oil prices they know there is no guarantee that prices will not fall in the future. Car buyers also naturally seek a much shorter payback on any investment compared to government, which is able to make long term investments on behalf of society as a whole. This short-term perspective coupled with risk aversion makes paying for significantly improved fuel economy unattractive to most car buyers, even if fuel savings would cover the additional costs of buying a superior vehicle.

Such risk aversion is not unique to car markets but oil price volatility makes it a more significant factor than in many other consumer decisions. For car manufacturers, the effect is magnified as they are faced with large sunken costs for investment in new technologies, creating aversion to investment in new technology which has yet to be proven successful.

Fuel efficiency regulations can create the certainty required to make these investments. It is true that higher fuel prices induce consumers and car manufacturers to pay more attention to fuel economy, but this is unlikely to fully counter the effects of short-termism and risk aversion. High fuel taxes account for much of the difference in the average size, power and weight, and thus vehicle fuel economy, between the United States and Europe but there remains a similar potential for improvement in both markets. Looking further into the future, the costs of technological innovation are less certain. The cost premium for plug-in hybrid vehicles and battery electric vehicles are significant, adding up to 50% to the price of a conventional car, depending for example on battery price and vehicle range. Expected near-term battery costs are expected to remain above USD 500 per kWh of energy storage capacity, or above USD 10 000 per vehicle for a vehicle with a 200 km range and 0.1 kWh/km battery efficiency. However, for plug-in hybrids with a 50 km range, the battery costs in this example might only be USD 2 500 (depending on scaling issues). As battery costs decline, so will the costs of these types of vehicles. Taking into account lower running costs (electricity cost per km is likely to be well below fuel costs for gasoline or diesel vehicles), the net costs to many consumers may be acceptable in the near-medium-term.

Fuel economy improvements using existing technologies are estimated to be quite cost effective and in fact could have CO<sub>2</sub> reduction costs near or below zero USD per tonne through 2030, taking into account the likely value of fuel savings and assuming a social discount rate (or a private discount rate with fairly high fuel prices). Hybrids also have near zero net cost. Plug-ins also might be fairly low cost, assuming battery costs decline and vehicle driving range on electricity (and therefore the battery storage) is modest. Pure electric vehicles and fuel cell

vehicles are expected to remain quite expensive through 2030, though with successful R&D efforts and cost reduction via increased production scale and learning, their cost per-tonne CO<sub>2</sub> could drop below USD 200/tonne, perhaps after 2030. In any case, it is clear that achieving fuel economy improvements with conventional technologies and hybridisation are cost effective and should be undertaken before embarking on more expensive solutions such as full electrification or introduction of fuel cells.

It also is not likely, at least not in the short-term, that advanced technologies will become mainstream in many non-OECD countries, mainly due to their relatively high costs. However, given that more than half of the new vehicles to be added to the global vehicle fleet population by 2050 will be added in non-OECD markets, it is important to recognize which vehicles this will be and what their fuel efficiency will be. Although a significant portion of the new vehicles added to these markets will be vehicles developed and/or produced in OECD countries, it is likely that the market share of vehicles specifically produced for non-OECD markets, in non-OECD countries, will increase. Fuel efficiency targets in this case will, first and foremost, need to be met with existing, cheaper, technologies. It can be expected that the number of small, inexpensive cars produced in developing countries will significantly increase. What the fuel efficiency of these vehicles will be remains questionable; however, due to their small size and light weight opportunities exist for these vehicles to significantly reduce fuel consumption with conventional technologies.

Without a global initiative to address the GHG emissions of vehicles in non-OECD countries, there is a risk that this issue will not be sufficiently addressed. As mentioned earlier, a window of opportunity of about one decade exists to address this issue, after which it will be very difficult to influence the way the global car fleet is going to grow in the coming decades. This will be a disaster from a climate change and human health perspective. The GFEI will also ensure that fuel economy policies promoted by the project will be linked to existing transport policies to ensure that the project will not result in additional car use compared to the baseline, thus avoiding possible rebound effects which may result in reduced cost of car ownership. GEF funding will ensure that measures are taken 'in use' both to improve on-road fuel economy of existing vehicles that link to other low-GHG transport measures.

There is a demand for support from countries to help them develop fuel economy policies, both for environmental and economic reasons. Non-OECD countries, especially the least developed, lack the capacity, knowledge and network that will allow them to develop these policies on their own. In addition, often it makes little sense for a country to adopt these policies in isolation – often only a regional, or at least sub-regional, approach can work when it comes to promoting cleaner and more efficient fuels and vehicles, given the trade and cross border nature of road transport.

To start the full implementation of Phase I of the GFEI – the global and regional phase - approximately 3 million USD is needed. The GEF support will ensure the full and timely implementation of the first phase of this project that is to start in May 2010.

Given the huge contribution of the global vehicle fleet to global GHG emissions, the expected huge growth of these emissions, and the lack of a global approach or programme to address transportation emissions, inaction on this issue will threaten the success of any global climate

effort. The GEF has the mandate as a global facility working on climate change to ideally support the GFEI.

In addition, as mentioned earlier, having clean and more efficient fuels and vehicles available in countries will also support other GEF supported projects – especially those aimed at promoting better and more efficient public transport.

### **3.8 Sustainability**

The goal of UNEP and the GFEI is to develop sustainable, self-sustaining and self-replicating approaches to cleaner, more efficient vehicle fleets and lower emissions. In addition to establishing in-country expertise and regional networks of practice on the subject, the GFEI, similar to the PCFV, provides ongoing support and access to industry and government knowledge and feedback, in addition to networking, technical and financing support for ongoing work on the subject.

In this way, the GFEI is modelled on the successful approach of the leading global programme to promote cleaner fuels and vehicles, the PCFV. The PCFV has over 110 members, including all major oil and vehicles organizations or their representative organizations. The PCFV has been successful in implementing global clean fuels programs – the phase out of leaded gasoline (for which the PCFV was awarded the UN21 Award by the UN Secretary General), a campaign to promote cleaner vehicles and a campaign to reduce fuel sulphur levels. The PCFV has developed a global network and approach that has been very successful and will be used by UNEP for the design and implementation of this GFEI-GEF proposal. The PCFV has developed global mechanisms for major global stakeholders – governments, the oil and vehicles industry, civil society organizations and international organizations – to support global campaigns. The PCFV has developed regional frameworks and partnerships and has been supporting many countries in the development of clean fuels and vehicles policies.

*Financial:* Given the potential fuel cost and foreign exchange benefits of improved automotive fuel efficiency, coupled with widely fluctuating global fuel prices, measures should be self-sustaining in the short and medium-term. Savings will depend on global oil prices, and will also incorporate improved air quality.

*Institutional:* UNEP's support for regional and national institutional and technical capacity building and technology exchange will allow structures for improved fuel efficiency and urban air quality to continue their work and positive impacts long after the completion of project support. In addition, PCFV activities are always locally owned and aimed at capacity and institution building through national governments or groups of stakeholders dealing with a certain issue related to clean fuels and vehicles. Activities are implemented by the relevant local stakeholders, which ensure that activities and their outcomes have effects far beyond the project dates and boundaries.

*Policy level:* The objective of this project is to promote, at the national level, policies and actions that will support improvements in fuel efficiency and reductions of CO<sub>2</sub> emissions from vehicle fleets and provide guidance and support for the development of policies to promote fuel efficient

vehicles in non-OECD countries. Thus, all activities supported under this project will have an institutional and/or policy anchoring. And thus it will be possible to measure the outcomes of this project in the development of new policies and regulations.

#### *Global – Regional – National approach*

UNEP, and its partners, plan to use a similar approach; agree on global targets and develop support materials and data/information; develop and organize regional partnerships, agreements and implementation support modalities; and promote and support the implementation at the national level.

At the global level the GFEI will facilitate the setting of targets, involvement of all key stakeholders and the development of information and products to support regional and national implementation. This will include trying to get the car industry to agree on the GFEI targets; to develop data, models and policy toolkits - showcasing the options available to improve fuel economy and the cost-benefits of these options. At the regional level this will include development of regional modeling/ databases, regional agreement on targets (political), regional implementation plans, regional campaigns (like information and awareness campaigns), partnering with regional institutions, and implementation of pilot projects.

With the support from the global and regional level, countries should be ready, on their own or with GFEI support, to start developing fuel economy policies based on the GFEI targets, using GFEI products and linking into sub-regional, regional and global GFEI networks for support and sharing of information and experiences. Wide-spread roll out of the project at the national level – to support many countries world wide based at the global and national work done - will be the next phase of the GFEI project (not included in this project).

#### *Working with Partners*

Activities at all levels will be developed with the involvement of all key stakeholders (governments – industry- civil society –international and regional organizations) and will be demand driven. By using the existing networks and contacts (PCFV and existing regional networks and national contacts of all four partners), the project will be able to commence with minimum start up time.

For example the GFEI will work with leading regional environment organizations such as the Mario Molina Centre in Latin America and the Caribbean, the Regional Environment Centre in Central and Eastern Europe, the Clean Air Initiative for Asia, the Air Pollution Information Network for Africa in Southern Africa etc. Already cooperation agreements exist between UNEP and these organizations. These will be extended to include fuel efficiency work.

### **3.9 Replication**

Phase I, inclusive of the GFEI Toolset and pilot countries, serves to refine the GFEI approach at all levels, and its available tools and engagement with countries to ensure a harmonized approach to a 50% improvement by 2050. This phase of the GFEI project is designed to enable a global roll out of the GFEI to developing and transitional countries.

Within every pilot country project, a regional/sub regional component is built in to ensure that the results and approach of the GFEI are communicated beyond the pilots themselves, moving already toward Phase II by engaging surrounding countries already in Phase I. This project component, in addition to ensuring that data gathered by the GFEI is publicly available and communicated by partners, will ensure that the GFEI message reaches potential partners.

### **3.10 Public awareness, communications and mainstreaming strategy**

The GFEI, since its inception, has included a very strong communication component, headed by the FIA Foundation (also the Secretariat of the GFEI). Building on knowledge, networks and expertise gained through previous global campaigns run by GFEI partners, including the PCFV,

The activities mentioned above will be accompanied by a global awareness campaign to provide consumers and decision makers with information on options. From sponsored research, to events, publications and competitions, the GFEI will work with partners across the globe to create the sort of momentum for change that is needed. The four GFEI partners, FIA Foundation, IEA, ITF and UNEP, are developing a global State of the World report showcasing progress in automotive fuel economy worldwide, to be launched in 2010. In addition, [www.50by50campaign.org](http://www.50by50campaign.org), is the main hub of information for the GFEI, in addition to UNEP's portals on cleaner fuels and vehicles.

### **3.11 Environmental and social safeguards**

The sustainability, conduct, and safeguard policies of all GFEI partner organizations will be applied during project implementation. These policies are designed to ensure the integration of environmental, gender, social and economic issues into decision making and minimizing risks associated with project implementation in an international context

A fuel economy policy and standard may affect import and production patterns of national auto markets, with varying cost implications to industry and consumers. More efficient vehicles do not necessarily imply a cost increase (e.g. the Tata Nano is an efficient, affordable, light vehicle designed for developing country markets; additionally restrictions on emissions, consumption and size may also limit the introduction of progressively larger and more expensive vehicles. Policies and standards for more efficient vehicles may also encourage the creation of local markets; in addition, they will protect developing countries from becoming dumping grounds of obsolete technology. The green economy potential of auto standards will also be incorporated into the GFEI Toolset product.

## **SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS**

### *Implementation Structure for Pilot Projects, Delivery of Project Outcomes*

The national pilot projects will be managed by the UNEP Transport Unit and its team of regional and substantive Programme Officers. These will work with GFEI partners and national working groups set up to develop and move toward implementation the auto fuel efficiency plans

developed under Phase I. UNEP will report to the Project Steering Committee on the implementation of the national-level projects, and regularly with the GFEI Secretariat in addition to engaging IEA and ITF technical expertise at the national level.

#### *Project Steering Committee*

A Project Steering Committee will be maintained at the international level to ensure the coordination and information exchange on project process and performance. The Committee will be held simultaneously with yearly GFEI roundtable sessions (see below), and will include representatives from main partner organizations, and will be chaired by UNEP and GFEI partners on a rotating basis. The Committee will discuss administrative, substantive and implementation aspects of the project; UNEP will submit reports to the Committee and seeks advice from members on project implementation and progress. The Project Steering Committee is designed to provide guidance on the specifics of the GEF Phase I project and related initiatives within the GFEI and, in addition to project partners, the Steering Committee will include the GFEI Steering Group (as described below) which consists of GFEI founding member organizations UNEP, FIA Foundation, IEA and ITF. The GFEI Advisory Group members may also wish to contribute their expertise to the Steering Committee.

#### *Project Technical and Communications Support Group*

The governance of the GFEI allows for this kind of support for pilot projects, including the GEF action; the project technical and communications support group will form a specialized sub-group of the project steering committee as described above. UNEP, as implementing agency, will make full use of the governance structures and resources provided by the make-up of the GFEI, including its Advisory group, Secretariat, Associate members, and the PCFV and its technical partners. The Group will supply advice and expertise on the substantive technical aspects of project implementation on the global and national levels, and will also assist with communicating the aims and results of the project and the GFEI in general. The GFEI Advisory Group members, as described below, may contribute to this group, along with outside experts.

#### *Project Management*

UNEP's Transport Unit, within the Division of Technology, Industry and Economics, will manage the project's implementation and coordination. It will provide the personnel and day-to-day management for the project, and ensure reporting and budgetary management of the action; this includes UNEP's fund management services. The Transport Unit Head (Rob de Jong) will function as Project Director (see Appendix 10), and unit staff responsible for regional programs will manage project implementation on the ground, along with sub-contracting. In addition to the Unit Head, a designated Programme Officer will oversee the day-to-day implementation and management of the project.

#### *Implementation Arrangements*

The implementation of the GFEI will be done through a regional approach and in cooperation and coordination with the GFEI Secretariat and partners (IEA, ITF and FIA Foundation). The project will be implemented in a three-pronged arrangement: small-scale funding agreements with national governments and partners are signed with UNEP, and regional strategic partners form the middle technical and networking support to national partner, along with providing a scale-up element to the rest of the region and interested countries.

Regional GFEI launches will be organized by the four partners. The launch events are used as platforms to form wide-reaching consensus at the regional governance level for the need for auto fuel efficiency programs at the national level, and helps to build the expertise and institutional champions needed to implement the GFEI at the national level; launches also help to begin building basic knowledge of the available policies in the auto sector in the region, and helps to form networks on the subject among countries. They serve as an efficient way of building the contacts needed to implement national projects and also raise the profile of the 50:50 campaign. Ideally, there will 2 of these launches in each bi-annual cycle. Regional work-programmes will be introduced and key strategic regional partners (CAI Asia, Mario Molina Centre Chile and Climate Excellent - Africa) will be identified that will work closely with the four partners to implement the regional GFEI work programme. From there regional and national activities will be undertaken to implement the regional work-programme and on the basis of demand. Regional work-programmes can differ significantly as can the involvement in and contribution to the implementation of regional work plans by the four GFEI partners.

The GFEI will organize a bi-annual meeting, called the GFEI Roundtable and funded by the GFEI Secretariat independently of this project, where organizations will be invited to discuss fuel economy issues in general, take stock of developments and progress, provide advice and support for the GFEI campaign and make recommendations to the GFEI in general. This meeting will also launch a bi-annual publication – ‘The State of Global Fuel Economy’. The meeting will not take formal decisions about the GFEI, but rather act as a sounding board/ advisory/ expert group. Any organization that has an interest can be invited by the partners to participate in the Roundtable, although partners will jointly control the invitation list. The objective will be to get as wide a range of partners involved as possible from all major stakeholder groups, industry, governments, civil society and regional and international organizations. Participants to the Roundtable do not need to formally subscribe to the GFEI targets (thus this will allow the “free” involvement of vehicle industry reps and others that are in general supportive but do not want to formally commit to specific targets).

The GFEI Secretariat resides with the FIA Foundation. The Secretariat is involved in the implementation of GFEI activities, and also in organizational and coordination matters. These include: supporting the organization of annual Roundtables, maintaining the budget, the website, coordinating communication between GFEI partners, raising funds, raising awareness at the global level, coordinating the preparation of the biannual GFEI roundtable report etc. The Secretariat will be located at the FIA Foundation in London.

A bi-annual budget has been developed, on the basis of the biannual work programme. The Secretariat and the four partners have raised funds for the budget. It is important that this is well coordinated – the Secretariat should ensure this. Funds can either be managed by the Secretariat or by the individual partners.

#### *GFEI Core Partners*

The four founding partners will be the core partners of the GFEI - FIA Foundation, IEA, ITF and UNEP,

#### *GFEI Four Programmatic Components*



Each of the four partners will play a part in implementing the four components of the GFEI, eg regional workshops and dialogues, and also playing a role in the bi-annual round-table as well as specializing in certain tasks/areas as follows:

FIA Foundation – Secretariat, Fundraising, Communications and outreach

IEA – data and modeling

ITF – cost effectiveness, 2010 Roundtable event

UNEP – policy development in developing and transition countries (including GFEI Toolset)

#### *GFEI Work Programme*

A bi-annual work programme has been developed by the four partners annually, and will detail these four components. It will be contained within the GFEI Flagship document.

#### *GFEI Steering Group*

FIA Foundation, IEA, ITF and UNEP are full members of the Steering Group of the GFEI, which should meet at least three times each year.

#### *GFEI Advisory Group*

The Advisory Group will provide advice and support to the GFEI and make specific recommendations to the GFEI on the Global Report, Global Roundtable, the Flagship document, and on other general matters. Membership will be decided by agreement of the core partners. This group will meet once a year. On alternate years it will meet at the Roundtable event. The Advisory Group serves as an independent source of expertise and guidance to the 4 founding GFEI members.

#### *GFEI Roundtable*

The GFEI will organize a bi-annual meeting, called the GFEI Roundtable and funded separately by the GFEI Secretariat, to take stock of developments and progress.

The Roundtable is open to representatives of the following groups:

- \* oil industry
- \* vehicles industry
- \* NGO's/ civil society organizations
- \* auto clubs
- \* international organizations
- \* governments
- \* experts
- \* donors

#### *GFEI Regional Work Programmes*

The four partners will organize a major GFEI launch event in each of the regions over the 6-year GFEI working programme.

The regions are:

- CEE
- Sub-Saharan Africa
- North Africa and the Middle East
- Latin America
- OECD
- Asia

Regional GFEI programs will be developed by the four partners. National activities will be implemented on the basis of the regional work programmes, responding to demands of countries and regional institutions.

In these regional work programmes regional partners will be identified for strategic cooperation, and national ‘champions’ for specific issues will be sought.

#### *GFEI Secretariat*

A GFEI Secretariat has been set up for coordination and organizational purposes.

The Secretariat maintains an overall budget, based on the funds received for the GFEI by the Secretariat and the funds available in each of the four partner organizations to implement the GFEI activities (components/ regional plans).

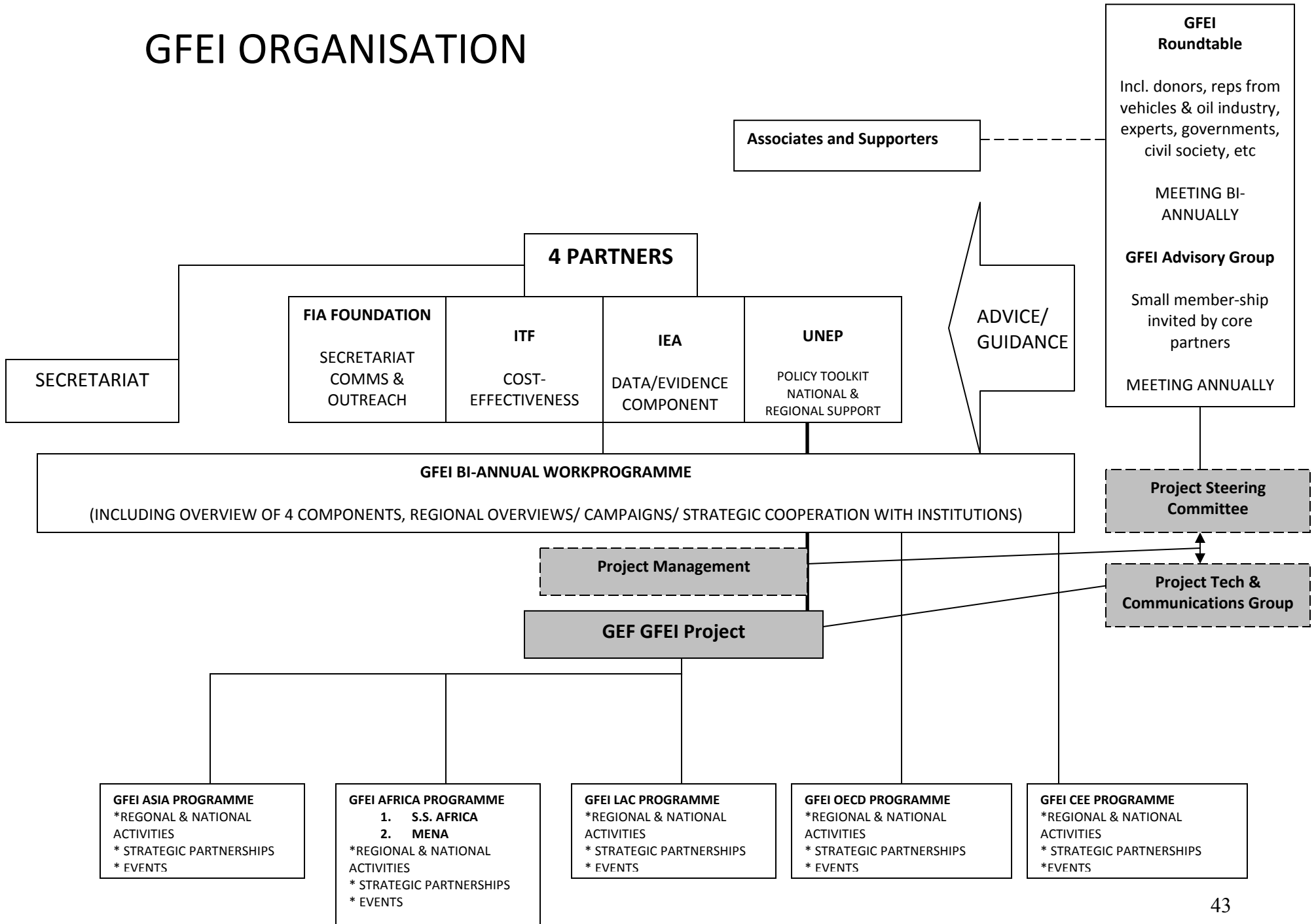
#### *GFEI Decision Making*

All decisions will be taken with the full involvement of all four partners. These include subcontracts, submission of donor funding requests/ projects, and cooperation agreements at the regional and national level with institutions and governments. The Secretariat will ensure coordination and consultation.

#### *GFEI Funding*

Donors can provide funding to the GFEI in general – in which case these are controlled by the Secretariat and the four partners will decide on the use of these funds – as per the GFEI Work programme. Donors can also earmark funds (for specific partners, work areas, regions etc). These contracts could be either with the Secretariat or any of the four partners. Before any partner or the Secretariat submits a request for donor support all partners and the secretariat are involved.

# GFEI ORGANISATION



## **SECTION 5: STAKEHOLDER PARTICIPATION**

The GFEI works in consultation with project stakeholders, from concept development through implementation. The mapping and analysis of stakeholders at all levels is featured earlier in this document, section 2.5.

### *Methods of Consultation*

The GFEI consults stakeholders through regular meetings and teleconferences in the development of national projects and regional meetings. In addition, the GFEI maintains steering and advisory groups to inform its work and the implementation of projects. Projects are developed and managed in multi-stakeholder groups and consultation, ensuring the best available technical and project management approach and advice.

At the national level, each pilot country will institute a national project management team, of which the GFEI partners participate, as part of national automotive fuel economy working groups across government agencies, NGO groups and private sector partners.

## **SECTION 6: MONITORING AND EVALUATION PLAN**

1. The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 6.
2. The project Steering Committee, or GFEI Secretariat and the UNEP DGEF programme officer, will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.
3. Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UNEP.
4. A mid-term management review or evaluation will take place in 2011 as indicated in the M & E plan. The review will include all parameters recommended by the GEF Evaluation Office

for terminal. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see section 5 of the project document). The project Steering Committee will participate in the mid-term review and develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

5. An independent terminal evaluation will take place at the end of project implementation. The Evaluation and Oversight Unit (EOU) of UNEP will manage the terminal evaluation process. A review of the quality of the evaluation report will be done by EOU and submitted along with the report to the GEF Evaluation Office not later than 6 months after the completion of the evaluation. The standard terms of reference for the terminal evaluation will be developed following the mid term review.

## **SECTION 7: PROJECT FINANCING AND BUDGET**

### **7.1. Overall project budget**

The total budget of the project amounts to USD 3,120,000. This will be funded by a GEF contribution of USD 980,000 and by non-GEF resources in the form of co-financing.

For details see Appendix 1 and 2.

### **7.2. Project co-financing**

Co-financing for this project will come from a variety of sources, both financial and in-kind. UNEP, in addition to the US government through the USEPA, the FIA Foundation, and various contributions from the private sector (including IPIECA) will form the bulk of the cash and in-kind contributions for this project. See Appendix 2.

In addition, countries are required to contribute to project implementation through the provision of staff, facilities and financial contributions, if possible.

### **7.3. Project cost-effectiveness**

This project is extremely cost effective when comparing the funds requested and the potential benefits in terms of global action and GHG emissions reductions. Many off-the-shelf technologies and fuel-related GHG reduction measures in the transport sector have the potential to save money over time, along with being low cost to implement. A reduction in fuel consumption will result in financial savings, and as fuel prices increase over time, so do the financial benefits to the consumer. Further, with fuel-related GHG reduction measures, total CO<sub>2</sub> levels from transport will generally be less than that of other sectors, albeit with variations over regions and countries.

However, such abatement measures will not come without significant investment from consumers, industry, and most importantly, government. High investment costs will have to be met through a

partnership between the consumer and investor on the one side and government on the other, to overcome the barriers of high capital investment costs. Demand management also hold potential for low social marginal abatement costs, especially considering the positive impacts on issues such as congestion mitigation and urban air quality. Economic growth need not be sacrificed on the alter of CO2 emission reduction measures in the transport industry, as illustrated by the Japanese economy, which has seen a decrease in transport related CO2 emissions since 2001 coupled with a slightly growing economy.

According to the ITF, one of the most recent of these studies published by McKinsey in February 2009 finds that a global economy-wide abatement potential of 38 Gt CO<sub>2</sub>eq per year for technical measures exists at a cost less than €60 (2005) per tonne CO<sub>2</sub>eq abated (assuming a societal discount rate of 4% and an average oil price of \$60 per barrel) – this would result in 35% and 70% reductions in emissions from 2005 levels and projected 2030 levels, respectively. If realized, this abatement would put emissions on track to more-or-less meet a trajectory to 450 ppm atmospheric CO<sub>2</sub> concentrations and keep temperature rise to ~2°C by 2100. The IEA finds that for 2050, economy-wide measures costing less than €40 (\$50) per tonne CO<sub>2</sub>eq abated might only stabilize emissions while measures costing up to €160 (\$200) might halve emissions from the 2005 baseline. This is a less optimistic outlook than McKinsey but, unlike IEA, McKinsey accounts for emission reductions from forestry, agriculture and land-use changes. Of the 38 Gt CO<sub>2</sub>eq abatement potential in 2030 cited by McKinsey, only 3.2 Gt (8%) occur in the transport sector mostly from road transport. However, the average cost of these reductions are negative (ranging from -€17 to -€3 per tonne CO<sub>2</sub>eq abated). For road transport, ~60% of the abatement potential at less than 100€/tonne CO<sub>2</sub>eq comes at a net negative societal cost and most of these measures concern efficiency improvements to existing internal combustion engine vehicles (ITF report on greenhouse gas reduction strategy in the transport sector, yet to be released).

The project is also designed to be cost effective with the four major components of the initiative to be designed and implemented by the four involved organizations – each having expertise and experience in their specific areas - with UNEP taking the lead in policy development, IEA taking the lead in research, data and modeling, ITF taking the lead on harmonization while the FIA Foundation has the lead in communication development & management.

**APPENDICES**

- Appendix 1: Budget by project components and UNEP budget lines**
- Appendix 2: Co-financing by source and UNEP budget lines**
- Appendix 3: Results Framework**
- Appendix 4: Workplan and timetable**
- Appendix 5: Key deliverables and benchmarks**
- Appendix 6: Costed M&E plan and project reporting**
- Appendix 7: Co-financing commitment letters from project partners**
- Appendix 8: Incremental Cost Analysis**
- Appendix 9: Decision-making and organizational flowchart**
- Appendix 10: Standard TORs for Project Director**
- Appendix 11: Procurement Plan**
- Appendix 12: Reporting Requirements**
- Appendix 13: Standard Terminal Evaluation TORs**

## Appendix 1

APPENDIX 1 - RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET LINE (GEF FUNDS ONLY US\$)												
Project title: The Global Fuel Economy Initiative												
Project number: GFL/XXXXXXXX												
Project executing partner: UNEP												
Project implementation period:												
From:	Feb-10		Expenditure by project component/activity					Expenditure by calendar year				
To:	Nov-12		Data and Modelling	Policy Development	Outreach and stakeholder support	Management costs	Evaluation	Total	2010	2011	2012	Total
<b>UNEP Budget Line</b>												
<b>10</b>	<b>PERSONNEL COMPONENT</b>											
1200	Consultants											
1201	Consultant 1		24,000		20,000			44,000	11,000	11,000	22,000	44,000
1202	Consultant 2			55,000				55,000	20,000	20,000	15,000	55,000
1203	Consultant 3					60,000		60,000	20,000	20,000	20,000	60,000
<b>1299</b>	<b>Sub-total</b>		<b>24,000</b>	<b>55,000</b>	<b>20,000</b>	<b>60,000</b>	<b>0</b>	<b>159,000</b>	<b>51,000</b>	<b>51,000</b>	<b>57,000</b>	<b>159,000</b>
1400	Volunteers w/m											
1401	UNV 1		23,500		10,000			33,500	9,000	9,000	15,500	33,500
1402	UNV 2		7,500					7,500	2,500	2,500	2,500	7,500
<b>1499</b>	<b>Sub-total</b>		<b>31,000</b>	<b>0</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>41,000</b>	<b>11,500</b>	<b>11,500</b>	<b>18,000</b>	<b>41,000</b>
1600	Travel on official business											
1601	Staff travel					20,000		20,000	5,000	5,000	10,000	20,000
<b>1699</b>	<b>Sub-total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>20,000</b>	<b>0</b>	<b>20,000</b>	<b>5,000</b>	<b>5,000</b>	<b>10,000</b>	<b>20,000</b>
<b>1999</b>	<b>Component total</b>		<b>55,000</b>	<b>55,000</b>	<b>30,000</b>	<b>80,000</b>	<b>0</b>	<b>220,000</b>	<b>67,500</b>	<b>67,500</b>	<b>85,000</b>	<b>220,000</b>
<b>20</b>	<b>SUB-CONTRACT COMPONENT</b>											
2200	Sub-contracts (MOUs/LOAs for supporting organizations)											
2201	Africa: GFEL launch SSA subregional			60,000				60,000		60,000		60,000
2202	CEE: GFEL Launch + follow up			90,000				90,000	45,000	45,000	0	90,000
2203	LAC: GFEL Launch			40,000				40,000	40,000			40,000
2204	Indonesia: GFEL pilot, national activities			75,000				75,000	75,000			75,000
2205	Ethiopia: GFEL pilot, national activities			80,000				80,000	80,000			80,000
2206	Chile: GFEL pilot, national activities			80,000				80,000	40,000	40,000		80,000
2207	Costa Rica: GFEL pilot, national activities			95,000				95,000	95,000			95,000
2208	IEA lead on data and modeling		100,000					100,000	50,000	50,000		100,000
2209	FIA Foundation lead on Outreach and stakeholder support				95,000			95,000	47,500	47,500		95,000
<b>2299</b>	<b>Sub-total</b>		<b>100,000</b>	<b>520,000</b>	<b>95,000</b>	<b>0</b>	<b>0</b>	<b>715,000</b>	<b>472,500</b>	<b>242,500</b>	<b>0</b>	<b>715,000</b>
<b>2999</b>	<b>Component total</b>		<b>100,000</b>	<b>520,000</b>	<b>95,000</b>	<b>0</b>	<b>0</b>	<b>715,000</b>	<b>472,500</b>	<b>242,500</b>	<b>0</b>	<b>715,000</b>
<b>50</b>	<b>MISCELLANEOUS COMPONENT</b>											
5200	Reporting costs											
5201	Publications / Printing				30,000			30,000	10,000	10,000	10,000	30,000
5202	Reporting				5,000			5,000			5,000	5,000
<b>5299</b>	<b>Sub-total</b>		<b>0</b>	<b>0</b>	<b>35,000</b>	<b>0</b>	<b>0</b>	<b>35,000</b>	<b>10,000</b>	<b>10,000</b>	<b>15,000</b>	<b>35,000</b>
5500	Evaluation											
5501	Project Evaluation costs						10,000	10,000			10,000	10,000
<b>5599</b>	<b>Sub-total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>10,000</b>	<b>10,000</b>
<b>5999</b>	<b>Component total</b>		<b>0</b>	<b>0</b>	<b>35,000</b>	<b>0</b>	<b>10,000</b>	<b>45,000</b>	<b>10,000</b>	<b>10,000</b>	<b>25,000</b>	<b>45,000</b>
<b>99</b>	<b>GRAND TOTAL</b>		<b>155,000</b>	<b>575,000</b>	<b>160,000</b>	<b>80,000</b>	<b>10,000</b>	<b>980,000</b>	<b>550,000</b>	<b>320,000</b>	<b>110,000</b>	<b>980,000</b>



## Appendix 2

APPENDIX 2 - RECONCILIATION BETWEEN GEF BUDGET AND CO-FINANCE BUDGET (TOTAL GEF & CO-FINANCE US\$)															
Project title: The Global Fuel Economy Initiative															
Project number: GFL/xxxx															
Project executing partner: UNEP															
Project implementation period:															
From:	Feb-10	GEF Cash	UNEP DTIE		Bilaterals (US&Korea)		Private Sector		FIA Foundation		IEA&ITF		Total		
To:	Nov-12		Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind	Cash	In-kind	
		A	B	C	D	E	F	G	H	I	J	K	A+B+D+F+ H+J	C+E+G+I +K	
<b>UNEP Budget Line</b>															
<b>10</b>	<b>PERSONNEL COMPONENT</b>														
1100	Project personnel														
1101	UNEP staffmember	0	25,000	0	120,000	0	0	0		0	0	0	145,000	0	
1102	FIA staffcosts	0								85,000			0	85,000	
1103	IEA staffcosts - techn. Analysis	0										90,000	0	90,000	
1104	Other staff (inkind)	0		20,000								90,000	0	110,000	
<b>1199</b>	<b>Sub-total</b>	<b>0</b>	<b>25,000</b>	<b>20,000</b>	<b>120,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>85,000</b>	<b>0</b>	<b>180,000</b>	<b>145,000</b>	<b>285,000</b>	
1200	Consultants														
1201	Consultant1	44,000											44,000	0	
1202	Consultant2	55,000	45,000										100,000	0	
1203	Consultant3	60,000	50,000		10,000								120,000	0	
<b>1299</b>	<b>Sub-total</b>	<b>159,000</b>	<b>95,000</b>	<b>0</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>264,000</b>	<b>0</b>	
1300	Administrative support														
1301	Secretarial and admin/budget support			10,000									0	10,000	
<b>1399</b>	<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000</b>	
1400	Volunteers														
1401	UNV 1	33,500											33,500	0	
1402	UNV 2	7,500			15,000								22,500	0	
<b>1499</b>	<b>Sub-total</b>	<b>41,000</b>	<b>0</b>	<b>0</b>	<b>15,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>56,000</b>	<b>0</b>	
1600	Travel on official business														
1601	Staff travel	20,000			30,000				25,000				75,000	0	
<b>1699</b>	<b>Sub-total</b>	<b>20,000</b>	<b>0</b>	<b>0</b>	<b>30,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>75,000</b>	<b>0</b>	
<b>1999</b>	<b>Component total</b>	<b>220,000</b>	<b>120,000</b>	<b>30,000</b>	<b>175,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>25,000</b>	<b>85,000</b>	<b>0</b>	<b>180,000</b>	<b>540,000</b>	<b>295,000</b>	
<b>20</b>	<b>SUB-CONTRACT COMPONENT</b>														
2200	Sub-contracts (for supporting organizations)														
2201	Africa: GFEI launch SSA Subregional	60,000			20,000				40,000				120,000	0	
2202	CEE: GFEI Launch	90,000			45,000				30,000				165,000	0	
2203	LAC: GFEI Launch	40,000			45,000				30,000				115,000	0	
2204	Indonesia: GFEI pilot, national activities	75,000	50,000		63,000				20,000				208,000	0	
2205	Ethiopia: GFEI pilot, national activities	80,000			80,000		10,000						170,000	0	
2206	Chile: GFEI pilot, national activities	80,000	30,000		60,000		10,000						180,000	0	
2207	Costa: GFEI pilot, national activities	95,000			67,000		10,000						172,000	0	
2208	IEA lead on data and modeling	100,000											100,000	0	
2209	FIA Foundation lead on Outreach and stak	95,000											95,000	0	
2210	Global programme for roll out				100,000								100,000	0	
<b>2299</b>	<b>Sub-total</b>	<b>715,000</b>	<b>80,000</b>	<b>0</b>	<b>480,000</b>	<b>0</b>	<b>30,000</b>	<b>0</b>	<b>120,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,425,000</b>	<b>0</b>	
<b>2999</b>	<b>Component total</b>	<b>715,000</b>	<b>80,000</b>	<b>0</b>	<b>480,000</b>	<b>0</b>	<b>30,000</b>	<b>0</b>	<b>120,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,425,000</b>	<b>0</b>	

<b>40</b>	<b>EQUIPMENT AND PREMISES COMPONENT</b>													
	4300	Premises												
		4301 Office Rental	0		5,000					5,000			0	10,000
	<b>4399</b>	<b>Sub-total</b>	<b>0</b>	<b>0</b>	<b>5,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000</b>
<b>4999</b>	<b>Component total</b>		<b>0</b>	<b>0</b>	<b>5,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10,000</b>
<b>50</b>	<b>MISCELLANEOUS COMPONENT</b>													
	5200	Reporting costs												
		5201 Publications / Printing	30,000	0	0	145,000	0	0	0	30,000			50,000	205,000
		5202 Reporting	5,000											5,000
		5203 Website and design	0	0	0	165,000	0			75,000	10,000			240,000
		5204 Database and report on fuels and vehicles	0	0	0	50,000	0	20,000					70,000	70,000
		5205 National campaigns on TV/Radio/Print	0	0	0	180,000	0							180,000
	<b>5299</b>	<b>Sub-total</b>	<b>35,000</b>	<b>0</b>	<b>0</b>	<b>540,000</b>	<b>0</b>	<b>20,000</b>	<b>0</b>	<b>105,000</b>	<b>10,000</b>	<b>0</b>	<b>120,000</b>	<b>700,000</b>
	5500	Evaluation												
		5501 Project Evaluation costs	10,000			10,000								20,000
	<b>5599</b>	<b>Sub-total</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>20,000</b>
<b>5999</b>	<b>Component total</b>		<b>45,000</b>	<b>0</b>	<b>0</b>	<b>550,000</b>	<b>0</b>	<b>20,000</b>	<b>0</b>	<b>105,000</b>	<b>10,000</b>	<b>0</b>	<b>120,000</b>	<b>720,000</b>
<b>99</b>	<b>GRAND TOTAL</b>		<b>980,000</b>	<b>200,000</b>	<b>35,000</b>	<b>1,205,000</b>	<b>0</b>	<b>50,000</b>	<b>0</b>	<b>250,000</b>	<b>100,000</b>	<b>0</b>	<b>300,000</b>	<b>2,685,000</b>

## Appendix 3: Results Framework

Project Strategy	1. Objectively verifiable indicators				
	Indicator	Baseline	Target	Sources of verification	Risks and Assumptions
<p><b>Project Objective</b> This project's objective is to develop and launch plans and strategies for improved auto fuel efficiency policies in 4 developing countries, as part of Phase I of a global effort to stabilize greenhouse gas emissions from the global light duty vehicles fleet through a 50 percent improvement of vehicles fuel efficiency worldwide by 2050.</p>	<p>1. The technical, economic, financial, environmental and potential social benefits of lowering emissions from the road transport sector are considered confirmed. The exact figures for full implementation in all countries worldwide within the GFEI timeframe remain to be determined. However, emission savings from full implementation can add up to over 2 gigatonnes (Gt) of CO<sub>2</sub> annually from 2025 onwards and fuel cost savings are expected to equal 6 billion barrels of oil per year by 2050.</p>	<p>1. Best practice auto fuel efficiency policies not adopted in 4 pilot countries</p> <p>2. No countries firmly identified for Phase II implementation</p>	<p>1. Lessons, experience and supporting data justifying auto fuel efficiency policies available from 4 pilots countries</p> <p>2. At least 8 countries have sent letters of commitment to participate in Phase II GFEI roll out in developing and transitional regions.</p>	<p>1. Monitoring and evaluation material and reports on avoided GHG emissions from LDVs, including UNFCC figures, national data, and project reporting through GFEI Phases I and II.</p> <p>2. Official and unofficial correspondence</p>	<p>Automotive fuel economy is prioritized by governments and industry groups over the next 10-20 years, with decision makers focusing on the long-term gains possible from cleaner, more efficient vehicle fleets.</p>

	2. At least 8 countries lined up for Phase II implementation on the basis of Phase I deliverables and outcomes.				
<p><b>Outcome 1</b></p> <p>Fuel economy strategies and plans developed and launched in 4 non-Annex I Pilot Countries (e.g. agreements or draft agreements already developed with Ethiopia, Chile, Costa Rica and Indonesia), contributing to a global 50:50 goal</p>	Strategies and plans adopted in 4 countries	1. No strategies and plans addressing auto fuel efficiency in 4 pilot countries	1. Strategies and plans in 4 countries launched	Project documents, national press, government documents	Political dedication to reducing emissions from the road transport sector, and private sector participation in regional and national GFEI efforts. Governments, in consultation with all stakeholders, are willing to implement policies and measures needed to secure progress toward steady, adequate fuel economy increases within a reasonable timeframe that enables global stabilization.

<p><b>Outcome 2</b></p> <p>Publication and refinement of the GFEI Auto Fuel Efficiency and Climate Change: a tool for national strategy development tool, and its use as a training tool and also as a repository for best available information on current policies and technologies that promote auto fuel economy;</p>	<p>1. Tool available online and in CD format</p> <p>2. Trainings held in all 4 pilots</p>	<p>1. No tools available to developing and transitional countries</p> <p>2. No specific auto fuel efficiency policy-making trainings held</p>	<p>1. Accessible and practical tool with policy and technology examples available and used in trainings in 4 pilots</p>	<p>1. Web traffic records; Training records and feedback</p>	<p>Expertise on auto fuel efficiency readily available for development of tool, along with technical resources to launch the product in an interactive format</p>
<p><b>Outcome 3</b></p> <p>A global vehicle and fuel efficiency knowledge campaign that helps to establish the GFEI approach and brings additional partners and countries on board for the implementation of Phase II and Phase III</p>	<p>1. Changes in awareness of GFEI and auto fuel efficiency at regional, subregional and national levels</p> <p>2. Growth in GFEI associated organizations</p>	<p>1. Awareness of GFEI low, auto fuel efficiency not prioritized at national level</p> <p>2. GFEI associated organizations, including industry groups, at 0</p>	<p>1. GFEI a known service provider in the transport and climate change sector</p> <p>2. GFEI support organizations and network expanded to include industry groups</p>	<p>1. Questionnaires to measure changes in awareness among different stakeholder groups, including government representatives</p> <p>2. GFEI records and meeting minutes</p>	<p>Knowledge campaign continues to be a priority for the GFEI Secretariat and the FIA Foundation, with dedicated resources and staff</p>
<p><b>Outcome 4</b></p> <p>Publicly available data on vehicle fleets and emissions is improved through the UNEP PCFV/GFEI Fuels and Vehicles Database; and</p>	<p>1. PCFV/GFEI global fuels and vehicles database is online and in use</p>	<p>1. No such database in place and readily available</p>	<p>1. Database available to public, regularly updated</p>	<p>1. Web traffic, requests for information and assistance. Documented outcomes of Toolset training</p>	<p>Technical and financial resources in place to ensure database development; information on</p>

				and field testing activities	auto fuel efficiency available and reported from national level partners
<p><b>Outcome 5</b></p> <p>A practical methodology for baseline setting and monitoring of emission reductions over time is developed for the purposes of this project and Phases II &amp; III for continuation of the GFEI rollout globally, along with improving available data for global modeling (e.g. improved IEA MoMo modeling).</p>	<p>1. Methodology published as part of Tool (above) and used for national data gathering and analysis in 4 pilots</p>	<p>1. No such methodology in place and in use at national level</p>	<p>1. Pilot countries report results of baseline development, data gathering and implement systems to monitor fleet data and emissions from baseline year</p>	<p>1. Project documents, national reports, meeting reports</p>	<p>GFEI partner organizations (e.g. IEA) available staff for the development of methodology and advisory services at national level</p>

**Appendix 4: Workplan and timetable**

	2009			2010			2011			2012			2013		
<b>I. Pilot Countries</b>															
* identification of national partners and regional networks through regional, subregional launch events															
* Agreements for cooperation in 4 pilot countries via SSFAs and MOU's															
* launch national working teams in-country															
* national training events, GFEI expertise provided															
* national strategies and plans announced															
<b>II. Tool and Database (inclusive of baseline methodology)</b>															
* Tool development and drafting															
* Consultation and peer review															
* Database development															
* Database launch online and in GFEI meetings															
* Tool launched on web and CD, used in pilot country trainings															
* Baseline methodology developed, included in Tool, national agreements															
<b>III. GFEI Knowledge Campaign</b>															
* Communication strategy for GFEI developed															
* website and materials available															
* GFEI present at transport and climate fora															

**Appendix 5: Key deliverables and benchmarks**

<b>Deliverables</b>	<b>Timeline</b> (see Appendix 4)	<b>Benchmarks</b>
<ul style="list-style-type: none"> <li>- Strategic and project agreements in pilot countries Chile, Costa Rica, Ethiopia, and Indonesia signed between national agencies and UNEP;</li> <li>- National launch meetings held with key stakeholders;</li> <li>- Draft national action plans/strategies on auto fuel economy developed;</li> <li>- Plans are communicated nationally through media, multi-sectoral consultations;</li> <li>- Countries continue to work with GFEI to develop and implement standards;</li> <li>- Countries work with other developing countries to share experience and best practice on developing auto fuel economy policies.</li> </ul>	<ul style="list-style-type: none"> <li>- 2009-2010</li> <li>- 2010-2011</li> <li>- 2010-2013</li> <li>- 2012 – 2013</li> <li>- ongoing throughout</li> <li>- ongoing throughout</li> </ul>	<ul style="list-style-type: none"> <li>- Legal instruments finalized;</li> <li>- National working teams set up;</li> <li>- Inaugural GFEI/national team meetings held;</li> <li>- Communication material(s) developed and disseminated;</li> <li>- Countries attend and are active in GFEI global, regional events;</li> <li>- Evidence of intra-regional and cross-regional cooperation between countries participating in GFEI.</li> </ul>
<ul style="list-style-type: none"> <li>- Clean Fuels and Vehicles database is available to the public online;</li> <li>- Public and institutions participate in updating information for countries;</li> </ul>	<ul style="list-style-type: none"> <li>- 2010</li> <li>- ongoing throughout</li> </ul>	<ul style="list-style-type: none"> <li>- Online launch of database;</li> <li>- Regular updating of country information;</li> <li>- Regular use of database by country agencies and industry groups.</li> </ul>
<ul style="list-style-type: none"> <li>- GFEI Auto Fuel Economy Tool published online and on CD</li> </ul>	<ul style="list-style-type: none"> <li>- Mid 2010</li> </ul>	<ul style="list-style-type: none"> <li>- Auto Fuel Economy tool online;</li> <li>- Regular inputs and revisions from countries featured in tool;</li> <li>- Tool used in regional and national training events.</li> </ul>
<ul style="list-style-type: none"> <li>- Regional and national consultation events held for GFEI in key regions, including LAC, Asia and Africa;</li> <li>- National follow up in these regions for country projects ongoing.</li> </ul>	<ul style="list-style-type: none"> <li>- 2010-2011</li> <li>- 2010 - 2013</li> </ul>	<ul style="list-style-type: none"> <li>- Meeting reports, key agencies and cooperating partners identified;</li> <li>- Additional agreements with countries for GFEI projects.</li> </ul>



**Appendix 6 Costed M&E plan & project reporting**

<i>UNEP M &amp; E plan and budget</i>			
<b>M &amp; E Activity</b>	<b>Responsible party</b>	<b>Budget US \$</b>	<b>Time Frame</b>
Mid term and terminal evaluations	PMU/UNEP Evaluation Office	20,000	At mid and end of project implementation
Annual project summary reports	UNEP DTIE Transport Unit	2,500	Yearly from start of project
Final project report	UNEP DTIE Transport Unit	2,500	Within 3 months of project completion

The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures, and it will be evaluated against the stated project indicators of achievement, timelines, and deliverables.

The Project Steering Committee, or GFEI Secretariat and the UNEP DGEF programme officer, will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Appendix 7 Co-financing commitment letters from project partners (originals mailed to UNEP DGEF)



2 February 2010

Ms. Maryam Niamir-Fuller  
Director  
Division of Global Environment Facility Coordination  
UNEP  
PO Box 30552  
Nairobi  
Kenya

Dear Ms. Maryam Niamir-Fuller

I would like to confirm the FIA Foundation's commitment to co-financing the Global Fuel Economy Initiative (GFEI) project, as submitted to the GEF by UNEP. The FIA Foundation is not only one of four founding partners of the GFEI, but also acts as its Secretariat. As such we are charged with information dissemination, coordination of partner activities, facilitation of regional launch events, and enabling communication between all partners. The FIA Foundation will make a contribution of USD250,000 in cash for the project cycle, and will also make an in-kind contribution of USD100,000.

The FIA Foundation's role in the GFEI is to lead on information dissemination, education, and communication. The FIA Foundation's specific activities will include support for a global awareness campaign to provide information that enables behavioral change and supports markets for more fuel efficient vehicle technology. It will also include supporting the development of a global fuel and vehicle database which will track information on parameters of interest to all relevant sectors- the first of its kind available to the public. In addition, the FIA Foundation will develop publications, awareness materials and tools such as our [website 50by50campaign.org](http://www.50by50campaign.org) which will be used by the GFEI to enable policy development and technology adoption by decision makers and other stakeholders at the national level. We will also work with GFEI partner institutions, to develop national and regional information and communication programmes for GFEI national pilot projects.

The FIA Foundation, on behalf of GFEI partners, would like to express its appreciation for GEF funding support. We look forward to a fruitful partnership with the GEF during and following project implementation.

Yours sincerely

**Sheila Watson**  
**Director of Environment**





Ms. Maryam Niamir-Fuller  
Director  
Division of Global Environment Facility Coordination  
UNEP  
PO Box 30552  
Nairobi, Kenya

Tel: +254 20 7621234  
Fax: +254 20 7624489

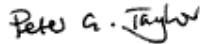
Paris, 23 March 2010

Dear Ms. Niamir-Fuller,

The IEA is working closely with UNEP and other partners on the Global Fuel Economy Initiative (GFEI) and expects to spend USD 300k over the first three years of the project, including staff time. This breaks down to roughly USD 100k per year and includes about 10 person months of staff effort per year. It also includes some expenditures on consultants, such as a supporting project with ICFI during 2009-2010 that cost about USD 50 000.

All of these expenditures advance the goals of the GFEI and include IEA involvement on conferences, providing analytical support, and assisting with outreach to governments and stakeholders.


Yours sincerely,



Peter TAYLOR  
Head

**NOTE on USEPA Bilateral Co-Finance below:** UNEP has signed an overall contract with USEPA for USD 3 million for 5 years for cleaner vehicles and fuels work (see Notice of Award below). We have set aside USD 1,205,000 USD (see Table B of CEO Endorsement) for this project from the overall USEPA USD 3 million funds. To date we have received USD 1.25 million. Below we have also included evidence of the first payment received for this contract, USD 481,841.

X4 - 83415201 - 0 Page 1

 <b>U.S. ENVIRONMENTAL PROTECTION AGENCY</b>  <b>Cooperative Agreement</b>	<b>ASSISTANCE ID NO.</b>		<b>DATE OF AWARD</b>
	<b>PRG</b>	<b>DOC ID</b>	<b>AMEND#</b>
	<b>X4</b>	<b>83415201</b>	<b>- 0</b>
	<b>TYPE OF ACTION</b>		
New			04/16/2009
<b>PAYMENT METHOD:</b>			<b>ACH#</b>
EFT			F228
<b>RECIPIENT TYPE:</b>	Send Payment Request to:		
Foreign Recipient	Las Vegas Finance Center		
<b>RECIPIENT:</b>	<b>PAYEE:</b>		
United Nations Environment Programme PO Box 30552 00100, Nairobi, Kenya EIN: 00-0000228	Chief, Contributions Service United Nations Environment Programme PO Box 30552 Nairobi 00100, Kenya		
<b>PROJECT MANAGER</b>	<b>EPA PROJECT OFFICER</b>	<b>EPA GRANT SPECIALIST</b>	
Rob de Jong PO Box 30552 Nairobi, Kenya E-Mail: rob.jong@unep.org Phone: 254-20-762-4184	Angela Bandemehr 1200 Pennsylvania Ave, NW, 2860R Washington, DC 20460 E-Mail: bandemehr.angela@epa.gov Phone: 202-564-1427	David Ack 1200 Pennsylvania Ave NW, 3903R Washington, DC 20460 E-Mail: ack.david@epa.gov Phone: 202-564-2054	
<b>PROJECT TITLE AND DESCRIPTION</b>			
UNEP - Clearing-House/Partnership-Clean Fuels Global initiative promoting cleaner fuels and vehicles in developing and transitioning countries. The promoting of cleaner fuels and vehicles will focus on four global campaigns. Phase down sulphur in diesel and gasoline, concurrent with: adoption of cleaner vehicle standards and technologies and fuel economy policies.			
<b>BUDGET PERIOD</b>	<b>PROJECT PERIOD</b>	<b>TOTAL BUDGET PERIOD COST</b>	<b>TOTAL PROJECT PERIOD COST</b>
04/01/2009 - 12/31/2013	04/01/2009 - 12/31/2013	\$3,000,000.00	\$3,000,000.00
<b>NOTICE OF AWARD</b>			
Based on your application dated 09/10/2006, including all modifications and amendments, the United States acting by and through the US Environmental Protection Agency (EPA), hereby awards \$481,841. EPA agrees to cost-share 100.00% of all approved budget period costs incurred, up to and not exceeding total federal funding of \$481,841. Such award may be terminated by EPA without further cause if the recipient fails to provide timely affirmation of the award by signing under the Affirmation of Award section and returning all pages of this agreement to the Grants Management Office listed below within 21 days after receipt, or any extension of time, as may be granted by EPA. This agreement is subject to applicable EPA statutory provisions. The applicable regulatory provisions are 40 CFR Chapter 1, Subchapter B, and all terms and conditions of this agreement and any attachments.			
<b>ISSUING OFFICE (GRANTS MANAGEMENT OFFICE)</b>		<b>AWARD APPROVAL OFFICE</b>	
<b>ORGANIZATION / ADDRESS</b>		<b>ORGANIZATION / ADDRESS</b>	
Grants and Interagency Agreement Management Division 1200 Pennsylvania Ave, NW Mail code 3903R Washington, DC 20460		Environmental Protection Agency Office of International Affairs 1200 Pennsylvania Ave, NW Washington, DC 20460	
<b>THE UNITED STATES OF AMERICA BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY</b>			
<b>SIGNATURE OF AWARD OFFICIAL</b>	<b>TYPED NAME AND TITLE</b>	<b>DATE</b>	
Digital signature applied by EPA Award Official	Jeff Meestre, Chief - Grants Management Branch A	04/14/2009	
<b>AFFIRMATION OF AWARD</b>			
<b>BY AND ON BEHALF OF THE DESIGNATED RECIPIENT ORGANIZATION</b>			
<b>SIGNATURE</b>	<b>TYPED NAME AND TITLE</b>	<b>DATE</b>	

EPA Funding Information

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FUNDS	FORMER AWARD	THIS ACTION	AMENDED TOTAL
EPA Amount This Action	\$	\$ 481,841	\$ 481,841
EPA In-Kind Amount	\$	\$	\$ 0
Unexpended Prior Year Balance	\$	\$	\$ 0
Other Federal Funds	\$	\$	\$ 0
Recipient Contribution	\$	\$	\$ 0
State Contribution	\$	\$	\$ 0
Local Contribution	\$	\$	\$ 0
Other Contribution	\$	\$	\$ 0
Allowable Project Cost	\$ 0	\$ 481,841	\$ 481,841

Assistance Program (CFDA)	Statutory Authority	Regulatory Authority
86.931 - International Financial Assistance Projects Sponsored by the Office of International Affairs	National Environmental Policy Act: Sec. 102(2)(f) Clean Air Act: Sec. 103	SEE SPECIAL CONDITION

Fiscal									
Site Name	Req No	FY	Approp. Code	Budget Organization	PRC	Object Class	Site/Project	Cost Organization	Obligation / Decobligation
	0856F80325	0809	C	56FN	101A61D	4183			188,841
	0913PXN904	0809	B	13PPPP1	401L85D	4183			283,000
									481,841

Budget Summary Page: UNEP PCFV

Table A - Object Class Category (Non-construction)	Total Approved Allowable Budget Period Cost
1. Personnel	\$660,000
2. Fringe Benefits	\$0
3. Travel	\$105,000
4. Equipment	\$0
5. Supplies	\$0
6. Contractual	\$2,235,000
7. Construction	\$0
8. Other	\$0
9. Total Direct Charges	\$3,000,000
10. Indirect Costs: % Base	\$0
11. Total (Share: Recipient % Federal 100.00 %)	\$3,000,000
12. Total Approved Assistance Amount	\$3,000,000
13. Program Income	\$0
14. Total EPA Amount Awarded This Action	\$481,841
15. Total EPA Amount Awarded To Date	\$481,841

**Private Sector (Exxon Mobil): UNEP was awarded USD100K for cleaner fuels and vehicles work, 50K of which we have earmarked for this project, as noted in Table B of CEO Endorsement. See below UNON ledger deposit entry of total USD 100K of Exxon Mobil donation.**

Week 51/2009				18.12.09							
No.	Depositor	Value	Deposit	3rd Party ID	Receivable	Amount (USD)	Amount (EUR)	Other	Posting	Project	Remarks
40	Exxon Mobile	15.12	30989		19432	100,000.00			CPL	8416-3945-2632	Support to PCFV

UNEP DTIE:



**United Nations Environment Programme**

برنامج الأمم المتحدة للبيئة • 联合国环境规划署  
PROGRAMME DES NATIONS UNIES POUR L'ENVIRONNEMENT • PROGRAMA DE LAS NACIONES UNIDAS PARA EL MEDIO AMBIENTE  
ПРОГРАММА ОРГАНИЗАЦИИ СЪЕДИНЕННЫХ НАЦИЙ ПО ОКРУЖАЮЩЕЙ СРЕДЕ

**MEMORANDUM**

**To:** Ms. Maryam Niamir-Fuller  
Director, Division of Global Environment  
Facility Coordination

**Reference:** DTIE/MR/RDJ/EMD

**From:** Mark Radka  
Chief, Energy Branch

**Date:** 30 March 2010

**Subject:** Letter of Commitment for GEF GFEL Project, UNEP DTIE

I would like to confirm the Division of Technology, Industry and Economics' (DTIEs) commitment to co-financing the Global fuel Economy Initiative (GFEL) project, as submitted to the GEF. Our support for the 32-month project would total at least USD 235,000 in both cash and in-kind contributions. This will include staff time, direct Environment Fund, and in-kind support.

As one of the founding partner of the GFEL, UNEP is leading in national and regional policy development for cleaner, more efficient vehicle fleets in developing and transitional countries. As such, UNEP is committed to support the DTIE Transport Unit's implementation of the GFEL project as proposed to the GEF, and ensure the meeting of the project's objectives and, therefore, the GFEL's global target of 50by50.

We look forward to working closely with the GEF during and following project implementation.

## **Appendix 8 Incremental Cost Analysis**

Note: A complementary cost analysis is provided in section 3.5 above.

GEF financing for specific GFEI activities allows for the development of GFEI pilot projects, and a practical demonstration that CO<sub>2</sub> and non-CO<sub>2</sub> emissions may be reduced from vehicles in developing countries using appropriate policies and technologies, and that cost-effective measures do exist and can be transferred to developing markets. GEF financing will also allow for a national-level assessment of baseline and potential scenarios for fleet efficiency, emissions, and costs.

Two scenarios are envisaged:

### Baseline:

- With shifting consumption patterns in developing and transitional countries, growth in vehicle ownership in non-OECD countries is expected to make up close to three-fifths of the global vehicle fleet by 2050; at the moment the non-OECD fleet is a quarter of the global fleet.
- According to the IEA ETP Baseline scenario (IEA ETP 2008), world transport energy use and emissions will increase by more than 50% by 2030 and will more than double by 2050. The fastest growth is expected to come from air travel, road freight and light-duty vehicle (car, small van and SUV) travel.
- In the Baseline scenario, nearly all future fuel use in transport will continue to be fossil fuel. While conventional oil production is expected to peak and begin to decline, the shortfall is likely to be made up with non-conventional oil (such as tar sands) and fossil resources such as gas-to-liquids and (especially in China) coal-to-liquids. On average, these fuels are likely to be significantly more carbon intensive than oil. Such a future will be even less sustainable than present practice and creates even greater urgency to shift to a more sustainable, low-carbon transport system.
- Across the OECD the average figure in 2005 was around 8 litres per 100 km for new cars (including both gasoline and diesel vehicles). Currently, new vehicles average around 8L/100km.
- In addition to CO<sub>2</sub> emissions, the role of road transport in local and trans-boundary air pollution is also an important and closely related issue that deserves equal attention. On average, road transport is responsible for an estimated 70-90% of air pollution in urban areas - especially in developing countries where fuel quality, vehicle technology, and inspection and maintenance regimes are inadequate, causing millions of premature deaths and reductions in GDP of up to 5%.

### Alternative (GEF-Scenario):

- Even if vehicle kilometers travelled double by this time, fuel efficiency improvements on a global scale together with complementary systemic transport measures can effectively stabilize emissions from cars. Emission reduction strategies can add up to over 1 gigatonne (Gt) of CO<sub>2</sub> annually from 2025 onwards, and fuel cost savings are expected to equal 6 billion barrels of oil per year by 2050. In the IPCC scenario outlined above, halving CO<sub>2</sub> emissions by 2050 would mean that global emissions would fall to 14 Gt per year.
- According to leading transport and energy outlooks developed by the IEA and the ITF, stabilizing emissions from LDVs requires fuel economy of around 4L/100km (or approximately 90 g CO<sub>2</sub>/km) by 2050 worldwide. With a 50% fuel economy improvement,

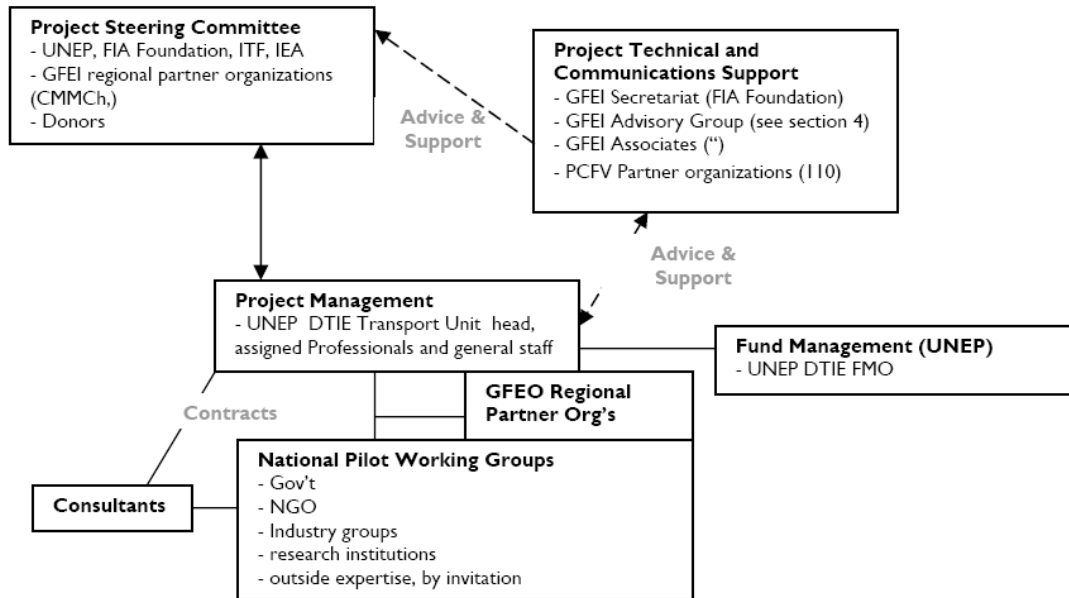
the average new car performance in OECD markets would improve to around 4 litres per 100 km (about 90 g/km of CO<sub>2</sub>).

- Conventional technology can take us up to a 30% increase in efficiency, but the remaining 20% will require widespread global hybridization and the use of flanking transport measures. Therefore, the adoption of enabling policies and incentive structures and the uptake of appropriate cost-effective technology in developing and transitional countries is crucial.
- Fuel economy improvements using existing technologies are estimated to be quite cost effective and in fact could have CO<sub>2</sub> reduction costs near or below zero USD per tonne through 2030, taking into account the likely value of fuel savings and assuming a social discount rate (or a private discount rate with fairly high fuel prices). Hybrids also have near zero net cost. Plug-ins also might be fairly low cost, assuming battery costs decline and vehicle driving range on electricity (and therefore the battery storage) is modest. Pure electric vehicles and fuel cell vehicles are expected to remain quite expensive through 2030, though with successful R&D efforts and cost reduction via increased production scale and learning, their cost per-tonne CO<sub>2</sub> could drop below USD 200/tonne, perhaps after 2030. In any case, it is clear that achieving fuel economy improvements with conventional technologies and hybridisation are cost effective and should be undertaken before embarking on more expensive solutions such as full electrification or introduction of fuel cells.

Baseline activities include 1) developing a fast-track methodology for assessing existing fleets, turnover, and projecting baseline conditions into scenarios for future fleet characterization.



Appendix 9 Decision-making and organizational flowchart



**Project Steering Committee**

A Project Steering Committee will be maintained at the international level to ensure the coordination and information exchange on project process and performance. The Committee will have the opportunity to meet yearly on the outskirts of the **GFEI roundtable sessions (see section 4)**, and will include representatives from main partner organizations, and will be chaired by UNEP and GFEI partners.

**Project Technical and Communications Support Group**

The governance of the GFEI, see section 4, allows for this kind of support for pilot projects, including the GEF action. UNEP, as implementing agency, will make full use of the governance structures and resources provided by the make-up of the GFEI, including its Advisory group, Secretariat, Associate members, and the PCFV and its technical partners.

**Project Management**

UNEP’s Transport Unit, within the Division of Technology, Industry and Economics, will manage the project’s implementation and coordination. It will provide the personnel and day-to-day management for the project, and ensure reporting and budgetary management of the action; this includes UNEP’s fund management services. The Transport Unit head will function as **Project Director** (see Appendix 10).

### Appendix 10 Standard TORs for Project Director

#### Objectives

The Project Director is responsible for the delivery of project outputs, project coordination, and liaising with Project Steering Committee, UNEP Management, and allocation of project work load to designated Programme Officers. The Project Manager will be responsible for the day-to-day operation of the project, and the management of project activities towards the project objectives. Responsibilities will include managing the Programme Officers, supervising activities, including sub-contracting processes, and communication with donors.

#### Assistance

The Project Manager will be assisted in carrying out his/her responsibilities by three regional Programme Officers, at least two consultants, and UNEP secretarial staff.

#### Supervision

The Project Manager is supervised by the Chief, Energy Branch of DTIE, UNEP, and reports to the Project Steering Committee of which UNEP is a member. The Steering Committee meets on a yearly basis to oversee the operation of the project. The Project Manager will prepare regular progress reports for the Chief, Energy Branch and the Steering Committee.

#### Expected Outputs

The Project Manager will be responsible for managing the project activities to achieve the project objectives. The Project Manager will supervise others, including 3 full-time Programme Officers, to achieve the listed project outputs: 1) policy development and national implementation to support the role of the road transport sector in the reduction of global CO<sub>2</sub> and non-CO<sub>2</sub> emissions by supporting the development of fuel economy policies at regional and national levels in non-Annex I countries, including launch of pilot projects in 4 countries and the establishment of the foundation for a global GFEI rollout; 2) information dissemination, capacity increase, and communication: implementation activities on automotive fuel economy supported with a global awareness campaign and tools to provide information that enables behavioral change and supports markets for fuel efficient technology. This includes the development of a global fuel and vehicle database and toolset - the first of their kind.

**Appendix 11 Procurement Plan**

The GEF funds will be disbursed through standard UNEP legal instruments (e.g. Small-Scale Funding Agreements, MOU's) with partner organizations, governments, and research institutions, in accordance with UNEP rules and regulations. Partner organizations will contribute to the project activities depending on their expertise and financial ability.

Final allocation, by project components, will be finalized during the inception phase of the project.

Consultants will be selected for:

- Relevant experience and education, including technical and policy-level knowledge of auto fuel economy policies and programs;
- Experience in working in developing and transitional countries, technology transfer, and working with the private sector;
- Expertise in the transport sector, experience in working with international organizations, and the ability to communicate effectively and bring together all relevant stakeholders;
- Possess specialized skills as required by DTIE, UNEP and GFEI partners.

## Annex 1: Project Document

<b>Appendix 12 – Reporting requirements</b>	<b>Due date</b>	<b>Format appended to legal instrument as</b>	<b>Responsibility of</b>
Procurement plan (goods and services)	2 weeks before project inception meeting	N/A	Project Manager
Inception Report	1 month after project inception meeting	N/A	Project Manager
Expenditure report accompanied by explanatory notes	Quarterly on or before 30 April, 31 July, 31 October, 31 January	<b>Annex 10</b>	Project Manager
Cash Advance request and details of anticipated disbursements	Quarterly or when required	<b>Annex 6</b>	Project Manager
Progress report	Half-yearly on or before 31 January	<b>Annex 7</b>	Project Manager
Co-financing report	Yearly on or before 31 July	<b>Annex 11</b>	Project Manager
Project implementation review (PIR) report	Yearly on or before 31 August	<b>Annex 8</b>	Project Manager, TM, DGEF FMO
Minutes of steering committee meetings	Yearly (or as relevant)	N/A	Project Manager
Mission reports and “aide memoire” for executing agency	Within 2 weeks of return	N/A	TM, DGEF FMO
Final report	2 months of project completion date	<b>Annex 9</b>	Project Manager
Final expenditure statement	3 months of project completion date	<b>Annex 10</b>	Project Manager
Mid-term review or Mid-term evaluation	Midway though project	N/A	TM or EOU (as relevant)
Independent terminal evaluation report	6 months of project completion date	Appendix 13 to Annex 1	EOU

**APPENDIX 13 - STANDARD TERMINAL EVALUATION TERMS OF REFERENCE**

**Terminal Evaluation of the UNEP GEF project {Title}**

**1. PROJECT BACKGROUND AND OVERVIEW**

**Project rationale**

*The objective was stated as:*

*The indicators given in the project document for this stated objective were:*

**Relevance to GEF Programmes**

*The project is in line with:*

**Executing Arrangements**

*The implementing agency(ies) for this project was (were) UNEP and { }; and the executing agencies were:*

*The lead national agencies in the focal countries were:*

**Project Activities**

The project comprised activities grouped in {number} components.

**Budget**

At project inception the following budget prepared:

	<u>GEF</u>	<u>Co-funding</u>
Project preparation funds:		
GEF {Medium/Full} Size Grant		

**TOTAL (including project preparation funds)**

Co-funding sources:

Anticipated:

## APPENDIX 13 TERMS OF REFERENCE FOR THE EVALUATION

### **1. Objective and Scope of the Evaluation**

The objective of this terminal evaluation is to examine the extent and magnitude of any project impacts to date and determine the likelihood of future impacts. The evaluation will also assess project performance and the implementation of planned project activities and planned outputs against actual results. The evaluation will focus on the following main questions:

1. Did the project help to {} among key target audiences (international conventions and initiatives, national level policy-makers, regional and local policy-makers, resource managers and practitioners).
2. Did the outputs of the project articulate options and recommendations for {}? Were these options and recommendations used? If so by whom?
3. To what extent did the project outputs produced have the weight of scientific authority and credibility necessary to influence policy makers and other key audiences?

### **Methods**

This terminal evaluation will be conducted as an in-depth evaluation using a participatory approach whereby the UNEP/DGEF Task Manager, key representatives of the executing agencies and other relevant staff are kept informed and consulted throughout the evaluation. The consultant will liaise with the UNEP/EOU and the UNEP/DGEF Task Manager on any logistic and/or methodological issues to properly conduct the review in as independent a way as possible, given the circumstances and resources offered. The draft report will be circulated to UNEP/DGEF Task Manager, key representatives of the executing agencies and the UNEP/EOU. Any comments or responses to the draft report will be sent to UNEP / EOU for collation and the consultant will be advised of any necessary or suggested revisions.

The findings of the evaluation will be based on the following:

1. A desk review of project documents including, but not limited to:
  - (a) The project documents, outputs, monitoring reports (such as progress and financial reports to UNEP and GEF annual Project Implementation Review reports) and relevant correspondence.
  - (b) Notes from the Steering Group meetings.
  - (c) Other project-related material produced by the project staff or partners.
  - (d) Relevant material published on the project web-site: {}.
2. Interviews with project management and technical support including {NEED INPUT FROM TM HERE}
3. Interviews and Telephone interviews with intended users for the project outputs and other stakeholders involved with this project, including in the participating countries and international bodies. The Consultant shall determine whether to seek additional information and opinions from representatives of donor agencies and other organizations. As appropriate, these interviews could be combined with an email questionnaire.

4. Interviews with the UNEP/DGEF project task manager and Fund Management Officer, and other relevant staff in UNEP dealing with {relevant GEF focal area(s)}-related activities as necessary. The Consultant shall also gain broader perspectives from discussions with relevant GEF Secretariat staff.
5. Field visits<sup>2</sup> to project staff

### **Key Evaluation principles.**

In attempting to evaluate any outcomes and impacts that the project may have achieved, evaluators should remember that the project's performance should be assessed by considering the difference between the answers to two simple questions “*what happened?*” and “*what would have happened anyway?*”. These questions imply that there should be consideration of the baseline conditions and trends in relation to the intended project outcomes and impacts. In addition it implies that there should be plausible evidence to **attribute** such outcomes and impacts **to the actions of the project**.

Sometimes, adequate information on baseline conditions and trends is lacking. In such cases this should be clearly highlighted by the evaluator, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

## **2. Project Ratings**

The success of project implementation will be rated on a scale from ‘highly unsatisfactory’ to ‘highly satisfactory’. In particular the evaluation shall assess and rate the project with respect to the eleven categories defined below:<sup>3</sup>

### **A. Attainment of objectives and planned results:**

The evaluation should assess the extent to which the project's major relevant objectives were effectively and efficiently achieved or are expected to be achieved and their relevance.

- *Effectiveness*: Evaluate how, and to what extent, the stated project objectives have been met, taking into account the “achievement indicators”. The analysis of outcomes achieved should include, *inter alia*, an assessment of the extent to which the project has directly or indirectly assisted policy and decision-makers to apply information supplied by biodiversity indicators in their national planning and decision-making. In particular:
  - Evaluate the immediate impact of the project on {relevant focal area} monitoring and in national planning and decision-making and international understanding and use of biodiversity indicators.
  - As far as possible, also assess the potential longer-term impacts considering that the evaluation is taking place upon completion of the project and that longer term impact is expected to be seen in a few years time. Frame recommendations to enhance future project impact in this context. Which will be the major ‘channels’ for longer term impact from the project at the national and international scales?
    - *Relevance*: In retrospect, were the project's outcomes consistent with the focal areas/operational program strategies? Ascertain the nature and

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<sup>2</sup> Evaluators should make a brief courtesy call to GEF Country Focal points during field visits if at all possible.

<sup>3</sup> However, the views and comments expressed by the evaluator need not be restricted to these items.

significance of the contribution of the project outcomes to the {relevant Convention(s)} and the wider portfolio of the GEF.

- *Efficiency*: Was the project cost effective? Was the project the least cost option? Was the project implementation delayed and if it was, then did that affect cost-effectiveness? Assess the contribution of cash and in-kind co-financing to project implementation and to what extent the project leveraged additional resources. Did the project build on earlier initiatives, did it make effective use of available scientific and / or technical information. Wherever possible, the evaluator should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects.

## B. Sustainability:

Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts after the GEF project funding ends. The evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, e.g. stronger institutional capacities or better informed decision-making. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes. The evaluation should ascertain to what extent follow-up work has been initiated and how project outcomes will be sustained and enhanced over time.

Five aspects of sustainability should be addressed: financial, socio-political, institutional frameworks and governance, environmental (if applicable). The following questions provide guidance on the assessment of these aspects:

- *Financial resources*. Are there any financial risks that may jeopardize sustenance of project outcomes? What is the likelihood that financial and economic resources will not be available once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project's outcomes)? To what extent are the outcomes of the project dependent on continued financial support?
- *Socio-political*: Are there any social or political risks that may jeopardize sustenance of project outcomes? What is the risk that the level of stakeholder ownership will be insufficient to allow for the project outcomes to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- *Institutional framework and governance*. To what extent is the sustenance of the outcomes of the project dependent on issues relating to institutional frameworks and governance? What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for, the project outcomes/benefits to be sustained? While responding to these questions consider if the required systems for accountability and transparency and the required technical know-how are in place.
- *Environmental*. Are there any environmental risks that can undermine the future flow of project environmental benefits? The TE should assess whether certain activities in the project area will pose a threat to the sustainability of the project outcomes. For example; construction of dam in a protected area could inundate a



sizable area and thereby neutralize the biodiversity-related gains made by the project; or, a newly established pulp mill might jeopardise the viability of nearby protected forest areas by increasing logging pressures; or a vector control intervention may be made less effective by changes in climate and consequent alterations to the incidence and distribution of malarial mosquitoes.

**C. Achievement of outputs and activities:**

- Delivered outputs: Assessment of the project's success in producing each of the programmed outputs, both in quantity and quality as well as usefulness and timeliness.
- Assess the soundness and effectiveness of the methodologies used for developing the technical documents and related management options in the participating countries
- Assess to what extent the project outputs produced have the weight of scientific authority / credibility, necessary to influence policy and decision-makers, particularly at the national level.

**D. Catalytic Role**

Replication and catalysis. What examples are there of replication and catalytic outcomes? Replication approach, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources). Specifically:

- Do the recommendations for management of {project} coming from the country studies have the potential for application in other countries and locations?

If no effects are identified, the evaluation will describe the catalytic or replication actions that the project carried out.

**E. Assessment monitoring and evaluation systems.**

The evaluation shall include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The Terminal Evaluation will assess whether the project met the minimum requirements for 'project design of M&E' and 'the application of the Project M&E plan' (see minimum requirements 1&2 in *Annex 4* to this Appendix). GEF projects must budget adequately for execution of the M&E plan, and provide adequate resources during implementation of the M&E plan. Project managers are also expected to use the information generated by the M&E system during project implementation to adapt and improve the project.

**M&E during project implementation**

- *M&E design.* Projects should have sound M&E plans to monitor results and track progress towards achieving project objectives. An M&E plan should include a baseline (including data, methodology, etc.), SMART indicators (see Annex 4) and data analysis systems, and evaluation studies at specific times to assess results. The time frame for various M&E activities and standards for outputs should have been specified.
- *M&E plan implementation.* A Terminal Evaluation should verify that: an M&E system was in place and facilitated timely tracking of results and progress

towards projects objectives throughout the project implementation period (perhaps through use of a logframe or similar); annual project reports and Progress Implementation Review (PIR) reports were complete, accurate and with well justified ratings; that the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs; and that projects had an M&E system in place with proper training for parties responsible for M&E activities.

- *Budgeting and Funding for M&E activities.* The terminal evaluation should determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.

**F. Preparation and Readiness**

Were the project's objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place?

**G. Country ownership / drivenness:**

This is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements. The evaluation will:

- Assess the level of country ownership. Specifically, the evaluator should assess whether the project was effective in providing and communicating biodiversity information that catalyzed action in participating countries to improve decisions relating to the conservation and management of the focal ecosystem in each country.
- Assess the level of country commitment to the generation and use of biodiversity indicators for decision-making during and after the project, including in regional and international fora.

**H. Stakeholder participation / public awareness:**

This consists of three related and often overlapping processes: information dissemination, consultation, and "stakeholder" participation. Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the GEF-financed project. The term also applies to those potentially adversely affected by a project. The evaluation will specifically:

- Assess the mechanisms put in place by the project for identification and engagement of stakeholders in each participating country and establish, in consultation with the stakeholders, whether this mechanism was successful, and identify its strengths and weaknesses.
- Assess the degree and effectiveness of collaboration/interactions between the various project partners and institutions during the course of implementation of the project.
- Assess the degree and effectiveness of any various public awareness activities that were undertaken during the course of implementation of the project.

**I. Financial Planning**

Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime.

Evaluation includes actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co- financing. The evaluation should:

- Assess the strength and utility of financial controls, including reporting, and planning to allow the project management to make informed decisions regarding the budget and allow for a proper and timely flow of funds for the payment of satisfactory project deliverables.
- Present the major findings from the financial audit if one has been conducted.
- Identify and verify the sources of co- financing as well as leveraged and associated financing (in co-operation with the IA and EA).
- Assess whether the project has applied appropriate standards of due diligence in the management of funds and financial audits.
- The evaluation should also include a breakdown of final actual costs and co-financing for the project prepared in consultation with the relevant UNEP/DGEF Fund Management Officer of the project (table attached in *Annex 1* to this Appendix Co-financing and leveraged resources).

**J. Implementation approach:**

This includes an analysis of the project’s management framework, adaptation to changing conditions (adaptive management), partnerships in implementation arrangements, changes in project design, and overall project management. The evaluation will:

- Ascertain to what extent the project implementation mechanisms outlined in the project document have been closely followed. In particular, assess the role of the various committees established and whether the project document was clear and realistic to enable effective and efficient implementation, whether the project was executed according to the plan and how well the management was able to adapt to changes during the life of the project to enable the implementation of the project.
- Evaluate the effectiveness and efficiency and adaptability of project management and the supervision of project activities / project execution arrangements at all levels (1) policy decisions: Steering Group; (2) day to day project management in each of the country executing agencies and {lead executing agency}.

**K. UNEP Supervision and Backstopping**

- Assess the effectiveness of supervision and administrative and financial support provided by UNEP/DGEF.
- Identify administrative, operational and/or technical problems and constraints that influenced the effective implementation of the project.

The *ratings will be presented in the form of a table*. Each of the eleven categories should be rated separately with **brief justifications** based on the findings of the main analysis. An overall rating for the project should also be given. The following rating system is to be applied:

HS	= Highly Satisfactory
S	= Satisfactory
MS	= Moderately Satisfactory
MU	= Moderately Unsatisfactory
U	= Unsatisfactory
HU	= Highly Unsatisfactory

**3. Evaluation report format and review procedures**

The report should be brief, to the point and easy to understand. It must explain; the purpose of the evaluation, exactly what was evaluated and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should be presented in a way that makes the information accessible and comprehensible and include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

**The evaluation will rate the overall implementation success of the project and provide individual ratings of the eleven implementation aspects as described in Section 1 of this TOR. The ratings will be presented in the format of a table with brief justifications based on the findings of the main analysis.**

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. Any dissident views in response to evaluation findings will be appended in an annex. The evaluation report shall be written in English, be of no more than 50 pages (excluding annexes), use numbered paragraphs and include:

- i) An **executive summary** (no more than 3 pages) providing a brief overview of the main conclusions and recommendations of the evaluation;
- ii) **Introduction and background** giving a brief overview of the evaluated project, for example, the objective and status of activities; The GEF Monitoring and Evaluation Policy, 2006, requires that a TE report will provide summary information on when the evaluation took place; places visited; who was involved; the key questions; and, the methodology.
- iii) **Scope, objective and methods** presenting the evaluation's purpose, the evaluation criteria used and questions to be addressed;
- iv) **Project Performance and Impact** providing *factual evidence* relevant to the questions asked by the evaluator and interpretations of such evidence. This is the main substantive section of the report. The evaluator should provide a commentary and analysis on all eleven evaluation aspects (A – K above).
- v) **Conclusions and rating** of project implementation success giving the evaluator's concluding assessments and ratings of the project against given evaluation criteria and standards of performance. The conclusions should provide answers to questions about whether the project is considered good or bad, and whether the results are considered positive or negative. The ratings should be provided with a brief narrative comment in a table (see *Annex 1* to this Appendix);
- vi) **Lessons (to be) learned** presenting general conclusions from the standpoint of the design and implementation of the project, based on good practices and successes or problems and mistakes. Lessons should have the potential for wider application and use. All lessons should 'stand alone' and should:
  - Briefly describe the context from which they are derived
  - State or imply some prescriptive action;
  - Specify the contexts in which they may be applied (if possible, who when and where)

- vii) **Recommendations** suggesting *actionable* proposals for improvement of the current project. In general, Terminal Evaluations are likely to have very few (perhaps two or three) actionable recommendations.

*Prior to each recommendation*, the issue(s) or problem(s) to be addressed by the recommendation should be clearly stated.

A high quality recommendation is an actionable proposal that is:

1. Feasible to implement within the timeframe and resources available
2. Commensurate with the available capacities of project team and partners
3. Specific in terms of who would do what and when
4. Contains results-based language (i.e. a measurable performance target)
5. Includes a trade-off analysis, when its implementation may require utilizing significant resources that would otherwise be used for other project purposes.

- viii) **Annexes** may include additional material deemed relevant by the evaluator but must include:

1. The Evaluation Terms of Reference,
2. A list of interviewees, and evaluation timeline
3. A list of documents reviewed / consulted
4. Summary co-finance information and a statement of project expenditure by activity
5. The expertise of the evaluation team. (brief CV).

TE reports will also include any response / comments from the project management team and/or the country focal point regarding the evaluation findings or conclusions as an annex to the report, however, such will be appended to the report by UNEP EOU.

Examples of UNEP GEF Terminal Evaluation Reports are available at [www.unep.org/eou](http://www.unep.org/eou)

#### **Review of the Draft Evaluation Report**

Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The DGEF staff and senior Executing Agency staff are allowed to comment on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. The consultation also seeks feedback on the proposed recommendations. UNEP EOU collates all review comments and provides them to the evaluators for their consideration in preparing the final version of the report.

#### **4. Submission of Final Terminal Evaluation Reports.**

The final report shall be submitted in electronic form in MS Word format and should be sent to the following persons:

Segbedzi Norgbey, Chief,  
UNEP Evaluation and Oversight Unit  
P.O. Box 30552-00100  
Nairobi, Kenya  
Tel.: +(254-20)762-4181  
Fax: +(254-20)762-3158

Email: [Segbedzi.Norgbey@unep.org](mailto:Segbedzi.Norgbey@unep.org)

With a copy to:

Maryam Niamir-Fuller,  
Director  
UNEP/Division of GEF Coordination  
P.O. Box 30552-00100  
Nairobi, Kenya  
Tel: +(254-20)762-4166  
Fax: +(254-20)762-4041/2  
Email: [Maryam.Niamir-Fuller@unep.org](mailto:Maryam.Niamir-Fuller@unep.org)

{Name}  
[Task Manager](#)  
{Contact details}

The Final evaluation will also be copied to the following GEF National Focal Points.

{Insert contact details here}

The final evaluation report will be published on the Evaluation and Oversight Unit's web-site [www.unep.org/eou](http://www.unep.org/eou) and may be printed in hard copy. Subsequently, the report will be sent to the GEF Office of Evaluation for their review, appraisal and inclusion on the GEF website.

##### **5. Resources and schedule of the evaluation**

This final evaluation will be undertaken by an international evaluator contracted by the Evaluation and Oversight Unit, UNEP. The contract for the evaluator will begin on ddmmyyy and end on ddmmyyy (# days) spread over # weeks (# days of travel, to {country(ies)}, and # days desk study). The evaluator will submit a draft report on ddmmyyy to UNEP/EOU, the UNEP/DGEF Task Manager, and key representatives of the executing agencies. Any comments or responses to the draft report will be sent to UNEP / EOU for collation and the consultant will be advised of any necessary revisions. Comments to the final draft report will be sent to the consultant by ddmmyyy after which, the consultant will submit the final report no later than ddmmyyy.

The evaluator will after an initial telephone briefing with EOU and UNEP/GEF conduct initial desk review work and later travel to {country(ies)} and meet with project staff at the beginning of the evaluation. Furthermore, the evaluator is expected to travel to {country(ies)} and meet with representatives of the project executing agencies and the intended users of project's outputs.

In accordance with UNEP/GEF policy, all GEF projects are evaluated by independent evaluators contracted as consultants by the EOU. The evaluator should have the following qualifications:

The evaluator should not have been associated with the design and implementation of the project in a paid capacity. The evaluator will work under the overall supervision of the Chief, Evaluation and Oversight Unit, UNEP. The evaluator should be an international expert in {} with a sound understanding of {} issues. The consultant should have the following minimum qualifications: (i) experience in {} issues; (ii) experience with management and implementation of {} projects and in particular with {} targeted at policy-influence and decision-making; (iii) experience with project evaluation. Knowledge of UNEP programmes

and GEF activities is desirable. Knowledge of {specify language(s)} is an advantage. Fluency in oral and written English is a must.

**6. Schedule Of Payment**

The consultant shall select one of the following two contract options:

**Lump-Sum Option**

The evaluator will receive an initial payment of 30% of the total amount due upon signature of the contract. A further 30% will be paid upon submission of the draft report. A final payment of 40% will be made upon satisfactory completion of work. The fee is payable under the individual Special Service Agreement (SSA) of the evaluator and **is inclusive** of all expenses such as travel, accommodation and incidental expenses.

**Fee-only Option**

The evaluator will receive an initial payment of 40% of the total amount due upon signature of the contract. Final payment of 60% will be made upon satisfactory completion of work. The fee is payable under the individual SSAs of the evaluator and is **NOT** inclusive of all expenses such as travel, accommodation and incidental expenses. Ticket and DSA will be paid separately.

In case, the evaluator cannot provide the products in accordance with the TORs, the timeframe agreed, or his products are substandard, the payment to the evaluator could be withheld, until such a time the products are modified to meet UNEP's standard. In case the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

*Annex 1 to Appendix 13: OVERALL RATINGS TABLE*

<b>Criterion</b>	<b>Evaluator's Summary Comments</b>	<b>Evaluator's Rating</b>
<b>A. Attainment of project objectives and results (overall rating)</b> Sub criteria (below)		
A. 1. Effectiveness		
A. 2. Relevance		
A. 3. Efficiency		
<b>B. Sustainability of Project outcomes (overall rating)</b> Sub criteria (below)		
B. 1. Financial		
B. 2. Socio Political		
B. 3. Institutional framework and governance		
B. 4. Ecological		
<b>C. Achievement of outputs and activities</b>		
<b>D. Monitoring and Evaluation (overall rating)</b> Sub criteria (below)		
D. 1. M&E Design		
D. 2. M&E Plan Implementation (use for adaptive management)		
D. 3. Budgeting and Funding for M&E activities		
<b>E. Catalytic Role</b>		
<b>F. Preparation and readiness</b>		
<b>G. Country ownership / drivenness</b>		
<b>H. Stakeholders involvement</b>		
<b>I. Financial planning</b>		
<b>J. Implementation approach</b>		
<b>K. UNEP Supervision and backstopping</b>		

**RATING OF PROJECT OBJECTIVES AND RESULTS**

Highly Satisfactory (HS): The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Moderately Satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Moderately Unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Unsatisfactory (U) The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Highly Unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.



**Please note:** Relevance and effectiveness will be considered as critical criteria. The overall rating of the project for achievement of objectives and results **may not be higher** than the lowest rating on either of these two criteria. Thus, to have an overall satisfactory rating for outcomes a project must have at least satisfactory ratings on both relevance and effectiveness.

### **RATINGS ON SUSTAINABILITY**

A. Sustainability will be understood as the probability of continued long-term outcomes and impacts after the GEF project funding ends. The Terminal evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, i.e. stronger institutional capacities, legal frameworks, socio-economic incentives /or public awareness. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes.

#### Rating system for sustainability sub-criteria

On each of the dimensions of sustainability of the project outcomes will be rated as follows.

Likely (L): There are no risks affecting this dimension of sustainability.

Moderately Likely (ML). There are moderate risks that affect this dimension of sustainability.

Moderately Unlikely (MU): There are significant risks that affect this dimension of sustainability

Unlikely (U): There are severe risks that affect this dimension of sustainability.

According to the GEF Office of Evaluation, all the risk dimensions of sustainability are deemed critical. Therefore, overall rating for sustainability will not be higher than the rating of the dimension with lowest ratings. For example, if a project has an Unlikely rating in any of the dimensions then its overall rating cannot be higher than Unlikely, regardless of whether higher ratings in other dimensions of sustainability produce a higher average.

### **RATINGS OF PROJECT M&E**

Monitoring is a continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing project with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. Evaluation is the systematic and objective assessment of an on-going or completed project, its design, implementation and results. Project evaluation may involve the definition of appropriate standards, the examination of performance against those standards, and an assessment of actual and expected results.

The Project monitoring and evaluation system will be rated on ‘M&E Design’, ‘M&E Plan Implementation’ and ‘Budgeting and Funding for M&E activities’ as follows:

Highly Satisfactory (HS): There were no shortcomings in the project M&E system.

Satisfactory(S): There were minor shortcomings in the project M&E system.

Moderately Satisfactory (MS): There were moderate shortcomings in the project M&E system.

Moderately Unsatisfactory (MU): There were significant shortcomings in the project M&E system.

Unsatisfactory (U): There were major shortcomings in the project M&E system.

Highly Unsatisfactory (HU): The Project had no M&E system.

## Annex 1: Project Document

“M&E plan implementation” will be considered a critical parameter for the overall assessment of the M&E system. The overall rating for the M&E systems will not be higher than the rating on “M&E plan implementation.”

All other ratings will be on the GEF six point scale.

GEF Performance Description	Alternative description on the same scale
HS = Highly Satisfactory	Excellent
S = Satisfactory	Well above average
MS = Moderately Satisfactory	Average
MU = Moderately Unsatisfactory	Below Average
U = Unsatisfactory	Poor
HU = Highly Unsatisfactory	Very poor (Appalling)

*Annex 2 to Appendix 13: Co-financing and Leveraged Resources*

Co financing (Type/Source)	IA own Financing (mill US\$)		Government (mill US\$)		Other* (mill US\$)		Total (mill US\$)		Total Disbursement (mill US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
- Grants										
- Loans/Concessional (compared to market rate)										
- Credits										
- Equity investments										
- In-kind support										
- Other (*)										
-										
-										
-										
-										
-										
<b>2. Totals</b>										

*Co-financing (basic data to be supplied to the consultant for verification)*

**2.1.**

\* Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

***Leveraged Resources***

Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective.

**Table showing final actual project expenditure by activity to be supplied by the UNEP Fund management Officer. (insert here)**

$$0.1*(C+D+E+F)$$

$$\text{EOU assessment of MTE report} = 0.3*(G + H) +$$

$$0.1*(I+J+K+L)$$

$$\text{Combined quality Rating} = (2* \text{'GEF EO' rating} + \text{EOU rating})/3$$

The Totals are rounded and converted to the scale of HS to HU

#### Rating system for quality of terminal evaluation reports

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1, and unable to assess = 0.

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### Review of the Draft Report

Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The DGEF staff and senior Executing Agency staff provide comments on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. The consultation also seeks agreement on the findings and recommendations. UNEP EOU collates the review comments and provides them to the evaluators for their consideration in preparing the final version of the report. General comments on the draft report with respect to compliance with these TOR are shared with the reviewer.

### Quality Assessment of the Evaluation Report

All UNEP GEF Mid Term Reports are subject to quality assessments by UNEP EOU. These apply GEF Office of Evaluation quality assessment and are used as a tool for providing structured feedback to the evaluator.

The quality of the draft evaluation report is assessed and rated against the following criteria:

<b>GEF Report Quality Criteria</b>	<b>UNEP EOU Assessment</b>	<b>Rating</b>
A. Did the report present an assessment of relevant outcomes and achievement of project objectives in the context of the focal area program indicators if applicable?		
B. Was the report consistent and the evidence complete and convincing and were the ratings substantiated when used?		
C. Did the report present a sound assessment of sustainability of outcomes?		
D. Were the lessons and recommendations supported by the evidence presented?		
E. Did the report include the actual project costs (total and per activity) and actual co-financing used?		
F. Did the report include an assessment of the quality of the project M&E system and its use for project management?		
<b>UNEP EOU additional Report Quality Criteria</b>	<b>UNEP EOU Assessment</b>	<b>Rating</b>
G. Quality of the lessons: Were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
H. Quality of the recommendations: Did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can they be implemented? Did the recommendations specify a goal and an associated performance indicator?		
I. Was the report well written? (clear English language and grammar)		
J. Did the report structure follow EOU guidelines, were all requested Annexes included?		
K. Were all evaluation aspects specified in the TORs adequately addressed?		
L. Was the report delivered in a timely manner		

<b>GEF Quality of the MTE report = 0.3*(A + B) +</b>
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## **2.2. GEF Minimum requirements for M&E**

### **2.3. Minimum Requirement 1: Project Design of M&E<sup>4</sup>**

All projects must include a concrete and fully budgeted monitoring and evaluation plan by the time of Work Program entry (full-sized projects) or CEO approval (medium-sized projects). This plan must contain at a minimum:

- SMART (see below) indicators for project implementation, or, if no indicators are identified, an alternative plan for monitoring that will deliver reliable and valid information to management
- SMART indicators for results (outcomes and, if applicable, impacts), and, where appropriate, corporate-level indicators
- A project baseline, with:
  - a description of the problem to address
  - indicator data
  - or, if major baseline indicators are not identified, an alternative plan for addressing this within one year of implementation
- An M&E Plan with identification of reviews and evaluations which will be undertaken, such as mid-term reviews or evaluations of activities
- An organizational setup and budgets for monitoring and evaluation.

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<sup>4</sup> <http://gefweb.org/MonitoringandEvaluation/MEPoliciesProcedures/MEPTools/meptstandards.html>

## 2.4. Minimum Requirement 2: Application of Project M&E

- Project monitoring and supervision will include implementation of the M&E plan, comprising:
- Use of SMART indicators for implementation (or provision of a reasonable explanation if not used)
- Use of SMART indicators for results (or provision of a reasonable explanation if not used)
- Fully established baseline for the project and data compiled to review progress
- Evaluations are undertaken as planned
- Operational organizational setup for M&E and budgets spent as planned.

**SMART INDICATORS** GEF projects and programs should monitor using relevant performance indicators. The monitoring system should be "SMART":

1. **Specific:** The system captures the essence of the desired result by clearly and directly relating to achieving an objective, and only that objective.
2. **Measurable:** The monitoring system and its indicators are unambiguously specified so that all parties agree on what the system covers and there are practical ways to measure the indicators and results.
3. **Achievable and Attributable:** The system identifies what changes are anticipated as a result of the intervention and whether the result(s) are realistic. Attribution requires that changes in the targeted developmental issue can be linked to the intervention.
4. **Relevant and Realistic:** The system establishes levels of performance that are likely to be achieved in a practical manner, and that reflect the expectations of stakeholders.
5. **Time-bound, Timely, Trackable, and Targeted:** The system allows progress to be tracked in a cost-effective manner at desired frequency for a set period, with clear identification of the particular stakeholder group to be impacted by the project or program.



**2.5. List of intended additional recipients for the Terminal Evaluation (to be completed by the IA Task Manager)**

Name	Affiliation	Email
Aaron Zazueta	GEF Evaluation Office	azazueta@thegef.org
<b>Government Officials</b>		
<b>GEF Focal Point(s)</b>		
<b>Executing Agency</b>		
<b>Implementing Agency</b>		
Carmen Tavera	UNEP DGEF Quality Assurance Officer	

## APPENDIX 14: CLIMATE CHANGE TRACKING TOOLS

The tracking tools for IV Sustainable Transport are those used for OP7:

Indicator 1: Growth in interest in the selected technologies, as measured by the number of stakeholders (public or private enterprises) indicating interest in procuring or supplying the technology.

Indicator 2: Annual electricity production from grid-connected renewable energies that were installed under the influence of the project (MWh/ year).

Only Indicator 1 is relevant for this project.

The measure of this project will be: Four fuel economy policies developed that will increase efficiency of the national vehicle fleet 20% by 2030, with an overall target of 50% by 2050.

Tracking climate emissions: The four pilot projects will set a baseline of the CO<sub>2</sub> emissions of the vehicle fleet in the country. The project will establish the average fuel economy of vehicles in the pilot countries. This can then be translated in an estimation of the overall CO<sub>2</sub> emissions of a countries' light duty vehicle fleet.

The project measure will result in an increased average fuel economy, which can be translated in reduced or avoided CO<sub>2</sub> emissions.

Thus at the end of the project estimations will be provided of the reduced or avoided CO<sub>2</sub> emissions of the light duty fleets in the four pilot countries.



## APPENDIX 15: PROJECT SUPERVISION PLAN

Project Title:	Global Fuel Economy Initiative																																						
Project number:	GFL-2328-2721-4B12																																						
Project executing partner:	UNEP/DTIE Transport Unit																																						
Project implementation period	32 months																																						
Note: Plan should cover an additional 6 months after the project is completed to cover requirements for final reporting and terminal evaluation																																							
	Month	Year 1												Year 2												Year 3													
	Mth no	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O
Executing Agency		UNEP/DGEF																																					
Activity/Task/Output																																							
1	MoU with 4 pilot countries	[Green bar from Mth 1 to 4]																																					
2	Inception meeting/workshop + report of meeting	[Green bar from Mth 3 to 7]																																					
3	Hire consultants and project staff (4 countries)	[Green bar from Mth 1 to 6]																																					
5	Establish M&E system	[Green bar from Mth 2 to 4]																																					
6	Expenditure report - Jun and Dec 31+ 30 days	[Red diamonds at Mths 7, 13, 19, 25, 31]																																					
7	Progress report - Dec 31+ 30 days	[Red diamonds at Mths 7, 13, 19, 25, 31]																																					
8	Annual co-financing report - Dec 31+ 30 days	[Red diamonds at Mths 7, 13, 19, 25, 31]																																					
9	Annual audit report - Dec 31+ 180 days	[Red diamonds at Mths 13, 19, 25]																																					
10	Year end review of project accounts Dec 31+ 60 days	[Red diamonds at Mths 13, 19, 25]																																					
11	Project Implementation Review (PIR) - Jun 30 + 30 days	[Red diamonds at Mths 13, 19, 25]																																					
12	Mid-term review	[Red diamond at Mth 16]																																					
13	Progress reports to co-financiers (where applicable)	[Green bars at Mths 7, 13, 19, 25]																																					
14	Training workshops/seminars	[Green bar from Mth 10 to 31]																																					
15	Project website design & development + updates/revamps	[Green bar from Mth 10 to 31]																																					
16	Project steering committee meeting + minutes of meeting	[Green bars at Mths 1, 13, 25]																																					
17	Country visit & reports	[Green bars at Mths 2-3, 8-11, 26-29]																																					
18	Final report + outputs	[Green bar from Mth 30 to 32]																																					
19	Completion revision	[Green bar from Mth 31 to 32]																																					
20	Final audit report for project	[Red diamond at Mth 36]																																					
21	Terminal evaluation	[Red diamonds at Mths 34, 35]																																					
22	Return unspent funds (if applicable)	[Red diamond at Mth 34]																																					
23	Closing revision	[Red diamond at Mth 35]																																					
		Project End																																					