SAFE CLEAN FAIR & GREEN

AN AGENDA FOR SUSTAINABLE MOBILITY POST-2015

LEIPZIG, GERMANY, WEDNESDAY 21 MAY 2014
Saul Billingsley
Director General,
FIA Foundation
SAFE

REDUCE DEATHS BY 50% BY 2030
SAFE
CLEAN
FAIR

REDUCE DEATHS BY 50% BY 2030
IMPROVE URBAN AIR QUALITY
ACCESS TO MOBILITY FOR ALL
SAFE
CLEAN
FAIR
GREEN

REDUCE DEATHS BY 50% BY 2030
IMPROVE URBAN AIR QUALITY
ACCESS TO MOBILITY FOR ALL
50% FUEL EFFICIENCY GAIN
The case for Post-2015 action
The case for Post-2015 action
SAFE
CLEAN
FAIR &
GREEN

OUR POST-2015 MOBILITY AGENDA

The United Nations is currently consulting on the agenda for global development policy post-2015. The FIA Foundation is advocating for safe and sustainable transport to be recognised as a new priority in these Sustainable Development Goals.

Addressing road safety, air quality, transport and fuel economy can play an important cross-cutting role in reducing health burdens; promoting green mobility; ensuring sustainable energy use; and improving quality of life and economic opportunities for millions. Safe, Clean, Fair & Green is our agenda for the post-2015 debate.

FIA Foundation
www.fiafoundation.org
Incubating innovation: road safety

Legislation, enforcement & mass action on motorcycle helmets

Independent car safety tests in LAC, India, ASEAN

International Road Assessment Programme

‘Safe Schools’: piloting road improvements & speed reduction
Catalysing funding, far more needed

Increase in road safety lending since World Bank Global Road Safety Facility was established with FIA Foundation support

<table>
<thead>
<tr>
<th></th>
<th>FY97-05</th>
<th>FY06-FY14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series1</td>
<td>$358</td>
<td>$1,219</td>
</tr>
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GRSF
Global Road Safety Facility

FIA Foundation
www.fiafoundation.org
Incubating innovation: liveable cities

Tools and Guidelines

Share the Road: Design Guidelines for Non-Motorised Transport in Africa

National policy support

Before

After

Pilots
Partnering for impact: cleaner air

Use of leaded fuel eliminated (almost), with huge societal benefits

Ghana Blood lead levels

Supported over 100 countries

Low sulphur plans adopted - 2006

Now focusing on small particulate matter through low sulfur fuels and vehicles emissions standards
Partnering for impact: fuel economy

- Regional events
- Global reports
- National projects
- Products (Toolkit)

FIA Foundation, UNEP, IEA, ITF, ICCT, UC Davis
Post-2015: designing and delivering targets

- Applicable to all countries, all incomes

- e.g. road fatality target:
  - H.I. : 4 per 100,000
  - M.I. : 8 per 100,000
  - L.I. : 12 per 100,000
Currently, road safety, air quality and fuel economy are all included in ‘Focus areas’ including health, sustainable cities and energy.

We all need to work to ensure they remain, and are translated into firm targets with political support and resourcing.
Fuel Economy in the Post-2015 Agenda

GFEI is an Energy Efficiency Accelerator Initiative for UN Climate Summit 2014
"I call for more concerted action on road safety as part of the future development agenda. This will be a vital component of efforts to improve health and save lives in the years ahead."

Ban Ki-Moon, November 2013

April 2014, UN General Assembly Resolution:

Brazil offers to host Global Ministerial Conference on Road Safety in 2015
Long Short Walk
MY World: UN Global Survey for Post-2015
Cristian Bowen
Vice Minister, Minister of Transport and Communications, Chile
Conciliate increasing mobility with low emissions and energy consumption

May 2013

Cristian Bowen
Vice Minister of Transport
@cristianbowen
Agenda

CONTEXT
• General status of Chile
• Empowered Citizenship
• Emission Control and Energy Consumption

WHAT ARE WE DOING?
• Citizen Participation
• Pollution and Energy Efficiency

FUTURE CHALLENGES
CONTEXT
General Status of Chile
• Increasing population
• 2.8% extreme poverty*
• ~USD 20,000 GDP
• Santiago, Valparaiso and Concepción concentrate 62% of the population
• Privileged position for the Asia Pacific International Commerce

*Data from Casen Survey 2011
Trends show that in Chile the motorization rate will continue to grow

Empowered Citizenship
Empowered Citizenship

New Conditions

- Each time more educated population

![Graph showing the evolution of the population aged 18-24, enrollment, and coverage in higher education in Chile from 1990 to 2012.](image-url)
Emission Control and Energy Consumption
A little history

- We started (in the mid-90s) a program of public policy focusing in improving air quality in cities

- We established a schedule of emissions regulations for new vehicles, which has evolved since EURO III to EURO V

- We implemented a laboratory to certificate new vehicles entering the country

- We improved quality of the fuel (sulfur content less than 15 ppm)
But...turning to Energy Efficiency

- Transportation has the **highest energy consumption in Chile**, with 33% of total energy use, being land transport the most involved, with 80% of it*

- Transport accounts for **25% of total national energy** efficiency potential by 2020**

- Therefore is critical to achieve the development of **projects aimed to establish an efficient use of energy** resources in transportation

*According to the National Energy Balance 2010 (BNE)
** Source: Studies and Energy Program, Universidad de Chile (PRIEN)
WHAT ARE WE DOING?
Citizen Participation
Citizen Participation

1. Participative Committee Pro Mobility, with proposals agreed with the community to improve mobility in our cities

2. Board of Civil Society, composed of civil non profit organizations

3. The first regional Hackathon (at Concepción City): The new age of big data, with the state as a information provider and encouraging the co-creation with citizens and companies
Pollution and Energy Efficiency
1. Evaluate and improve public transportation systems in the main cities of the country

2. Efficiently allocate state contributions to development of transport systems:
   - Public transport infrastructure
   - Subsidies to urban and rural public transport

### Pollution and Energy Consumption

<table>
<thead>
<tr>
<th>Eje Gran Avenida</th>
<th>Buses /hr</th>
<th>Partículas Ultrafinas PM 10-40</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006 83</td>
<td>2013 103</td>
</tr>
<tr>
<td></td>
<td>42.898</td>
<td>30.116</td>
</tr>
<tr>
<td></td>
<td>-30%</td>
<td></td>
</tr>
</tbody>
</table>

Variación
3. Energy Consumption Labelling for Lightweight Motor Vehicles to share parameters of vehicular consumption and carbon dioxide
4. Plan “Renew your Bus ” to **improve quality of buses, safer, better and cleaner technology**. Economic incentives to allow the destruction of old machines and replace them.

**Subsidies: USD 30.000.000**

2.500 buses nationwide

**Age:** Outgoing buses (20 years) VS Incoming buses (6 years)
FUTURE CHALLENGES
Future challenges

• We need to face more organized communities: co-creating public policy

• We need to create policies that really promote public transportation and non-motorized modes, while people are increasing incomes

• In terms of energy efficiency, we are going to face technological non marginal changes (hydrogen, electric, hybrid, or another?). What are we going to do?

We are facing huge changes in our world and development of a more efficient system of transportation needs to be aware of that. Let´s work together because I´m sure we will pass the exam.
Thanks

Name: Cristian Bowen, Vice Minister of Transport, Chile
Email: cristian.bowen@mtt.gob.cl
Date: May 2014
Jose-Luis Irigoyen
Transport Director,
World Bank
Transport for Health
The Global Burden of Disease from Motorized Road Transport

Jose Luis Irigoyen
Director, Transport, Water and Information & Communications Technology

THE WORLD BANK
IBRD • IDA • WORLD BANK GROUP

GRSF
Global Road Safety Facility
Transport contributes to 6 of the top 10 death causes

Table 1: Leading causes of death worldwide, associated DALYs, and burden attributable to motorized road transport, 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cause</th>
<th>Global burden of disease</th>
<th>Burden attributable to motorized road transport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Deaths</td>
<td>DALYs</td>
</tr>
<tr>
<td>1</td>
<td>Ischemic heart disease</td>
<td>7,029,270</td>
<td>129,795,464</td>
</tr>
<tr>
<td>2</td>
<td>Stroke</td>
<td>5,874,181</td>
<td>102,238,999</td>
</tr>
<tr>
<td>3</td>
<td>COPD</td>
<td>2,899,941</td>
<td>76,778,819</td>
</tr>
<tr>
<td>4</td>
<td>Lower respiratory infections</td>
<td>2,814,379</td>
<td>115,227,062</td>
</tr>
<tr>
<td>5</td>
<td>Lung cancer</td>
<td>1,527,102</td>
<td>32,405,411</td>
</tr>
<tr>
<td>6</td>
<td>HIV/AIDS</td>
<td>1,465,369</td>
<td>81,549,177</td>
</tr>
<tr>
<td>7</td>
<td>Diarrheal diseases</td>
<td>1,445,798</td>
<td>89,523,909</td>
</tr>
<tr>
<td>8</td>
<td>Road injury</td>
<td>1,328,536</td>
<td>75,487,102</td>
</tr>
<tr>
<td>9</td>
<td>Diabetes mellitus</td>
<td>1,281,345</td>
<td>46,857,136</td>
</tr>
<tr>
<td>10</td>
<td>Tuberculosis</td>
<td>1,195,990</td>
<td>49,399,351</td>
</tr>
<tr>
<td></td>
<td>All other causes</td>
<td>24,207,527</td>
<td>1,682,995,639</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>52,769,676</td>
<td>2,482,258,070</td>
</tr>
</tbody>
</table>
Road deaths (in blue) are dominant in all world regions

Figure 7: Death rates from injuries and air pollution due to motorized road transport, 2010
Report confirms under-reporting of road traffic deaths

<table>
<thead>
<tr>
<th>China</th>
<th>India</th>
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<tbody>
<tr>
<td>Reported road death toll: 62,225</td>
<td>Reported road death toll: 130,037</td>
</tr>
<tr>
<td><strong>GBD 2010 estimates: 283,000</strong></td>
<td><strong>GBD 2010 estimates: 274,000</strong></td>
</tr>
<tr>
<td>WHO estimates: 275,983</td>
<td>WHO estimates: 231,027</td>
</tr>
<tr>
<td>Underreporting: 334%</td>
<td>Underreporting: 111%</td>
</tr>
</tbody>
</table>
Transport for Health: Recommendations

• Scale up road safety programs and crash reporting capacity

• Promote strong institutional development and multi-sectoral collaboration

• Commit resources to realize the health and economic gains from safe and clean transit systems

• Systematically account for the health impact of road projects

• http://www.worldbank.org/grsf
Sheila Watson
Director of Environment,
FIA Foundation
Global Fuel Economy Initiative – Next Steps

Sheila Watson
ITF - Leipzig
May 21st 2014
The Global Fleet...

... is set to increase by 2.5 times....
.... with 90% of this growth taking place in developing countries.....

...as many cars in China in 2050 as there are on the planet now

Source: IEA Energy Technology Perspectives, 2012
By 2050, in comparison with a scenario considering current policies (4DS) improved energy efficiency of transport vehicles can reduce transport energy demand by 25% (Improve). 20% energy savings can avoided/shifted transport to more efficient modes (Avoid/Shifts). Combined, these two contributions lead to 35% lower energy demand (2DS).

Source: IEA’s – likely demand for oil-based fuels - ITP 2013
THE TRANSPORTATION SECTOR
A major contributor to global energy-related CO₂ emissions

GLOBAL ENERGY-RELATED EMISSIONS
≈ 30 Gt CO₂

TRANSPORT EMISSIONS
≈ 7 Gt CO₂

ROAD TRANSPORT EMISSIONS
≈ 5 Gt CO₂

LEGEND
- RAIL
- AIR
- ROAD
- SEA
- HEAVY-DUTY VEHICLES
- LIGHT-DUTY VEHICLES

Sources:
Air Pollution

World Health Organization: small PM is affecting more people than any other pollutant...

...with ~3.2 mln premature deaths annually....

...this is growing problem, with an 11% increase globally in deaths from air pollution in the past 20 years – as the Global Burden of Disease report released yesterday shows
IEA estimates that the world will invest USD 400 trillion in fuels and vehicles by 2050.....

- what personal mobility systems will we use?...
- what vehicles will we buy?...
- running on what fuels, and what kind of roads?...
- with what energy, health and climate impacts?...
- how can we influence this vast investment?
Global Fuel Economy Initiative

Secretariat based at FIA Foundation
Six core partners: FIA Foundation, UNEP, IEA, ITF, ICCT and UC Davis, financial support from GEF and EU

GFEI recognized as leading initiative in energy and climate reports and discussions

THE GFEI FUEL ECONOMY TARGETS
From 2005 baseline:

- 30% reduction in L/100km by 2020 in all new cars in OECD countries
- 50% by 2030 in all new cars globally
- 50% by 2050 in all cars globally

Benefits:
- $ 2 trillion net fuel savings by 2030
- 6 billion barrels of oil saved by 2050
- 2 gigatones of CO2 annually by 2050
Historical fleet fuel consumption performance and current or proposed standards

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2008</th>
<th>2011</th>
<th>Trend%</th>
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<tbody>
<tr>
<td>OECD</td>
<td>8.1</td>
<td>7.6</td>
<td>7</td>
<td>-2.4</td>
</tr>
<tr>
<td>non-OECD</td>
<td>7.5</td>
<td>7.6</td>
<td>7.5</td>
<td>-0.1</td>
</tr>
<tr>
<td>Global</td>
<td>8</td>
<td>7.6</td>
<td>7.1</td>
<td>-1.8</td>
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</table>
Research

• State of the World
• Cost-benefit of fuel economy policies ($2 trillion net savings by 2030)

And in 2014......

• IEA data analysis
• Green labelling
• On-road performance and off-road testing (clubs)
• FE for car importers
In-country:
- Kenya
- Chile
- Georgia

And in 2014......
- China
- Russia
- Mexico
- Middles East
- Caribbean
Global Awareness Raising

- Rio+20
- G20
- SE4ALL
- Sec Gen’s Climate Summit
- POST 2015 Framework

GFEI made a commitment as part of SLoCat’s transport group

Energy Efficiency is a key component - Working with US Government/Australia

GFEI is a High Impact Opportunity under the Se4ALL Initiative, and as such has had success as part of the SDG development process

GFEI is a potential accelerator at the Sec Gen’s Climate Summit

GFEI is supporting an energy band transport target on fuel economy/efficiency
Sustainable Development Goals (SDGs)

‘To double the global rate of improvement in energy efficiency in transport’ (High Level Panel – 2013)

There is a need for policy interventions that encourage...increased vehicle efficiency’ (UN Habitat – 2013)

Air pollution

Double people living within WHO limits by 2030

Climate & energy

Double the efficiency of the global fleet by 2050

The Global Fuel Economy Initiative (GFEI) has shown that fuel economy improvements from conventional internal combustion engine cars can save a staggering $2 trillion in un-used fuel over the next decade, freeing up those valuable resources for other development priorities, such as education, health, infrastructure, or indeed the promotion of other transport technologies or modes such as electric vehicles.

Cost-effective technology improvements such as weight reduction, and stop-start hybridization, could keep fuel demand steady by 2050 – even with the predicted tripling of the global fleet – and thereby save close to half of the CO₂ emissions from cars by this date. But we need a global commitment to fuel economy if we are to see the policies put in place to achieve this.
May 4-5, Abu Dhabi Ascent

ITF Leipzig, May 21-23rd

SE4All Forum, New York, June 4-6, 2014

GFEI Accelerator Meeting
Paris July 4th 2014

UN Secretary General
Climate Summit, New York, September 23, 2014

G20 Annual Meeting,
Brisbane, November 2014

COP, Paris 2015

SDGs, NYC 2015
What can you do?

Participate and become part of the commitment

Show that your commitment to energy efficiency in transport is real!

GFEI’s Accelerator Symposium

Co-hosted by the French Government, where we will be developing a Commitment at the US SG Summit in September 2014
THANK YOU

http://globalfueleconomy.org

@GlobalFuelEcon

#ITF2014  #Climate2014
#SE4ALL   #SDGs
#post2015 #fuelecon2030
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