

Dialogue of the South on Clean Air and Sustainable Mobility

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Clean Air and Sustainable Mobility

Experience sharing and orientation workshop

- regulation development;
- air quality monitoring and management;
- vehicle technology and fuel quality roadmaps;
- public transport strategy;
- non-motorized transport policy; and
- restraint policies to reduce personal motorized vehicle use *like parking policy, road pricing and transit oriented development and smart urbanism.*

Issues: air pollution, vehicle technology and emission standards, fuel standards, public transport, non-motorized transport, parking management, street design, universal design, etc.

Clean Air and Sustainable Mobility

Conclave of Champion cities:

- Champion initiatives
- Experience and initiatives on **air quality monitoring, vehicle excise act** and use of **50 ppm sulphur diesel** in Mauritius
- **Issues:**
 - *vehicular emissions, poor quality of fuel and inefficient monitoring of air pollution is worsening climate and energy security risk;*
 - *unorganized public transport, increased dependence on privately owned motor vehicles and in-accessible walking and cycling infrastructure is discouraging people to adopt sustainable modes of transport, thereby worsening the quality of air.*

Sustainable Transport in Mauritius

The land transport sector is the second largest contributor to carbon dioxide (CO₂) emissions in Mauritius after industries and accounts for 25% of total emissions. The fleet of light duty vehicles (vehicles less than 3.5 tonnes) is expected to double in 2030 and triple in 2050 compared to 2013 figures.

The Government of Mauritius has been proactive in establishing a sustainable transportation with the implementation of the following measures:

- i. Our Excise Act provides for a taxation system for motor cars (amended in 2011 & 2013),** to promote the use of more energy efficient vehicles, based on their carbon dioxide (CO₂) emissions. A CO₂ rebate is granted and deducted from the Excise Duty, and a CO₂ levy is payable and added to the Excise Duty.
- ii. Introduction of unleaded petrol in September 2002.**
- iii. Introduction of diesel with sulphur content 50 ppm in March 2012.** A 6-fold decrease in the maximum level of SO₂ in ambient air quality has been observed with the introduction of 50 ppm sulphur diesel. A further reduction to 15 ppm is being envisaged. According to a survey carried out by the World Health Organisation in 2010, Mauritius was ranked second as having the best air quality.

Mauritius – Measures implemented

- iv. **The rate of Excise duty on electric cars has been reduced to 25%.**
50% reduction in levy on Road Tax and Registration Fee for hybrid and electric vehicles. It has been observed that these incentives have boost up sales of hybrid and electric vehicles in the country.
- iv. **Government is putting a lot of emphasis on ecodriving - a smarter driving culture** which bring a reduction in the amount of fuel used thus cutting down on CO2 emissions and also raises on safety of the driver and passengers.
- iv. **The Mauritius National Long Term Energy Strategy (2009-2025)** aims to reduce the country's dependence on fossils fuels, increase the share of renewable energy, democratize energy supply and promote energy efficiency and conservation. Our target is to increase the share of renewable sources of energy in electricity supply from around 17.5% presently to 35% in 2025.

GFEI in Mauritius

Mauritius was one of the 3 pilot countries in Africa to implement the Global Fuel Economy Initiative (GFEI). The purpose of this project was:

- i. To compile and calculate a **national auto fuel economy baseline** for 2005 using GFEI methodology and **vehicle inventory** for 2005, 2008, 2010 and 2012 to establish trends.
- ii. **To review existing national fuel and vehicle regulations**, incentives and standards and make recommendations.
- iii. To identify, measure and value the economic, financial and social benefits and costs of identified **policy interventions in reducing CO₂ emissions** and the average fuel consumption.

GFEI in Mauritius

A series of **recommendations** have been made:

- Road Tax,
- new proposals on the CO2 levy/rebate system,
- incentive for biofuels,
- Ecodriving, and
- park and ride policy.

All these issues will have budgetary implications and will have to be discussed further with authorities concerned before any final decision is taken.

Results of Vehicle Inventory report

Conclusions

- The projected cumulative total light-duty vehicle population is likely to *double in 2030 and triple in 2050* compared to 2013 figures.
- The use of *hybrid vehicles* has been doubling yearly as from 2010.
- Figures on *average fuel consumption* and *CO₂ emission* show that there has been an improvement for cars imported in year 2013 as compared to those of year 2005. This is due to the introduction of unleaded petrol and reduced sulphur content in diesel (from 2500 ppm to 50 ppm) in line with Government policy. Improvement in fuel quality has enabled car dealers to import more efficient vehicles.

Recommendations

- Encourage the use of *biofuels* such as biodiesel and bioethanol;
- Provide better *incentives* for the purchase of hybrid vehicles (for e.g remove all duties on hybrid cars);
- Government to come up with a policy to *remove all vehicles above 30 years* from the vehicle fleet

Recommendations of the Fuel and Vehicle Legislation Report(1)

- A **single standard** should be used to make the assessment of petrol consumption and CO₂ emission for both new and imported second hand cars.
- **Cleaner fuels** should be introduced.
- Re-introduce the **Park and Ride Policy**. This policy should be backed by a rigorous sensitization campaign. The operational aspects also need to be properly laid out for the smooth implementation of this project (for e.g there should be safe parking facilities at strategic points, comfortable, safe and readily available buses, the price also should be attractive). This project could eventually set the base for the use of the light railway system for commuting to Port Louis.
- **Car pooling/sharing** is to be promoted at all levels.
- Based on best practices from other countries (e.g China and India), to introduce **cleaner fuel for buses** e.g LPG (Liquefied Petroleum Gas).

Recommendations of the Fuel and Vehicle Legislation Report (2)

- All exporting bodies of second hand cars shall send via the importer a **certificate of fuel consumption** of the vehicle along with the **CO₂ emission**. This information shall be systematically recorded by the second hand car dealers and sent to an authority for official compilation.
- The certification system issued by the Ministry of Commerce on the purchase of cars should be reviewed to include petrol consumption. **The Consumer Protection (Price and Supplies Control) Act 2004** should therefore be amended.
- There should be an **authority** for a structured system for the collection of data on fuel consumption and carbon dioxide emissions.
- There is a need for an **umbrella legislation** to oversee the importation of motor vehicles in Mauritius.

Recommendations of the Fuel and Vehicle Legislation Report (3)

- A training programme on **Eco Driving** should be undertaken for all licence holders at recognized and registered driving schools (e.g drivers in public and private sectors, general public). Each company could provide training to their drivers under the module of driving for economy /safety. Same shall be reported to the NTA for record purposes.
- To encourage companies and individual car owners to install a **Driver's Behaviour Monitoring System** in their vehicles which is a device to ensure that drivers are engaged in ecodriving at all times.
- A **mass sensitization campaign** on ecodriving should be undertaken. This could include communicating tips on ecodriving at fitness centres, where hundreds of people transit everyday and the distribution of flyers at fuel dispensing centres to reach out to the maximum number of people.

Recommendations of the Fuel and Vehicle Legislation Report (4)

- All diesel engines in Mauritius should be **at least EURO I**. All companies should envisage to import at least EURO I engines.
- The **Road Traffic (Control of Vehicle Emissions) Regulations 2002** be amended to review the standards to enable the operation of **EURO III** or above engine buses.
- The use of **biofuel** in diesel engines should be considered as this can bring a substantial drop in carbon dioxide emissions.
- **Fitness tests** should be done after 3 or 5 years or based on the mileage per year.
- Fitness tests should not be limited to only verification of particulars of cars. The fitness centres should be transformed into a **repository of data** on all vehicles that are examined. The NTA should do the vehicle checks and emission test. MITD or other specialized garages could be empowered to check the performance of vehicles (fuel consumption and CO2 emission) and provide certification against payment.
- The **servicing of vehicles should be done at approved agencies** where the checks are done as per the manufacturer's guidelines. Small and informal garages could be empowered through appropriate training and certification to issue fitness certificates of vehicles.

Recommendations of the Fuel and Vehicle Legislation (5)

- The life span of vehicles should be reviewed and regulated by legislation. Vehicles should be assessed on **road worthiness** rather than age. A scheme could be put in place to remove the old vehicles from the road. The schemes proposed are:
- A price could be offered for the **old vehicles** to give incentives to the owners to scrap the vehicle, although a distinction has to be drawn between vintage vehicles and old vehicles.
- **Duty remission** could be offered to owners of old vehicles for the purchase of new ones.
- It is recommended that a **labeling mechanism** be developed to provide information to buyers on the fuel consumption and carbon dioxide emission of cars.

*The implementation of the proposed measures in concert with other measures will not only help to achieve the objectives of the Global Fuel Economy initiative but also the target set in the Maurice Ile Durable Policy, Strategy and Action Plan, which aims **to reduce the consumption of energy in the transport sector by 35% by 2025, in comparison to 2010.***

Cost Benefit Analysis Report (1)

Policy Interventions identified for CBA:

- **Road Tax** – an annual vehicle registration fee which is paid in order to use a vehicle on public roads; the cost of which is dependent on the type/engine capacity of vehicle.
- **CO2 levy /rebate on motor cars** – a scheme reflecting the Polluter Pay Principle under which a motor car buyer pays an additional amount as penalty per gram of CO2 per kilometer (g/km) emission above a set threshold or he receives a rebate if the CO2 standard emission of his motor car is below the CO2 threshold.
- **Ecodriving** (ECOTAK) and driving school – a driving culture for energy efficient use of vehicles to travel the same distance.
- **Park & Ride Service and Carpooling**
- **Scrap of old vehicles** (except vintage vehicle) and incentive to buy new vehicles
- **Rebate on Tyres**
- **Bus engine type (EURO III)**
- Incentive for **biofuel**

Cost Benefit Analysis Report (2)

- A **new mechanism could be put in place to collect the road tax** at source through inclusion in the retail prices of Mogas (gasoline) and Gas Oil (diesel). This mechanism would reflect a kind of “Pay as You Drive”
- The following data were required:
 - (i) **total sales** (litres) of Mogas (gasoline) and Gas Oil (diesel) for the year 2013 from the State Trading Corporation; and
 - (ii) **total number and types of registered vehicles** at the NTA for the year 2013 and their corresponding taxation rates.
- The revenue on the road tax collected through this mechanism amounts to Rs 1312 M. Over and above, the NTA would save in terms of human resources at its office and Post Offices for the collection of road tax, which would not be necessary. The savings amounts to around Rs 7M. In 2013, road tax collected by NTA was around Rs 1300 M.

Cost Benefit Analysis Report (3)

- *The computation results showed that for vehicles running on Mogas, the yearly road taxation represented approximately **Rs 4.50/litre** and for Gas Oil, same was around **Rs 2.0/litre**. This implies that the retail price of Mogas and Gas Oil would increase by Rs 4.50 and Rs 2.0 respectively as shown in the Table*

Cost Benefit Analysis Report (4)

Threshold for CO₂ levy/rebate

- *As from 2015, all cars manufacturers in Europe will have to meet the emissions levels of **130 g/km**. The Committee recommends that this measure be applied as from December 2014. It is to be noted that manufacturers outside EU wishing to sell their cars in the EU will also be concerned by this measure.*

Ecodriving

- *Proposal to introduce a culture of eco-driving at the level of driving schools instead of setting up dedicated ecodriving schools.*
- *There was a need to promote vehicles with in built fuel efficient systems.*

Cost Benefit Analysis Report (5)

Park and Ride

- To address the Transportation and congestion issue, Govt. is coming up with the *Light Railway Transit (LRT) system* which will cover the track of the main towns. The project is at tendering stage and commissioning is scheduled for 2018.
- estimated *25,000 vehicles* would not pass through the Port Louis as a Park and Ride Service would be integrated in the project.
- estimated total savings of *38.4 M Litres* of fuel and *92 Gg of CO₂* would be achieved.

Old Vehicles

- Scrapping of vehicles *above 30 years* - the owner be entitled a sum of *Rs 30,000* prior to putting the vehicle off the road as scrapped. This sum could be granted through a rebate or relief in paying the registration duty of a new vehicle

Note: *The CBA report is presently being prepared and other issues have not yet been analyzed e.g. bus engine type (EURO III) & Incentives for biofuel.*

Conclusion

*We have to acknowledge that **vehicle technology** is improving rapidly and more cost-effective technologies are likely to emerge in coming years. More and more energy efficient and environmentally friendly transportation technologies are being developed to enable countries to move towards fuel efficiency. We are fully **committed** to implement technologies that will provide greater freedom of mobility and energy security, while **lowering costs** and **reducing impacts on the environment**.*

Thank You