

Climate Action Enhancement Package: Belize

Transportation Mitigation options

Methodology and Workplan



Fundación Bariloche

- Methodological approach:
 - Review of current proposals identifying potential measures
 - Sources: studies referred to Belize
 - Available data estimations about the transport sector of Belize
- Selection criteria
 - Implementation cost: measures appraised as cost effective were included
 - Institutional feasibility: measures that required management resources deemed available for Belize´s public sector.
- Stakeholder consultation
 - No consultation was carried out, as identified stakeholders within the public sector did not answer the study's staff request

Courses of action



1. Differential Registration Tax
2. Differential Circulation Tax
3. Differential tax on fuels
4. Differential duties on imported vehicles
5. Retrofitting vehicles to GLP Fuel
6. Replacement of buses by more efficient vehicles
7. Energy efficiency labeling of vehicles
8. Awareness campaigns

1. Differential Registration Tax



Fundación Bariloche

Purpose: incentivize reduction of emissions, taxing differentially more efficient models of cars

Proposed classification for taxing

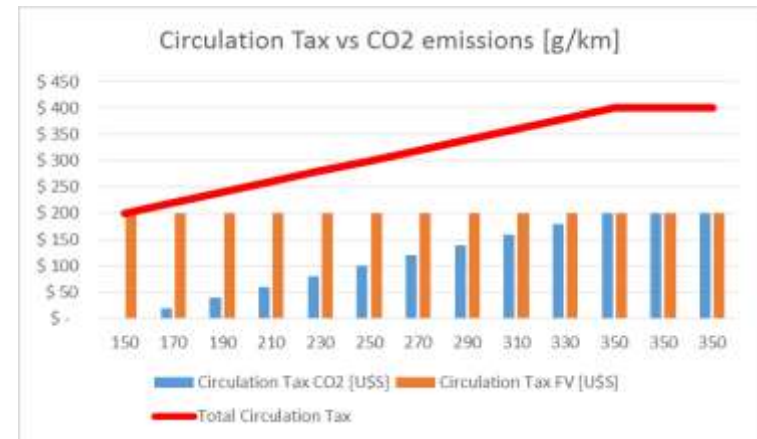
Category	Europe	United States
C	Euro 1 / Euro 2 y Euro 3	LEV y Tier 1
B	Euro 4	LEV II / Tier 2: Bin 5
A	Euro 5 / Euro 6	LEV III: LEV 160 / Tier 3: Bin 160

- Expected emissions reduction

	Year 1	Year 10
Present emission/veh.-km	300	300
Best emission/veh.-km	150	150
Expected reduction	-50,00%	-50,00%
Incidence on new cars	3,00%	20,00%
% car renewal	6,67%	66,67%
Net incidence	0,20%	7,67%

2. Differential Circulation Tax.

Purpose: reduce emissions through a differential tax that incentivizes the circulation of more efficient vehicles



Course of action: differential taxing

Expected emissions reduction

	Year 1	Year 10
Present emission/veh.-km	300	300
Best emission/veh.-km	150	150
Expected reduction	-50,00%	-50,00%
Incidence on new cars	3,00%	20,00%
% car renewal	6,67%	66,67%
Net incidence	0,20%	7,67%

3. Taxes on fuels aiming more refined fuels



Fundación Bariloche

Purpose: promote using more refined fuels, substituting present less quality fuels

Course of action: reduction of fuel tax, in order to compete with “smuggled” fuel from Mexico

- Expected impacts:
 - Increase of fuel economy: 2% (better quality of fuel)
 - Incidence in overall fuel consumption of better quality of fuel): 35%

4. Duties on Imported Vehicles



Fundación Bariloche

Purpose: promote imports of more environmental friendly vehicles

Courses of action:

- Benefits on duties of new or used motor vehicles from third countries that comply with at least Euro 5 Environmental Standards or their equivalent in the American Standard.
- Differential environmental tax for public passenger and freight vehicles more than TEN (10) years old in the fleet with emission levels higher than Euro 5 Standards or equivalent

Expected impacts:

	Year 1	Year 10
Present emission/veh.-km	300	300
Best emission/veh.-km	150	150
Emission reduction	-50,00%	-50,00%
Incidence on new cars	3,00%	20,00%
% car renewal	6,67%	66,67%
Net incidence	0,20%	7,67%

5. Auto gas, GLP – Auto gas proposes - GPL

Purpose: promote using GLP as a vehicle fuel

Course of action: issuing of technical regulations for GLP vehicles conversion

Expected impacts:

	Year 1		Year 10	
	Urban	Intercity	Urban	Intercity
Emission reduction/vehicle-km	10,0%	11,0%	10,0%	11,0%
Incidence on fleet	1,0%	0,5%	20,0%	10,0%
Emission reduction	0,1%	0,1%	2,0%	1,1%

6. Substitution of buses by more efficient vehicles

Purpose: renewal of bus fleet, introducing more efficient vehicles

Course of action: issuing of mandatory regulation, enforcing the introduction of more efficient vehicles

Expected impacts:

	Year 1		Year 10	
	Urban-diesel	Intercity-diesel	Urban-diesel	Intercity-diesel
Emission reduction	18%	6%	18%	6%
% bus renewal	6,67%	6,67%	66,67%	66,67%
Net incidence	1,2%	0,4%	12,0%	4,0%

7. Energy Efficiency Label.



Fundación Bariloche

Purpose: increase of awareness of vehicles users of environmental issues when acquiring a vehicle

Course of action:

- Step 1: Only vehicles labeled at source are allowed to enter the country.
- Step 2: Implement Compulsory Vehicle Technical Review workshops where active and passive safety systems of the units are checked, and emission measurement is performed through the application of Exhaust Gas Analyzers

Expected impacts:

	Year 1	Year 10
Present emission	300	300
Best emission	150	150
Best reduction	-50,00%	-50,00%
Incidence on new cars	5,00%	20,00%
% car renewal	6,67%	66,67%
Net incidence	0,33%	2,50%

8. Awareness campaigns on energy efficient driving

Purpose: increase awareness of drivers about the environmental impact of different ways of driving

Course of action: advertisement and training campaigns, stressing

- Drive slower
- Drive smoothly
- Use the motor brake
- Use of low rolling resistance tires
- Proper Tire Pressure
- Removal of Roof Bars and Bags
- Eliminate unnecessary loads
- Vehicle Mechanics Maintenance
- Choose Suitable Roads

Expected impacts:

	Year 1	Year 10
Unit reduction	5,0%	5,0%
% of vehicles	2,0%	30,0%
Emission reduction	0,10%	1,50%

¡¡MANY THANKS!!



Alberto Müller
Ernesto Syriani