



Photo: Jacintha Castora Photography

## The first complete motorized vehicle census in Galapagos

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### Introduction

The Galapagos Islands are one of the most complex and unique oceanic archipelagos in the world, considered a natural laboratory of evolution with worldwide importance for science, education, and nature tourism. The increase in the human population and economic activities has provoked an increase in the size of the vehicular fleet, which is affecting the local population and the environment and biodiversity of Galapagos.

The Special Law for Galapagos of 1998 (LOREG) established that the entry of vehicles into Galapagos must be regulated and controlled. Since then, there have been many efforts on the part of the National Institute of Galapagos (INGALA) to meet this requirement. In 2005 a pilot census of vehicles on Isabela identified a total of 117 vehicles and analyzed the socioeconomic and environmental impacts related to the increase in vehicles. In June 2008, INGALA carried out a study of the environmental impact of the vehicular fleet in the three most populated islands (San Cristóbal, Santa Cruz, and Isabela) to ensure adequate regulation.

Based on the recommendations of the 2008 study, a census of terrestrial vehicles was carried out in February-March 2009 for the entire province. This study provided updated data on the number and characteristics of vehicles and provided information needed to develop a database for better control.

## Regulation of vehicles in Galapagos

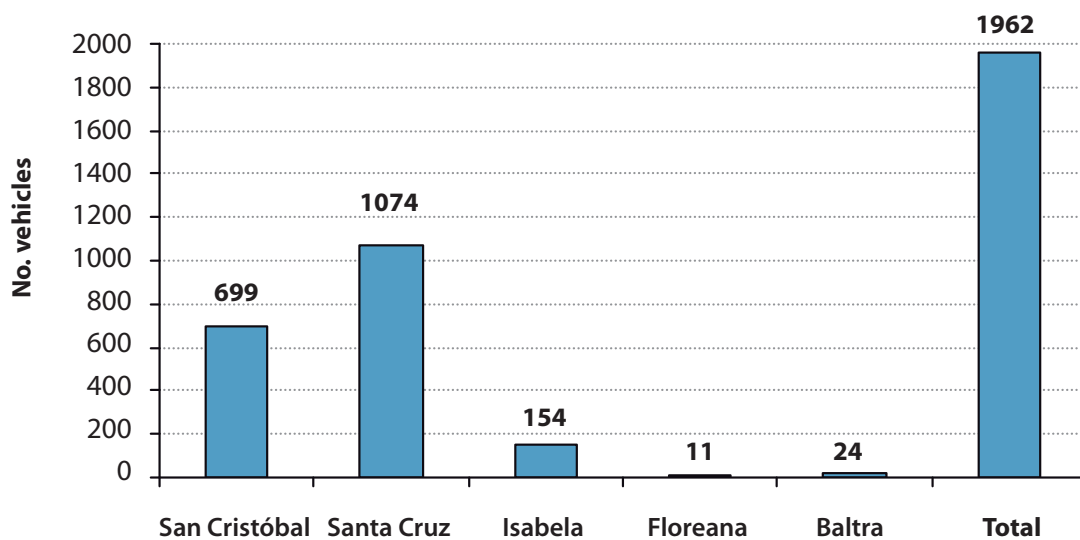
Between 2005 and March of 2009, the entry of vehicles into Galapagos was governed by a regulation approved by the INGALA Council in May 2005<sup>1</sup>. This regulation established a five-year moratorium on the number of permits in the public service cooperatives, as well as a moratorium on the creation of new terrestrial transportation cooperatives. This initial regulation was replaced in March 2009<sup>2</sup>. The 2009 regulation established that the entry of motorized vehicles and machines into Galapagos was further restricted and promoted the use of vehicles that use alternative energy or hybrids. These decisions complemented the Government of Ecuador's vision for the elimination of the use of fossil fuels in Galapagos.

## Vehicle census of 2009

A vehicle census was carried out between February and March 2009 in all of the populated islands: San Cristóbal, Santa Cruz, Isabela, Floreana, and Baltra.

Information was recorded on the technical characteristics of each vehicle, the reason for entry of the vehicle, the owner's name, and if it was owned by an individual or business. All of the data associated with this study can be found in a database accessible via the website of the Governing Council of Galapagos (Consejo de Gobierno de Galápagos). The information related to the rationale for entry of the vehicles will be particularly important for anticipating future demand for vehicles generated by the business sectors of the province.

Between February and March 2009, the census identified a total of 1962 terrestrial vehicles in the five populated islands (Figure 1; Table 1). The study showed that the largest number of vehicles is on Santa Cruz (1074), followed by San Cristóbal (699), Isabela (154), Baltra (24), and Floreana (11).



**Figure 1.** Number of vehicles in the inhabited islands of the Galapagos Province in February-March 2009.

<sup>1</sup> Special Regulation for the Control of the Entry of Motorized Vehicles and Machinery in the Province of Galapagos; resolution No. CI-18-I-2005 published in the Official Register No. 09 of 3 May 2005.

<sup>2</sup> Substitute Regulation for the Control of the Entry of Motorized Vehicles and Machinery in the Province of Galapagos; resolution No. CI-11/12-II-2009, published in the Official Register No. 555 of 24 March 2009.

**Table 1.** Number of vehicles in Galapagos by type and sector, 2009.\*

Class	Sector											Total
	Public	Private: individual-owned					Private: business-owned				Personal use	
	Heavy Equipment	Fishing	Agriculture	Commercial	Construction	Artisanal	Taxi	Cargo	Tourism	Institutional		
Pick-up truck	4	13	44	28	3	2	314	23	34	62	117	644
Automobile	0	3	3	13	0	4	0	0	1	0	12	36
Jeep	1	0	12	5	3	0	0	0	2	14	44	81
Motorcycle	0	1	0	2	0	0	0	0	0	30	902	935
4 Wheeler	0	0	0	0	0	0	0	0	0	0	16	16
Truck	0	2	6	24	8	0	0	18	1	11	18	88
Van	1	0	0	0	0	0	0	0	6	8	7	22
Small bus	1	0	0	0	0	0	0	0	7	3	5	16
Large bus	20	0	0	0	0	0	1	0	14	2	10	47
Road equipment	0	0	0	0	0	0	0	0	0	51	9	60
Tanker	0	0	4	1	0	0	0	1	1	6	4	17
<b>Total</b>	<b>27</b>	<b>19</b>	<b>69</b>	<b>73</b>	<b>14</b>	<b>6</b>	<b>315</b>	<b>42</b>	<b>66</b>	<b>187</b>	<b>1144</b>	<b>1962</b>

\* Classifications used were those established by the Organic Law for Terrestrial Transportation, Transit, and Road Safety.

Most vehicles were designated for personal use (1144), followed by commercially owned (610), for personal use in business (181), and for public transport (27) (Table 1). The most common types of vehicles were motorcycles and scooters (935), followed by pick-up trucks (644) and trucks (88). There were also 315 taxis and 187 institutional vehicles.

A total of 699 terrestrial vehicles were censused in San Cristobal (Table 3). Most public transport vehicles are taxis (110). Of the 438 vehicles identified for personal use, 380 are motorcycles. The remaining 151 vehicles are used for a variety of economic activities, such as agriculture, fishing, cargo transport, construction, and artisan activities.

**Table 2.** Vehicles registered in San Cristóbal in 2009.\*

Class	Sector											Total
	Public	Private: individual-owned					Private: business-owned				Personal use	
	Heavy Equipment	Fishing	Agriculture	Commercial	Construction	Artisanal	Taxi	Cargo	Tourism	Institutional		
Pick-up truck	0	10	12	14	1	1	110	0	8	23	36	215
Automobile	0	3	3	10	0	4	0	0	1	0	6	27
Jeep	0	0	5	4	0	0	0	0	1	9	9	28
Motorcycle	0	0	0	1	0	0	0	0	0	7	380	388
4 Wheeler	0	0	0	0	0	0	0	0	0	0	3	3
Truck	0	0	0	1	0	0	0	3	1	3	3	11
Van	0	0	0	0	0	0	0	0	1	2	0	3
Small bus	0	0	0	0	0	0	0	0	5	0	0	5
Large bus	0	0	0	0	0	0	0	0	5	1	0	6
Road equipment	0	0	0	0	0	0	0	0	0	10	0	10
Tanker	0	0	0	0	0	0	0	0	0	2	1	3
<b>Total</b>	<b>0</b>	<b>13</b>	<b>20</b>	<b>30</b>	<b>1</b>	<b>5</b>	<b>110</b>	<b>3</b>	<b>22</b>	<b>57</b>	<b>438</b>	<b>699</b>

\* Classifications used were those established by the Organic Law for Terrestrial Transportation, Transit, and Road Safety.

In Santa Cruz, 1074 terrestrial vehicles were censused (Table 3). The majority (627) were categorized for personal use. Of these vehicles, 470 were motorcycles.

There were 351 pick-up trucks, most of which pertain to the taxi sector (204).

**Table 3.** Vehicles registered in Santa Cruz in 2009.\*

Class	Sector										Personal use	Total
	Public	Private: individual-owned					Private: business-owned					
	Heavy Equipment	Fishing	Agriculture	Commercial	Construction	Artisanal	Taxi	Cargo	Tourism	Institutional		
Pick-up truck	0	1	22	14	2	1	204	0	15	23	69	351
Automobile	0	0	0	2	0	0	0	0	0	0	6	8
Jeep	0	0	5	1	1	0	0	0	1	5	32	45
Motorcycle	0	0	0	0	0	0	0	0	0	16	470	486
4 Wheeler	0	0	0	0	0	0	0	0	0	0	9	9
Truck	0	2	5	22	6	0	0	9	0	6	15	65
Van	1	0	0	0	0	0	0	0	3	2	6	12
Small bus	1	0	0	0	0	0	0	0	1	1	4	7
Large bus	20	0	0	0	0	0	1	0	7	0	4	32
Road equipment	0	0	0	0	0	0	0	0	0	38	9	47
Tanker	0	0	4	1	0	0	0	1	1	2	3	12
<b>Total</b>	<b>22</b>	<b>3</b>	<b>36</b>	<b>40</b>	<b>9</b>	<b>1</b>	<b>205</b>	<b>10</b>	<b>28</b>	<b>93</b>	<b>627</b>	<b>1 074</b>

\* Classifications used were those established by the Organic Law for Terrestrial Transportation, Transit, and Road Safety.

In Isabela 154 vehicles were censused (Table 4). Nearly half of them were pick-up trucks (68), of which 23 were used for cargo transport, 11 by the tourism sector,

10 by the agricultural sector, 9 by institutions, 9 for personal use, and the remainder by fisheries and other.

**Table 4.** Vehicles registered in Isabela in 2009.\*

Class	Sector										Personal use	Total
	Public	Private: individual-owned					Private: business-owned					
	Heavy Equipment	Fishing	Agriculture	Commercial	Construction	Artisanal	Taxi	Cargo	Tourism	Institutional		
Pick-up truck	4	2	10	0	0	0	0	23	11	9	9	68
Automobile	0	0	0	1	0	0	0	0	0	0	0	1
Jeep	1	0	2	0	2	0	0	0	0	0	0	5
Motorcycle	0	1	0	1	0	0	0	0	0	6	50	58
4 Wheeler	0	0	0	0	0	0	0	0	0	0	3	3
Truck	0	0	1	1	2	0	0	3	0	1	0	8
Van	0	0	0	0	0	0	0	0	2	1	0	3
Small bus	0	0	0	0	0	0	0	0	1	1	0	2
Large bus	0	0	0	0	0	0	0	0	2	0	0	2
Road equipment	0	0	0	0	0	0	0	0	0	3	0	3
Tanker	0	0	0	0	0	0	0	0	0	1	0	1
<b>Total</b>	<b>5</b>	<b>3</b>	<b>13</b>	<b>3</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>26</b>	<b>16</b>	<b>22</b>	<b>62</b>	<b>154</b>

\* Classifications used were those established by the Organic Law for Terrestrial Transportation, Transit, and Road Safety.

Eleven vehicles were censused in Floreana, seven belonging to individuals and four to institutions (Table 5).

**Table 5.** Vehicles registered in Floreana in 2009.\*

Class	Sector											
	Public	Private: individual-owned					Private: business-owned				Personal use	Total
	Heavy Equipment	Fishing	Agriculture	Commercial	Construction	Artisanal	Taxi	Cargo	Tourism	Institutional		
Pick-up truck	0	0	0	0	0	0	0	0	0	1	2	3
Automobile	0	0	0	0	0	0	0	0	0	0	0	0
Jeep	0	0	0	0	0	0	0	0	0	0	3	3
Motorcycle	0	0	0	0	0	0	0	0	0	1	1	2
4 Wheeler	0	0	0	0	0	0	0	0	0	0	0	0
Truck	0	0	0	0	0	0	0	0	0	0	0	0
Van	0	0	0	0	0	0	0	0	0	0	0	0
Small bus	0	0	0	0	0	0	0	0	0	1	1	2
Large bus	0	0	0	0	0	0	0	0	0	1	0	1
Road equipment	0	0	0	0	0	0	0	0	0	0	0	0
Tanker	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</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>4</b>	<b>7</b>	<b>11</b>

\* Classifications used were those established by the Organic Law for Terrestrial Transportation, Transit, and Road Safety.

Twenty-four vehicles were censused in Baltra: twelve were large, 45-passenger buses for passengers and institutional, nine private, and three for cargo transport (Table 6). Of those belonging to individuals, six were large, 45-passenger buses for passengers and tourists.

**Table 6.** Vehicles registered in Baltra in 2009.\*

Class	Sector											
	Public	Private: individual-owned					Private: business-owned				Personal use	Total
	Heavy Equipment	Fishing	Agriculture	Commercial	Construction	Artisanal	Taxi	Cargo	Tourism	Institutional		
Pick-up truck	0	0	0	0	0	0	0	0	0	6	1	7
Automobile	0	0	0	0	0	0	0	0	0	0	0	0
Jeep	0	0	0	0	0	0	0	0	0	0	0	0
Motorcycle	0	0	0	0	0	0	0	0	0	0	1	1
4 Wheeler	0	0	0	0	0	0	0	0	0	1	0	1
Truck	0	0	0	0	0	0	0	3	0	1	0	4
Van	0	0	0	0	0	0	0	0	0	3	1	4
Small bus	0	0	0	0	0	0	0	0	0	0	0	0
Large bus	0	0	0	0	0	0	0	0	0	0	6	6
Road equipment	0	0	0	0	0	0	0	0	0	0	0	0
Tanker	0	0	0	0	0	0	0	0	0	1	0	1
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>12</b>	<b>9</b>	<b>24</b>

\* Classifications used were those established by the Organic Law for Terrestrial Transportation, Transit, and Road Safety.

## Conclusions

The vehicle census of 2009 indicates that between 1999 and 2004, a period when no structured regulations to control the entry of vehicles to Galapagos existed, there was a considerable increase in the number of vehicles in the archipelago. From 2005 forward, with the new regulations in place, there was a reduction in the entry of new vehicles, particularly pick-up trucks used for taxis (public transport), due to the five-year moratorium on permits for new taxis and new terrestrial transport cooperatives.

The 2005 regulation allowed for the unrestricted entry of motorcycles for personal use and resulted in a considerable increase in the number of motorcycles up to March 2009, when the regulation was modified. The new regulation required justification for importing a motorcycle based on its proposed use. If the justification was approved, based on technical and legal reports, it was turned over to the Vehicle Committee for consideration.

The principal economic activity of the population is tourism. However, the census does not reflect an increase in the number of vehicles used in this sector. This is probably due in large part to the fact that the majority of tourists remain onboard tourist boats and those who stay in the towns overnight generally use taxis. Even so, it could be argued that the increase in the number of vehicles is directly related to population growth and increasing tourism.

## Recommendations

- A system for controlling the entry of vehicles into Galapagos is in place and functioning. There is ongoing coordination between INGALA (now part of the Governing Council of Galapagos) and the Provincial Commission for Terrestrial Transportation, Transit, and Road Safety. It is important that this coordination is maintained and that the two institutions play their respective roles in keeping vehicle registration and control up to date.
- The software program for the vehicle database should be continually updated and improved to allow more information to be captured and to ensure easy access for end users.
- The use of vehicles using alternative energy should be encouraged, to replace those that use

fossil fuels. Incentives should be established to make such vehicles accessible.

- It is important to continue the process of vehicle control; a study of the supply and demand of vehicles circulating in Galapagos is planned.