

Third Party Evaluation Report 2019
Ministry of Foreign Affairs of Japan

**Evaluation Report
of
Individual Project
under
Grant Aid**

**(Japan's Non-Project Grant Aid for Provision
of Japanese Next Generation Eco-Friendly
Vehicles to Peru in the Fiscal Year 2013)**

March 2020

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KPMG AZSA LLC.

Preface

This report, under the title “Evaluation of Individual Project under Grant Aid (Japan’s Non-Project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles to Peru in the Fiscal Year 2013),” was undertaken by KPMG AZSA LLC. entrusted by the Ministry of Foreign Affairs of Japan (MOFA) in the fiscal year 2019.

Since its commencement in 1954, Japan’s Official Development Assistance (ODA) has contributed to the development of partner countries and to bringing solutions for international issues which vary over time. Recently, in both Japan and the international community, implementing ODA requires higher quality, effectiveness and efficiency. MOFA has been conducting ODA evaluations every year, of which most are conducted at the policy level with two main objectives: to improve the management of ODA; and to ensure its accountability. The evaluations are conducted by third-parties, to enhance transparency and objectivity.

This evaluation study at the project level of “Japan’s Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles” provided to Peru in the Fiscal Year 2013 was conducted with the objectives of preparing recommendations and learning lessons useful for project formulation in future and ensuring accountability by making the evaluation results widely available to the general public.

The Evaluation Team in charge of this evaluation study consisted of Professor Juichi Inada, School of Economics, Senshu University; Associate Professor Yasuhiro Tokoro, School of Commerce, Meiji University and staff members of KPMG AZSA LLC. Prof. Inada, who served as the chief evaluator, supervised the entire evaluation process and Prof. Tokoro, as an advisor, shared his expertise on economic policies of countries in Central and South America which was indispensable to the appropriate surveys and analysis to complete the report. In addition, during the course of this study in Japan and Peru, we have received support from many organizations, including not only governmental ministries, organizations and agencies of Japan, such as MOFA, Japan International Cooperation Agency (JICA) and Japan International Cooperation System (JICS), but also government organizations/agencies of Peru, Japanese automobile manufacturers and trading companies, the Automotive Association of Peru and

chambers of commerce and industry in Peru. We would like to take this opportunity to express our sincere gratitude to all those who supported this study.

Finally, the Evaluation Team wishes to note that opinions expressed in this report do not necessarily reflect views or positions of the Government of Japan.

March 2020

KPMG AZSA LLC.

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Map of Peru



(Source: United Nations Geospatial Information Section)

Abbreviations

Abbreviation	Full form
CNG	Compressed Natural Gas
COP	Conference of Parties to the United Nations Framework Convention on Climate Change
EPA	Economic Partnership Agreement
EU	European Union
EV	Electric Vehicle
FTA	Free Trade Agreement
GDP	Gross Domestic Product
GHG	Green House Gas Emission
HV	Hybrid Vehicle
JICA	Japan International Cooperation Agency
JICS	Japan International Cooperation System
METI	Ministry of Economy, Trade and Industry
MOFA	Ministry of Foreign Affairs
NEP	National Environment Policy
ODA	Official Development Assistance
PHEV	Plug-in Hybrid Vehicle
SDGs	Sustainable Development Goals

Chapter 1 Implementation Policy of the Evaluation

Evaluation Implementation Structure

(1) Evaluation Team:

- Chief Evaluator: Prof. Juichi INADA, School of Economics, Senshu University
(Specialty: International cooperation)
- Advisor: Assoc. Prof. Yasuhiro TOKORO (School of Commerce, Meiji University)
- Consultants: Masaaki HAMADA (KPMG AZSA LLC.)
Taihei KAJIYAMA (KPMG AZSA LLC.)

(2) Period of the Evaluation Study: September 2019 – March 2020

(3) Field Survey Country: Peru

Background, Objective and Scope of the Evaluation

(1) Background:

The Non-Project Grant Aid is a grant aid that provides developing countries striving for economic and social development, including poverty reduction, with a grant for purchasing materials and equipment required for the development from abroad. The Government of Japan provided NON-PROJECT GRANT AID for “Promotion of Japanese Standards”, including “NON-PROJECT GRANT AID for Provision of Japanese SME’s Products,” “NON-PROJECT GRANT AID for Provision of Japanese Next-Generation Eco-Friendly Vehicles,” “NON-PROJECT GRANT AID for Provision of Medical Equipment,” “NON-PROJECT GRANT AID for Provision of Japanese Local Products” and “NON-PROJECT GRANT AID for Provision of Japanese Disaster Reduction Equipment,” from the fiscal year 2012. These types of NON-PROJECT GRANT AID are expected to contribute greatly to the promotion of not only economic and social development of developing countries, but overseas business expansion of Japanese enterprises, with the procurement of quality Japanese products.¹ “NON-PROJECT GRANT AID for Provision of Japanese Next-Generation Eco-Friendly Vehicles,” in particular, supported developing countries striving for economic and social development in the environmental and other sectors by promoting the use of next-generation vehicles with the procurement of energy efficient eco-friendly Japanese vehicles.

¹ However, these sub-schemes of NON-PROJECT GRANT AID were terminated in April 2015 and succeeded by the “Grant Aid for Economic and Social Development Program.” These sub-schemes were used for projects, the implementation of which was decided before March 2015.

(2) Objective:

The objectives of this evaluation study are to conduct a project-level evaluation of the “Japan’s Non-Project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles” provided to Peru in the fiscal year 2013, make the evaluation results available to the general public and prepare recommendations useful for future project formulation.

(3) Scope:

Japan’s Non-Project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles to Peru in the fiscal year 2013 (Amount of the grant provided: 1.2 billion yen)

1-1 Formulation of Evaluation Plan**1-1-1 Preparation of Objective Framework**

To set the scope of the evaluation and verify the relevance to policies and effectiveness of the project results, a diagram to depict the objective framework of the evaluation was prepared. In the evaluation study, the relevant policies, etc. were also evaluated to maintain a good balance between evaluation from micro viewpoints and that from macro viewpoints. In the evaluation from micro viewpoints, the financial assistance was regarded as input, procurement and operation of the next generation vehicles as output and the increase in the use of such vehicles in Peru, contribution to environmental protection measures, promotion of business extension in Peru of Japanese enterprises and strengthening of the bilateral economic relationship as outcome. In the evaluation from macro viewpoints, the project was evaluated on its positioning in the Country Development Cooperation Policy for Peru of Japan, environmental policies of the Government of Peru and the Export Strategy for Infrastructure Systems of the Government of Japan.

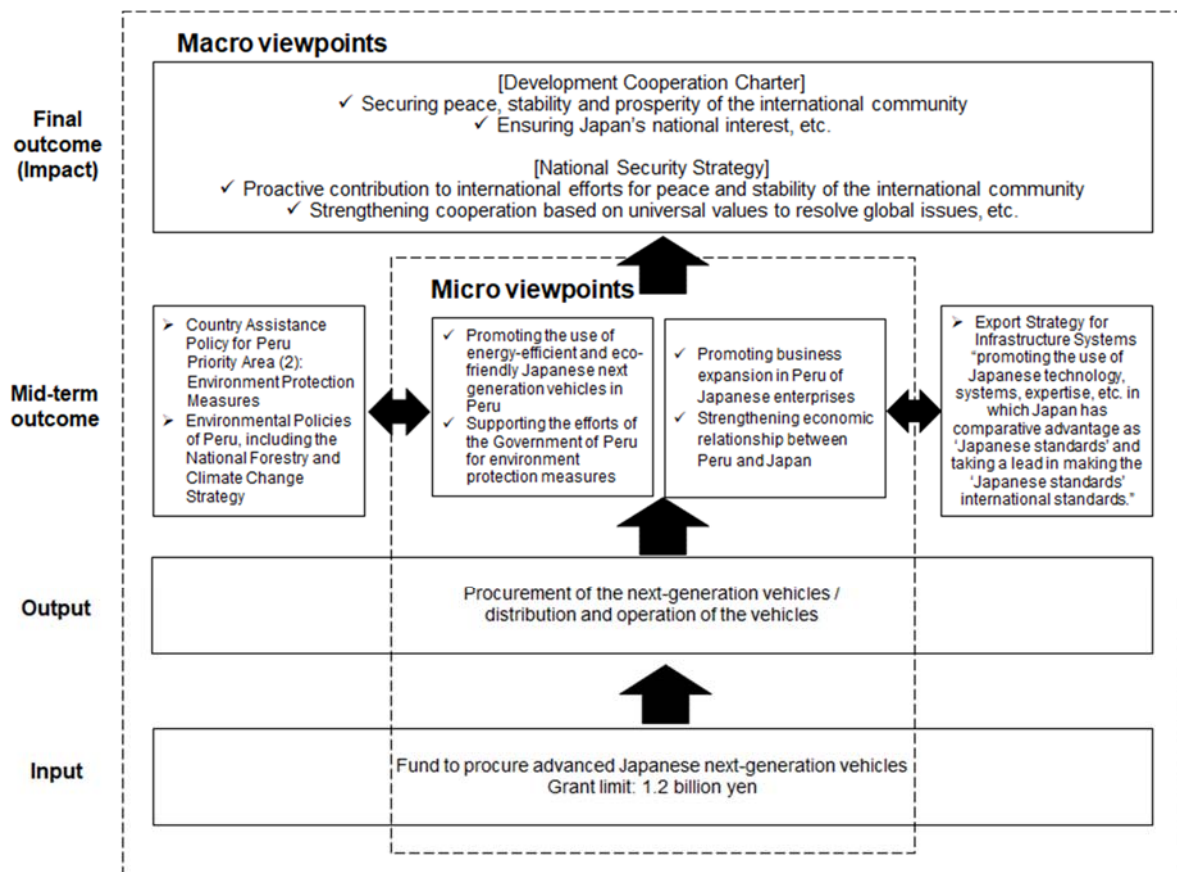


Fig. 1-1 Objective Framework

(Prepared by Evaluation Team)

1-1-2 Preparation of Evaluation Framework

In the evaluation study, the project was analyzed on 1) relevance of project, 2) effectiveness of project results and 3) appropriateness of processes from development viewpoints and on 4) diplomatic importance and 5) diplomatic impact from diplomatic viewpoints. The Evaluation Team prepared a framework describing the evaluation criteria, evaluation details (evaluation items), sources of information, etc.

Table 1-1 Evaluation Items

Evaluation from Development Viewpoints	
Relevance of Project	1. Consistency with Japan's high-level policies
	2. Consistency with development needs of the partner country (Peru)
	3. Consistency with international priority issues
	4. Coherence with assistance policies of other donors
	5. Japan's comparative advantage
Effectiveness of Project Results	1. What were the amounts of financial, human and material resources (input) that were invested in the achievement of the

	<p>preset goals and objectives?</p> <p>2. What products and services did the above-mentioned input generate for the achievement of the preset goals and objectives? Was the project implemented as planned with the said input? (output)</p> <p>3. To what extent were the preset goals and objectives achieved? What short-, medium- and long-term effects did the project produce? (outcome and impact)</p>
Appropriateness of processes	<p>1. Appropriateness of the process for formulating a development cooperation policy (including understanding of development issues and holding of consultations)</p> <p>2. Appropriateness of the process for implementing development cooperation (including effective cooperation with other schemes)</p> <p>3. Appropriateness of the structure for the implementation of development cooperation (including the assistance implementation structure of relevant agencies)</p> <p>4. Effective cooperation with other donors, international organizations and various other assistance providers (including those in the private sector and NGOs)</p>
Evaluation from Diplomatic Viewpoints	
Diplomatic importance	<p>1. Importance in the international community</p> <p>2. Importance in the bilateral relationship</p> <p>3. Importance for the prosperity of Japan, Japanese enterprises and Japanese people</p>
Diplomatic impact	<p>1. Impact on the international community</p> <p>2. Impact on the bilateral relationship</p> <p>3. Impact on Japan, Japanese enterprises and Japanese people</p>

(Source: Evaluation Team)

1-2 Implementation of Evaluation Study

The evaluation study was conducted in Japan and Peru in accordance with the evaluation framework. The Evaluation Team studied various policy documents and relevant documents in Japan. Between September and November 2019, the team conducted interview surveys to collect information for the implementation of the field survey at the relevant Japanese agencies using a questionnaire prepared in accordance with the evaluation framework and asked their cooperation in the implementation of the survey. Based on the results of the study in Japan, the team conducted a field survey in Peru between December 8 and 15, 2019. In the field survey, the team conducted interview surveys at the relevant Peruvian agencies using a questionnaire prepared in accordance with the evaluation framework. The team also studied the use of the next-generation vehicles provided in the project and obtained various quantitative and qualitative data.

1-3 Analysis of Evaluation Study Results and Preparation of Recommendations and Lessons Learned

Based on the results of the study in Japan and Peru and in accordance with the evaluation framework, the Evaluation Team assessed the project from the development and diplomatic viewpoints. In the evaluation from the development viewpoints, the project was rated on a scale of A to D; A: “highly satisfactory,” B: “satisfactory,” C: “partially unsatisfactory” and D: “unsatisfactory,” on each evaluation criterion. In the evaluation from the diplomatic viewpoints, the project was not rated in order to avoid the risk of deducing simplistic evaluation results from limited information. In addition, the team prepared recommendations that present proposals to the organizations and people involved in the evaluated project and lessons, including points to note, learned from the evaluation results, which would be more widely applicable than the recommendations, keeping in mind the provision of feedback to the formulation of ODA policies.

Chapter 2 Outline of the Evaluated Project

2-1 Project Outline

Project title: Japan's Non-Project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles to Peru in the Fiscal Year 2013

Conclusion of E/N: April 30, 2013

Outline: The financial assistance required for the procurement of Japanese high-quality next generation vehicles was provided in the project. Aiming at the promotion of the use of energy-efficient and eco-friendly next generation vehicles, the project was expected not only to support the Government of Peru in its efforts for environment protection measures, but also to promote overseas business expansion of Japanese enterprises and strengthen the economic relationship between Peru and Japan.

2-2 About the Scheme (Non-Project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles)

The objective of Non-project Grant Aid is to support partner countries in economic and social development with the provision of assistance consistent with their development needs. This scheme began as an assistance scheme to provide commodities, including petroleum and steel products, to countries with limited means of acquiring foreign exchange. Later, the scheme was also used for the "promotion of Japanese standards." Under this scheme, projects aiming at promoting the use of Japanese products were implemented in partner countries and regions and products of Japanese enterprises in areas in which Japan had comparative advantage were provided to those countries and regions. This scheme was implemented as part of the effort to "promote Japanese standards."

Non-Project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles was formulated in accordance with the high-level policies, including the Comprehensive Strategy for the Rebirth of Japan decided by the Cabinet in December 2011 and the Japan Revitalization Strategy, which provided practical measures for the implementation of the Comprehensive Strategy for the Rebirth of Japan, and the trend at the time. The supplementary budget for the Fiscal Year 2012 included the budget for the implementation of this scheme. When formulating a project under this scheme, MOFA obtained information required for the project formulation by holding consultation with the Automobile Division,

Manufacturing Industries Bureau, Ministry of Economy, Trade and Industry (METI), and conducted an interview survey at the Japan Automobile Manufacturers Association through the above division of METI.

According to a document of MOFA, next-generation vehicles and equipment required for their maintenance manufactured by Japanese companies were to be provided in accordance with the framework of NON-PROJECT GRANT AID under this scheme and the objectives of the scheme were to 1) support overseas business expansion of Japanese enterprises by creating a continuous demand for both Japanese next generation vehicles and system of maintenance infrastructure for their operation and 2) contribute to the prevention of environmental pollution and the reduction in greenhouse gas emission by promoting the use of next generation vehicles with low environmental load in partner countries.

The use of the names of the sub-schemes of NON-PROJECT GRANT AID, including NON-PROJECT GRANT AID for Provision of Japanese Next Generation Eco-Friendly Vehicles, was terminated in 2015. The grant aid which used to be provided under such sub-schemes are provided as grant aid under the procurement agent system (Grant Aid for Economic and Social Development Program). In this type of grant aid, a procurement agent makes a public announcement of procurement and performs the procurement.

2-3 Outline of the Partner Country

Peru is in the western part of South America and bordered by Colombia, Brazil, etc. Because of the geographic characteristics, silver and copper ore and a thriving fishing industry are found in Peru. Its land can be topographically and climatically divided into three areas, a desert area on the Pacific coast, a mountainous area in the Andes and a jungle area. The country is rich in natural resources. The population and gross domestic product (GDP) are expected to show continuous increase in Peru. While the nominal per capita GDP is about US\$ 7,000, there is a huge disparity in income in Peru. As the economic growth of the country depends heavily on the market prices of mineral resources, the country has many social issues to be addressed, including the development of other industries, realization of sustainable agriculture, forestry and fisheries and environment protection. The Government of Peru is taking measures to address such issues, including the diversification of industry. The three largest trading partners of Peru are China, the U.S.A. and the European Union (EU) in both import and export. The presence of India in Peru is also on the increase.

Table 2-1 Key Economic Indicators of Peru

Year	2017	2018	2019	2020
Nominal GDP (in US\$ billions)	214.1	225.2	232.1	244.2
Nominal GDP per capita (in US\$)	6,728.1	7,002.1	7,141.9	7,438.5
Inflation rate (%)	2.8	1.3	2.4	2.0
Rate of increase in import of goods and services (%)	4.5	1.6	4.3	5.3
Rate of increase in export of goods and services (%)	8.1	1.5	3.7	3.3
Unemployment rate (%)	6.9	6.7	6.6	6.5
Population (in millions)	31.8	32.2	32.5	32.8

(Source: International Monetary Fund)

Chapter 3 Results of the Evaluation

3-1 Evaluation from Development Viewpoints

Summary of Evaluation Results (Evaluation from Development Viewpoints)

(1) Relevance of Project: B: Satisfactory

Evaluation items: Consistency with Japan's high-level policies, consistency with development needs of the partner country (Peru), consistency with international priority issues and Japan's comparative advantage

Basis for the evaluation result:

This project was consistent with Japan's high-level policies, development needs of Peru and international priority issues. Japan's comparative advantage was utilized in the project. However, this project is considered to have had a problem of not having a clear target for the achievement of the objective of expanding the market of Japanese automotive manufacturers in Peru. Absent such a target, it was not possible to decide whether this project was an appropriate measure to achieve the objective. As practical goals or performance indicators were not fully explained in the assistance framework of the Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles, it was deemed necessary to explain political objectives and positioning of the project/scheme more clearly.

(2) Effectiveness of Results: B: Satisfactory

Evaluation items: Input/output, outcome/impact

Basis for the evaluation result:

The input and output of the project were appropriate. The next generation vehicles procured in the project were used effectively and maintained appropriately. In the evaluation at the level of outcome/impact, the Evaluation Team estimated the reduction in greenhouse gas (GHG) emissions realized by the use of the procured next generation vehicles and confirmed that Japanese automotive manufacturers had maintained the largest shares in the automotive market in Peru. However, the evaluation study was unable to prove conclusively that the project had led to the promotion of the use of Japanese vehicles and Japanese next generation vehicles in Peru. Although the Government of Peru proactively introduced environment policies and the awareness to the environment in the society had been enhanced, it seemed that this project was not well-known to the general public. The evaluation study

was unable to obtain concrete evidence that the project had promoted the use of Japanese next generation vehicles or assisted the implementation of environment protection measures.

(3) Appropriateness of Processes: A: Highly satisfactory

Evaluation items: Appropriateness of the process for formulating development cooperation policies, appropriateness of the process for implementing development cooperation and appropriateness of the structure for implementing development cooperation

Basis for the evaluation result:

This project was planned appropriately. The Japanese counterparts involved in the project understood the development needs of Peru well. The flexibility and speed of the project implementation were ensured by following appropriate project implementation procedures. On the point of prioritizing environmental issues, the objective and goal of this project were consistent with those of the cooperation projects that the Japan International Cooperation Agency (JICA) implemented with Peruvian counterparts. The Embassy of Japan in Peru actively implemented publicity and information dissemination activities for the project and several local media reported on the project.

3-1-1 Relevance of Project

(1) Consistency with Japan's High-level Policies

(A) Environment Protection Measures

The "Country Assistance Policy for the Republic of Peru (December 2012)," the policy on assistance to Peru of the Government of Japan at the time of the planning and implementation of this project, describes "contribution to sustainable economic development that accompanies the realization of social inclusion" as the basic policy of assistance (large targets) and "(1) economic-social infrastructure development and income disparity reduction," "(2) environment protection measures" and "(3) disaster risk reduction measures" as the three priority areas of assistance (middle targets). It can be concluded that this project was consistent with Japan's Country Assistance Policy for Peru at the time of its implementation that prioritized "environment protection measures."

The project also aimed at reducing GHG emission from vehicles in Peru by promoting the use of next generation vehicles. The above-mentioned policy mentioned that the need for Peru to reduce the risk of and strengthen capacity to respond to natural disasters caused by climate change, El Niño, etc. was the

background for prioritizing “disaster risk reduction measures.” For these reasons, this project was consistent with the policy on disaster risk reduction. The “Country Assistance Policy for the Republic of Peru (September 2017),” the policy on assistance to Peru of the Government of Japan at the time of the evaluation study, also prioritizes “environment protection measures” and “disaster risk reduction measures.”

(B) Expansion of Market of Japanese Automotive Manufacturers

The Comprehensive Strategy for Rebirth of Japan decided by the Cabinet in July 2012 mentions the exploitation of potential markets for the capturing of global market for next-generation vehicles. The objective of this project of expanding the market of Japanese automotive manufacturers in Peru was backed by the discussion in the “Ministerial Meeting on Strategy relating to Infrastructure Export and Economic Cooperation”² and the Export Strategy for Infrastructure Systems. At the fifth ministerial meeting in September 2013, a concept that it is necessary to use such means as ODA to make Japan’s advanced technology, systems, expertise, etc. international standards and to promote the use of them as “Japanese standards” was presented and quick chargers for electric vehicles and safety and environmental performance of vehicles were shown as examples of “Japanese standards” in the transport sector. The “Export Strategy for Infrastructure Systems of the Government of Japan” (May 2013) describes the establishment of international standards in areas in which Japan has comparative advantage and strengthening of authentication infrastructure as implementation policies and mentions next generation vehicles as an example of areas in which Japan has comparative advantage. This project is deemed to have complied with these high-level policies of Japan.

However, the evaluation study did not lead to obtaining evidence of any tangible outcome on the promotion of the use of Japanese next generation vehicles.³ The project had no concrete indicator for the achievement of the objective of its activities, *i.e.* provision of fund to purchase next generation vehicles to the Government of Peru and procurement of the vehicles, which were to be used as official vehicles of the government, with the provided fund.

² A policy meeting led by the Prime Minister’s Office to support Japanese enterprises in export of infrastructure system and acquisition of overseas resource interests and to discuss important issues on Japan’s overseas economic cooperation for its strategic and efficient implementation.

³ See 3.1.2 “Effectiveness of Results” for details.

Therefore, it cannot be decided whether the project was an appropriate measure to expand the market of Japanese automotive manufacturers. On this point, the project had a problem concerning its relevance. In the first place, no concrete target or specific performance indicator for the assistance to overseas business expansion and sales promotion of Japanese enterprises is provided in the overall framework of the Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles. More explicit explanation of the objectives and positioning of the Non-project Grant Aid should have been provided.

(2) Consistency with Development Needs of Peru

In this project, Japanese next generation vehicles with low environmental load were provided to Peru where measures against global warming and those to reduce GHG emissions were being implemented. Therefore, the Evaluation Team concludes that this project was consistent with the development policies and needs of Peru. The Government of Peru has stipulated the objectives of, guidelines for and standards for environmental measures applicable to all sectors in the National Environment Policy (NEP) (Supreme Decree No. 012-2009-MINAM). The policy defines 1) conservation and sustainable use of natural resources and biodiversity, 2) integrated management of environmental quality, 3) environmental governance and 4) international efforts and opportunities for the conservation of the environment as main policy themes. NEP has set a policy of promoting the modernization of vehicles by facilitating the use of equipment, means of transport and fuel that contribute to the alleviation of the level of air pollution in its guidelines on air quality.

Lima in Peru is one of the major cities in the world in which traffic congestion has become a serious social problem. Japanese hybrid vehicles have good fuel efficiency, which leads to positive environmental effect, such as reduction of GHG emissions, in the stop-and-go driving environment and low-speed driving in urban areas, with their motor-driven driving and acceleration assistance systems. Therefore, Japanese next generation vehicles are considered to have been consistent with the condition and needs in Lima City in Peru.

(3) Consistency with International Priority Issues

Climate change could affect the achievement of sustainable development in all countries. The Sustainable Development Goals (SDGs) have Goal 13, "Take urgent action to combat climate change and its impact." The Paris Agreement was adopted as a global action against climate change at the 21st Conference of Parties to the United Nations Framework Convention on Climate Change (COP) held in 2015 and came into effect on November 4, 2016. The agreement

has set the targets of “holding the increase in global average temperature to well below 2 °C above pre-industrial levels and pursuing efforts to limit the increase to 1.5 °C above pre-industrial levels” and “reaching global peaking of greenhouse gas emissions as soon as possible and achieving a balance between anthropogenic emissions by sources and removals by sinks (e.g. forests) of greenhouse gases in the second half of this century to achieve the long-term goal.” The agreement adopted a bottom-up approach of achieving the goal with voluntary actions of each country party by requesting all parties, including developing country parties, to make mitigation efforts.

In 2010, METI of Japan prepared “the Next Generation Vehicle Strategy” as a national strategy for medium- to long-term responses to be made by the automotive industry and the entire society. Global warming, resource constraints and structural change in the automotive markets were considered in the preparation of the strategy. It consists of six plans, an overall plan and those on batteries, resources, infrastructure, systems and international standards. As it is certain that the expansion of motorization will increase the demand for vehicles in developing countries, and particularly in emerging countries, the strategy recognizes that the automotive industry of Japan is expected to contribute greatly to the world with the reduction of CO2 emissions against global warming.

(4) Japan’s Comparative Advantage

In 2018, the METI launched a “Strategic Commission for the New Era of Automobiles”, hosted by METI Minister. Since then, the commission has been holding discussions on strategies that the Japanese automobile industry, amid dramatic changes in business environments surrounding automobiles, should take to lead global innovations and proactively contribute to solutions to global issues including climate change. In the interim report based on results of commission’s discussion held in July 2018, a new concept of “electrified vehicles (xEVs)” was defined. Electric vehicles (EVs), plug-in hybrid electric vehicles (PHEVs), hybrid electric vehicles (HEVs) and fuel cell electric vehicles are collectively defined as xEVs. The report sets long-term goal that Japan should achieve by 2050, including: advance the shift of vehicles produced by Japanese automakers in global markets to xEVs; bring about environmental performance at the world’s highest level; and contribute to realizing a “Well-to-Wheel Zero Emission” policy (to reduce emissions a vehicle’s total emissions footprint to zero, from fuel and power production to automobile operation). According to the Next Generation Vehicle Promotion Center, xEVs account for approx. 30 % of the vehicles manufactured and sold by Japanese automotive manufacturers and the technology, scale of the industry and human resource in xEVs in Japan are

among the best (largest) in the world. The scheme of Japan’s Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles aiming at expanding the overseas market of Japanese next generation vehicles by making good use of ODA and supporting environment protection measures of Peru is considered to have taken advantage of Japan’s comparative advantage.

The interview surveys conducted at Japanese automotive manufacturers and trading companies in the evaluation study revealed their strong confidence and high pride in the performance and durability of Japanese next generation vehicles. The ministries and agencies of the Government of Peru to which such vehicles were provided in this project also placed high confidence in the provided vehicles. The share of Toyota in the market of next generation vehicles (mainly HVs) in Peru was almost 100 % at the time of the evaluation study. This shows that next generation vehicles are products and an area that Japan has comparative advantage. However, the Evaluation Team confirmed in the field study that Korean and Chinese manufacturers were gradually penetrating the market, especially the low-end and a Chinese manufacturer is strengthening its presence particularly in the market for electric buses with the implementation of a joint pilot project with a local power generation company. These points should be noted as part of the results of the evaluation study.

3-1-2 Effectiveness of Results

(1) Input/ Output

Table 3-1 Procured Vehicles

Lot No.	Supplier	Model	Quantity	Contract price
1	Mitsui & Co., Ltd.	Toyota Prius	13	214,814,764 yen
		Toyota Camry HV	48	
2	Mitsui & Co., Ltd.	Lexus LS HV	25	513,455,387 yen
		Lexus ES HV	56	
3	Mitsubishi Corporation	Mitsubishi Outlander PHEV	12	83,000,000 yen
		Mitsubishi iMiEV	2	
4	Itochu Corporation	Isuzu ELF CNG	15	81,958,581 yen
2-1	Mitsui & Co., Ltd.	Toyota Camry HV	35	116,602,500 yen
2-2	Mitsubishi Corporation	Mitsubishi Outlander PHEV	26	155,759,167 yen
Total			232	1,165,590,399 yen

Note: Because of the delay in delivery, the amounts mentioned below were deducted from the above-mentioned prices

Lot 1: 189,906 yen, Lot 2: 21,310 yen, Lot 3: 1,379,183 yen, Total: 1,590,399 yen

(Source: Final Report)

The next generation vehicles were procured in two batches in April 2014 and April 2015. The procurement of the vehicles went smoothly as planned. As surplus was generated after the tender for the first batch, additional vehicles were procured in the second batch with the surplus. 97 and 135 next generation vehicles were delivered to the Ministry of Foreign Affairs and the Presidency of the Council of Ministers of Peru, respectively. The vehicles delivered to the ministry were mainly used by top officials of the ministry. They are also used for transporting its staff members to venues of meetings and some of the vehicles were transferred to local offices. In addition, the vehicles are used for transporting foreign dignitaries invited to international events organized by the Government of Peru. For example, the vehicles delivered in this project were used effectively during COP20 held in Peru in December 2014. The Presidency of the Council of Ministers distributed 103 of the 135 vehicles delivered to it to ministries and agencies of the Government of Peru and local governments in rural areas.

Almost all the delivered vehicles are in good operating condition.⁴ Local distributors of the Japanese automotive manufacturers conducted pre-delivery training to the ministry and presidency before handing over the vehicles. The local authorized dealers have provided regular maintenance services of HVs of Toyota and PHEVs and EVs of Mitsubishi Motors every 5,000 to 10,000 km. The compressed natural gas (CNG) trucks of Isuzu Motors delivered to rural areas are maintained by local private repair shops designated by the local governments because there are no authorized dealers in such areas. Each of these vehicles had a warranty of 36 to 60 months or 100,000 km to 150,000 km. The vehicles have been maintained under the warranty. At the time of the evaluation study, five years have passed since the delivery. Therefore, the Government of Peru will have to bear the maintenance costs. The Ministry of Foreign Affairs, the Presidency of the Council of Ministers and other government ministries and agencies intend to maintain the vehicles at their own expense. In the inspection and verification of the vehicles at ministries and agencies conducted in the field survey, the Evaluation Team found that the vehicles were maintained appropriately and generally in good working condition.

The Evaluation Team managed to collect the odometer data from 80 % of the

⁴ A document provided by the Ministry of Foreign Affairs shows that, among the 232 vehicles delivered, one delivered to a government office from the Presidency of the Council of Ministers was completely damaged in an accident and one delivered to the Ministry of Foreign Affairs was completely damaged in a flood. (Both were insured.) All the rest, except those that have broken down and are being maintained, are working without problem.

delivered vehicles.⁵ The average travelling distances of HVs, PHEVs, EVs and CNG trucks were 52,508 km, 27,206 km, 12,008 km and 17,944 km, respectively. The difference in the average distances is considered due to the difference in the use of the vehicles. For example, the EVs delivered to the Ministry of Foreign Affairs have been used mainly to transport documents between government ministries and agencies. According to local governments to which the CNG trucks were delivered, all the trucks delivered were very useful as they used them in disasters as emergency vehicles. An HV used as an official vehicle of the government in Lima is expected to be rarely used for long distance drives. Therefore, the average travelling distance of 10,000 km per year or so suggests that the vehicles have been used sufficiently.

(2) Outcome/Impact

(A) Effect on Greenhouse Gas Emissions

As Peru is considered a country most vulnerable to global warming in the world, the government is implementing measures for forest conservation and against climate change under such policies as NEP. At COP21 held in Paris in 2015, Peru committed to reduce greenhouse gas emissions by 30 % in relation to the emissions of the projected Business as Usual scenario in 2030. In the period between 2011 and 2017, while the nominal GDP of Peru increased at a rate of 3.84 % per year, the GHG emissions increased at a rate of 1.70 % per year. In the same period, while the nominal per capita GDP increased at a rate of 2.70 % per year, the per capita GHG emissions remained almost unchanged at around 1.5 t per year. These figures suggest that the environmental load is on the decrease in relation to the increase in economic activities due to economic growth.

Table 3-2 Changes in GHG Emissions and GDP in Peru

	2011	2012	2013	2014	2015	2016	2017
GHG emissions per capita (tons)	1,5	1,5	1,5	1,6	1,6	1,6	1,5
GHG emissions (million tons)	44,92097	44,07072	45,18242	48,11101	49,72481	52,1867	49,69364
Nominal per capita GDP (US\$)	5733,22	6402,12	6632,217	6561,775	6147,838	6175,884	6728,093
Nominal GDP (billion US\$)	170,837	192,933	202,118	202,196	191,515	194,47	214,128

(Sources: OECD and IMF)

The results of the quantitative estimation of the reduction of GHG emissions realized by the use of next generation vehicles provided in this project are shown below as reference.

⁵ The data were collected from 156 out of 177 HVs, 14 out of 38 PHEVs, 2 out of 2 EVs and 9 out of 15 CNG trucks.

[Assumptions for the estimation]

The estimated GHG emissions from the next generation vehicles and equivalent ordinary gasoline-powered vehicle driven for the same distance for the expected lifetime of 10 years were compared.

The reduction of GHG emissions may be overestimated if the total number of vehicles is reduced by accidents or the utilization rate decreases due to increase in breakdown and the need for maintenance service. Meanwhile, if fuel costs and electricity charges increase, the rate of operation of the next generation vehicle will increase. In such a case, the reduction of GHG emissions may be underestimated. The estimate of the reduction may vary if elements in the estimation formula are calculated more elaborately.

[Formula for the estimation of GHG emission]

(Average travelling distance at the time of the evaluation study (km)) (*1) / (Average fuel efficiency (km/L)) (*2) / 5 (years) x 10 (years) x (Heating value per unit volume (GJ/L)) (*3) x (GHG emission per unit heating value (tCO₂/GJ)) (*4) x (number of vehicles) = (GHG emission in 10 years)

*1: Average travelling distance confirmed with the maintenance records of vehicles

*2: Fuel efficiencies of similar model and equivalent non-HV/EV vehicle (found on websites of the automotive manufacturers)

*3 and *4: Data of the Japan LP Gas Association

[HV]

1) Gasoline-powered vehicle

52,508 (km) / 21.25 (km/L) / 5 (years) x 10 (years) x 0.0346 (GJ/L) x 0.0671 (tCO₂/GJ) x 177 units
= 2,030.8 tCO₂

2) HV

52,508 (km) / 25.75 (km/L) / 5 (years) x 10 (years) x 0.0346 (GJ/L) x 0.0671 (tCO₂/GJ) x 177 units
= 1,675.9 tCO₂

1) – 2) = 354.9 t reduction of CO₂ emission

[PHEV]

1) Gasoline-powered vehicle

27,206 (km) / 14.6 (km/L) / 5 (years) x 10 (years) x 0.0346 (GJ/L) x 0.0671 (tCO₂/GJ) x 38 units
= 328.8 tCO₂

2) PHEV

27,206 (km) / 18.6(km/L) / 5 (years) x 10 (years) x 0.0346 (GJ/L) x 0.0671 (tCO₂/GJ) x 38 units
= 258.1 tCO₂

1) – 2) = 70.7 t reduction of CO₂ emission

[EV]

1) Gasoline-powered vehicle

12,008 (km) / 29.4 (km/L) / 5 (years) x 10 (years) x 0.0346 (GJ/L) x 0.0671 (tCO₂/GJ) x 2 units
=3.8 tCO₂

2) EV

$12,008 \text{ (km)} / 0.0 \text{ (km/L)} / 5 \text{ (years)} \times 10 \text{ (years)} \times 0.0346 \text{ (GJ/L)} \times 0.0671 \text{ (tCO}_2\text{/GJ)} \times 2$
units

=0.0 tCO₂

1) – 2) = 3.8 t reduction of CO₂ emission

【CNG truck】

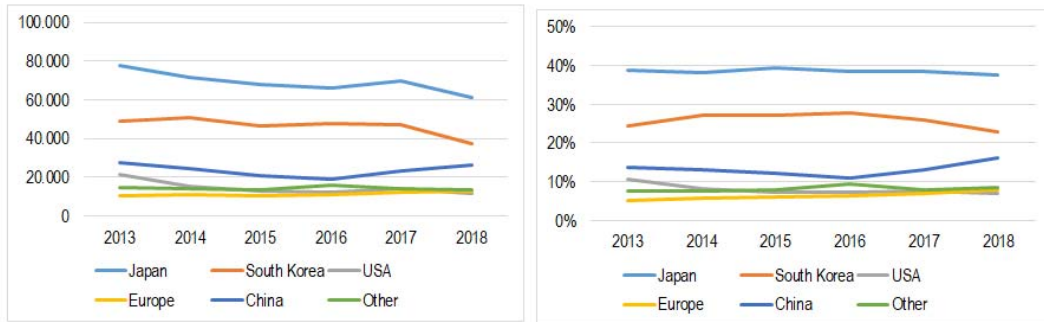
The CO₂ emission from the CNG trucks was not analyzed because it was difficult to compare their CO₂ emission with that of gasoline-powered vehicles. However, as the CO₂ equivalents per unit heating value of gasoline and natural gas are 0.0671 tCO₂/GJ and 0.051 tCO₂/GJ, respectively (data of the Japan LP Gas Association), the trucks are considered to have exerted their environmental performance.

(B) Effect on Promotion of Use of Next Generation Vehicles

Japanese automotive manufacturers have had the largest share in the automotive market in Peru for a long time. At the planning stage of this project, there was severe competition for the market share between Japanese manufacturers and those of other countries, including South Korea. The Free Trade Agreement (FTA) between Peru and South Korea and the Economic Partnership Agreement (EPA) between Peru and Japan came into effect in August 2011 and March 2012, respectively. With this background, assistance was needed to promote the sale of Japanese vehicles in Peru.

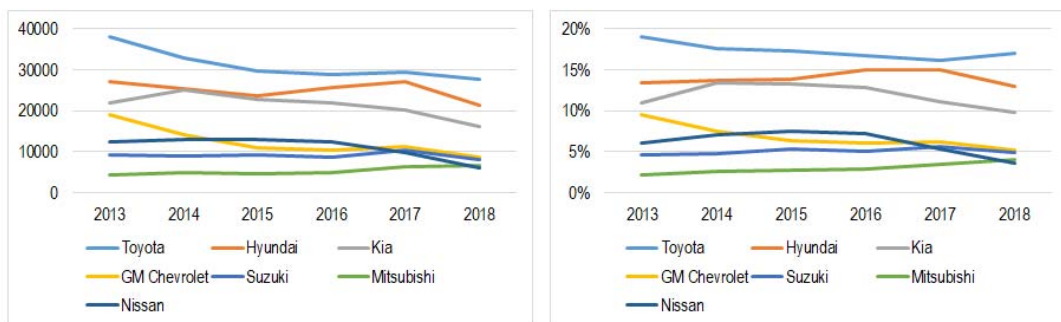
Japanese automotive manufacturers has maintained the largest share in the automotive market in Peru. Although the volume of the sales of Japanese automobiles has been on the decline, the market share has remained almost unchanged. While the difference in the market share between Japanese and Korean automotive manufacturers, which had the second largest share, was reduced slightly in the period between 2014 and 2018, the difference increased again recently. Meanwhile, the share of Chinese manufacturers has been on the increase since 2016. Toyota has maintained the largest market share by manufacturer. Hyundai of South Korea has the second largest share. While the share of Toyota was on the decline, that of Hyundai was on the increase. However, the gap between the two slightly increased in 2018. The sales volume and market share of Mitsubishi is on the increase. In the market of commercial vehicles, three Japanese manufacturers, Hino, Isuzu and Mitsubishi Fuso have the largest shares and they are followed by Hyundai and Volvo. While the sales volumes of Hino and Isuzu have remained the same or been reduced slightly, their market shares have been on the increase.

Fig. 3-1 Changes in Sales Volumes and Market Shares of Vehicles in Peru by Country



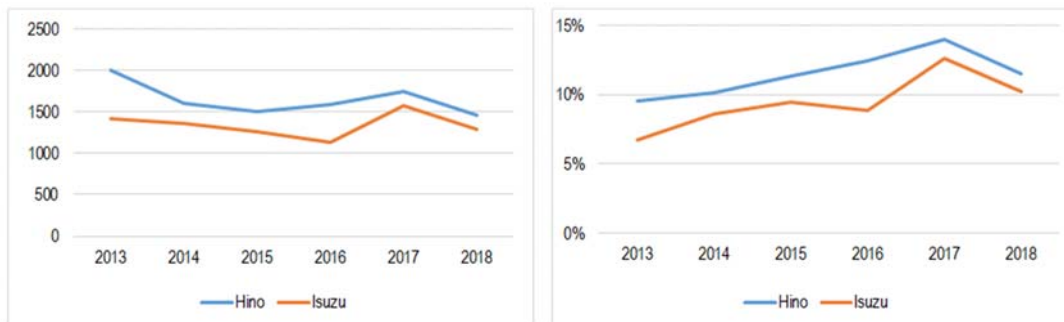
(Prepared by the Evaluation Team from the reference materials provided by JETRO and automotive manufacturers)

Fig. 3-2 Changes in Sales Volumes and Market Shares of Vehicles in Peru by Manufacturer



(Prepared by the Evaluation Team from the reference materials provided by JETRO and automotive manufacturers)

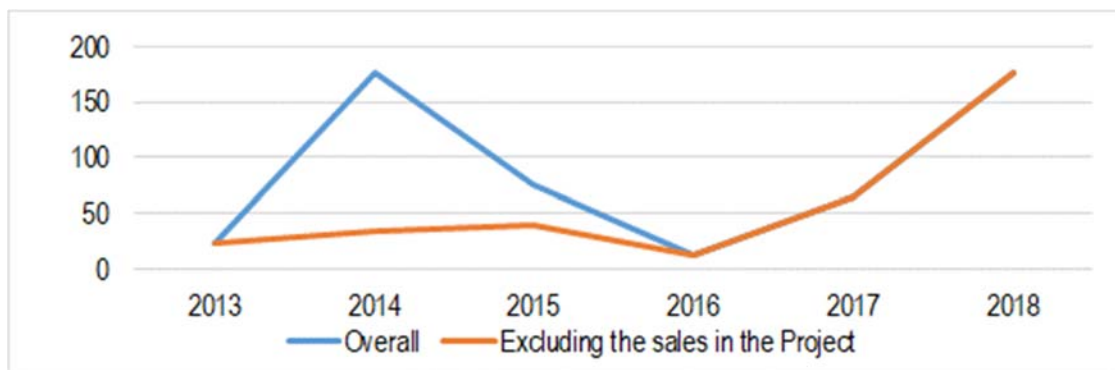
Fig. 3-3 Changes in Sales Volumes and Market Shares of Commercial Vehicles in Peru by Manufacturer⁶



(Prepared by the Evaluation Team from the reference materials provided by JETRO and automotive manufacturers)

The sales volume of next generation vehicles in Peru is small. Excluding the next generation vehicles (HVs) purchased in this project (142 units in 2014 and 35 units in 2015), the sales volume remained almost unchanged until 2016 and the volume has been on the increase since 2017. Almost all the HVs sold in Peru have been Toyotas.

Fig. 3-4 Change in Sales Volume of Next Generation Vehicles (HVs) in Peru



(Prepared by the Evaluation Team from the reference materials provided by JETRO and automotive manufacturers)

In general, the market shares of Japanese automotive manufacturers in Peru have been maintained high. However, sales data since 2014, the year in which Japanese next generation vehicles were delivered to the Government of Peru in this project, show no large increase in sales volume or market share of Japanese manufacturers, except the volume and share of commercial vehicles. The

⁶ Only the data of Hino and Isuzu are shown in the figure because the data on sales volumes of commercial vehicles were not available from other commercial vehicle manufacturers, including Mitsubishi Fuso, Hyundai and Volvo.

automotive manufacturers and trading companies that supplied vehicles in this project informed the Evaluation Team that the implementation of this project had no direct impact on the sales volume in the interview surveys conducted by the team. The officials of the Government of Peru involved in this project, the Automotive Association of Peru and the Japanese Peruvian Chamber of Commerce and Industry expressed the same view. In addition, among the next generation vehicles procured in this project, *i.e.*, HVs of Toyota, PHEVs and EVs of Mitsubishi and CNG trucks of Isuzu, the HVs of Toyota are the only next generation vehicles commercially available in Peru. The others are not commercially distributed in Peru. Development of infrastructure, including charging stations and CNG stations and establishment of a financial source to provide large incentive to the purchase of next generation vehicles are the issues to be addressed in the development of a market for next generation vehicles.

(C) Contribution to Environment Protection Measures

The importance of environment protection measures, including raising awareness of the need for the reduction of GHG emissions, has been recognized by an increasing number of Peruvians recently. The Government of Peru is implementing environment protection measures and promoting the use of next generation vehicles. It introduced emission standards (EURO 4, EURO 6 in future) in 2018. When an excise tax⁷ was introduced in the same year, next generation vehicles were exempted from the tax. In this way, the Government of Peru has commenced the implementation of measures to promote the use of next generation vehicles and the sales volume of the vehicles has been on the increase since 2016. However, the results of the interview surveys conducted at offices of the Government of Peru, Japanese automotive manufacturers and trading companies, the Automotive Association of Peru and the Japanese Peruvian Chamber of Commerce and Industry in the evaluation study have failed to show the direct causal relationship between the introduction of the above-mentioned policy and implementation of this project.

The Peruvian society in general and people have increasingly become aware of the importance of the natural environment. However, according to the views expressed in the interview surveys at the Automotive Association of Peru and the Japanese Peruvian Chamber of Commerce and Industry, the activities implemented in this project for the procurement of next generation vehicles as official vehicles of the government are not recognized at the levels of society by the people at present, five years after the implementation of the project.

⁷ 10% tax applicable mainly to luxury items

Therefore, it is not reasonable to assume that the implementation of the project had an impact on the environment awareness of Peruvians.

3-1-3 Appropriateness of Processes

(1) Appropriateness of the Process for Formulating Development Cooperation Policies

The interview survey conducted at the Ministry of Foreign Affairs of Peru in the field survey revealed the following background information on the planning of this project. Various countries offered to provide assistance to the Government of Peru in the preparation for COP20 in 2014. Among them, the Embassy of Japan in Peru informed the ministry of the scheme of the Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles and, later, the ministry inquired to the embassy for the details. The officials of the Government of Peru involved in the project acknowledged that the Japanese involved in the project had correct understanding of the needs of the government implementing environment protection measures and the project had been designed appropriately.

(2) Appropriateness of the Process for Implementing Development Cooperation

(A) Appropriateness of Procedures

The procedures, including the announcement of tender, tender and contract conclusion, for the implementation of this project were implemented correctly in compliance with the “Procurement Guidelines for Non-project Grant Aid” provided by MOFA. As no serious procedural problem was found in the implementation of this project, the Evaluation Team has concluded that appropriate implementation procedures were used in this project.

(B) Flexibility and Speed of Project Implementation

MOFA shall perform work required for the implementation of a grant aid project that is closely connected with the decision on the performance of a foreign policy and that needs to be implemented flexibly and a procurement agent appointed by MOFA shall procure items required for the implementation of such a project. This procurement agent system was adopted for the implementation of the Non-project Grant Aid for Provision of Next Generation Eco-Friendly Vehicles.

The Governments of Peru and Japan concluded an E/N on this project in April 2013. After the consultation among the stakeholders involved in the project and procurement of required items, the first and second batches of the procured

vehicles were delivered between August and December 2014 and between November and December 2015, respectively. According to the procurement agent of this project, the Japan International Cooperation System (JICS), this project had to be implemented very quickly to maximize its diplomatic impact, as COP20 was to be held in Peru in December 2014. On the side of the Government of Peru, the Presidency of the Council of Ministers coordinated the distribution of the procured vehicles to government ministries and agencies in a very short time. The Japanese trading companies and automotive manufacturers appointed as the contractors and suppliers of the project, respectively, made delivery on time. Due to the efforts made by both countries, the flexibility and speed of the implementation of this project was maintained.

(C) Publicity Activities and Information Disclosure

The Embassy of Japan in Peru used COP20, a large-scale international event, as an opportunity to publicize this project. The embassy organized the handover ceremony of the vehicles procured in this project just before the opening of COP20 and published the photographs taken in the ceremony on its homepage. Local media also reported a row of the procured vehicles seen in various ceremonies and the scenes of government dignitaries using the vehicles.⁸ The latest version of the pamphlet on Japan's ODA published by the embassy in 2017 has an article on this project.

Despite such efforts of the embassy, the fact that Japan's ODA was used for the procurement of Japanese next generation vehicles, which are used as official vehicles of the Government of Peru, is not widely known to the general public. The vehicles are still used by the Government of Peru five years after the implementation of the project and they are driven in the city. On this point, this project is highly appreciated. However, the interview conducted in the field survey revealed that staff of the Automotive Association of Peru were unaware of the project. Members of the Japanese Peruvian Chamber of Commerce and Industry mentioned that this project was not well known even in the local Japanese community.

(D) Cooperation with Related Projects

No specific cooperation was seen between this project and those of JICA in the environment sector. Nonetheless, JICA has prioritized the cooperation in the

⁸ Examples of local news articles:

“Japan Provides Eco cars for Transport of COP delegations” (TV Peru)

“‘Preparation for COP20 completed’ The Foreign Minister Gutierrez Thanks Provision of Eco-cars by Japan” (El Peruano)

environment sector in accordance with the Country Development Cooperation Policy for Peru of MOFA and is implementing various cooperation projects for environment conservation, including ODA loan projects concerning measures against climate change and environmental issues as part of cooperation in the environment sector. The goal and objective of this project were consistent with those of the cooperation projects implemented by JICA.

(3) Appropriateness of the Structure for Implementing Development Cooperation

The Governments of Peru and Japan held intergovernmental committee meetings for the implementation of this project. The Embassy of Japan in Peru represented the Government of Japan and the Ministry of Foreign Affairs of Peru and the Presidency of the Council of Ministers represented the Government of Peru in the committee. JICS participated in the committee as an advisor to evaluate the needs of the Government of Peru from the technical aspect. As next generation vehicles were procured twice in this project, the committee held two meetings. Both governments performed their respective duties appropriately in the implementation process of this project. The trading companies and automotive manufacturers selected as the contractors and suppliers, respectively, of the project observed the delivery dates of the vehicles and conducted pre-delivery training and maintenance services appropriately.

3-2 Evaluation from Diplomatic Viewpoints

<p>Brief Summary of Evaluation Results (Evaluation from Diplomatic Viewpoints)</p> <p>(1) Diplomatic Importance:</p> <p>This project was evaluated to be important in relation to the bilateral relationship between Peru and Japan because of its consistency with the ODA policy and the policies for economic diplomacy of Japan. With the particular importance of the automotive market in Peru to Japan taken into consideration, the Evaluation Team has concluded that the project was important for the prosperity of Japanese enterprises and people.</p> <p>(2) Diplomatic Impact:</p> <p>Although the lack of awareness of the general public in Peru to the project was recognized as its problem, the Evaluation Team has confirmed that the Government of Peru appreciated this project as the use of next generation</p>

vehicles in COP20 had improved the image of Peru and demonstrated its awareness to the environmental issues and that the project produced the effect of enhancing the presence of Japan and creating pro-Japanese feeling in Peru. The Evaluation Team has confirmed that this project had various positive impacts on Japanese automotive manufacturers by analyzing the benefit of the manufacturers not only on simple sales volume of Japanese vehicles, but from a wider viewpoint.

3-2-1 Diplomatic Importance

(1) Importance in Bilateral Relationship

(A) Importance with regard to Japan's ODA Policies for Peru

This project was important for Japan in implementing its ODA policy for Peru. It was consistent with the Country Development Cooperation Policy for Peru of the Government of Japan and implemented to assist the environment protection measures taken by the Government of Peru. The Evaluation Team has confirmed that the Government of Peru appreciates the contribution of the project to the strengthening of the economic cooperation between Peru and Japan with the acknowledgement of the particular importance of this project for its contribution to the achievement of goals in the environment sector to which the Government of Peru made commitment in the international community.

(B) Importance with regard to Japan's Policies on Economic Diplomacy for Peru

Table 3-3 Change in Trade Volume between Peru and Japan (in US\$ 1,000,000)

	2013	2014	2015	2016	2017	2018
Volume of imports to Peru from Japan (CIF)	1,433	1,105	1,068	1,033	1,030	1,054
Total Volume imports into Peru (CIF)	43,290	42,177	38,026	36,148	39,781	43,123
Percentage	3.3%	2.6%	2.8%	2.9%	2.6%	2.4%
Volume of exports from Peru to Japan (FOB)	2,228	1,584	1,117	1,265	1,880	2,183
Total volume of exports from Peru	41,872	38,646	33,669	36,310	44,238	47,709
Percentage	5.3%	4.1%	3.3%	3.5%	4.2%	4.6%

(Source: JETRO)

Peru and Japan maintain a good bilateral economic relationship. Japan has a

trade deficit against Peru as the amount of exports from Peru to Japan is approx. US\$ two billion and that of exports from Japan to Peru is approx. US\$ one billion. Underground resources account for 80 % of the imports from Peru to Japan. Peru is more important to Japan as a stable supplier of base metals (including copper and zinc) than as a market for Japanese products. Equipment, mining machinery and vehicles account for a large proportion of exports from Japan to Peru. The Japan-Peru EPA came into effect in March 2012 for the liberalization and facilitation of trade and investment, protection of intellectual properties, fair competition and improvement of business environment. The agreement stipulates the establishment of a subcommittee on business environment improvement. The Government of Japan (MOFA, METI and the Embassy of Japan in Peru), JETRO Lima Office, the Japan-Peru Business Committee, the Japanese Peruvian Chamber of Commerce and Industry and the Government of Peru (Ministry of Foreign Trade and Tourism, Ministry of Foreign Affairs, Ministry of the Interior, etc.) participate in the committee meetings. With respect to the trade relationship between Japan and Peru, Japan has a trade deficit with Peru.

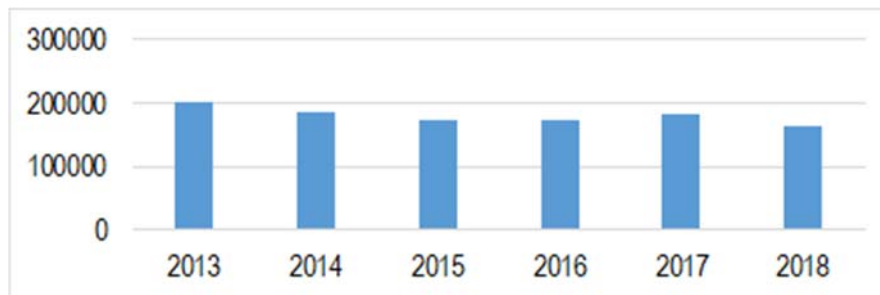
(2) Importance for Prosperity of Japanese Enterprises and People

The number of vehicles sold in the automotive market in Peru in the fiscal year 2018 was approx. 160,000. The number decreased from approx. 180,000 in the previous fiscal year. The revision of the excise tax in May 2018⁹ is considered to account for part of the decrease. The automotive market in Peru is the fifth largest in the Central and South America. While approx. 160,000 vehicles are sold in the entire market in Peru, approx. 400,000 vehicles are sold in the neighboring Chile. As the number of vehicles per person in Peru is extremely small, Japanese automotive manufacturers regard Peru as a promising market in which the sales are expected to increase. Korean automotive manufacturers were increasing market shares in Peru mainly in the low-end market when the plan for this project was prepared. Chinese manufacturers were also promoting their vehicles in the market. Japanese manufacturers are aware of the need for maintaining and increasing their market shares against the competitors. The market share of Japanese vehicles in Peru has been large. Toyota is the manufacturer with the largest share among all manufacturers. Such measures as the tax reform referred to earlier are expected to promote the use of eco-friendly HVs and other next generation vehicles in Peru. For the reasons mentioned above, Japanese automotive manufacturers consider Peru a

⁹ The tax rates on EVs, HVs, LNG-powered vehicles and pickup trucks were reduced and those on all the other types of vehicles and gasoline were raised.

particularly important market.

Fig. 3-5 Scale of Automotive Market in Peru (in units sold)



(Prepared by the Evaluation Team from the reference materials provided by JETRO and automotive manufacturers)

3-2-2 Diplomatic Impact

(1) Impact on Bilateral Relationship

This project is highly appreciated in the Government of Peru. On the point of enhancing the presence of Japan and creating pro-Japanese feeling among the policy makers, this project is considered to have had a certain extent of diplomatic impact. The Government of Peru thinks highly of the provision of Japanese next generation vehicles because the large-scale use of the vehicles in COP20 held in Peru in December 2014 led to the improvement of the image of Peru as a country and enhanced environmental awareness.

Meanwhile, it is not possible to conclude that the implementation of this project enhanced the presence of Japan among the general public. In the field survey, interviewees of the Japanese Peruvian Chamber of Commerce and Industry, the Automotive Association of Peru and other private organizations pointed out the lack of awareness to this project of the general public.

(2) Impact for Prosperity of Japanese Enterprises and People

The evaluation study failed to confirm direct causal relationship between this project and the sales volumes and market shares of Japanese automotive manufacturers in Peru. Meanwhile, the Japanese automotive manufacturers which participated in this project as the suppliers expressed the views described below not only on the simple increase in sales volume, but on the impact of this project. When the benefits of the Japanese enterprises in the project are evaluated from a wider perspective, it can be concluded that the implementation of this project brought some positive impact to the Japanese enterprises.

[Mitsubishi Motors]

Mitsubishi Motors originally participated in this project with the possibility of the sale of its EVs and PHEVs in the market in Peru in mind. However, the survey of Mitsubishi conducted before the commencement of the project revealed that Peru did not have an environment required for safe operation of EVs as the earthing of domestic power supply was not mandated. Based on this finding, the manufacturer has concluded that it is not possible to sell its EVs in the commercial market in Peru at the time. Peruvian enterprises have shown strong interest in the engines of the PHEVs and EVs and sent inquiries to Mitsubishi. Although it was difficult to explore a market for the PHEVs and EVs in the current condition, the implementation of this project was beneficial to the manufacturer because it could make correct decision based on the results of the field survey conducted in this project.

[Isuzu Motors]

Isuzu is considering the introduction of CNG vehicles in another country in South America. The driving conditions for commercial vehicles in developing countries are quite different from that in Japan. By participating in this project, Isuzu was able to obtain driving data from the operation of the CNG trucks in rural areas in Peru where road conditions are poor. Such data (including fuel performance and driving functions under the climatic and topographic conditions (slopes)) are quite useful for the manufacturer. An automotive manufacturer must spend a large sum of money to collect such data by itself.

Chapter 4 Recommendations and Lessons Learned

Recommendations Based on Evaluation Results

1. To extend disclosure in Japan of the information explaining the background, objectives and activities of a project implemented under the “Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles (currently integrated into the Grant Aid for Economic and Social Development Program)” in a detailed manner to the extent possible
2. To disseminate information and conduct publicity activities more actively and effectively in the partner country (Peru) for the implementation of “Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles (currently integrated into the Grant Aid for Economic and Social Development Program)”
3. To provide clearer explanation of the objectives and performance indicators and positioning of the “Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles (currently integrated into the Grant Aid for Economic and Social Development Program)” and publicize the explanation and positioning information

Lessons Learned from Evaluation Results

To increase the feasibility of the expansion of the sale of Japanese products (including next generation vehicles) after the implementation of a project, it is important to take the possibility of their commercialization in a partner country into account even at the stage of the project planning process starting from study on specifications and selection of products to be sold.

Meanwhile, it is considered possible to improve people’s understanding of the grant aid by envisaging various benefits that can be derived from the promotion of overseas market expansion of Japanese enterprises and products, without limiting benefits to those derived from the increase in sales volume, and preparing a document explicitly describing the benefits.

4-1 Recommendations

Recommendation (1)

While MOFA and the Embassy of Japan in Peru distribute the publicity information of this project on their websites, it only gives general and generic information on the project purposes, such as assistance to environment protection measures and the promotion of overseas business expansion of

Japanese enterprises, and the fact that Japanese next generation vehicles were provided to the Government of Peru. JICS has published the contract information of this project on its website. However, it only described the names of contractors and total contract price. This project was implemented to help the Government of Peru organize COP20 with the provision of Japanese next generation vehicles. Therefore, it strengthened the diplomatic relationship between Peru and Japan. However, such objectives and background of the project are not clearly described in the disclosed reference information. It is not possible for Japanese citizens to know why this project had to be implemented, what was provided to which country or whether the contents of the project and financial assistance provided were appropriate.

It is necessary to disclose information to fulfil the accountability to the people and make efforts to improve their understanding of ODA projects for the implementation of such projects. Therefore, the Evaluation Team recommends disclosure to Japanese citizens of information that explains the background, objectives and contents (such as models of vehicles to be provided, the recipient and the use of the vehicles) of a project in as much detail as possible when it is to be implemented under the Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles (currently integrated into the Grant Aid for Economic and Social Development Program).

Recommendation (2)

The evaluation study revealed the lack of recognition of this project by the general public in Peru. With regard to the business expansion of Japanese automotive manufacturers in Peru, the project failed to exert impact at least on the citizens of Peru, the potential clients of the automotive manufacturers, (including high-income people, expected buyers of next generation vehicles). The study also did not obtain reasonable evidence of positive effect of the project on people's understanding or recognition of Japan or improvement of the presence of Japanese enterprises in Peru. The Evaluation Team recommends more active and effective information dissemination and publicity activities in the Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles (currently integrated into the Grant Aid for Economic and Social Development Program) for the promotion of the use of Japanese products. For example;

- ◆ Information on the efforts made by the Government of Japan and Japanese automotive industry shall be distributed to local business organizations such as the Automotive Association to improve their understanding of the efforts.

- ◆ The following measures are recommended: The views on the benefits derived from the use of next generation vehicles and advantage of their performance shall be collected from the government of Peru that uses the vehicles. The government should be requested to disseminate the information on the benefits and advantage to the general public. The embassy should use its official SNS accounts to disseminate information on the use of next generation vehicles and the benefits and advantage of using them.
- ◆ The information on the presence, progress and contents of the project should be disseminated and made known to the local Japanese community by conducting publicity activities with chambers of commerce and industry in Peru and Japan. The use of the information dissemination function (such as “word-of-mouth communication”) of local Japanese communities shall be considered for the implementation of projects in Central and South America.

Recommendation (3)

Assistance to the overseas expansion of the sale of technically advanced Japanese next generation vehicles was one of the objectives of the Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles (currently integrated into the Grant Aid for Economic and Social Development Program). The framework for the assistance to “promote Japanese standards” including the above-mentioned non-project grant aid has been integrated into the Grant Aid for Economic and Social Development Program and the name of the non-project grant aid is no longer used as the name of a sub-scheme of the Grant Aid. The objective of the Program is to “contribute to the economic and social development of partner countries.” As in the assistance to “promote Japanese standards,” ODA is being used for the implementation of projects with objective and nature of promoting overseas market expansion of Japanese enterprises and their products in this program. The change of the name to the Grant Aid for Economic and Social Development Program and integration of various sub-schemes into the program has made it difficult for the general public, who are third parties to the projects, to understand the purposes of the above-mentioned projects.

Based on the above-mentioned discussion, the Evaluation Team recommends preparation of reference materials that show the objective and targets to be achieved, as well as activities, in a project to be implemented under the scheme of the Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicle (currently integrated into the Grant Aid for Economic and Social Development Program) for its planning and implementation. It is necessary to

prepare feasible processes to decide the contents of the reference materials and the timing of their publication for the implementation of a project under the Non-project Grant Aid (currently integrated into the Grant Aid for Economic and Social Development Program) with a focus placed on the diplomatic importance and speed of the implementation taken into consideration.

4-2 Lessons Learned

The objectives of the Non-Project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles (currently integrated into the Grant Aid for Economic and Social Development Program) are to support the government of a partner country in the implementation of environmental measures and to facilitate overseas market expansion of Japanese automotive manufacturers. Therefore, the vehicles to be provided to a partner country should be those commercially available or those planned to be made available in the country. While the HVs procured in this project were commercially available, the rest, *i.e.*, EVs, PHEVs and CNG trucks, procured in this project are not available in the market in Peru. There are problems in the sale of EVs, PHEVs and CNG trucks. The Government of Peru needs to develop policies for the development of infrastructure, such as charging stations, and tax incentive to the purchase of next generation vehicles.

However, the Evaluation Team does not claim the necessity to include the feasibility of sale to general public or commercialization in the specifications of new generation vehicles to be procured or to select vehicles that satisfy such specifications for the procurement in this lesson. The information and driving data obtained in this project from the use on a trial basis of the EVs and CNG trucks, which are not commercially available in Peru have become valuable assets for the Japanese automotive manufacturers. The understanding of the Non-project Grant Aid for Provision of Japanese Next Generation Eco-Friendly Vehicles (currently integrated into the Grant Aid for Economic and Social Development Program) and projects under the grant aid by the general public is expected to be improved by 1) envisaging, even at the stage of the project planning, various benefits, not limited to the increase in the sales volume, but including accumulation of experience in and data of assistance in developing countries in relation to project background, current state of partner countries and the objective of promoting overseas market expansion of Japanese enterprises and products and 2) preparing a document stating explicitly that the accumulation of the experience and data is an objective of the grant aid.

This report is a compilation of the results of a review conducted by KPMG AZSA LLC on behalf of the Ministry of Foreign Affairs of Japan. This report had been submitted to the Ministry of Foreign Affairs of Japan, and KPMG AZSA LLC has no direct or indirect liability for any damage or loss caused by using this report by a third party who has viewed or obtained a copy of this report. KPMG AZSA LLC strived to compile this report in a timely manner based on the information obtained at the time of the study. However, the contents of this report are not intended to be applied to situations where there are specific individuals or organizations that are not included in this study. We do not guarantee that the information in this report will be up-to-date, accurate, or complete at the time of receipt of the information or thereafter.