

**1. Project Description**



Target Area (at appraisal)



New Class Room (Ancash)

**1.1 Background**

Peru is roughly divided into three areas: coastal (Costa), mountain (Sierra) and Amazon (Selva). Compared to the Costa area with many industrial clusters, including that in the capital of Lima, economic and industrial development in the Sierra and Amazon areas lags behind and a sizable population of both areas suffer from poverty. At its onset, the first Fujimori administration (1991 - 1995) faced a Peruvian economy suffering from huge external debt, fiscal deficit and high inflation. To restore the health of the national economy, the first Fujimori administration introduced a tight fiscal policy and market economy. At the same time, it established the National Compensation and Social Development Fund (FONCODES) in 1991 under the direct jurisdiction of President Alberto Fujimori to tackle the problem of poverty. The highest priority of the FONCODES was improvement of the socioeconomic infrastructure in poor areas for the purpose of poverty reduction. The FONCODES has since been actively engaged in the development or improvement of the socioeconomic infrastructure in response to requests by local communities.

During the second Fujimori administration period (1996 - 2000), poverty reduction remained an important issue on the policy agenda as some 4.5 million people, accounting for 20% of the total population of Peru at the time (1995), were classified as "extremely poor". In the Sierra area covering

some 30% of the national land, two-thirds of the households were classified as "poor", half of which were classified as "extremely poor" (1995). Four Regions, i.e. Cajamarca, Ancash, Cusco and Puno, in the Sierra area in particular were the poorest and the development of basic infrastructure was urgently required to improve the livelihood and production activities of the rural populace.

Against this background, the Government of Japan provided loans in response to a request by the Government of Peru for the "Social Sector Development Project in the Amazon Area" in 1997 and the "Social Sector Development Project in the Sierra Area" in 1999. These loans have now been followed by another loan for the "Social Sector Development Project in the Sierra Area II" which is the subject project of this evaluation.

## 1.2 Project Outline

To meet the basic human needs (BHNs) of local residents in four regions in the Sierra area, i.e. Cajamarca, Ancash, Cusco and Puno by implementing small-scale socioeconomic infrastructure sub-projects in a participatory manner, thereby contributing to improvement of the standard of living in the Sierra area.

Approved Amount/ Disbursed Amount	¥6,794 million / ¥6,758 million
Exchange of Notes Date/ Loan Agreement Signing Date	September 2000 / September 2000
Terms and Conditions	Interest Rate : 2.2% Repayment Period (Grace Period) : 25 years (7 years) Procurement : General Untied < Consulting Service > Interest Rate : 0.75% Repayment Period (Grace Period) : 40 years (10 years) Procurement : Bilateral Tied
Borrower / Executing Agency	Government of the Republic of Peru / FONCODES
Final Disbursement Date	July 2007
Main Contractor (Over 1 billion yen)	None
Main Consultant (Over 100 million yen)	None
Feasibility Studies, etc.	None
Related Projects	Social Sector Development Project in the Amazon Area (PE-P19) Social Sector Development Project in the Sierra Area (PE-P24)

## **2. Outline of the Evaluation Study**

### **2.1 External Evaluator**

Takeshi Yoshida, President, TREA Ltd.

### **2.2 Duration of Evaluation Study**

This ex-post evaluation of the Project was conducted over the following period.

Duration of the Study:	September, 2009- July, 2010
Duration of the Field Study:	17th November through 19th December, 2009 3rd March through 17th March, 2010

### **2.3 Constraints during the Evaluation Study**

Under the Project, while a total of 1,726 sub-projects were conducted in nine regions<sup>1</sup>, the project implementing body did not gather data on the project effects (indicators for operation and effects). For this reason, a field investigation was conducted for 36 sub-projects of seven types in Ancash, Puno and Arequipa. Moreover, a beneficiary's survey consisting of workshops and questionnaire survey was conducted, featuring 14 sub-projects in Ancash and Puno. It was found to be necessary to carry out the analysis of the effectiveness, impacts and sustainability of the Project based on the limited information obtained by these surveys.

## **3. Results of the Evaluation (Overall Rating: A)**

### **3.1 Relevance (Rating: a)**

#### **3.1.1 Relevance with the Development Plan of Peru**

As part of its priority policy issue of poverty reduction, the second Fujimori administration (1996 - 2000) adopted the target of halving the number of the extremely poor by the year 2000. The FONCODES was identified as the leading organization to achieve this policy initiative.<sup>2</sup>

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<sup>1</sup> As described in 3.2.1 - Outputs, the scope of the Project was expanded to include five southern regions which were badly hit by an earthquake during the project implementation period in addition to the original four regions.

<sup>2</sup> The FONCODES (*Fondo Nacional de Compensación y Desarrollo Social*) was established in 1991 as an organization to specifically deal with the problem of poverty in rural areas where existing administrative organizations were found to be slow to introduce effective measures. Its activities are characterised by the reflection of local needs, swiftness of fund transfer and transparency of spending through the employment of

One of the targets adopted by the present Garcia administration<sup>3</sup> is reduction of the poverty ratio from 50% in 2005 to 30% in 2011 and the social programme for poverty reduction is in progress. This programme has positively appraised the performance of the FONCODES. The Garcia administration has enacted the Act for the Promotion of Exports from the Sierra (*Ley de Sierra Exportadora / Ley No.28890*) to encourage agriculture and the handicrafts industry in the Sierra area as part of its drive to eliminate poverty in rural villages in the Sierra. The objective of the Project conforms to these government policies.

### 3.1.2 Relevance with Development Needs of Peru

At the time of initial project appraisal, the development of basic infrastructure to meet BHNs was upheld as a first step towards achieving poverty reduction. Therefore, the Project to be implemented by the FONCODES was thought to be indispensable and urgent for the alleviation of poverty in Peru.

Peru's population statistics for 2007 showed that the water supply coverage and electrification rate in rural areas were still low at 22% and 30% respectively, illustrating the strong need for improvement of the basic infrastructure in rural areas. Meanwhile, a situation was observed that the income of the poor in rural areas was not rising in accordance with the progress of basic infrastructure development. In the face of this situation, the FONCODES introduced an experimental projects designed to directly support productive activities such as coffee, aquiculture, dairy farming, fruits, hand craft, etc. in rural areas (*Proyecto Productivo*). As the problem of poverty in the Sierra is still very serious, the development of the Sierra is a priority for the present administration. In 2007, the national poverty rate of 39% (extreme poverty rate: 14%) while the corresponding rate in the Sierra was as high as 60% (extreme poverty rate: 29%).

### 3.1.3 Relevance with Japan's ODA Policy

The old ODA Charter adopted in 1992 stipulated that Japan would provide assistance for the development of infrastructure. Japan has actively provided assistance for Peru in recognition of the positive reform efforts of the Fujimori administration since 1990 to ensure sustainable economic development and to eradicate poverty. In line with the diverse development needs in Peru, Japan decided to provide Yen loans every year, in principle, from FY 1996 onwards with the qualitative as well as quantitative enhancement of cooperation in mind. Japan's Country Assistance Program for Peru prepared in 2000 listed (i) poverty alleviation, (ii) social sector assistance, (iii) economic

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participatory approaches. The FONCODES was later in 2002 integrated to the Ministry of Women and Social Development (MIMDES) and was renamed as *Fondo Nacional de Cooperación para el Desarrollo Social* (National Fund for Social and Development) in 2005.

<sup>3</sup> Políticas Gubernamentales 2006 - 2011

infrastructure development and (iv) environmental conservation as the priority areas for assistance. The subject Project for the present evaluation was highly compatible with Japan's ODA policies as it met the first three priority areas listed above.

Based on the above, this project has been highly relevant with the country's development plan, development needs, as well as Japan's ODA policy, therefore its relevance is high.

**3.2 Efficiency (Rating: b)**

**3.2.1 Project Outputs**

The Project originally intended the implementation of 1,987 sub-projects in six sectors in four regions but ended with 1,726 sub-projects in nine sectors in nine regions (Table 2).

Table 2 Planned and Actual Outputs

(Unit: sites)

Sub-Project	Planned	Actual
• Social Infrastructure		
- School Buildings (New or Rehabilitated)	470	532
- Health Post (New or Rehabilitated)	116	90
- Community Centre Building (New)	13	6
• Economic Infrastructure		
- Improvement of Irrigation Channels	387	193
- Improvement of Roads/Bridges	621	385
- Rural Electrification	440	226
• Sanitation Infrastructure (added in 2004)		
- Water Supply	0	199
- Latrines	0	94
- Sewerage Facilities	0	1
Total	2,047	1,726

Sources: Project documents at the time of appraisal and FONCODES (PCR)

Originally, the target regions were Cajamarca, Ancash, Cusco and Puno. For the rehabilitation of areas devastated by an earthquake in June, 2001, five regions, i.e. Arequipa, Moquegua, Tacna, Ayacucho and Apurimac, were added to the geographical scope of the Project and 151 sub-projects were conducted in these regions. These sub-projects predominantly involved the rehabilitation of schools or health post buildings damaged by the earthquake. Several sub-projects featured the rehabilitation of irrigation channels. Local communities expressed their deep gratitude for the swift response by the FONCODES and the financial assistance of Japan in the immediate aftermath of the earthquake. This quick assistance under the Project to rehabilitate earthquake-hit facilities was a very positive move.

In September, 2004, the decision was made to implement sanitation-related sub-projects under the Project. This decision was taken to compensate for the cancellation of similar sub-projects under the "Social Sector Development Project in the Sierra Area" due to the reduction of the loan amount for the FONCODES.<sup>4</sup> Because of this, the number of sub-projects in other sectors was reduced. The level of satisfaction among the beneficiaries of the sanitation-related sub-projects was very high as described later, indicating the very strong needs for improved sanitation-related infrastructure. As such, the re-arrangement of the sub-projects is judged to have been appropriate.



Health Post (Puno)



Irrigation Channel (Ancash)



Improvement of Road and Bridge (Puno)



Rural Electrification (Ancash)

A study on the impacts of social infrastructure improvement which was supposed to be conducted as part of the consulting service was cancelled because the planned study contents were believed to duplicate a theme-based evaluation study in FY 2005 on "Improvement of Living Conditions and Livelihood in Poor Areas". The findings on assistance for institutional strengthening for the benefitted

<sup>4</sup> Since the enforcement of the Fiscal Prudence Law in 2000, the Ministry of Economy and Finance (MEF) with the approval of the Congress set an upper limit for external borrowing. The Toledo administration introduced an austere fiscal policy to reduce government expenditure. As a result, the total disbursement for the Social Sector Development Project in the Sierra Area was limited to approximately 30% of the originally planned amount.

communities and FONCODES were positive, among others on the training on operation and maintenance of the completed infrastructures. However, these findings were not reflected by the sub-projects because of the timing of the study was near the end of many sub-projects and another reason would be that then there were discussions on the change of responsible ministries for FONCODES.

As for the post-project monitoring system designed during the project, no such system was established because of the budgetary shortage of the FONCODES.

As for the promotion of sub-project formulation, the participatory approach where local residents make proposals based on their own needs was continuously employed even after the progress of decentralisation with local government's initiative in project formulation.



Water Supply (Puno)

Latrines (Puno)

3.2.2 Project Inputs

3.2.2.1 Project Period

The Project was originally planned to continue for 61 months from September, 2000 (signing of the L/A) to September, 2005. In reality, it was implemented over a period of 83 months from September, 2000 (signing of the L/A) to July, 2007 (36% longer than the originally planned period). This necessitated one extension of the loan disbursement period. The main reason for the extended project period was insufficient counterpart funding by the government to cover the domestic portion due to the policy of the Peruvian government to reduce its external debt.<sup>5</sup>

3.2.2.2 Project Cost

The actual spending of ¥8,962 million was 99% of the originally planned project cost of ¥9,059 million. This almost exact level of spending as the planned level was the result of the reduction of the

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<sup>5</sup> See Footnote 4.

sub-projects to contain the actual project cost within the planned project cost. The number of sub-projects implemented was 1,726, 84% of the planned number of 2,047 sub-projects, as a result of the reduction of the number of sub-projects to keep the final project cost within the planned project cost despite an increase of the unit cost of the construction work.

Although the project period was longer than planned, the project cost was lower than planned, therefore efficiency of the project is fair.

Table 3 Planned and Actual Project Cost (Unit: Million Yen)

Item	Plan			Actual		
	Yen Loan	Gov. of Peru	Total	Yen Loan*	Gov. of Peru	Total
Sub-Projects	6,703	1,691	8,394	6,696	1,674	8,370
Consulting Services	91	0	91	56	13	69
Administration	0	362	362	0	341	341
Promotion, Evaluation	0	212	212	0	182	182
Total	6,794	2,265	9,059	6,752	2,210	8,962
Item	Plan			Actual		
	Foreign Currency	Local Currency	Total	Foreign Currency	Local Currency	Total
Sub-Projects	0	8,394	8,394	0	8,370	8,370
Consulting Services	91	0	91	56	13	69
Administration	0	362	362	0	341	341
Promotion, Evaluation	0	212	212	0	182	182
Total	91	8,968	9,059	56	8,906	8,962

Source: FONCODES, material at the time of initial appraisal

Exchange rates: US\$1=S/. 3.291= ¥118.45 (Weighted average during December 2001 – July2007)

\*Transaction charge amount is not included.

### 3.3 Effectiveness (Rating: a)

According to data compiled by the FONCODES, a total of 1,634,000 people benefited from the 1,726 sub-projects which were implemented under the Project. The primary objective of the Project was expansion and qualitative improvement of basic infrastructural services through the development of such infrastructure by sub-projects. As mentioned earlier, the FONCODES did not gather data on the concrete effects of individual sub-projects. The present evaluator visited 29 sub-project sites in either the Ancash or Puno Regions and seven sub-projects in the Arequipa Region to establish a clear picture of the current conditions and situation of use of the facilities and the concrete effects of individual sub-projects. In addition, the evaluator conducted a series of interviews, workshops and questionnaire survey (with a total of 280 households) in connection with 14 sub-projects in either the Ancash or Puno Regions to establish the project effects through a comparison of the local situation before and after the implementation of the sub-projects. The opinions of beneficiaries of the Project were also studied.

Table 4 Effects of Sub-Projects Confirmed by the Field Survey

Sub-Project	Village	Number of Beneficiaries	Project Effects (Expansion and/or Qualitative Improvement of the Service)
School Building	Huata (Ancash)	202	The construction of four classrooms has eliminated the need for combined classes and the number of pupils per classroom came within the set size. Classes are now pleasantly held in a spacious, bright and quiet environment.
	Juncal (Puno)	240	The old classrooms were liable to collapse at any time. The construction of six classrooms has created a bright and well-ventilated pleasant environment with no worry about a leaking roof. Pupils now come from even neighbouring villages, increasing the overall number of pupils. The old classrooms are now used as a staffroom, storage room and other.
Health Post	Chucos (Ancash)	2,100	The environment for clinical examinations at the health post has been drastically improved with a new extension. The number of examination beds has increased along with a new waiting area. No leaking roofs mean the safe storage of medicines. The number of visitors a month has almost doubled with more women and children.
	Pinaya (Puno)	1,400	The extension to the health post has secured storage space for medical equipment and medicines without worrying about leaking roofs. Clinical examinations are now conducted in a warm and dry environment and in privacy. The old building is now used as accommodation for pregnant women from distant areas.
Improvement of Irrigation Channel	Santa Rosa (Ancash)	700	The change to a concrete channel has eliminated water leakage, increasing the usable water volume. Water now continually runs to the far end of the channel. The irrigated area has increased by some 30% while less labour is required for maintenance work.
	Miramar (Ancash)	300	The change to a concrete channel has eliminated water leakage and the water runs faster. The usable water volume has increased and less labour is required for maintenance work.
Improvement of Road/Bridge	Compina (Ancash)	2,500	The absence of a bridge in the past made it impossible for the people of some villages to cross the river in the rainy season. In addition, people were sometimes swept away. The construction of a suspended footbridge has made it possible to safely cross the river all year round. The travelling time to the nearby town has been shortened.
	Huayrapata (Puno)	500	In the past, the use of a local road was difficult in the rainy season even on foot. The construction of an unpaved rural road and a small bridge has made it easy to travel to the town all year round, shortening both the travelling distance and travelling time. Travel by 4-wheel vehicle has also become possible.
Rural Electrification	Progreso (Ancash)	400	Some 80% of the households in this village have been electrified along with a school, health post and church. Many households now have electric lighting (75%) and radio (85%).
	Cantunani (Puno)	490	Most of the households in the village have been electrified and many of them now have lighting (84%) and radio (90%).
Water Supply	Calliri (Puno)	275	Groundwater was mainly used in the past. A river was the main water supply source in the dry season. The new facility constructed under the sub-project has enabled water use throughout the year although the water volume is insufficient in the dry season. Most households now use the common outdoor tap. The water quality has significantly improved.
Introduction of Latrines	Cayepampa (Ancash)	325	In the past, toilets were simply dug holes. Almost all of the households today have an access to sanitary toilet.
	Yapuscachi (Puno)	1,038	

Source: Prepared by the evaluator based on the findings of the beneficiaries' survey.

At more than 90% of the 36 sub-project sites visited, the facilities constructed or rehabilitated under the Project were found to be actively used. At the 14 sub-project sites for which a more detailed analysis was conducted, the facilities were effectively used by the beneficiaries without exception as shown in Table 4. These findings clearly suggest that the Project had some positive effects regarding the expansion and qualitative improvement of the basic social, economic or sanitary infrastructure and/or services in the Sierra.

In the case of school and health post damaged by an earthquake in the Arequipa Region which are not listed in Table 4, following effects are confirmed based on the opinions obtained in the field.

At one primary school in Pampa Nueva, most of the concrete school buildings were not able to use after the earthquake. Then prefabricated school buildings were constructed but they did not provide good environment to study, for example roof were blown by window, dusts came in. At the primary school in Wambo, having classes were very difficult as there were not enough number of class rooms after the earthquake, as part of the school building constructed by adobe fell down and they needed to continue classes in the remaining part of the school building. The new class rooms are safe, well-lighted and students can comfortably concentrate on studying. In the primary school of Wanka, some beams fell down and part of the school building was not able to use after the school, forcing them to continue classes in inadequate conditions with limited space using the undestroyed part of the building. The villagers show gratitude to the new class rooms that are spacious, safe, well-lighted and students can comfortably concentrate on studying.

At the health post in Yanque, part of the building were not usable because of cracks on walls, and the services were given in the space remained after the earthquake. The new health post is spacious and sanitary, enabling an efficient provision of medical services. In Maka, the health post was destroyed and forced to close temporary after the earthquake. After the reconstruction, the villagers highly appreciate the new health post as physical environment for medical services were remarkably improved by having separate rooms for different functions.



(Left) Reconstructed primary school in Arequipa  
(Right) Reconstructed health post in Arequipa

The level of satisfaction with each sub-project is very high as shown in Table 5 as the combined ratio of respondents who are either "very satisfied" or "satisfied" is as high as 77% - 99%. In contrast, the maximum ratio of those which are "not satisfied" of 6% is low. The types of sub-projects recording an especially high level of satisfaction are those in the category of sanitary infrastructure improvement. These include the installation of portable water facilities and the introduction of latrines. Such a high level of satisfaction justifies the expansion of the scope of the Project in the middle of the implementation period. In contrast, the level of satisfaction with improved transport infrastructure (roads and bridges) is relatively low, presumably because of the different degree of benefit for those owning a car or another means of transport and those who do not own a means of transport.

Table 5 Beneficiaries' Satisfaction to Sub-Projects

(%)

	Very Much Satisfied	Satisfied	Regular	Not Satisfied	No Answer	Total
School Building	22	62	6	6	4	100
Health Post	17	63	17	0	3	100
Irrigation	17	71	12	0	0	100
Road & Bridge	22	50	27	2	0	100
Rural Electrification	24	72	2	0	2	100
Water Supply	38	57	4	1	0	100
Latrines	31	68	2	0	0	100

Source: Prepared by the evaluator based on the findings of the beneficiaries' survey.

Based on the above, this project has largely achieved its objectives, therefore its effectiveness is high.

**3.4 Impacts**

3.4.1 Intended Impacts

The anticipated effect of the Project was the fulfilment of the BHNs of the beneficiaries through the implementation of wide-ranging sub-projects, thereby contributing to improvement of the standard of living.

Table 6 summarises the impacts of the sub-projects based on the findings of the beneficiaries' survey (consisting of workshops and a questionnaire survey) featuring 14 sub-projects in the Ancash and Puno Regions. It is clear that certain impacts leading to improvement of the standard of living did manifest, reflecting the positive utilisation of each sub-project.

Table 6 Impacts of Sub-Projects (Typical Replies)

Sub-Project	Village	Impacts (Contribution to Improvement of the Standard of Living)
School Building	Huata (Ancash)	The improvement of the educational environment has enhanced the appetite of pupils for learning. Teaching has been modernised by the introduction of a computer room.
	Juncal (Puno)	The previously poor environment underlined by cracked walls and a leaking roof used to cause problems, including pupils catching colds. The number of pupils suffering from health problems has decreased since the construction of the new school building. More than 90% of the beneficiaries (parents) believe that the learning performance of their children has much improved due to the new classroom.
Health Post	Chucos (Ancash)	The medical service has greatly improved, especially for pregnant women, mothers and children. The most popular reasons for the positive assessment are (i) less frequency of falling ill (58%) and (ii) improved medical examination and diagnosis (22%).
	Pinaya (Puno)	The extended floor space of the health post has enabled the introduction of preventive medical care for mother and child health, etc. 40% of the respondents said that the medical service has generally improved but some expressed dissatisfaction with the lack of a full-time doctor.
Improvement of Irrigation Channel	Santa Rosa (Ancash)	The improved irrigation has improved the productivity. Together with an increase of the market demand, the improved irrigation has expanded the cultivation of cash crops. As a result, the household income has increased for some 70% of the beneficiaries.
	Miramar (Ancash)	The improved irrigation has increased the unit yield of crops. Some 40% of the beneficiaries now earn a better income. The transition to cash crops has been slow due to poor market access and the limited land availability.
Improvement of Road/Bridge	Compina (Ancash)	The new footbridge is used to go to the market to purchase miscellaneous goods and to sell agricultural products, school, health post and farmland. The volume of agricultural products brought to the market has increased. 90% of the respondents said that the new footbridge has improved the convenience of daily life. 25% said that the bridge has had an economic benefit in terms of better market access.
	Huayrapata (Puno)	The number of visits by villagers to the town has considerably increased. The new road and bridge have proved very convenient for the sale of products to the market and for the movement of livestock. Commercial activities using vehicles have become possible. 93% of the respondents said that the new road and bridge have improved the convenience of daily life. 27% said that they have had an economic benefit in terms of better market access.
Rural Electrification	Progreso (Ancash)	The supply of electricity has been found to be very useful for learning by children (41%) and entertainment (33%). 90% of the respondents said that the electricity supply has improved their daily lives. New commercial, sewing and flour milling businesses have been set up even though the number is small.
	Cantunani (Puno)	Children can now do their homework. Accidents involving fire due to the use of candles have been eliminated. Access to the latest news is now possible. Street lighting has reduced the number of crimes. While 97% of the respondents said that the electricity supply has improved their daily lives, hardly any new businesses using electricity as a key factor have been set up.
Water Supply	Cayepampa (Ancash)	75% of the respondents said that the heavy labour of fetching water has been reduced, allowing them to use their time more effectively. Half of the respondents said that the use of more water for hygiene purposes, including hand/face washing and house cleaning, has reduced the occurrence of infectious diseases. 95% said the tapped water supply has improved their daily lives.
	Calliri (Puno)	92% of the respondents are satisfied with the significant reduction of the labour of fetching water. The frequency of house cleaning, face washing, clothes washing and other tasks has slightly increased. The respondents generally feel that the frequency of digestive and skin disorders has fallen.
Latrines	Cayepampa (Ancash)	There are now cleaner toilets near homes. The contamination of farmland and water by human excreta has been reduced. 90% of the respondents said that toileting is no longer a problem (as a suitable place is provided) while 80% said that the introduction of latrines has improved their daily lives.
	Yapuscachi (Puno)	The clean toilets have reduced the bad odour. 35% of the respondents said that the use of the latrines has reduced the occurrence of diarrhoea. All of the respondents said that the introduction of latrines has improved their daily lives.

Source: Prepared by the evaluator based on the findings of the beneficiaries' survey.



Pedestrians Bridge (Ancash)



Small Business (Sewing) Started with Electrification (Ancash)

The agricultural income of the beneficiaries of the two irrigation sub-projects in Ancash has clearly increased since the Project, illustrating the fact that irrigation channel improvement contributes to improving the income of beneficiaries through diversification of crops etc., while there might be another influencing factors such as use of fertilizer.

Table 7 Increase in Agricultural Income by Irrigation Channel Improvement

(Unit : Nuevo Soles per family per year)

Village	Before the Project	After the Project
Santa Rosa	1,068 (2006)	2,237 (2009)
Miramar	307 (2004)	446 (2009)

Source: Prepared by the evaluator based on the findings of the beneficiaries' survey.

Apart from irrigation sub-projects, other sub-projects also contributed to improving the income of the beneficiaries. For example, the construction of a new footbridge over a river in Ancash has increased the shipment volume of local agricultural products to the market. In the field of rural electrification, there are examples of expanded business activities. One is a sewing business using electric sewing machines and another is increased timber production using electric sawmill machinery.

However, such examples of new or expanded business activities due to rural electrification are rare. The main impacts of electrification appear to be social impacts, including reading at night, access to information through radio and crime prevention through street lighting. As yet, there is no strong preparedness to set up a new business taking the opportunity of the development of infrastructure under the Project. For a further increase of the income of the beneficiaries, it is hoped that training will be provided to develop entrepreneurship among the rural populace and also to transfer the necessary know-how and skills.

### 3.4.2 Other Impacts

No negative impacts of the Project (sub-projects), such as environmental destruction and the forced resettlement of residents, were pointed out in the course of the beneficiaries' survey. Sub-projects are small and will not have significant impact to environment, and were approved based on the condition that there would be no negative impact to environment. Issues on land acquisition were basically solved by the beneficiaries themselves, as the Project took a participative approach.

The Project had a positive economic impact in that local residents were employed with a daily wage of S/.10 per person as non-skilled labour for the construction work.

### 3.5 Sustainability (Rating: a)

The FONCODES provided training for the beneficiaries on the maintenance of the new facilities. After the completion of a sub-project, the FONCODES handed over ownership of the sub-project to the body responsible for the operation and maintenance of the new facilities, be it the Ministry of Education, Ministry of Health or municipalities. While these bodies are primarily responsible for the operation and maintenance of the new facilities, the beneficiaries also conduct some of the maintenance work for sub-projects other than those involving health post or rural electrification. The field investigation and beneficiaries' survey found that the new facilities improved or constructed under the various sub-projects are being maintained fairly well except for some facilities in the water supply sector.

The organization, technical issues, finance and current maintenance situation are described next for each type of sub-project.

#### (1) School Buildings

Since the completion of the sub-projects, each new school building has been operated and maintained by the Ministry of Education via the Department of Education of the relevant regional government. However, simple maintenance work, including cleaning and repainting, is conducted by a parents' association and/or local residents. At each site, the FONCODES provided maintenance training for the benefit of a parents' association and/or local residents prior to the completion of the sub-project. In the case of school buildings reconstructed in the Arequipa Region in the aftermath of the earthquake, earthquake countermeasures, including the use of flexible joints for the walls, were employed.

Funding to cover the maintenance cost is allocated from the budget of the Ministry of Education. In FY 2009, the maintenance budget was directly allocated by the Ministry of Education to each school

and was used for the repainting of the buildings and other maintenance work. The field investigation conducted by the present evaluator did not find any specific problems relating to school building maintenance.

## (2) Health Post

Since the completion of the sub-projects, each new health post has been operated and maintained by the Ministry of Health although cleaning and simple repairs are conducted by the benefiting local residents. As same as in the case of school buildings, earthquake countermeasures were employed for the health centre buildings newly constructed in Arequipa as part of the reconstruction efforts in the aftermath of the earthquake.

Funding to cover the maintenance cost is allocated from the budget of the Ministry of Health. In FY 2009, the maintenance budget was directly allocated by the Ministry of Health to each health post and was used for the repainting of the buildings and other maintenance work.

## (3) Irrigation Channels

Since the completion of the sub-projects, the ownership of the improved irrigation channels has been transferred to the relevant municipality which is responsible for operation and maintenance. In general, the benefiting farmers have formed a farmers' association to take responsibility for the operation and maintenance of the irrigation channel.

Prior to the completion of the sub-projects, the FONCODES provided training for the benefiting farmers on the required maintenance work, including cleaning, oiling of the gates and simple repair of the channel.

Each farmer's association collects money from the beneficiaries to pay for the necessary maintenance work. Simple work, such as cleaning, is conducted by the beneficiaries. When the facility is damaged by a landslide or something else, the beneficiaries restore the channel themselves using materials and machinery provided by the district authority. The field investigation found that all of the irrigation channels improved under the Project was well maintained.

## (4) Roads and Bridges

Since the completion of the sub-projects, the new or improved roads and/or bridges have been maintained by the relevant municipality. While the municipality provides the necessary materials and machinery, local residents who have undergone training by the FONCODES on appropriate use and simple repair methods prior to the completion of the sub-project provide labour for simple civil works.

Funding to cover the maintenance cost is allocated from the budget of the relevant municipality. Because of the limited budget of each municipality, the size of the budget allocation is not necessarily sufficient as it only covers the minimum cost of maintaining the road or bridge function.

#### (5) Rural Electrification

Since the completion of the sub-projects, each facility has been operated and maintained by the relevant local power distribution company. These companies have established service centres to ensure the proper operation and maintenance of the new power supply facilities in accordance with the standards stipulated by the Ministry of Energy and Mines.

Prior to the completion of the sub-projects, the FONCODES organized training sessions for the benefiting local residents on the proper use of electricity to prevent accidents. As far as the visited sites are concerned, no maintenance-related problems are found.

Each local power company receives the electricity charge from the users' association in each village based on the reading of a meter installed in each village. Initially each village had one collective meter and each household were paying same amount. But in the last two or three years, there has been a shift towards the installation of a meter at each household so that the electricity charge is collected from each household based on its actual electricity consumption. According to the findings of the beneficiaries' survey, the monthly average electricity charge per household in the Ancash Region is S/.9 and 26% of users pay S/.5 or less a month. In the Puno Region, the average is S/.4 and 93% of users pay S/.5 or less a month. The principal sources of income for payment of the electricity charge are agricultural products (58%) and commercial activities other than agriculture or stock raising (26%) in the Ancash Region and agricultural products (67%) and stock raising (17%) in the Puno Region. The electricity consumption figures reflect the poorer status of the Puno Region.

#### (6) Water Supply

Since the completion of the sub-projects, each municipality has been responsible for the operation and maintenance of the new facilities. In general, the benefiting local residents have formed a users' association to collect the water charge from each user to pay the cost of ordinary maintenance and to conduct simple repairs.

Prior to the completion of the sub-projects, the FONCODES organized training sessions for the benefiting local residents on such maintenance-related issues as cleaning of the intake facility and water tank, maintenance of the pipeline and injection of a disinfectant. The state of maintenance is generally good. There is one case among the sites visited of complaints regarding failure of the water

supply to reach the tap in the dry season because of the inadequate distribution. There is another case of insufficient protection of the tap in the cold season resulting in the freezing of and damage to the tap. At one water supply sub-project site, a users' association has not yet been formed. At the workshop held at this site, a staff member of the FONCODES urged representatives of the local community to form such an association.

According to the findings of the beneficiaries' survey, the monthly water charge per household varies from S/.1.5 to S/.5 at the sub-project sites in the Ancash Region and from S/.0.25 to S/.0.5 in the Puno Region. When repair is found to be necessary, the municipality provides the necessary funding from its reserve fund. According to the municipalities interviewed, water supply as an important service is said to be given priority for the funding of repairs, etc. by the reserve fund.

#### (7) Latrines

Since the completion of the sub-projects, the ownership of the newly constructed latrines has been transferred to the benefiting local residents for maintenance by individual users. Local residents jointly conduct the work to relocate the simple toilet enclosure to a new latrine site when the existing pit becomes full.

Prior to the completion of the sub-projects, the FONCODES organized training sessions for benefiting local residents on the hygiene maintenance of the latrines, including the occasional application of lime. The visited latrines were found to be generally clean and in good working order.

The maintenance cost is paid by local residents and is not a heavy burden for them.

In summary, the maintenance of the new facilities constructed under the Project poses no problems in terms of the system, technology or finance even though the actual maintenance system differs depending on the mode of participation of the management body and local residents in each sub-project. No major problems have been observed in the operation and maintenance system, therefore sustainability of the project is high.

## **4. Conclusion, Recommendations and Lessons Learned**

### **4.1 Conclusion**

A total of 1,726 sub-projects were implemented in nine regions under the Project for the purpose of improving the basic infrastructure to help poor farmers in the Sierra. The Project made a great contribution to improvement of the standard of living in the target area, thereby assisting the policy of

poverty reduction adopted by successive governments in Peru. While the finalised project cost was within the original planned cost, the actual implementation period was longer than planned, resulting in a project efficiency rating of medium. The findings of the beneficiaries survey conducted for the present evaluation exercise indicate that almost all of the facilities constructed/improved under the relevant sub-projects are effectively used with a high level of satisfaction among the intended beneficiaries. The sustainability of these facilities is rated high as they are adequately operated and maintained by mostly public bodies with the cooperation of local residents.

In light of the above, this project is evaluated to be highly satisfactory. .

## **4.2 Recommendations**

### **4.2.1 Recommendations for the Project Implementing Body**

It is believed that the need for the improvement of basic infrastructure will remain strong in both the Sierra and Selva of Peru in the years to come. It is, therefore, highly desirable for the FONCODES to continue its work to meet this need. It is also desirable for local residents to utilise the socioeconomic infrastructure improved by the FONCODES to increase their income to reduce poverty throughout Peru. For this purpose, technical assistance for the intended beneficiaries will be required. Examples of such assistance are farming guidance for farmers benefiting from an irrigation system and guidance on business start-up, technical issues and management for the beneficiaries of rural electrification for those who hope to start a new business venture using electricity. Capacity building and expansion of the jurisdiction of the FONCODES will also be required to realise such assistance.

### **4.2.2 Recommendations to the JICA**

None

## **4.3 Lessons Learned**

In the face of the damage caused by the earthquake which struck some parts of Peru in 2001 during the implementation period of the Project, the geographical scope of the Project was expanded to allow the reconstruction of school and health post buildings and other work. By fulfilling the BHNs of the disaster victims through such work, the Project achieved certain positive effects on the post-disaster rehabilitation. As seen in the Project, such prompt and flexible response of the project is desirable for other Japanese ODA as a change of the project scope at the time of an emergency can have highly positive impacts/effects which were not originally intended.

Like the other projects of FONCODES, formulation and implementation of the sub-projects under the Project were carried out in a participatory manner by an implementation core (*Nucleo Ejector*) organized by the villagers themselves. The implementation core has a high sense of ownership and financial transparency as it is entrusted with the payment of construction and other costs. However, the implementation core is a temporal institution that is dissolved after the completion of a sub-project. On the other hand, in line with the recent decentralization policy, budget for municipal government are increasing and their involvement to the project of FONCODES now encompasses selection and implementation of sub-projects. Therefore it is desirable that the municipalities would learn and inherit the experiences gained through the implementation core, and thereon build up a methodology for developing social, economic and sanitary infrastructures in poor area together with FONCODES.

Comparison Between the Original Plan and Actual Results

Item	Original	Actual
1. Outputs	(a) Sub-Projects Social Infrastructure School Building : 470 Health Post : 116 Public Hall : 13 Economic Infrastructure Irrigation channel : 387 Road and Bridge : 621 Rural Electrification : 440 Sanitation Infrastructure (not included) Total : 2,047 (b) Consulting Services (c) Promotion, Evaluation	(a) Sub-Projects Social Infrastructure School Building : 532 Health Post : 90 Public Hall : 6 Economic Infrastructure Irrigation channel : 193 Road and Bridge : 385 Rural Electrification : 226 Sanitation Infrastructure Water Supply : 199 Latrines : 94 Sewerage : 1 Total : 1,726 (b) Consulting Services 4 years delay in execution (c) Promotion, Evaluation 4 years delay in execution
2. Project Period	September 2000 – September 2005 (61 months)	September 2000 – July 2007 (83 month)
3. Project Cost		
Foreign Currency	¥91 million	¥56 million
Local Currency	¥8,962 million	¥8,906 million
Total	¥9,059 million	¥8,962 million
Japanese ODA Loan Portion	¥6,794 million	¥6,758 million
Exchange Rate	US\$1=S/.3.34=¥113.5 (October 1999)	US\$1=S/.3.291=¥118.45 (Weighted average during December 2001 – July 2007)