Peru

Social Sector Development Project in Amazon Area/Social Sector Development Project in Sierra Area

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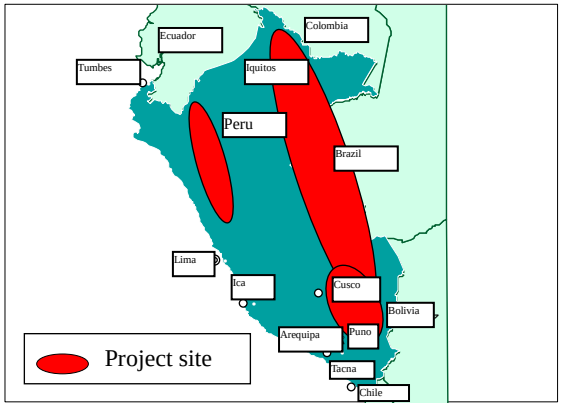
Field Survey: Feb-April, 2006

1. Project Profile and Japan's ODA Loan



Map of project area

Village Water Supply From This Project (Ancash)

1.1 Background

Peru is roughly divided into three areas: coastal (Costa), mountain (Sierra), and Amazon (Selva). Compared to the Costa area, which includes Lima and where many industries have clustered, the Sierra and Amazon areas are lagging in economic and industrial development, and a sizable population of the both areas is in poverty. At the inauguration of the first Fujimori administration (1991-1995), Peru's economy suffered from external debt problem, fiscal deficits, and inflation. For this reason, the first Fujimori administration introduced tight fiscal policy and the market economy. While revitalizing the Peruvian economy, the Fujimori administration also paid considerable attention to poverty alleviation and established the National Compensation and Social Development Fund (FONCODES)[1] in 1991, under the direct jurisdiction of President Alberto Fujimori. The primary task of FONCODES was improvements of economic and social infrastructure in poor communities for poverty reduction. FONCODES has developed economic and social infrastructure with requests from beneficiary groups.

[1] The National Compensation and Social Development Fund (FONCODES) is an institution established in August 1991 under the direct jurisdiction of President Fujimori, with the goal of reducing the number of people in poverty. It is implementing social support projects through requests by communities, to improve economic and social infrastructure and develop productivity, with the goal of alleviating poverty and extreme poverty.

Even in the second Fujimori administration (1996-2000), about 4.5 million people were classified as "extreme poor[2], a 20% of the total population at that time (1995). Therefore, poverty reduction continued to be an important policy agenda. In particular, over 40% of the population in the rural communities of Sierra and Amazon areas belonged to "extreme poor", so poverty reduction in these areas was a highly prioritized policy issue.

1.2 Objective

The objective of the project is to contribute to poverty reduction and employment generation in poor areas (Phase 1: Amazon area, Phase 2: Sierra area) by the implementation of small-scale infrastructure subprojects, thereby the project improves social and economic infrastructure and social services.

1.3 Borrower/Executing Agency

Republic of Peru/National Compensation and Social Development Fund (FONCODES)

1.4 Outline of Loan Agreement

	Social Sector Development Project in Amazon Area	Social Sector Development Project in Sierra Area
Loan Amount Disbursed Amount	5,976 million yen 5,814 million yen	7,003 million yen 1,951 million yen
Exchange of Notes Loan Agreement	September 1997 November 1997	April 1999 April 1999
Terms and Conditions - Interest Rate - Repayment Period (Grace Period) - Procurement	 2.7% p.a. (Economic infrastructure) 2.5% p.a. (Sanitary infrastructure) 25 years 7 years General Untied	 1.7% p.a. 25 years 7 years General Untied
Final Disbursement Date	February 2004	August 2003

[2] "Poor" in this case is classified as those in "Misery" and "Extreme Poverty" in the poverty map by the Peru Indigenous Institute. In other word, this classification means people living in areas below or above certain levels of illiteracy rate, school attendance rate, sewage provision rate, water supply provision rate, infant mortality rate, and percentage employed in agriculture.

Main Contractor	-
Consulting Services	-
Feasibility Study (F/S) etc.	None

Fig. 1 Water Supply Subproject (Madre de Dios)

Fig. 2 Water Supply Subproject (Cajamarca)

2. Evaluation Result

2.1 Relevance

2.1.1 Relevance at the time of appraisal

Economic stabilization and anti-terrorism were urgent policy agendas in the first Fujimori administration (1991-1995). In order to alleviate negative impacts on the poor brought about by structural adjustment reforms, the administration adopted a social policy focusing on urgent and direct support to the poor. By the second Fujimori administration (1995-2000), the initial conditions for economic recovery had been satisfied. The administration therefore increasingly focuses on social development, implementing middle- and long-term policy measures for poverty reduction. It proclaimed that its greatest goal was to “eliminate poverty,” to halve the number of the extremely poor by the year 2000. The poor are concentrated in rural areas (mainly the Sierra and Amazon), which became the priority areas of the FONCODES established to effectively promote poverty alleviation. Furthermore, there was the earnest needs of sanitary and economic infrastructure for poverty reduction in the Amazon area while the necessity of sanitary infrastructure was recognized in the Sierra area. For this reason, this project was thus extremely important.

2.1.2 Relevance at the time of evaluation

The Toledo administration (2000-) has enacted a social policy charter, set the fight against poverty as its primary policy agenda and aimed at: (1) Employment creation, (2) Access to health, education, and culture, and (3) A nation which serves people. In 2002, control of FONCODES was transferred to the recently-established Ministry of Women and Social Development (MIMDES). The role of FONCODES is to manage subprojects in social investment and to improve the standard of living and incomes of the poor. In addition, the Toledo administration promoted decentralization policy, placing more responsibility of poverty reduction on local governments such as district governments. Under this policy, the local governments would play a more vital role in implementing poverty reduction measures, which could effectively utilize the capabilities of FONCODES. The necessity of poverty reduction measures in the Amazon and Sierra areas remains intact with continued strong demand for the subprojects to improve sanitation infrastructure (potable water supply and sewerage facilities, latrines) and economic infrastructure (rural roads and electrification of villages).

2.2 Efficiency

2.2.1 Outputs

Beneficiary groups[3] request projects and FONCODES selects subprojects based on these requests. Participation of beneficiaries is a principle rule for formation of subprojects, in which local residents play an active role. Beneficiaries' needs affect formation of subprojects and changes in outputs.

Subproject formation takes the following steps:

- Publicity work aimed at the community by FONCODES
- Establishment of core executor by community residents
- Subproject selection by residents
- Submission of subproject application to FONCODES by core executor
- FONCODES appraisal and approval
- Supervision contract and construction commencement

[3] Called "core executor" (Nuclear Ejecutor), composed of four directors, including committee chairman, secretary, and accountant.

Target areas for the Social Sector Development Project in the Amazon area were Loreto, Amazonas, Cajamarca, Ucayali, Madre de Dios, and Cusco. Target areas for the Social Sector Development Project in Sierra Area were Cajamarca, Ancash, Cusco, and Puno (See Figure-3).

Fig. 3 Regions Targeted By the Project

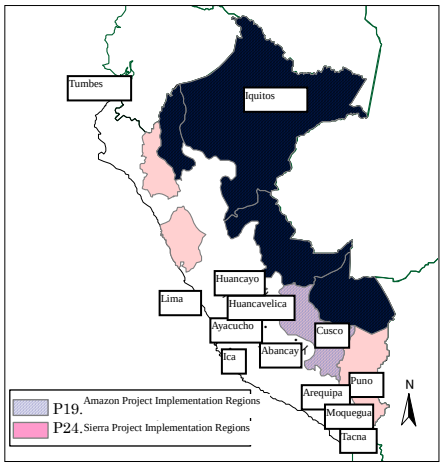


Table 1. Comparison of Planned and Actual Outputs

Item	Planned	Actual
Social Sector Development Project in Amazon Area		
Sanitary Infrastructure Improvements	818	639 locations
・ Install potable water facilities	locations	(completion rate 78%)
(Initial target: 818 locations)	172	101 locations
・ Install sewerage facilities (Initial target: 172	locations	(completion rate 59%)
locations)	171	708 locations
・ Latrines (Initial target: 171 locations)	locations	(completion rate
		414%)
Economic Infrastructure Improvements		
・ Rural roads and bridges (Initial target: 218	218	906 locations
locations)	locations	(completion rate
・		416%)
・ Rural electrification (Initial target: 225	225	249 locations
locations)	locations	(completion rate
		111%)
Social Sector Development Project in Sierra Area		
Sanitary Infrastructure Improvements	1,692	586 locations
・ Install potable water facilities	locations	(completion rate 35%)
(Initial target: 1,692 locations)	306	29 locations
・ Install sewerage facilities (Initial target: 306	locations	(completion rate 9%)
locations)	507	190 locations
・ Latrines (Initial target: 507 locations)	locations	(completion rate 37%)

2.2.2 Project period

According to the initial plan, the length of the entire project was five years and ten months, but it took six years and four months to implement. The major reason for the delay is a reduction in fiscal expenditure after the year 2000[4], which aimed to slash the fiscal deficit.

[4] Since the Fiscal Responsibility Law in the year 2000, the Ministry of Economy and Finance has been implementing the annual foreign borrowing ceiling based on approval of the Congress. The Toledo administration has introduced a contractual fiscal policy, and has been working to reduce expenditures.

2.2.3 Project cost

For the Social Sector Development Project in Sierra Area, due to the above-mentioned fiscal austerity, the ODA loan disbursement was drastically reduced. As result, the total project cost fell short of the planned amount.

Table 2 Comparison of Planned and Actual Project Costs

Item	Planned	Actual
Total	17,306 million yen	10,516 million yen
Social Sector Development Project in Amazon Area		
ODA Loan	5,976 million yen	5,791 million yen
Domestic Currency Portion	1,992 million yen	1,979 million yen
Total	7,968 million yen	7,770 million yen
Social Sector Development Project in Sierra Area		
ODA Loan	7,003 million yen	1,949 million yen
Domestic Currency Portion	2,335 million yen	797 million yen
Total	9,338 million yen	2,746 million yen

2.3 Effectiveness

2.3.1 Sanitary facility provision rate

1) Sanitary facility provision rate

As seen in the table below, comparing percentages of population served (by provinces) between 1993 and 2005, an increase is much higher in the provinces where the project was implemented than the national average. It can be surmised that this project made a definite contribution to the supply of safe water in the provinces where the project was implemented.

Table 3. Change in Provision Rate of Public Water Supply (%)

Region	1993	2005	Difference between 1993 and 2005 (%)
Amazonas	19.4	60.0	40.6
Ancash	40.1	78.1	38.0
Cajamarca	18.1	60.4	42.3
Cusco	28.3	63.7	35.4
Loreto	29.3	31.7	2.4
Madre de Dios	21.8	59.6	37.8
Puno	16.1	45.7	29.6
Ucayali	19.9	31.6	11.7
Average of project implementation regions	23.4	52.4	29.0
Peru national average	46.7	67.4	20.7

Source: INEI (National Statistics Office) Statistical Data

Fig. 4 Shower and Latrine (Madre de Dios)

Fig. 5 Flush Toilet and Shower (Cajamarca)

Fig. 6 Home and Latrine (Loreto)

Fig. 7 Latrine Sewage Processing Equipment (Loreto)

In order to assess the positive impacts on beneficiaries, a beneficiary survey was conducted, targeting 308 households in 16 communities (interview-type questionnaire survey). For the Amazon area, the survey was conducted in the provinces of Loreto and Madre de Dios. For the Sierra area, the survey was conducted in the provinces of Ancash and Cajamarca. The following table compares monthly medical expenditures before (10 years prior) and after project implementation. We were able to confirm that expenditures per household decreased to less than half previous levels. That is, cases of disease decreased through sanitary infrastructure improvements, and payments to medical clinics and purchases of medicine decreased. This shows that the improvements in infrastructure helped livelihood of beneficiary households.

Table 4. Household Medical Expenditures (Amazon Area) Units: Sol/month[5]

	Before project (10 years prior)	After project (At ex-post evaluation)
Loreto	79	22
Madre de Dios	103	48
Average	93	34

Source: Beneficiary Questionnaire Survey (143 Households Responding)

[5] Considering the 61% consumer price inflation from 1995 to 2004, one can see that current expenditures decreased even more.

Table 5. Household Medical Expenditures (Sierra Area) Units: Sol/month

	Before project implementation (10 years prior)	Current
Ancash	44	27
Cajamarca	62	31
Average	54	29

Source: Beneficiary Questionnaire Survey (165 Households Responding)

It is difficult to distinguish the benefits attributable to this project from those derived from other factors. It is therefore difficult to calculate this project's economic internal rate of return (EIRR). As shown above, however, since a decrease in household medical expenditures was confirmed in project areas, it can be surmised that this project is contributing to some extent to bring about economic benefits. In addition, for this ex-post evaluation, community workshops were held, inviting beneficiaries. Their opinion was that the installation of water supply facilities reduced the work of water carriage for the whole household including men and children. As water carriage is not only work of the women, the facilities of water supply reduced the work of a wide range of beneficiaries.

2.3.2 Economic infrastructure provision rates

Looking at percentages of population served derived from census data, as seen in the table below, the rates increased in the regions where subprojects were implemented for this project.

Table 6. Electricity provision rate (%)

Region	1993	2005	Rate of increase (%)
Amazonas	17.7	44.7	27.0 %
Ancash	45.0	66.3	21.3 %
Cajamarca	17.2	32.2	15.0 %
Cusco	42.4	64.3	21.9 %
Loreto	48.5	52.3	3.8 %
Madre de Dios	49.1	58.3	9.2 %
Puno	20.0	53.6	33.6 %
Ucayali	48.1	60.8	12.7 %
Average of the regions where Project implemented	31.0	50.5	19.5 %
Peru national average	54.9	72.2	17.3 %

Source: INEI

There is no initial target for population served for each subproject or for the whole project. Nevertheless, a remarkable improvement over the percentages of population served in the provinces where the project was implemented suggests that this project made some contribution to the access of electricity.

The following opinions on effects of economic infrastructure were voiced in community workshops:

Roads and Bridges

- Access to surrounding villages has improved
- It has become possible to travel using vehicles such as bicycles
- It has become possible to transport agricultural products
- The commute to school has become easier
- Possibilities of tourism development have arisen

Electrification

- Students can study at night
- Lighting at night has improved safety
- Use of home electric goods

・ Possibilities of business using equipment such refrigerators
・ Connection with capital and world news
・ Fewer fires from candles

Fig. 8 Retail Store Started Due to Electricity Supply

Fig. 9 Water Supply Tower (Loreto)

Fig. 10 Rural Road and Bridge (Loreto)

Fig. 11 Rural Road (Madre de Dios)

2.3.3 Beneficiary opinions of infrastructure use

According to the household survey, beneficiaries' opinions on the use of infrastructure after project completion were as shown in the following tables. The Social Sector Development Project in Amazon Area marked high scores overall, except latrines. As described below, there are cases where the design of latrine is too complex to conduct maintenance, so there were a number of opinions that the initial design was not appropriate. In addition, concerning the potable water facility, which follows the latrine

in terms of the number of responses pointing out the usage problem, the response included “the pump to send water is in bad condition” and “there are no replacement parts in stock.” The challenge is thus the repair works that are difficult for the beneficiary groups to take care of.

Table 7. Opinions on the Use of Infrastructure after Project Completion
(Social Sector Development Project in Amazon Area) (%)

Infrastructure	Operating well	Few Problems[6]	Large Problems
Potable Water	69.3	14.9	12.9
Sewerage	100	0	0
Latrines	48	24	28
Roads & Bridges	70.6	22.4	7.1
Electricity	76.8	20.3	2.9

Source: Beneficiary Questionnaire Survey (143 Households Responding)

The Social Sector Development Project in Sierra Area only installed sanitary infrastructure. There were almost no serious problems, with only a few problems on potable water. In contrast to the Amazon area, 90% of the latrines are operating well.

Table 8 Opinions on the Use of Infrastructure after Project Completion
(Social Sector Development Project in Sierra Area) (%)

Infrastructure	Operating well	Few problems	Large problems
Potable water	71.4	26.2	2.4
Sewerage	91.1	8.9	0
Latrines	87.0	10.9	2.2

Source: Beneficiary Questionnaire Survey (165 Households Responding)

2.4 Impact

2.4.1 Poverty reduction

According to the assessment by FONCODES (Annual report: *Memoria 2003*), the poverty in the rural area has changed as the following tables show. While the extreme poverty rate has declined, poverty rate based on non-monetary conditions has declined

[6] Including cases where the construction was not carried out according to the initial plan, and cases where maintenance is difficult.

even more. The fulfillment of basic human needs in poor areas progressed in the ten years between before and after project implementation. Therefore, this project, which aimed at improving infrastructures such as water supply, latrines, and electricity in poor areas, is improving living conditions. This project is alleviating some element of poverty based on non-monetary conditions and can be considered as contributing to poverty reduction.

Table 9. Changes in Rural Poverty (Monetary Economic Basis)[7]

	1993	2003	Rate of change
Rural poverty rate	72 %	73 %	1 %[8]
Rural extreme poverty rate	54 %	43 %	-20 %

Source: FONCODES

Table 10. Changes in Rural Poverty (Non-Monetary Economic Basis)[9]

	1993	2003	Rate of change
Rural poverty rate	90 %	66 %	-27 %
Rural extreme poverty rate	57 %	24 %	-58 %

Source: FONCODES

2.4.2 Reduction in disease

Based on Ministry of Health data, the contraction rate of infant diarrhea is calculated as the following tables show. The contraction rate is higher than average in the Amazon regions of Ucayali, Loreto, and Madre de Dios. The contraction rate has fallen overall in the provinces where the project was implemented. Since other factors may contribute to the occurrence of diseases, it is difficult to judge this improvement to be a result belonging only to this project. Nevertheless, this showed that the project had some positive effect in supporting the reduction in the occurrence of diseases.

[7] In this case, poverty is determined from per capita monthly income according to the National Survey on Living Standards (ENNIV-1991) and the National Household Survey (ENAHO-2003). In 2003, per capita household income below 170 sol was defined as poverty, below 111 sol as extreme poverty.

[8] Regarding the 1% rise in rural poverty (monetary economic basis), the statistical data sources of 1993 and 2003 differ, and the data fluctuated significantly in this 10-year period. It cannot, therefore, simply be concluded that poverty rose.

[9] In this case, poverty is determined from the so-called unsatisfied basic human needs (NBI) (infant mortality rate, literacy rate, water supply provision, electrification rate, etc.). The poverty rate has fallen in recent years through improvements in public services and social infrastructure.

Table 11. Contraction Rate of Infant Diarrhea

Region	1997	2000	2004	Improvement (%)
Amazonas	1.6	1.0	1.1	31.2 %
Ancash	2.87	2.34	1.91	33.4 %
Cajamarca	0.70	0.80	0.66	5.7 %
Cusco	1.2	2.0	1.0	16.7 %
Loreto	4.16	3.72	3.59	13.7 %
Madre de Dios	5.87	4.41	2.71	53.8 %
Puno region	2.0	1.2	1.0	50.0 %
Ucayali	4.3	3.8	4.1	4.7 %
Average of project implementation regions	2.1	1.9	1.6	23.8 %
Peru National Average	2.6	2.1	2.1	19.2 %

Source: El Cuanto, Annual Statistics Peru in Numbers - 2005
(Anuario Estadistico Peru en Numeros)

According to the household survey (143 households) for the Social Sector Development Project in Amazon Area, comparing the contraction rate of six common diseases between ten years ago and now, it is shown that the contraction rate of infectious diseases has dramatically decreased, with the exception of common colds.

Table 12. Changes in the Contraction of Diseases
(Social Sector Development Project in Amazon Area)
(Unit: %)

Disease	10 years prior contraction rate	Current contraction rate
Diarrhea	52	22
Cholera	41	2
Malaria	43	13
Common cold	26	77
Giardiasis	20	5
Dengue fever	18	7

Source: Beneficiary Questionnaire Survey (143 Households Responding)

A similar household visit survey (165 households) was also carried out for the Social Sector Development Project in Sierra Area, whose results are as shown in a following table. The contraction rate of infectious diseases has decreased dramatically, with the exception of common colds.

Table 13. Changes in the Contraction of Diseases
(Social Sector Development Project in Sierra Area)
(Unit: %)

Disease	10 years prior contraction rate	Current contraction rate
Diarrhea	50	5
Cholera	59	1
Giardiasis	13	4
Common cold	58	81
Bronchitis	19	16

Source: Beneficiary Questionnaire Survey (165 Households Responding)

Infectious diseases have decreased in the areas where the project was implemented. Since there may be other factors in the occurrence of infectious diseases, it is difficult to conclude that this result is derived only from this project. Nevertheless, this showed that the project had some effect in supporting the reduction in the contraction rate of infectious diseases.

2.4.3 Benefits to residents

According to the household visit survey for the Social Sector Development Project in the Amazon area, the effects of sanitary project are highly valued overall. In particular, there were many opinions that there were improvements in disease, medical expenses, water carriage labor, female housework, and family hygiene. It can be concluded that this project is contributing to fulfillment of beneficiaries' basic human needs.

Table 14. Beneficiaries' Perception of Sanitary Projects
(Social Sector Development Project in Amazon Area)

(Unit: %)

	Substantially Improved	Improved	Marginally Improved	No improvement
Water quality	22.7	33.3	22.3	21.6
Infant mortality	8.1	49.1	37.0	5.3
Disease, parasites	15.4	49.1	31.9	3.2
Medical expense reduction	12.6	54.9	26.4	5.5
Poisonous snake problems	10.3	50.5	30.0	8.4
Water drawing labor	25.3	46.5	16.5	11.4
Female housework	26.7	42.5	19.8	11.0
Family hygiene	26.4	49.8	20.5	3.3

Source: Beneficiary Questionnaire Survey (143 Households Responding)

Based on the survey, beneficiaries' perception on the Social Sector Development Project in the Sierra area is more positive than the Social Sector Development Project in Amazon Area. In particular, respondents perceived improvements in disease, medical expenses, water carriage labor, female housework, and family hygiene. The project is highly evaluated in the sense that it secured minimum level of living environment.

Table 15. Beneficiaries' Perception of Sanitary Projects
(Social Sector Development Project in Sierra Area)

(Unit: %)

	Dramatic improvement seen	Improved	Usual	No improvement
Water quality	39.3	52.9	4.2	3.3
Infant mortality	19.2	68.5	9.9	1.8
Disease, parasites	24.8	67.9	6.3	0.6
Medical Expense Reduction	19.8	69.7	9.3	0.9
Poisonous snake problems	17.4	61.0	15.0	3.9
Water drawing labor	41.1	47.1	6.9	0.8
Female housework	39.9	50.8	4.8	4.5
Family hygiene	39.9	49.8	8.7	1.5

Source: Beneficiary Questionnaire Survey (165 Households Responding)

Combining the Social Sector Development Project in the Amazon area and the Social Sector Development Project in Sierra Area, the perception of the project by household income[10] is as follows.

Table 16. Water Quality Improvement (Unit: %)

Household income (sol/month)	Dramatic improvement seen	Improved	Usual	No improvement
550 or more	38.3	38.3	12.0	11.4
350-550	41.7	45.0	8.3	5.0
350 or less	27.5	46.6	13.2	0.3

Source: Beneficiary Questionnaire Survey (308 Households Responding)

[10] Average household income targeted by the household visit survey is as follows: Amazon area - Loreto 385 sol/month, Madre de Dios - 1101 sol/month; Sierra area – Ancash 288 sol/month, Cajamarca - 335 sol/month.

Table 17. Infant Mortality (Unit: %)

Household income (sol/month)	Dramatic improvement seen	Improved	Usual	No improvement
550 or more	15.6	58.7	22.2	3.0
350-550	25.0	63.3	8.3	3.3
350 or less	11.9	59..8	24.4	3.4

Source: Beneficiary Questionnaire Survey (308 Households Responding)

Looking at "water quality improvement" by income level, fewer respondents of low-income household said "No improvement," so it is clear that there was progress in access to safe water among low-income households. For infant mortality rates, there was no difference in "No improvement" responses by income level, but "Substantially improved" and "Improved" comprised over half of responses for all income levels, so it was confirmed that low income households benefited too.

2.4.4 Qualitative opinion (synergistic effects from the project)

For the Social Sector Development Project in Amazon Area, a workshop was held in Pastora village[11] (where all the subprojects were carried out) in Puerto, Madre de Dios, and a variety of positive opinions were heard. Opinions were obtained, such as "With an electrical supply, we can now use refrigerators and freezers," "Students can also study at night by using electric lights," "Thanks to television, news comes from the capital city of Lima and the world," "These lifestyle changes occurred. Moreover, the progress in water supply distribution and latrine installations raised residents' hygiene awareness and standards as well," "After opening the access road to the main road, boat transport increased from other nearby villages," "Along with the frequent use of boat dock by travelers and freight, the number of households working nearby increased, purchasing refrigerators and selling merchandises such as drinks, and starting businesses in the service sector such as restaurants," "This increase in economic activities is because of the project." One can say that these are examples of several subprojects interacting together to produce synergistic effects.

[11] In geographical terms, Pastora village faces a river, and is also close to a national road. Subprojects were implemented concerning the road, electricity, water supply and latrines. The road is a paved road approximately 100m long on a slope connecting the village with the national road.

Fig. 12 Workshop

Fig. 13 Workshop

2.4.5 Environmental impact

There remains the problem of final disposal of the latrine waste[12], but so far no serious issues such as infectious diseases have arisen. For other subprojects, negative impacts are not observed.

2.5 Sustainability

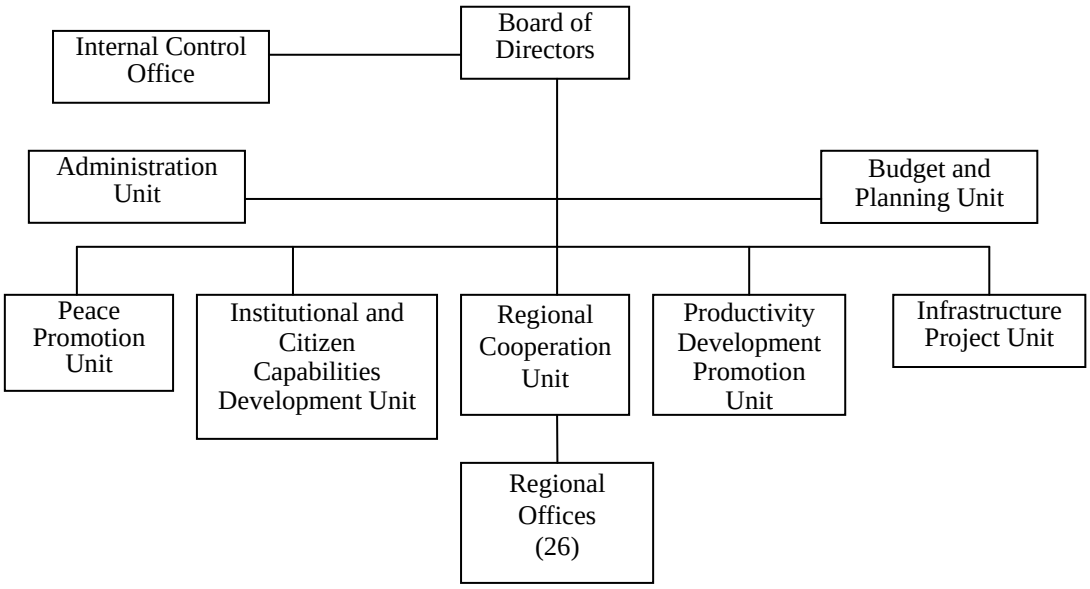
2.5.1 Executing agency

FONCODES has seven departments ("units") below its Board of Directors. It has 26 regional offices (one office per region) under the management of the Regional Cooperation Unit. Regional offices select subprojects, and carry out maintenance support for beneficiaries' groups. In the regional offices visited for the ex-post evaluation (Loreto, Ancash, Madre de Dios, and Cusco), there were about 10 to 20 members of staff. In the Madre de Dios regional office for example, four of the ten members of staff were involved in formation, supervision, and support for maintenance of the subprojects. In 2002, FONCODES was transferred from the President's office to the Ministry of Women and Social Development as part of streamlining social programs[13].

[12] For latrines which are not connected to sewerage, pipes should be buried deep in the earth for final disposal, but some beneficiaries are leaving the pipes on the surface.

[13] The Toledo administration is pushing forward its decentralization policy, transferring the FONCODES infrastructure investment resources and project selection authority to local governments.

Fig. 14 FONCODES Organization Chart



2.5.2.1 Technical capacity

With the exception of electrical distribution, completed facilities do not require advanced technology. With the exception of electrical facilities, beneficiaries are applying themselves to operation and maintenance. FONCODES is distributing manuals for operation and maintenance of each type of facility and carrying out training for maintenance. The principle of maintenance by beneficiaries is still maintained. For electrical facilities, electric companies are carrying out operation and maintenance, so there is no problem in the technical aspect.

2.5.2.2 Structure

Operation and maintenance of completed facilities differs by subproject. The operation and maintenance organization for each subproject is as follows.

Water supply: After completion, beneficiaries establish a beneficiaryies' group, which collects fees and carries out operation and maintenance. FONCODES carries out technical training and the beneficiaries' group conducted daily operation and maintenance. In cases of major repairs, special fees are collected to hire technicians. In some situations, financial and technical supports are requested to a district government.

Sewerage: Beneficiaries are trained by FONCODES and carry out daily operation and maintenance.

Latrines: Beneficiaries are trained by FONCODES and carry out operation and maintenance.

Bridges and roads: Beneficiaries conducted daily maintenance since advanced technical capabilities are not required. In some cases, district governments provide materials.

Electric supply: The facility is transferred to an electric company after completion. The electric company collects fees, provides services, and carries out operation and maintenance. FONCODES carries out training on how to use electricity in each household.

As described above, operation and maintenance is entrusted to beneficiaries after completion, except for electricity. Since the introduction of the decentralization policy, poverty reduction initiatives have been gradually transferred to local governments. The role played by local government for operation and maintenance is also expanding. However, due to the scarcity of trained staff within, the local governments often lack sufficient capabilities to satisfy their expanding role. On the other hand, FONCODES has trained engineers, but as there is only one regional office in each province, it is difficult to extend support in remote areas.

Fig. 14 Potable Water Entrance

Fig. 15 Potable Water Storage Tank

2.5.3 Financial status

Financial arrangements for operation and maintenance differ by type of subproject, as mentioned in “2.5.2.2 Structure.” The source of maintenance funds for each subproject is as follows.

Water supply: After completion, beneficiaries establish groups, which collect fees and carries out operation and maintenance. There are various fee schemes depending on the cooperative. There are fixed monthly fees, as well as fees depending on water usage.

Sewerage: Beneficiary groups carry out daily cleaning and other maintenance work, so fees are not collected in general.

Latrines: Individual beneficiaries carry out operation and maintenance, so fees are not collected in general.

Roads and bridges: They are transferred to the district after completion. Since beneficiaries carry out daily operation and maintenance, fees are not collected in general. In some cases, district governments provide materials for maintenance works.

Electricity supply: The facility is transferred to a electric company after completion. The electric company collects fees, provides service, and performs maintenance necessary to provide services. Electricity fees are sometimes set without sufficiently reflecting beneficiaries' inclinations.[14]

2.5.2.4 Operation and maintenance

At this field survey, operation and maintenance was being carried out adequately[15] on all sanitary infrastructure and economic infrastructure facilities visited[16]. For subprojects covered in the beneficiary survey for this evaluation, 70% or more of respondents replied that "The facility is operating well" (refer to Table 7 and Table 8). This suggests that appropriate operation and maintenance is being done in many of the subprojects. However, the Social Sector Development Project in the Amazon area had more subprojects with usage problems, which may suggest deterioration due to aging[17].

[14] In Madre de Dios, complaints were aired during the workshop about the fee increase.

[15] The Loreto region Barrio Florido village pump water supply and latrines is an exceptional example where maintenance was not done, and most facilities are unused. In the case of pump water supply, the initial plan was to dig one well per household and manually pump the water, but the pumps were rarely used due to bad water quality and were no longer in use. In the case of latrines, this village had latrines installed with complex drainage structures in places periodically submerged from floods, so maintenance became difficult. There were problems with the initial design, so the latrine of this type was not installed thereafter.

[16] Villages inspected in the Amazon area - Loreto: Barrio Florido, Gran Peru, San Rafael, San Ramón, Progreso;
Madre de Dios: El Triunfo, Monterrey, Izuyama, Puerto Pastora;
Sierra area: Ancash: Chavín, Huantallon, Canchabamba, Vista Alegre; Cajamarca: San Marcos, Bambamarca, Mangallana, Baños del Inca. Villages were selected from a project list, considering the subproject type, regional characteristics, and survey schedule.

[17] Falling operating rates due to deterioration with the passage of time was also pointed out in the ex-post evaluation (2002, IFPRI) of the Inter-American Development Bank (IDB) on its support to FONCODE. It could be seen as an issue that should be dealt with in the medium and long term.

3. Feedback

3.1 Lessons Learned

None.

3.2 Recommendations

(For the executing agency)

FONCODES sets objectives and manages project outputs such as population served by water supply and the number of latrine. It does not, however, set objectives related to project effects (outcomes, impacts)—for example, FONCODES does not set a target for a reduction in the number of diarrhea patients per community and provide support to beneficiary groups so that it could achieve the target. From now on, it is desirable for FONCODES to carry out data collection and to set target on project effects, and to provide support to beneficiary groups in order to achieve the target, while steadily cooperating with other organizations such as district governments and health posts.

As decentralization progresses, local governments is expanding its role in maintenance of small-scale infrastructure. However, few local governments have engineers with expertise in small-scale infrastructure. It is therefore feasible for FONCODES to continue playing a leading role in providing support to beneficiary groups for operation and maintenance of each subproject. That said, since FONCODES has only a relatively small number of regional offices, it is desirable to supplement them with local government human resources where possible. Specifically, FONCODES should consider measures such as carrying out technical training necessary for maintenance of subprojects upon receiving a request from local governments in needs of technicians.

Comparison of Original and Actual Scope

Item	Plan	Actual
(1) Outputs **Social Sector Development Project in Amazon Area** Sanitary Infrastructure Improvements		
・ Potable water facility installations (Initial target: 818 locations)	818 locations	639 locations (78% completion rate)
・ Sewerage facility installations (Initial target: 172 locations)	172 locations	101 locations (59% completion rate)
・ Latrines (Initial target: 171 locations)	171 locations	708 locations (414% completion rate)
Economic Infrastructure Improvements		
・ Rural roads and bridges (Initial target: 218 locations)	218 locations	906 locations (416% completion rate)
・ Rural electrification (Initial target: 225 locations)	225 locations	249 locations (111% completion rate)
Social Sector Development Project in Sierra Area Sanitary Infrastructure Improvements		
・ Potable water facility installations (Initial target: 1,692 locations)	1,692 locations	586 locations (35% completion rate)
・ Sewerage (Initial target: 306 locations)	306 locations	29 locations (9% completion rate)
・ Latrines (Initial target: 507 locations)	507 locations	190 locations (37% completion rate)
(2) Project Period	5 years, 10 months (70 months)	6 years, 4 months (76 months)
Social Sector Development Project in Amazon Area		
Loan agreement	November 1997	November 1997
Project commencement	January 1998	March 1998
Final disbursement date	February 2002 (4 yrs after L/A comes in effect)	February 2004 (Loan complete)
Social Sector Development Project in Sierra Area		
Loan agreement	April 1999	April 1999

Project commencement Final disbursement date	January 1999 August 2003 (4 years after L/A comes into effect)	October 1999 August 2003 (Loan Complete)
(3) Project Cost Total	17,306 million yen	10,516 million yen
Social Sector Development Project in Amazon Area ODA Loan Portion Local currency Total	 5,976 million yen 1,992 million yen 7,968 million yen	 5,791 million yen 1,979 million yen 7,770 million yen
Social Sector Development Project in Sierra Area ODA Loan Portion Local currency Total	 7,003 million yen 2,335 million yen 9,338 million yen	 1,949 million yen 797 million yen 2,746 million yen