

**Ex-Post Project Evaluation 2014: Package I-8
(Senegal)**

July 2015

JAPAN INTERNATIONAL COOPERATION AGENCY

ICONS Inc.

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0. Summary

The objective of this project is to supply sustainable and safe water, and to contribute to the economic sustainability through increasing the number of livestock and reducing hard work by reducing the time to fetch water through renovating and expanding the existing water supply facilities in the target sites mainly in the Region of Tambacounda, Senegal.

The project is consistent with the development policy and the development needs of Senegal and the development policy of Japan, and the relevance is high.

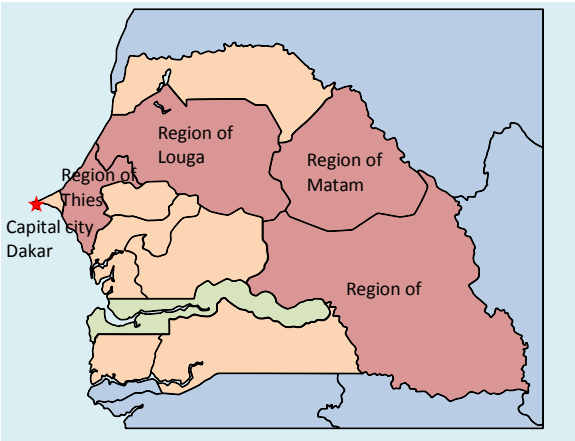
The project cost was lower than planned, but the project period was slightly longer than planned due to security problems in Senegal and efficiency was fair.

Although one of the effect indicators, the “number of people who have access to safe water” in the target area is lower than the target value, all other indicators have been achieved. In addition, there is indication of positive impact such as the increasing number of livestock and the reduction of time to fetch water, and there are also no negative impacts such as environmental effects, etc. Therefore, the effectiveness and the impacts are high.

Concerning the sustainability of the project, human resource is insufficient in administrative organization, especially with regard to Subdivision of Maintenance and Well and Borehole Brigade which are directly in charge of maintenance of water supply facilities, and the budget is also not allocated sufficiently. However, the Boreholes Users Association (Association des Usagers de Forage (hereinafter referred to as “ASUFOR”)), which is in charge of the operation and maintenance of the water supply facilities in each target site, functions sufficiently and there is no serious problem. Therefore, the sustainability is fair.

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

1. Project Description



Project Location(s)



One of the renovated water supply facilities in the target sites, Sinthiou Maleme

1.1 Background

The supply of safe water was positioned as one of the main development issues with respect to health and hygiene, and the reduction of poverty by the Government of Senegal, and improving the rate of access to safe drinking water¹ in the rural area to 78% by 2015 was listed in the national policy such as Millennium Development Goals (herein after referred to as MDGs). To achieve this objective, the government of Senegal prepared the “Millennium Program for Water and Hygiene (Programme d'Eau Potable et d'Assainissement du Millénaire (herein after referred to as “PEPAM”)) and the administration for water has been implemented in accordance with the policy.

The rate of access to safe drinking water in Senegal was 72% in 2007 (PEPAM) on the national level and the rate in the Region of Tambacounda, where the main project area is, and is located in south east part of Senegal was stagnant at approximately 30%. The Region was known as a poverty area in Senegal and the limited access to safe water, which is the basis of life, was one of the factors for the increasing poverty level in the area.

Japan has continuously conducted grant aid projects for rural water supply since “The Project for Rural Water Supply (1st Phase)” in 1979. However, some of the facilities had not functioned sufficiently as planned due to age. To improve this situation, the Government of Senegal requested a project to renovate and extend the water supply facilities in 19 sites which were mainly the sites of the previous Japan grant aid Projects.

1.2 Project Outline

The objective of this project is to supply sustainable and safe water in the target sites, and to contribute to the economic sustainability through increasing the number of livestock and reducing hard work through the reduction of time to fetch water by renovating and expanding the existing water supply facilities in the target sites, mainly in the Region of Tambacounda, Senegal.

Grant Limit / Actual Grant Amount	1,300 million yen / 1,300 million yen,
Exchange of Notes Date (/Grant Agreement Date)	March, 2010 / March, 2010
Implementing Agency	Ministry of Urban Development, House, Construction and Water (Current Ministry of Water and Sanitation) Department of Rural Water (Current Direction of Water)
Project Completion Date	April, 2012
Main Contractor(s)	Nissaku Co., Ltd.

¹ Rate of population who can access safe water by public fountains or individual taps.

Main Consultant(s)	Japan Techno Co., Ltd.
Basic Design	February, 2010
Detailed Design	November, 2010
Related Projects	<p><u>Technical assistance projects</u></p> <ul style="list-style-type: none"> - Project water for all and assisting community activities (Projet Eau Potable pour Tous et Appui aux Activités Communautaires (hereinafter referred to as “PEPTAC1”)) (2003-2006) - Project water for all and assisting community activities Phase 2 (hereinafter referred to as “PEPTAC 2”) (2006-2010) - Study on rural water supply in Tambacounda and Matam Regions (2007-2010) - Project for sustainable rural development (2008-2012) <p><u>Grant-aid projects</u></p> <ul style="list-style-type: none"> - Project for rural water supply (1st phase -12th phase) (1979-2000) - Project for rural water supply of eight regional centres (1992-1994) - Project for water supply in rural area (1993-1996) - Project for water supply in rural area, improvement and reinforcement of rural water supply facilities (1994-1999)

2. Outline of the Evaluation Study

2.1 External Evaluator

Satoshi Nagashima, ICONS Inc.

2.2 Duration of Evaluation Study

Duration of the Study: July, 2014 –June, 2015

Duration of the Field Study: 31 August, 2014 - 25 September, 2014

8 February, 2015 – 25 February, 2015²

² It was carried out at same timing of ex-post evaluation of technical cooperation project “Project for Sustainable Rural Development”.

3. Results of the Evaluation (Overall Rating: B³)

3.1 Relevance (Rating: ③⁴)

3.1.1 Relevance to the Development Plan of Senegal

At the planning stage of the project, the supply of safe water was positioned as one of the main development issues with respect to “health and hygiene” and “reduction of poverty” by the Government of Senegal and improving the rate of access to safe drinking water in the rural area to 78% by 2015 was listed in the National policy such as the Poverty Reduction Strategy Paper (hereinafter referred to as “PRSP”) and MDGs.

At the time of the ex-post evaluation, MDGs were still an important policy for the water sector and an 82% rate of access to safe drinking water in the rural area by 2015 was aimed for. Nationwide, the rate of access to safe drinking water in rural areas reaches 84.1% and the objective has been achieved in December, 2013. In addition, according to the National Strategy for Economic and Social Development 2013-2017 (hereinafter referred to as “NSES”) which is PRSP at the ex-post evaluation stage, increasing access to safe water is positioned as one of the major development issues and target objectives are prioritized. These objectives include increasing access to safe water in the urban or the rural areas via the construction or renovation of boreholes and water tanks, and assisting the sustainable management of water resources through the establishment of community organizations.

For the reasons above, MDGs are still important policy for the water sector in Senegal and is consistent with the project which aims to improve the rate of access to safe drinking water in rural areas. In addition, the important policy after 2015 will be NSES; it aims at increasing access to safe water the in urban and the rural areas via the construction or renovation of boreholes and water tanks, and assisting the sustainable management of water resources through the establishment of community organizations. There is no change in comparison with previous policy of Senegal and the policy in Senegal is consistent with the project.

3.1.2 Relevance to the Development Needs of Senegal

At the planning stage of the project, the nationwide rate of access to safe drinking water in Senegal was an average of 72% (PEPAM 2007), but the rate of access in the Region of Tambacounda which was a major project target area was 30%. The Region was one of the poorest areas in Senegal and indicators for education and health were also at low levels. Limited access to safe water, which is the basis of life was one of the factors for the increasing the poverty level in the area, and improvement and renovation of water supply facilities had been strongly aimed for. For these reasons, the priority on the improvement of water supply facilities in the Region of Tambacounda, Senegal was high.

According to the latest survey carried out by PEPAM, nationwide the rate of access to safe drinking water in the rural area has been improved to 84.1% but the rate of access in the Region of

³ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

⁴ ③: High, ② Fair, ① Low

Tambacounda in 2013 was still low, though it has improved to 48.3%.

Table 1: Rate of access to safe drinking water in the rural area of each Region of Senegal in 2013

Name of region	Rate of access to safe drinking water (%)
Region of Diourbel	94.9
Region of Ziguinchor	44.1
Region of Kaolack	87.9
Region of Fatick	85.3
Region of Thies	81.4
Region of Kaffrine	86.0
Region of Matam	75.5
Region of Kedougou	11.5
Region of Louga	80.4
Region of Tambacounda	48.3
Region of Sedhiou	24.7
Region of Kolda	18.2

Source: Material provided by PEPAM

Due to the reasons above, the rate of access to safe drinking water in the Region of Tambacounda is 5th from the lowest and still at a low level, and the demand for groundwater development is still high. Therefore, the project is consistent with the development needs of Senegal at the ex-post evaluation stage.

3.1.3 Relevance to Japan's ODA Policy

According to the "Country Assistance Policy for Senegal" prepared in 2009, "water supply" was listed as priority goal in Small Goal II "Improvement of basic social services" in Medium Goal I "Improvement of life for people in poverty in the rural areas". Therefore, water supply was an important development policy of Japan for Senegal, and the project is consistent with Japan's ODA Policy during the planning stage.

<Summary of Relevance> Improvement of access to safe water which the project has aimed is still consistent with the development policy in Senegal at the ex-post evaluation stage. In addition, the rate of access to safe drinking water in the rural area of the Region of Tambacounda, which is the main target area of the project, has been improved from 30% in 2007 to 48.3% in 2013 but it has not reached 82% which MDGs aim to achieve in rural areas, and the development needs are consistent with the project. Furthermore, according to Japan's ODA policy in 2009, water supply was one of the important objectives and the project was consistent with Japan's ODA policy.

For the reasons above, this project has been highly relevant to the country's development plan and development needs, as well as Japan's ODA policy. Therefore its relevance is high.

3.2 Efficiency (Rating: ②)

3.2.1 Project Outputs

In the project, renovation and extension of water supply facilities (boreholes, water towers, public fountains and other relevant facilities) had been conducted in following 19 sites.

Table 2: Name of target sites in the project

Name of Region	Name of Target site
Region of Tanbacounda	Sinthiou Malame, Darou Ndiawene, Diagle Sine, Maka, Colibantang, Meleto, Koumpentoume, Hamdalaye Tessan, Goumbayel, Fass Gounass, Darou Salam Sine II, Bidiankoto, Goudiry, Diam Diam, Missirah
Region of Matam	Dounde, Aoure
Region of Thies	Taiba Ndiaye
Region of Louga	Mbayene Thiasde

(1) Output by Japan side

1) Construction of facilities

There was no change between from the planning stage to the actual stage in regard to the numbers of existing boreholes renovated, new boreholes constructed, renovation of water towers renovated, renovation of water tanks renovated, and new water towers constructed. There were some changes in regard to the distance of distribution pipes, numbers of public fountains, watering places for livestock, watering places for vehicles and rooms for managers, etc. These were unavoidable and minor changes due to the results of detailed survey by the contractors during the implementing stage, changes of decisions as whether to renovate or newly construct requests from residents and change of the position, etc., and it was reasonable. Therefore, there is no major change between the planning stage and the actual stage.

Table 3: Comparison between planned facilities during the basic design stage and actual facilities constructed

		Planned	Actual
Renovation of existing boreholes		10	10
Construction of new boreholes		14	14
Renovation of water towers		20	20
Renovation of water tanks		3	3
Construction of new water towers		1	1
Distribution pipes	New construction	Approx.155km	Approx. 148km
Public fountains	Central villages	Renovation	141
		New construction	98
	Satellite village	Renovation	37
		New construction	51

Watering place for livestock	Renovation	32	35
	New construction	11	9
Watering place for vehicle	Renovation	19	15
	New construction	2	6
Room for machine	Renovation	17	17
	New construction	4	4
Room for manager	Renovation	16	18
	New construction	3	1
Toilet	Renovation	16	16
	New construction	3	3
Installation of submersible pump		24	24
Power source	Generator	24	24
	Commercial electricity	5	5

Source: Materials provided by JICA



Renovated watering place for livestock in Mbayene Thiasde



Newly constructed watering place for vehicle in Goumbayel

2) Soft component

Sites were categorized and the soft component activities were planned depending on the capacities of ASUFOR, which is in charge of operation and maintenance of water supply facilities, and sites were found to be: those in which the operational status was good (four sites); those in which there were some problems in regard to operation (eight sites); and, those in which the sites which ASUFOR would be newly established (seven sites). Operational status was re-categorized during the implementing stage and the number of sites in which the operational status was good became three, the number of sites in which there are some problems in regard to operation became twelve, and the number of sites in which ASUFOR would be newly established became seven. That was the only change and other activities were conducted as planned.

(2) Output from Senegal side

Output from Senegal side was conducted as planned and there was no change from plan.

- 1) Securing of land and the levelling
- 2) Ensuring personnel for utilising the procured facilities and equipment
- 3) Implementing necessary input for smooth implementation of the project
- 4) Cooperation of the soft component program activities by the Well and Borehole Brigade and

representative in target sites

- 5) Introduction of measured rate system for water utilization after completion of constructing the water supply facilities, and monitoring

3.2.2 Project Inputs

3.2.2.1 Project Cost

Concerning the project cost, 1,299 million yen was estimated in the planning stage. The actual project cost became 1,241 million yen which is lower than planned (96% of planned). The reason for reducing the project cost is that the bid amount during the tender for the project was lower than the planned amount.

For the reason above, the project cost was lower than planned.

3.2.2.2 Project Period

Concerning the project period, total 24 months were estimated in the planning stage but the actual project period became 25 months due to the one month delay of the completion of the soft component activities (104% of that planned). However, the reason was that the security was degrading due to implementation of presidential election in Senegal and it was forced to postpone the implementation of the soft component activities.

For the reason above, the project period was longer than planned.

<Summary of efficiency> For the Outputs of the Project, there were minor changes in regard to construction between the planning stage and the actual stage but there were no major changes in total, and the changes were reasonable. In addition, the other Outputs, such as the soft component was carried out as planned. Furthermore, concerning the Input, the project cost was 96% of that planned but the project period was 104% of planned.

For these reasons, although the project cost was within the plan, the project period exceeded the plan. Therefore, efficiency of the project is fair.

3.3 Effectiveness⁵ (Rating: ③)

3.3.1 Quantitative Effects (Operation and Effect Indicators)

(1) Operation indicators

None

(2) Effect indicators

Following effect indicators were set on access to safe water for the project.

⁵ Sub-rating for Effectiveness is to be put with consideration of Impact.

Table 4: Comparison between the target value and the actual value of the rate of access to safe water at the target year in the target area

	Baseline	Target	Actual	
	2009	2014	2012	2014
	Baseline Year	2 Years After Completion	Completion Year	2 Years After Completion
Number of people who can access safe water	0	126,540	119,280	119,650
Number of people who can limitedly access safe water	82,430	0	0	6,890
Number of people who cannot access safe water	26,670	0	0	0

Source: Documents provided by JICA

Note: According to the result of the estimation, it was found that the target value which was set for 2014 did not consider population growth rate in material provided by JICA (because the increase in the population was less than 1% during six years). Therefore, the target value was reset and modified.

For the number of the beneficiaries and the indicators regarding the rate of access to safe water, an effort was made to obtain the statistical information to confirm long term changes but such information did not exist. In the basic design period, the number of beneficiaries was estimated as the number of people obtained during the basic design period, multiplied by 3%⁶, which was the population growth rate of design criteria in the Direction of Water. Therefore, comparison was made by using same method. According to the survey, it was found that:

- 1) There was a water quality problem in Colibantang (water colour became red due to iron content) and population cannot utilize it as drinking water;
- 2) Water was not sufficiently distributed to the satellite villages of Koumpentoum due to insufficient water pressure;
- 3) Part of the public fountain was not utilized in Hamdalaye Tessian and Missirah, thus it was confirmed that only a portion of the population has limited access to safe water in these sites.

Therefore the rate of access to safe water in the target sites was slightly less than target value (95%), but it has been almost completely achieved. In addition, there were some problems in regard to the water supply facilities and that the number of people who have limited access to safe water was slightly higher than the target value of zero. It has been achieved the indicator of number of people who cannot access safe water as the target value of zero.

⁶ This is from the basic design report of the project. According to the general census for population, housing, agriculture and livestock by the national agency of the statistics and demography, growth rate of population from 2002 to 2013 is 2.5% and the estimation has evidence.

For the reasons above, expected objective has been almost achieved though actual value was slightly less than the target value.

In addition, according to the beneficiary survey conducted by a local consultant⁷, it was found that there was an increase in the consumption of water by each household after implementation of the project in all seven surveyed sites (minimum 128.1%. maximum 358.7%).

Table 5: Average of water consumption per household according to the beneficiary survey
Unit: L/day

	Before implementation	After implementation	Increasing rate
Koumpentoume	241	454	188.4%
Diam Diam	304	518	170.4%
Bidiankoto	147	417	283.7%
Goumbayel	327	780	238.5%
Aoure	138	495	358.7%
Mbayen Thiasde	395	506	128.1%
Taiba Ndiaye	338	481	142.3%

Source: Beneficiary survey

3.3.2 Qualitative Effects

(1) Existing water supply facilities which were in disuse have become usable by the construction of new boreholes.

According to site survey of water supply facilities in 19 target sites, all water supply facilities were available except a borehole renovated in Koumpentoume (a borehole which was newly constructed in Koumpentoume functions properly). Therefore, new boreholes function 100% and renovated boreholes function 92.9% out of 10 of new boreholes and 14 renovated boreholes respectively. Most water supply facilities are currently available and the outcome of the project appears sufficient.

(2) ASUFOR is newly established, or the activities are revitalized due to the implementation of the soft component activities

Classification of sites according to the “question items for judgement of the activity level of ASUFOR”⁸ is as follows.

⁷ Seven site were selected from the target sites and a questionnaire survey was conducted for 50 sample each (350 samples in total) Total respondent was 350 and the percentage of sex was 217 male (62%) and 133 females (38%) and the percentage of age composition was four of teen age (1%), 49 of twenties (14%), 88 of thirties (25%), 80 of forties (23%), 62 of fifties (18%), 45 of sixties (13%) 17 of seventies (5%) and five of eighties (1%).

⁸ Basis to judge the capacity or activity level prepared in the technical cooperation project PEPTAC implemented in Senegal

Table 6: Classification of site according to the question items for judgement of the activity level of ASUFOR during the period of implementing soft component and the period of ex-post evaluation

	Before implementing the soft component	Ex-post evaluation
Class A*	3	16
Class B	12	3
Class C	4	0

*This is a classification of ASUFOR defined during the soft component portion of the project:

Class A: ASUFOR has been already established. More than 10 of the question items have been achieved and the ASUFOR is judged as excellent,

Class B: ASUFOR has been already established. The question items have been achieved less than 10 and the ASUFOR is judged that there is some problem,

Class C: ASUFOR has not been established and the water supply facilities are managed by ex-water management committees system.

Source: Result of interview survey for ASUFOR

For the reason above, many target sites had problems before implementing the soft component activities of the project, however 16 sites became excellent at the time of ex-post evaluation. Compared with before implementing the soft component activities, significant improvement has appeared. Therefore it is evaluated that ASUFOR has been newly established and is functioning, or the existing activities of ASUFOR have been revitalized due to the implementation of the soft component activities.

3.4 Impacts

3.4.1 Intended Impacts

(1) Increase the number of large or small livestock by increasing access to safe water

Increasing the number of large or small livestock was expected by increasing access to safe water as shown in Table 7 below during the basic design study.

Table 7: Indicators on number of livestock

	Before implementation of the project (2009)	Expectation after completion of the project (2012)
Number of large livestock	44,575	44,843
Number of small livestock	67,700	68,107

Source: Material provided by JICA

However, according to the interview with the consulting company which was in charge of conducting the basic design study, the number of livestock used in the indicator was based on a result of an independent socio-economic survey at the target sites and was not the result of official statistics.

Though effort was made to collect existing statistical information at Regional Department of

Livestock in the Region of Tambacounda, the first livestock inventory was prepared in 2013 and it was impossible to compare with the previous data. In addition, the unit of the statistic was not village level but Rural Community⁹ level and it was difficult to compare with the target value. According to the interview survey with the Regional Department of Livestock, number of livestock grows 3% per year and one of the factors is sustainable water supply. Due to the reasons mentioned above, interview survey was carried out with ASUFOR members at each target site and the situation of increase or decrease of livestock was confirmed qualitatively.

Table 8: Increase or decrease of number of livestock at each target site based on the interview survey

Contents of interview survey	Number of sites
Number of livestock has increased due to sustainable access to water	13
Number of livestock has increased but water source is not the water supply facilities of the project	1
There is no change	3
Number of livestock has decreased	2

Source: Interview result with ASUFOR

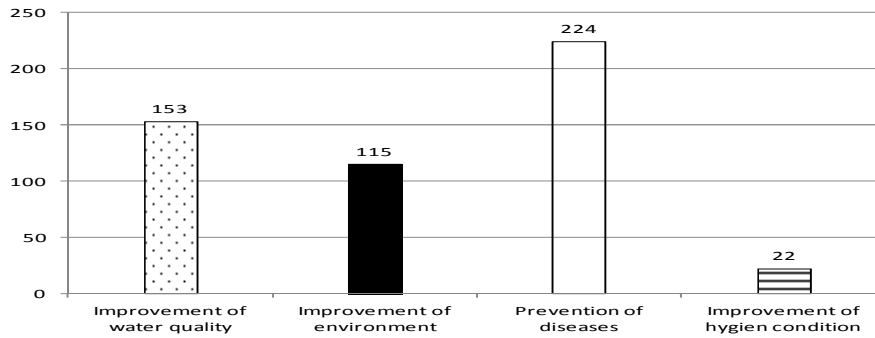
According to the interview survey, the number of livestock has increased in many target sites due to sustainable water supply. As a result of this, people can easily sell the livestock and cope with sudden situations such as marriages, sicknesses and festivals, etc., and their life became economically sustainable.

(2) Effect for health (decrease of water borne diseases)

Before implementing the project, it was considered that water borne diseases would decrease via sustainable access to safe water through implementation of the project.

According to the beneficiary survey, approximately 70% of respondents in total answered that diarrhea or malaria has been decreased at the target sites and it was confirmed that there is a decreasing tendency of diarrhea or malaria compared to before the project was implemented. However, the reasons for the answer were also asked. Beneficiaries realised that the improvement was caused not only by the improvement of water quality but also by combined effects such as improvement of environment and prevention of diseases, etc. Therefore, though it is due to the combined effect, the project partly contributes to decrease water borne diseases.

⁹ "Rural Community" was previous local administrative division in Senegal and was organizations to govern villages under Prefectures, Departments and Regions. Due to the policy change of decentralization in Senegal in 2014, administrative division under Prefectures was rearranged as "Commune" and "Rural Community" was abolished and has not existed at present.



Unit: person

Figure 1: Reason of decreasing water borne diseases by beneficiaries (There are multiple answers)

(3) Shortening time for fetching water and the reduction of hard work from women or children

Before implementing the project, shortening time for fetching water and the reduction of hard work was expected.

Time for fetching water before and after implementation of the project which beneficiaries consider is as following figure.

More than half of all beneficiaries who responded said that it took more than 20 minutes to fetch water before implementation of the project. However, more than half of all beneficiaries who answered said that it took 3-10 minutes to fetch water after implementation of the project.

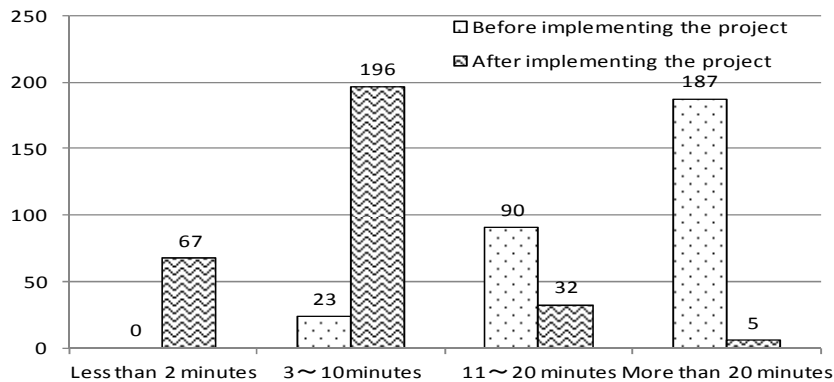


Figure 2: Time to fetch water by beneficiaries before and after implementation of the project

Tendency of reduction of time for fetching water is grasped from the result of the beneficiary survey and impact on reduction of hard work through shortening time of fetching water is confirmed.

3.4.2 Other Impacts

(1) Impacts on the Natural Environment

There was no positive or negative environmental impact.

(2) Land Acquisition and Resettlement

Concerning the resettlement, according to the interview survey with the Direction of Water, Ministry

of Water and Sanitation and a questionnaire survey with the consultant which was in charge of supervising of implementation of the project, it was confirmed that there was no resettlement and land acquisition in the project.

(3) Unintended Positive/Negative Impact

None

<Summary of effectiveness and impact> Concerning effectiveness, the “number of people who can access safe water” in the target sites has reached 95% of target value and “number of people who cannot access safe water” has reached zero which is the target value. In addition, average water consumption per household has significantly increased. Concerning the impacts, positive impacts have appeared such as the increasing number of livestock and shortening the time or fetching water, and there was no negative impact contrarily.

For the reasons above, this project has largely achieved its objectives. Therefore effectiveness and impact of the project are high.

3.5 Sustainability (Rating: ②)

3.5.1 Institutional Aspects of Operation and Maintenance

1) Institutional aspects of Operation and Maintenance for water supply facilities

According to the soft component plan for reinforcing operation and maintenance at basic design stage, it was hoped that operation and maintenance could be achieved by establishing ASUFOR and raising awareness about operation and maintenance in areas where ASUFOR had not been introduced. In addition, ASUFOR was categorized depending on the level of activity in the sites where ASUFOR had already been established, and it was planned that the soft component activities were to be carried out depending on the problems found by ASUFOR.

According to the interview survey in 19 of the target sites, it was confirmed that ASUFOR had been established and existed in all sites for operation and maintenance of water supply facilities at the time of ex-post evaluation. Therefore, there is no change from the planned institutional system (sharing of responsibility). Sixteen (16) ASUFOR out of 19 were judged as class A by the question items for judgement of the activity level of ASUFOR and the sound management was confirmed.

On the other hand, it was also found that operation and maintenance system have not functioned sufficiently in three ASUFOR (Koumpentoume, Hamdalaye Tessan and Missirah) at the time of ex-post evaluation. The reasons which these ASUFOR did not function well were;

- a) Degradation of service due to malfunction of water supply facilities and worsening of the financial balance cause by high electricity bills (Koumpentoume)
- b) Rejection of the water fee payment by residents due to unclear management of a part of the

ASUFOR members (Hamdalaye Tessan)¹⁰

c) Resignation of most of ASUFOR members who could not have any financial incentive and lost their interest (Missirah)¹¹

Concerning items b) and c), the prefectural government has already decided to re-elect the ASUFOR member.

For these reasons, there is no major problem on institutional aspect of operation and maintenance for water supply facilities because sound management was confirmed in 84.2% of the target sites.

2) Institutional aspects of Maintenance at administration level

At the time of ex-post evaluation, institutional structure of maintenance of water supply facilities at administration level is as follows.

Table 9: Institutional structure for maintenance of water supply facilities at administration level

Level	Institutional structure at administration level at the planning stage	Institutional structure at administration level at the ex-post evaluation stage	Major tasks at the ex-post evaluation stage
Central level	Direction of Exploitation and Maintenance, Ministry of Urban Development, Housing, Construction and Water	Office of rural boreholes in Senegal (Office des Forages Ruraux du Senegal (OFOR)), Ministry of Water and Sanitation	- Support to outsource maintenance of Water supply facilities to private sector
Regional level	Sub-division of Maintenance, Direction of Exploitation and Maintenance, Ministry of Urban Development, Housing, Construction and Water (three in the whole country) Region of Louga, Kaolack and Tambacounda	Sub-division of Maintenance, Direction of Water, Ministry of Water and Sanitation (three in the whole country) Region of Louga, Kaolack and Tambacounda	- Major repair and replacement of water supply facilities (Replacement and repair pump, air lift, replacement and repair of generator) - Maintenance education
Local level	Department Regional of Water, Ministry of Urban Development, Housing, Construction and Water (15 in the whole countries)	Department Regional of Water, Ministry of Water and Sanitation	- Coordination work due to decentralization
	Well and Borehole Brigade, Direction of Exploitation and Maintenance, Ministry of Urban Development, Housing, Construction and Water (15 in the whole countries)	Well and Borehole Brigade, Direction of Water, Ministry of Water and Sanitation (16 in the whole country)	- Minor repair of water supply facilities - Training and awareness raising activities for ASUFOR at village

Source: Interview survey with Direction of Exploitation and Maintenance (during the 1st survey) and

¹⁰ However, the evaluator visited the site again during the 2nd survey and it was confirmed that re-election of ASUFOR had been carried out and population had started to pay water fee.

¹¹ Normally ASUFOR members work without payment but there was a misunderstanding in Missirah that they could have some financial incentive if people became ASUFOR members.

OFOR

Number of staff who are in charge of maintenance work of water supply facilities at the target area is as follows.

Table 10: Number of staff who is involved for maintenance works of water supply facilities at administration level

Organization	Region	Formal staff	Contracted staff	Facilitators
Subdivision of Maintenance	Tambacounda	2 (5)	3 (5)	-
	Louga	11 (14)	17 (14)	-
Well and Borehole Brigade	Tambacounda	2 (3)	2 (6)	- (3)
	Goudiry	1 (3)	3 (2)	1 (3)
	Matam	1 (3)	7 (4)	0 ¹² (2)
	Linguere	2 (4)	12 (8)	3 (4)
	Thies	1 (3)	6 (10)	1 (1)

*Brackets are actual number during the basic design survey in August 2009

Source: Result of interview survey, basic design study report

Compared to the time of completion of the project, the operational segregation has been changed at the central level. The Government of Senegal aims to conduct operation and maintenance of water supply facilities in rural areas by private operators, and have established Office of Rural Boreholes in Senegal (Office des Forages Ruraux du Senegal (hereinafter referred to as “OFOR”)) for carrying out its management, and a part of the organization of the Direction of Exploitation and Maintenance was absorbed into it in January 2015.

Transition of operation and maintenance system of water supply facilities to private operators will be started from the central area (such as the Region of Dakar and Thiés) around the second half of 2015 and it will be gradually expanded nationwide after two to three years. For a few years, operation and maintenance by private operators and current ASUFOR operation and maintenance will be used in parallel as shown in Figure 3. In the area where OFOR has not introduced privatization, Subdivision of Maintenance and Well and Borehole Brigade will continue current operations under the Direction of Water.

In the future, the privatization system will be introduced all regions and all the tasks which Subdivision of Maintenance and Well and Borehole Brigade have currently carried out will be taken over to private operators and Subdivision of Maintenance and Well and Borehole Brigade will be

¹² NGO dispatches a volunteer and carried out awareness raising.

abolished and ASUFOR will exist only as a representative of the water supply organization for the village. OFOR will perform supervision of private operators that have been entrusted with the operation and maintenance of water supply facilities. However, the Government of Senegal will continuously take charge of the cost of large-scale construction work such as the renovation of boreholes.

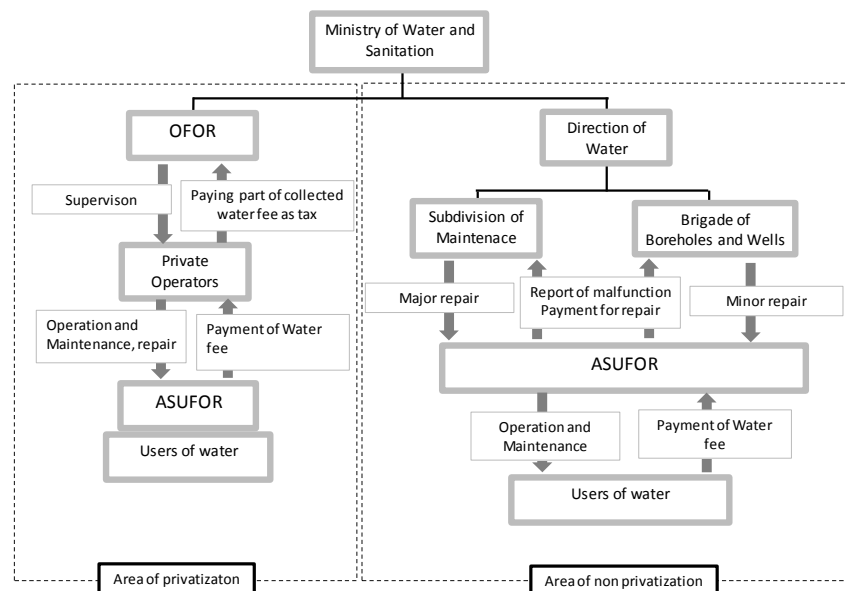


Figure 3: Plan of implementation system for operation and maintenance of water supply facilities at the time of ex-post evaluation

The number of personnel in the Subdivision of Maintenance and the Well and Borehole Brigade has been significantly cut back compared with August 2009 and it is difficult to say that sufficient personnel are assigned to cover the areas for which they are responsible. As the reason for not assigning enough personnel to Subdivision of Maintenance and Well and Borehole Brigade, it is seen that OFOR has been established and Subdivision of Maintenance and Well and Borehole Brigade will be abolished in the future after the privatization of operation and maintenance of water supply facilities.

For the reasons above, operation and maintenance system at water supply facilities do not have any problem at the time of ex-post evaluation, but it can be said that the maintenance system at the administrative level has some small problem. However, the Government of Senegal has already started for improvement initiatives.

3.5.2 Technical Aspects of Operation and Maintenance

1) Technical level of ASUFOR

At the time of planning stage, there were some sites where there was water supply facility but ASUFOR had not been established. For these sites, it was necessary to conduct an awareness raising

for teaching the significance of ASUFOR, the method of the establishment and the concrete activities, etc., encourage the village side sufficiently and establish an operation and maintenance system. In addition, even in some sites where ASUFOR have been already established, the policy of ASUFOR has not been perfectly observed such as payment based on measured rate system or announcement of the activities for population.

At the time of the soft component activities, there were only three sites that were evaluated as excellent (Class A) which passed the question items for judgement of the activity level of ASUFOR more than 10 items; these were Mereto, Taiba Ndiaye and Goumbayel. However, 16 sites have become excellent sites (84.2%) as shown in the results of the survey of 19 sites at the time of the ex-post evaluation.

At the time of ex-post evaluation, measured rate system and preparation of monthly accounting documents have been performed in almost all the sites, and it was confirmed that it has been well established in the target sites. On the other hand, many sites have not conducted 100% collection of water fee and holding regular monthly board committee, etc.

As described above, the number of sites that have problems is a minority and it was confirmed that most of ASUFOR function without any technical problem.

2) Technical level of administrative organization

Before the implementation of the project, most of the personnel in the Direction of Exploitation and Maintenance, Subdivision of Maintenance and Well and Borehole Brigade had conducted mainly repairs of pumps and generators based on the experts in civil engineering and sanitary engineering, and had also been directly involved in the villages and performed the soft component activities such as awareness raising of sanitary concepts and promoting the establishment of participatory management body. In addition, in response to full-fledged decentralization on operation and maintenance of water supply facilities initiated from the mid-1990s, transferring of authority to the local government and support for providing facilities and equipment of regional offices, etc., had been carried out by other donors and Japanese technical cooperation project "PEPTAC1 & 2". At the same time, capacity development of human resources was also underway, and the technical level had gradually improved, even though the technical level was insufficient at that time to practice the establishment of the operation and maintenance system in the village and to support for strengthening the capacity.

According to the interviews at the time of the ex-post evaluation, though OFOR is newly established organization, it was founded by absorbing the previous Direction of Exploitation and Maintenance and it is considered that the technical level of work implementation does not change and there is no problem.

According to interviews with Subdivision of Maintenance, there is no problem to perform major repair which Well and Borehole Brigade cannot deal with. Therefore, it is considered that the Subdivision of Maintenance have adequate technical ability to implement their task.

In addition, according to interviews with the Well and Borehole Brigade, one person has been

assigned at most from the Well and Borehole Brigade and it can be considered the capacity of Well and Borehole Brigade = capabilities of the personnel (the chief of Well and Borehole Brigade). According to the interview, it was found that some chiefs of the Well and Borehole Brigade have abilities of welding, electrical work and plumbing work. However, some chiefs do not have such techniques and the Chiefs in the Department of Tambacounda is also in charge of repairing the facilities in the Department of Goudiry (the works are carried out by only one person for 156 facilities in the Department of Tambacounda and for 63 facilities in the Department of Goudiry). Furthermore, in terms of technical assistance for establishment of operation and maintenance system in the villages and capacity building for ASUFOR, Well and Borehole Brigade are not able to perform regular visits due to the budget constraints and it is not possible to take proactive measures before malfunction of the facilities, and the chief of Well and Borehole Brigade only visits when a malfunction occurs. Therefore, it is considered that there are technological capabilities for performing operations for Well and Borehole Brigade. However, personnel assigned are small in comparison to the range of the task, it is difficult to conduct regular visits to ASUFOR, and there is a problem of the implementation system not being able to perform the techniques sufficiently.

For the reasons above, no problems are observed for the technical capabilities of ASUFOR that perform the operation and maintenance of the water supply facilities. In addition, there is no major problem on the technical level for OFOR (ex Direction of Exploitation and Maintenance), Subdivision of Maintenance and Well and Borehole Brigade, but there is a problem on implementation system in that assigned personnel is too small.

3.5.3 Financial Aspects of Operation and Maintenance

1) Financial aspects of operation and maintenance for water supply facilities

At the time of the basic design study, it was planned that the water fee will be paid by a measured rate system (fee that is converted to per 1m^3 units). Residents can pay maintenance costs because the willingness to pay is a value obtained from social conditions survey and willingness to pay per 1m^3 of water was lower than the water fee (amount which maintain the facility per 1m^3) in any of these sites during the social conditions survey. However, ASUFOR had to secure the financial resources for monitoring and repair by them and it had been assumed that there was a possibility to stop the water supply in some villages which are not able to secure the necessary expense.

According to the interview survey results on the annual expenditure and current bank balance of ASUFOR up to 2013, at the time of the ex-post evaluation, ASUFOR in the target sites which do not exceed minimum bank deposit¹³ of 500,000 FCFA¹⁴ are only Hamdalaye Tessan and Koumpentoume (89.5% of the target sites exceed 500,000 FCFA of the bank balance).

In addition, measured rate system has been already established as the method of billing water supply

¹³ The minimum banks deposit is defined in the question items for judgement of the activity level of ASUFOR prepared by the technical cooperation project "PEPTAC1".

¹⁴ 1FCFA=approximately 0.5 yen (March, 2015)

fee. In the public fountain, a manager is assigned at each tap and they manage the public fountain voluntary in exchange for a discount in the water supply rate. Furthermore, in the site where personal taps were installed after the project, water supply meters were installed. Although there is always downward pressure of the water supply rate from population, the financial conditions of own ASUFOR were always taken into account at each site and the water supply rates have been set.

For the water supply fee, there is no problem on collection of water fee from public fountains and personal taps though there is sometime delay such as during the rainy season¹⁵ when cash is insufficient. During non-payment, ASUFOR urges payment by stopping water supply. Therefore, 100% of the water fee has been recovered in about 70% of the target sites. The main reason for the unpaid portion is that residents do not pay the water fee for utilization of watering places for livestock and a few people do not pay the fee.

In this way, about 90% of ASUFOR in the target sites are financially sound. Water fees are set properly, the water supply fee is properly collected and about 90% of bank balance of ASUFOR is properly managed.

2) Financial aspects of administrative organizations

The budget of the last three years in the Direction of Exploitation and Maintenance is as follows.

Table 11: Transition of budget for the Direction of Exploitation and Maintenance (at the time of 1st survey) from 2012 to 2014

Unit: million FCFA

	Operation budget	Investment budget
2012	92.4	2,230
2013	29.2	2,680
2014	29.2	2,060

Source: Direction of Exploitation and Maintenance (at the time of 1st survey)

In the Direction of Exploitation and Maintenance, there was the investment budget for the purchase of equipment, installation of water supply meters and personal taps, the amount had not change significantly. On the other hand, the operating budget had been significantly reduced from 2013. It is considered that the budget for the Direction of Exploitation and Maintenance had been reduced gradually due to the establishment of OFOR. Therefore, it is difficult to contribute fully for the maintenance of water supply facilities.

In January 2015, OFOR formally absorbed a part of the organization of the Direction of Exploitation and Maintenance, and currently, the Direction of Exploitation and Maintenance does not exist. For OFOR, the operation and maintenance of water supply facilities will be entrusted to private operators, and it is planning to collect taxes as a part of water supply fee that private operators collect from

¹⁵ In most of the village in Senegal, People earn most of their income for one year to sell agricultural product cultivated in the end of rainy season. Therefore, most of people run out their stock mostly close to the end of the rainy season that agricultural crop is grown.

users.

Budget overview of the Subdivision of Maintenance and Well and Borehole Brigade is as follows.

Table 12: Annual budget of Subdivision of Maintenance and Well and Borehole Brigade

	Annual budget
Subdivision of Maintenance in Tambacounda	2.35 million FCFA/year
Subdivision of Maintenance in Louga	Approx. 2 million FCFA/year
Well and Borehole Brigade in Tambacounda	Approx. 1 million FCFA/year
Well and Borehole Brigade in Goudiry	Approx. 1 million FCFA/year
Well and Borehole Brigade in Matam	Approx. 1 million FCFA/year
Well and Borehole Brigade in Thies	Approx. 1 million FCFA/year
Well and Borehole Brigade in Linguere	Approx. 1 million FCFA/year

Source: Interview with Subdivision of Maintenance and Well and Borehole Brigade

However, ASUFOR is supposed to bear the costs, except in the case of major renovation, etc., and the cost to support the maintenance of water supply facilities is not included in the budget of Subdivision of Maintenance and Well and Borehole Brigade. These budgets are for fuel costs for vehicles, expense for office supplies and others. Therefore, it is impossible to spend fuel costs required to regular visit of sites from the budget situation such as it is, and it is only possible to accommodate to the repair request from each ASUFOR (if repairs are required, ASUFOR has to pay for the fuel cost). Furthermore, it becomes impossible to conduct preventive activity to protect from the malfunction of water supply facilities.

As ownership of Subdivision of Maintenance and Well and Borehole Brigade have been changed in January 2015 from being under the umbrella of the Direction of Exploitation and Maintenance to being under the umbrella of the Direction of Water and it is not known how the situation will change in the future.

For the reasons above, there is no major problem regarding the financial aspect of the ASUFOR for the operation and maintenance of water supply facilities. On the other hand, for the administrative side (Subdivision of Maintenance and Well and Borehole Brigade) which perform the support of the maintenance of water supply facilities, there are big financial challenges and budget constraints.

3.5.4 Current Status of Operation and Maintenance

For the constructed water supply facilities in this project, there is a problem in which a renovated borehole in Koumpentoume is not functional. However, there is no major malfunction so far and problems before implementing the project have already been solved.

<Summary of sustainability> For system of operation and maintenance, there is no problem at the level of community organizations and the target sites, but number of personnel has been reduced at the local level due to the influence of future privatization at the administrative organization.

Especially, human resources are lacking at the Subdivision of Maintenance and Well and Borehole Brigade which are directly responsible to maintain the water supply facilities and existing problems. There is no major problem regarding technical aspects though there is a problem to make the techniques functional. Concerning the financial aspects for the operation and maintenance, there is a lack of budget in the administrative side, and sufficient supports have not been performed, such as regular visits to implement preventative measures. In addition, privatization of maintenance work of the water supply facilities is in the planning stage and it is too early to expect some improvement at the time of ex-post evaluation. In this way, although some problems exist at the administrative side, ASUFOR at each target site is functioning well and major problems have not been found in the institutional, technical and financial aspects. As a result, there is no special major problem in operation and maintenance situation of the water supply facilities.

For the reasons above, no major problems have been observed in the institutional, technical and financial aspects of the operation and maintenance system for the water supply facilities. However, some minor problems have been observed in terms of institutional, technical and financial aspects on the administrative side which support the operation and maintenance of ASUFOR. Therefore sustainability of the project effects is fair.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

The objective of this project is to supply sustainable and safe water, and to contribute to the economic sustainability through increasing the number of livestock and reducing hard work by reducing the time to fetch water through renovating and expanding the existing water supply facilities in the target sites mainly in the Region of Tambacounda, Senegal.

The project is consistent with the development policy and the development needs of Senegal and the development policy of Japan, and the relevance is high.

The project cost was lower than planned, but the project period was slightly longer than planned due to security problems in Senegal and efficiency was fair.

Although one of the effect indicators, the “number of people who have access to safe water” in the target area is lower than the target value, all other indicators have been achieved. In addition, there is indication of positive impact such as the increasing number of livestock and the reduction of time to fetch water, and there are also no negative impacts such as environmental effects, etc. Therefore, the effectiveness and the impacts are high.

Concerning the sustainability of the project, human resource is insufficient in administrative organization, especially with regard to Subdivision of Maintenance and Well and Borehole Brigade which are directly in charge of maintenance of water supply facilities, and the budget is also not allocated sufficiently. However, ASUFOR which is in charge of the operation and maintenance of the water supply facilities in each target site, functions sufficiently and there is no serious problem. Therefore, the sustainability is fair.

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

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

1) Urgent improvement of water supply facilities management system of administrative side

As analyzed in the chapter of Sustainability, at the time of ex-post evaluation, there are problems on personnel and financial aspect for Subdivision of Maintenance and Well and Borehole Brigade. Therefore, there is room for improvement such as an increase and budget and personnel for the maintenance system on the administrative side. In order to solve this problem, the Ministry of Water and Sanitation has already founded OFOR to carry out the privatization of operation and management of water supply facilities. It is necessary to rebuild the system for the maintenance of the water supply facilities as soon as possible by implementing the operation and maintenance of water supply facilities through OFOR as planned.

In addition, although the privatization of operation and management is likely to go relatively smooth in the water supply facilities in the central area of Senegal because the area has many users and also has room for financial condition. However, private operators may not show much interest to carry out the operation and maintenance of the water supply facilities in the area where the poor are the majority and access to water supply facilities is difficult, and there is a possibility that introduction of the privatization does not go smoothly. Therefore, it is necessary to consider measures such as the enforcement of introduction, privatization and continuation of existing systems in parallel, allocate the personnel and budget saved in the privatization introduced area to non privatization introducing area.

2) Support for the site where the problem is seen

Currently, due to problems of malfunction of water supply facilities and water quality respectively, sufficient water supply has not been obtained in Koumpentoume and Colibantang. It is necessary that Direction of Water has to consider how to deal with these matters as soon as possible and to take necessary measures such as conducting a field survey and repair, etc. In addition, problems in the management of ASUFOR are seen in Hamdalaye Tessan and Missirah, and it is necessary to cooperate with Prefectural government and Well and Borehole Brigade for solving the problems as soon as possible.

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

1) Project planning which thoroughly examines the input from related past projects and their effects, and timeliness of the implementation

Before implementing the project, Japan had continued supports for the water supply sector in Senegal

for many years. In addition, for the purpose of reinforcing the capacity of operation and maintenance of ASUFOR, the technical cooperation projects “PEPTAC1 & 2” have been carried out. In the results of these projects, know-how such as knowledge and experience for organizing ASUFOR has been accumulated for many years in Senegal. These aspects have been utilized for the project formulation and the project design for the implementation of the project and it has led to steady operation and maintenance of water supply facilities by ASUFOR. Thus, it is possible to carry out projects efficiently by timely implementation and continue related projects such as grant aid projects introduced after implementation of the technical cooperation projects and soft components are reinforced.

(2) Importance of developing capacity evaluation criteria of water users association (ASUFOR)

In Senegal, the technical projects “PEPTAC1 & 2” had been carried out for the purpose of capacity building of ASUFOR. In the contents of these, the question items for judgement of the activity level of ASUFOR have been developed to measure the ability as a reference to determine whether ASUFOR functions properly for operation and maintenance of water supply facility, and it is possible to accurately evaluate the current activity and the ability of ASUFOR if it is utilized. In case operational status of such facilities is evaluated, it is useful to develop such an accurate evaluation criteria in advance and it will be possible to be evaluated properly by a third party.

(3) Effect of introducing measured rate system as the national policy for billing method of water supply facilities

In Senegal, efforts have been made for introduction of measured rate system which utilization fee for water supply facilities is paid depends on the used amount of water as a billing system for many years as government policy, a number of projects for water supply sector, including the technical cooperation projects “PEPTAC1 & 2”, and attempts of their dissemination have continued. In the consequence of these achievements, a measured rate system has been established with respect for payment of the water supply fee even in the rural area of Senegal. In the soft component activities of the project, the measured rate system has been taught as the payment system. When the measured rate system has been introduced, ASUFOR can not only collect sufficient cost for operation and maintenance from the users, but the life of water supply facilities can also be extended by not using excess water. However, according to the ex-post evaluation results of other countries, there were some cases in which it was difficult to introduce a measured rate system at individual sites due to opposition from many residents who utilize much water. Therefore, it is necessary to consider introducing the measured rate system at all sites as the national policy.

End

Republic of Senegal

Ex-Post Evaluation of Technical Cooperation Project
“Project for Sustainable Rural Development”

External Evaluator: Satoshi Nagashima, ICONS Inc.

0. Summary

The Project for Sustainable Rural Development (Projet de Développement Rural Durable (hereinafter referred to as the “PDRD”)) is aimed at establishing a foundation to disseminate and expand a community development method built on the experience of operation and management of water supply facilities in the Louga Region and related organization activities.

The Project was consistent with the government policies of Senegal and Japan while the assessment of development needs and examination of project planning and approach at the planning stage all proved to be insufficient, which adversely affect the effectiveness, impact and sustainability of the project. Thus, its relevance is rated to be fair.

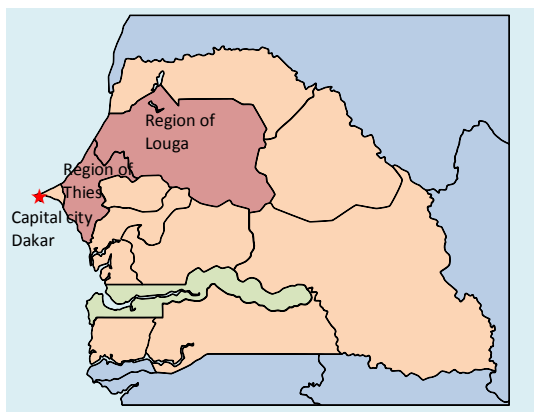
Regarding the Project purpose, establishing “community development activities led by local population” (hereinafter referred to as the “PDRD approach”) in the Louga Region, the development of human resources and preparation of development tools which constitute the outputs have been completed, though establishing a foundation of the system to disseminate and expand the PDRD approach (hereinafter referred to as the “diffusion system”) was not sufficient before the termination of the Project. Thus the Project purpose remains partly unachieved. Accordingly, the Overall Goal aimed at disseminating the PDRD approach throughout the target region, also remains unachieved and theme for the effectiveness and impact are rated to be fair.

The Project period was extended to reinforce the diffusion capacity of the PDRD approach and secure budget and the project cost increased as against the plan. From the view point of efficiency, the Project efficiency is rated to be low.

In terms of sustainability, the Project has problems such as lack of the policy and system to promote the dissemination and expansion of PDRD approach (policy and institutional aspects), insufficient intuitional capacities of the implement agencies which execute and support the diffusion of the PDRD approach (organizational aspects) and budget constraints (financial aspects). Thus and the sustainability is rated to be low.

In conclusion, the overall rating of the project is unsatisfactory.

1. Project Description



Project Location(s)



Watermelon cultivation at a community farm in one of the target sites, Ndate Bélakhor

1.1 Background

The Government of Senegal had constructed 1,500 water points within semi-arid areas of the country thanks to the cooperation of various donors, even before the project implementation. Japan has also successfully constructed more than 120 water supply points through grant aid schemes since the 1970s. This work has seen water supply management successfully improved through cooperation by donors such as establishing an Association of Users of Boreholes (Association des Usagers de Forages) (hereinafter referred to as “ASUFOR”) from 1996 for “autonomous operation and management of water supply facilities”, “billing by metered systems” and “democratic organization management”.

Accordingly, technical cooperation projects “Project for safe water for all and support for community activities” (Projet d’Eau Potable pour Tous et Appui aux Activités Communautaires) (hereinafter referred to as “PEPTAC”) has been performed by JICA to establish a system of sustainable water use by setting up ASUFOR over two phases from 2003 to 2010 at 25 target sites out of the water supply facilities constructed by Japan.

During the 1st phase of PEPTAC (hereinafter referred to as “PEPTAC1”), community development activities such as vegetable farming and livestock breeding were also attempted at certain target sites with effective ASUFOR management. Consequently, some effects have been confirmed in terms of using surplus funds collected as water supply fees more efficiently for community development activities and the potential to use the PDRD approach as implied by utilizing accumulated ability and experience related to organizational management of ASUFOR. From this perspective, the project was requested to disseminate sustainable rural development activities based on ASUFOR (Diffusion of the PDRD approach) in villages of the Louga Region where water sources were normally limited.

1.2 Project Outline

Overall Goal		Achieve community development in the Louga region through experience in maintaining water supply facilities and collective activities
Project Purpose		Define benchmarks to achieve community development in Louga through experience in maintaining water supply facilities and collective activities
Output(s)	Output 1	The persons responsible for diffusing community development are trained.
	Output 2	Tools (Guidebook & Technical sheets for community development) are drafted to efficiently community development upon population initiative.
	Output 3	The diffusion system of the development model elaborated by the Project ¹ is strengthened.
Total cost (Japanese Side)		510 million yen
Period of Cooperation		March, 2008 - March, 2011 (Extension phase) April 2011 - March 2012
Implementing Agency		Direction of Analysis, Forecast and Statistics, Ministry of Rural Development and Agriculture Regional Direction of Rural Development in Louga (Direction Régional du Développement Rural) (hereinafter referred to as “DRRD”) and Departmental Service of Rural Development in Louga, Linguere and Kebemer (Service Départemental du Développement Rural) (hereinafter referred to as “SDDR”), Ministry of Rural Development and Agriculture
Supporting Agency/Organization in Japan		Earth and Human Corporation
Related Projects		<u>Technical assistance projects</u>

¹ In the Project, the term “PDRD model” was utilized in the planning stage, reflecting plans to pick up some success examples by implementing experimental sustainable rural development methods by ASUFOR (= PDRD approach) at some rural villages throughout the entire Louga Region, the logic is generalized (= Modeling the PDRD approach) and disseminating and expanding it to other villages in the Louga Region. However, modeling of the project was only performed at the end of the project. Therefore, the term “PDRD model” is utilized to indicate sustainable rural development which was aimed at the target sites in the project, to cover the description between planning and ordinal phases, and the “PDRD approach” is utilized for the description after the extension phase.

	<ul style="list-style-type: none"> - Project for safe water for all and assisting community activities (PEPTAC1) (2003-2006) - Project for safe water for all and assisting community activities Phase 2 (PEPTAC 2) (2006-2010) - Project to Promote rural development in harmonization with Ecology and Economy: Promotion of Ecovillages (2012-2016 (Plan)) <p><u>Grant-aid projects</u></p> <ul style="list-style-type: none"> - Project for rural water supply (1st - 12th phases) (1979-2000) - The Project to Supply Drinking Water in the region of Tambacounda (2009-2012) <p><u>Projects by other international organization and aid agencies</u></p> <ul style="list-style-type: none"> - Millennium Village Project (MVP-UNDP) by the United Nation Development Plan (UNDP) (2006-2011)
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1.3 Outline of the Terminal Evaluation

1.3.1 Achievement Status of Project Purpose at the time of Terminal Evaluation

It was considered that the project purpose would be achieved by 1) completing the capacity building of the required human resources² (Output 1), 2) development of a community development guideline (hereinafter referred to as “Guideline”) and technical sheets for community development (hereinafter referred to as “Technical Sheets”)(Output 2) and the establishment of an organizational framework to promote dissemination of the development model (Output 3). At the time of the terminal evaluation of the ordinary phase³, it was evaluated that Outputs 2 and 3 had been achieved and Output 1 would be achieved by the end of the project.

1.3.2 Achievement Status of Overall Goal at the time of Terminal Evaluation

To apply the PDRD model to other rural development projects in the Louga Region, a

² In the Project, capacity building of administrative organization was carried out to diffuse the project. In addition, training sessions were also organized at the target sites for leaders of some activity groups which had existed even before the project in the target villages (hereinafter referred to as “Activity Group Leaders”), and capacity building for those who would disseminate techniques of organizational and technical aspects on PDRD (hereinafter referred to as “Organizational Leaders” and “Technical Leaders”).

³ In the project reports, e.g. final reports, the original project period was called “phase 1” and extension periods were called “extension phases”. However, the term “phase” is normally utilized for projects which are divided into phases (i.e. cut into two different projects) and the original project period is known as “ordinary phase” in this report.

protocol was concluded between JICA and the secretariat of the Regional Council of the Louga Region to cooperate to introduce the PDRD model in the Louga Region. In addition, the indicator for the Overall Goal was about to be realized, since there was the potential to introduce the PDRD model to the Millennium Village Project (hereinafter referred to as “MVP”) conducted by the United Nation Development Program (UNDP) and Guideline was officially approved by the Ministry of Agriculture.

1.3.3 Recommendations at the time of Terminal Evaluation

The following recommendations were made⁴:

- (1) It should be confirmed through site activities whether the contents of Technical Sheets reflect the opinions of the population.
- (2) There was a need to assess the capacity building outcomes of Organizational Leaders and Technical Leaders by the end of the project.
- (3) To achieve the Overall Goal, there is a need to establish a council led by the Regional Development Agency (Agence Régionale de Développement) (hereinafter referred to as “ARD”)⁵ to implement the PDRD model until the end of the project, with organizations involved in rural development in the Louga Region.
- (4) The Guideline must include the process of concluding a protocol with organizations implementing the PDRD model.
- (5) To reinforce the sustainability of the PDRD model, there is a need to verify the following matters and extend the project period: 1) Strengthening the diffusion capacity of the PDRD model through activities of guideline trial sites performed by the counterpart, 2) budgetary measures by central government, local governments and donors for sustainable implementation of the PDRD model, 3) validation of a model to tackle community living improvements, leveraging experience of organizations and groups⁶ of ASUFOR and 4) strengthening the integration of the PDRD model in the rural development plan prepared by the Rural Community⁷.
- (6) There is a need to widen activities which keep harmony with the principal of the PDRD model in the Guideline trial sites or future sites.
- (7) There is a need to examine strategy to disseminate the PDRD model nationwide.

⁴ Concerning the contents of the recommendations, a Community Development Review Committee was established for (3) and it was decided to extend the project period for (5). Variation of the activities was extended by adding some techniques in “technical sheets” during the extension phase for (6).

⁵ Regional Agency of Development (ARD) is formed in each region to prepare a development plan for local government and support its implementation.

⁶ Groups which originally existed and conducted community development activities under ASUFOR

⁷ “Rural Community” was included in the previous local administrative division in Senegal and comprised organizations governing villages under Prefectures, Departments and Regions. Due to the decentralization policy change in Senegal in 2014, the administrative division under Prefectures was rearranged as “Communes” and it has no longer existed.

2. Outline of the Evaluation Study

2.1 External Evaluator

Satoshi Nagashima, ICONS Inc.

2.2 Duration of Evaluation Study

Duration of the Study: July 2014 - June 2015
Duration of the Field Study: 31 August, 2014 -25 September, 2014
8 February, 2015 - 25 February, 2015⁸

3. Results of the Evaluation (Overall Rating: D⁹)

3.1 Relevance (Rating: ②¹⁰)

3.1.1 Relevance to the Development Plan of Senegal

According to the ex-ante evaluation sheet, it was confirmed that the agricultural sector was positioned as one of the key priority sectors in the Poverty Reduction Strategy Paper II (PRSP II) prepared in 2005. In addition, the project was considered to contribute to achieve some proprietary targets, such as boosting living standards of the rural population by creating an income source, diversifying agricultural production and improving the food self-sufficiency ratio, etc. as part of a basic plan for the rural development sector “Return to Agriculture (Plan de Retour vers l’Agriculture)” (Plan REVA) prepared in Senegal in 2006 based on PRSP.

At the time of completion of the project¹¹, since the successive PRSP II policy in Senegal was still being developed, the importance of the agricultural sector has remained relatively constant and it has focused on overcoming the weakness of agricultural activities, consolidating and modernizing agricultural production, boosting and diversifying agricultural income and strengthening the role of farmers’ organizations etc. as measures to activate the rural economy.

As described above, the agricultural sector in Senegal basically emphasized bottom-up type social development during both the planning and completion periods and it was confirmed that the development policy in Senegal was consistent with the Project Purpose of this project. Accordingly, consistency with the development policy is high.

⁸ It was carried out simultaneously with the ex-post evaluation of the grant aid project “the Project to Supply of Drinking Water in the region of Tambacounda”.

⁹ A: Highly satisfactory, B: Satisfactory, C: Partially satisfactory, D: Unsatisfactory

¹⁰ ③: High, ② Fair, ① Low

¹¹ PRSP II was the policy between 2006 and 2010 but the successive policy “National Strategy for Economic and Social Development” (hereinafter referred to as “NSESD”)(2013-2017) had not been prepared at the time of project completion.

3.1.2 Relevance to the Development Needs of Senegal

According to the ex-ante evaluation sheet at the planning stage, the target area of the project, the Louga Region, was considered to be one of the Regions suffering high levels of poverty in Senegal and a suitable target area.

When validating the needs upon completion of the project, in the rural area of semi-arid regions of Senegal, including the Louga Region, the lack of water during the dry season was confirmed, lasting for most of the year, except for a rainy season of three to four months. However, if the water from the water supply facility were utilized for agriculture, the water fee would be high and it would be difficult to boost the rate of return. In addition, it may shorten the service life of water supply facilities and unlimited use of water at water supply facilities for agriculture is unfeasible. Accordingly, there is no major income source in the rural area of semi-arid regions during the dry season and such areas are generally considered poverty zones.

According to interviews conducted as part of the ex-post evaluation at DRDR, people are generally engaged in agriculture depending on rainwater in rural areas and semi-arid regions of Senegal and most people lack any major income source during the dry season. Where the water in water supply facilities is used for agriculture, significant expansion is difficult given the limited quantity of water and the high need to diversify non-agricultural production activities was found out¹². Accordingly, the project aimed to “improve livelihoods through community development with appropriate water use under scarce water conditions” and community development which reduces the poverty rate by increasing income sources during the dry season, in which the revenue particularly decreases (development of the PDRD approach and diffusion of the model). Accordingly, the project remains consistent with the needs of the plan during the planning and completion of the project in the target area.

However, at the time of ex-post evaluation, the fact that the “target area mainly covers areas of high poverty” at planning stage was reflected in the following statistical data obtained from a 2011 Senegal poverty monitoring survey by the National Agency of Statistics in Senegal.

- In the Louga Region, enrollment and literacy rates, in the 12th and 10th grades respectively, are among the lowest nationwide (14 regions)¹³.

¹² The interview survey revealed the following problems and challenges for agriculture in the Louga Region: 1) lack of a water supply source when rainfall is scarce, 2) effective utilization of water, 3) difficulty in obtaining good quality seeds, 4) problem of vermin, 5) lack of measures to diversify productive activities, 6) lack of progress in organizing farmers, 7) impossible to utilize borehole water for agricultural water due to chlorination.

¹³ However, it is difficult to confirm the direct causal relationship between these factors and poverty.

- In the Louga Region, the poverty encounter rate¹⁴ is next to the Region of Dakar and is 2nd grade from the lowest (Less poor) and also lower than national average.

Accordingly, it was difficult to obtain evidence to support the “Region with a particularly high poverty level nationwide” which was cited as a reason for selecting the Louga Region during the planning stage. In various materials during the planning stage, there was no sufficient evidence that the Louga Region suffered from particularly high poverty level, nor was verification during the planning stage when selecting the target sites sufficient.

3.1.3 Relevance to Japan’s ODA Policy

The Government of Japan positioned “Improving living standards of the poor in rural areas” as one of its priority cooperation sectors in the “Country Assistance Policy for Senegal”. In addition, in the “Country Assistance Strategy for Senegal” of JICA, based on the priority cooperation sector above, “Rural Development” was one of the development targets and a project positioned in a cooperation program of “Sustainable resource management and improvement of income, diversification”.

Accordingly, the Japanese policy of “Improving living standards of the poor in rural areas” was a priority cooperation sector during the project implementation stage, consistent with a project targeting community development utilizing surplus water and had high consistency with Japan’s ODA policy.

3.1.4 Appropriateness of the project planning and approach

At the time of the ex-post evaluation, the original Overall Goal, which aimed to disseminate sustainable rural development based on ASUFOR in the entire Louga Region (= PDRD approach), remained unachieved (see chapter of “Effectiveness and Impact”). The project revealed some problems in the planning and approach, the factors of which are analyzed below.

¹⁴ This percentage is below the poverty line. Although the benchmark differs by countries and organizations, from an international perspective, the poverty line is defined as a layer whereby people live on less than US\$1/day of income.

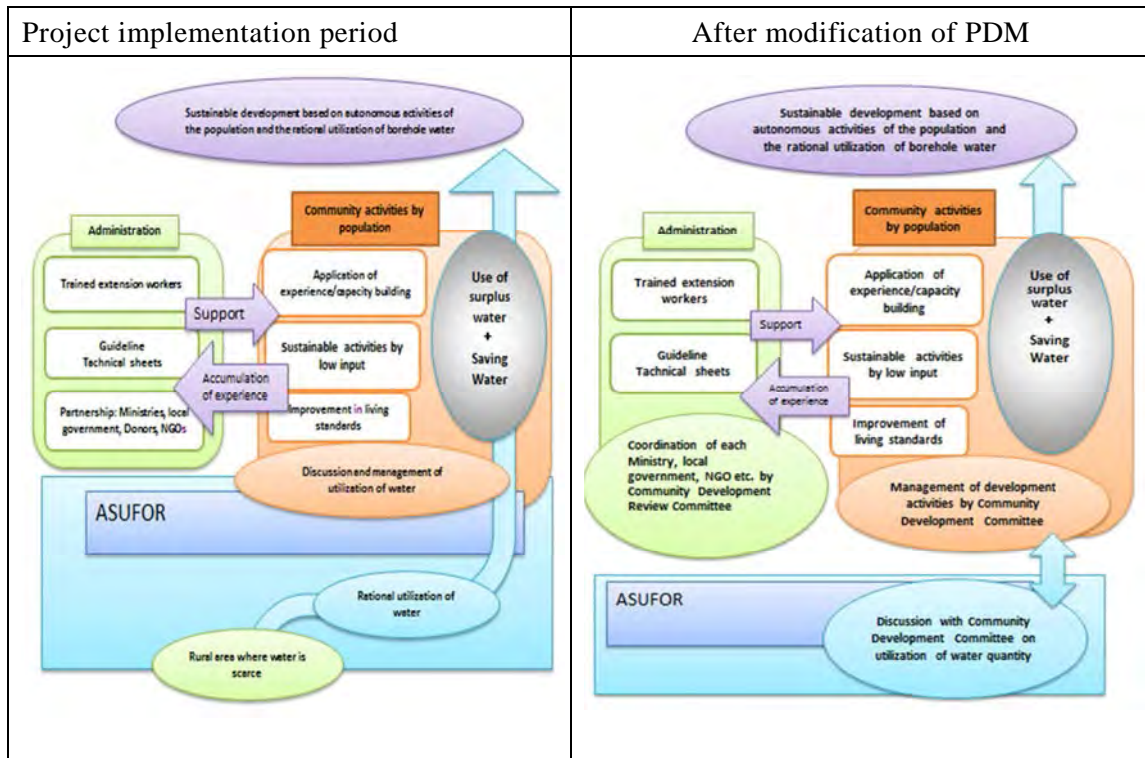


Figure 1: Connectional diagram of the PDRD model (Project implementation period and Current situation)

Source: Left figure is created by the evaluator based on the final report, right figure is created by the evaluator

(1) Lack of verification on the project planning at the planning stage

As described above, the prior PEPTAC1 technical cooperation project showed the potential to implement sustainable rural development utilizing organizational and financial capacities of ASUFOR, since some effects emerged, including the effective use of surplus funds collected as a water supply fee for community development activities by ASUFOR in some villages assisted by the project. The project included plans to pick up some success examples by implementing experimental sustainable rural development methods by ASUFOR (= PDRD approach) at some rural villages throughout the Louga Region, with generalized logic (= Modeling of the PDRD approach) and disseminating and expanding the same to other villages in the Louga Region. However, the Project Design Matrix (hereinafter referred to as “PDM”) at the planning stage was significantly modified since the project was not implemented as planned.

In the following chapter, insufficient matters are analyzed as part of verification of the project planning. Further, the concept of “utilizing surplus water for rural development” remains in the project, without any intentional downward adjustment of

Overall Goal and the Project Purpose¹⁵.

1) Lack of confirmation of mandate of each Agency

a) Relevant Ministries and Agencies

During the implementation period of the prior technical cooperation projects, PEPTAC1, ASUFOR was managed under the jurisdiction of the Ministry of Agriculture and Water, which integrated the agriculture and water sectors and saw relatively easy communication between the two departments, without any controversy in rural development utilizing ASUFOR. However, at the time of this project planning stage, the Ministries of Agriculture and Water were separated and the agencies tasked with overseeing this project included the Ministry of Rural Development and Agriculture (at that time of ex-ante evaluation stage, the Ministry names changed frequently, which will be referred to as “the Ministry of Agriculture”) and ASUFOR under the jurisdiction of the Ministry of Rural Water and National Water System (in the beginning of the project, the name of the Ministry have changed frequently and it will be referred to as “the Ministry of Water”). During the planning stage, there was no adequate verification and adjustment between the two ministries allowing ASUFOR, which was under the jurisdiction of the Ministry of Water, to be utilized by the project managed by the Ministry of Agriculture. Accordingly, immediately after the beginning of the project, no approval by the Ministry of Water was given that ASUFOR would be positioned as the main body of community development activities within the project framework. It seems that there were some insufficient factors such as confirmation of the mandate of the executing agency and confirmation of jurisdiction of Ministries of ASUFOR that became the stakeholders and coordination to involve various Ministries.

b) In the Ministry of Agriculture

As the main task of the Direction of Analysis, Forecast and Statistics in the Ministry of Agriculture, Senegal law sets out tasks for development policy and planning for the agricultural sector (review, implementation and evaluation, follow-up), tasks for programs and projects (implementation, evaluation and fund preparation), tasks for agricultural statistics (collection, analysis, processing and announcement), tasks for

¹⁵ Original Project Purpose was “Define benchmarks to achieve community development in Louga utilizing the fund and organizational capacity of ASUFOR” but the wording of ASUFOR was deleted and it was changed to “Define benchmarks to achieve community development in Louga through the maintenance experiences of water supply facilities and collective activities”. In addition, the original Overall Goal was “Achieve community development in the Louga region utilizing the fund and the organizational capacity of ASUFOR” but the wording of ASUFOR was also deleted and reworded as “Achieve community development in the Louga region through experience in maintaining water supply facilities and collective activities”.

human resource development (planning) and the Direction is also one of the directions to apply and adjust the framework on sectoral medium-term budget. However, the main task is to prepare agricultural statistics and the Direction lacked its own investment budget to implement projects such as this one, which meant the Direction played a role in various coordination works within and outside the Ministry and a focal point for JICA at a central government level since the project planning stage. However, from the perspective of disseminating the PDRD model as the Overall project Goal, it was not possible to fully play the role. For these reasons, confirmation as to whether the Direction could play a role in reflecting on and promoting policies and plans at the central government level during the planning stage was insufficient.

c) DRDR/SDDR/Rural Community

Concerning DRDR/SDDR, which had been positioned as the main counterpart organization for the project at the target site level, the main tasks involved examining the project implementation for agricultural policy and gathering the required information to evaluate the implementation status for agricultural policy. According to the final project report, the DRDR actively participated in various field level activities and was responsible for coordination works with related organizations on a regional level. Though DRDR/SDDR showed significant intention to disseminate the PDRD model, work to integrate the PDRD diffusion plan into the regional development plan or acquire a community development budget was outside the original mandate and meant they could not contribute sufficiently to establish the PDRD model diffusion system.

Conversely, ARD played a role in preparing a development plan for the target sites (Rural Community), while the Regional Council and Rural Communities had regional development budgets. To disseminate the PDRD model in the Louga Region, there was a need to play roles for planning and requesting budgets request for the diffusion systems there. Since the DRDR/SDDR lacked the authority to allocate a regional development budget to each target site and include the diffusion plan of the PDRD model into the regional development plan, the coordination capacity of DRDR/SDDR on a regional level was insufficient.

d) ASUFOR

During the project planning stage, it had been assumed that efforts would be made to exploit the organizational strength of ASUFOR. However, following the results of the field survey conducted by the project team in early 2008, the potential to impair operations and the maintenance of water supply facilities previously established by ASUFOR arose, due to the inability to spend sufficient time and effort if resources were

channeled toward community development activities. Accordingly, the inability to rely on ASUFOR organizations as originally assumed emerged.

In addition, during the project planning stage, it was assumed that community development activities taking advantage of the financial capacities of ASUFOR and being independent of government financial support would emerge¹⁶. However, the director of the Direction of Exploitation and Maintenance, the Ministry of Water changed after the project got underway and it was decided that it would not be possible to use ASUFOR other than to operate and maintain water supply facilities as the policy of new director. In addition, in ASUFOR-related laws and regulations, which came into effect in 2008, it was enacted that “ASUFOR funds should not be used other than for the water supply sector”. Accordingly, it emerged that it was not possible to make use of ASUFOR funds for community development activities in the project after it got underway.

2) Lack of examination on the budget to model the PDRD Approach

In PEPTAC1, which was the prior project to this one, successful cases of community development activities were only recorded on an individual site level. Conversely, despite attempts to model the PDRD approach and disseminate it to the whole Louga Region in the project, there was insufficient consideration in the planning stage such as which organizations would bear the budget for activity and monitoring costs to disseminate the model throughout the region or which organizations would play the main roles in diffusion activities.

In the project, the target was “low-input and circulation type¹⁷”. Given the low input, income could not be significantly increased and economic incentives encouraging the local population in the surrounding area to imitate the techniques voluntarily was insufficient. It was also difficult to achieve sustainable diffusion among rural areas given the inability to utilize ASUFOR funds. Accordingly, administrative support and budget were essential for diffusing the approach.

For the above reasons, there were problems at the planning stage, such as the inability to establish a sufficient basis for diffusing the PDRD approach for the reason of 1) above and insufficient budget to cover the cost (of activities and monitoring) required to model the PDRD approach due to reason 2) above. These factors were considered

¹⁶ In the ex-ante evaluation sheet of the project, it was indicated that “government policy will not change to implement “community activities” by utilizing ASUFOR funds”.

¹⁷ Reducing the quantity of water from supply facilities for agriculture, chemical fertilizer and pesticide by soil development utilizing compost with manure of livestock and dead leaves, creating effective water supply facilities, protection against vermin using the net etc.

attributable to the non-achievement of the Overall Goal of the project.

(2) Verification of the approach during the project implementation

To cope with the problems of 3.1.4 (1) above, the project plan (including PDM) that had been initially expected to disseminate and develop the rural development model based on ASUFOR had to be significantly modified after the beginning of the project. However, even the modified Overall Goal remained unachieved at the time of ex-post evaluation and an analysis is conducted for remaining areas of insufficiency for the approach during the project period.

1) Insufficient plan for the alternative ASUFOR implementing body

a) Strengthening of staffing and organizational skills

As mentioned above, it was difficult to adopt an approach which involved sustainable rural development via an overall ASUFOR initiative and the prerequisite for the project was lost. Conversely, the concept of “Rural development utilizing surplus water” remained and it was decided to newly organize Community Development Committees (Comité du Développement Communautaire (CDC)) as an alternative entity of ASUFOR. However, most human resources were arranged in ASUFOR (particularly in the target sites of remote areas) and it was difficult to newly organize CDC due to the difficulty in securing new organization personnel. In addition, it was also difficult to strengthen the organizational capacity from scratch to the ASUFOR level that it had passed nearly 20 years after its establishment during the two-year project period (which was later extended to three years). Accordingly, the end of the final report concluded that CDC had not been fully functional. Even at the time of ex-post evaluation, there was no functioning CDC.

b) Budget to cover the costs of community development activities

CDC, as mentioned above, lacked its own financial resources such as the ASUFOR since its establishment, which made it difficult for organizations to cover the costs of community development activities after PDM had changed. Accordingly, attempts were made for the project team to allocate a budget for community development activities costs from the Regional Council in Louga or the Rural Community during the project period. However, no budget had been allocated from the Regional Council in Louga or the Rural Community during the project period and this matter ultimately remained pending, due to the personnel change, etc. at the time of regime change following the results of the election performed in March 2012. In addition, the change in Senegal’s decentralization policy in 2014 eliminated the Regional Council in Louga and Rural

Community, with respective authority for both transferred to Departmental Council and Commune. Accordingly, at the time of ex-post evaluation, there was no budget source to cover the cost of community development activities under the project.

2) Insufficient concepts of the PDRD model diffusion system

A wide range of technologies were used to handle the diffusion activities of the PDRD approach, such as agriculture, livestock and community development. However, given the lack of an implementing body to coordinate community development activities in multiple sectors in Senegal, a “Community Development Review Committee” was established in the Louga Region apart from CDC mentioned above during the period of project implementation, although this committee was not utilized other than for the project and also lacked an activity budget during the ex-post evaluation, which hampered its function and prevented it from playing the expected role. In addition, the changed decentralization policy in Senegal since the second half of 2014 saw the main actor of local government transferred from the Regions to the Departments and the Community Development Review Committee, associated with the Regional Government, became ineffective.

3) Judgment of whether or not to conduct the extension phase

As per 3.1.4 (1) above, the project prerequisite involved sustainably performing community development activities, which would exploit the ASUFOR organizational and financial capacities at the beginning of the project. Accordingly, on completion of the ordinary phase, the option of not conducting the project extension phase was also studied. However, through discussion between JICA and implementing agencies, the potential to establish a system to diffuse the PDRD approach after PDM modification and to ensure the budget by Regional Government of Louga emerged, whereupon an extension phase was provided and efforts were made to acquire the budget. Unfortunately, as of the ex-post evaluation, the budget acquisition had not succeeded. However, since the concepts during the planning stage involved “expanding sustainable community development utilizing ASUFOR funds and not depending on government” and given the low significance of implementing the extension phase, work to “disseminate and expand the PDRD approach with financial support from administration” was far from initial expectations.

For the above reasons, it was not possible to diffuse the PDRD approach and an extension phase was provided, even after no clear budget had been secured given the lack of a project prerequisite due to 3) above and there was a problem on the approach

during implementing the project.

<Summary relevance>

Consistency with this project and Senegal’s development policy was confirmed, both during the planning and on completion. In addition, there was no change in consistency with Japan’s aid policy. However, sufficient evidence was not shown on the point that the area represents an especially high level of poverty, nor was verification sufficient when selecting the target area during the planning stage.

Further problems affected the verification/change of the project plan and approach, at both planning and implementation stages, such as ineffective action on the part of executing agencies or counterparts to continue project activities, even after the modification of PDM and the inability to procure financial resources. These problems affected the Effectiveness and Sustainability of the project
Therefore, its relevance is fair.

3.2 Effectiveness and Impact¹⁸ (Rating: ②)

3.2.1 Effectiveness

3.2.1.1 Achievement of Project Purpose

The achievement level of the Project is as follows:

Achievement of Project Purpose

Project Purpose	Indicator	Actual
Define benchmarks to achieve community development in Louga through experience in maintaining water supply facilities and collective activities	A new Community Development Plan applying a PDRD approach to promote voluntary activities of the population is implemented at more than one site with the initiative of counterparts and extension officers.	The indicator has been achieved. The PDRD approach was trialed at Garky Diaw by counterparts in DRDR and technical officers in the departmental branch office of each Ministry. Trials also got underway at Thiamen and Nguen Sarr as new sites for experimenting with the guideline since the extension phase ¹⁹ .
	A framework is established to consult on aspects of the diffusion and development of the PDRD approach.	The indicator was achieved. In the project, a “Community Development Review Committee” was established based on the “Guideline Development Committee (Each Ministry, Local government, the project, NGO etc.)” to establish a system of consultation on diffusing the PDRD approach and continuing it after the project. The committee not only aimed to

¹⁸ Sub-rating for effectiveness is expressed taking impact into consideration.

¹⁹ However, there was a problem affecting water quality in Garky Diaw with available activities limited, even during the project implementation period. In addition, in Thiamen and Nguen Sarr, training sessions carried out under the project only involved agriculture, since activities had only commenced from the extension phase. The types of applied community development techniques are thus limited compared with sites having commenced activities from the ordinary phase.

		<p>disseminate the PDRD approach but also pick up various problems affecting rural development and present measures to relevant persons such as the Regional Government.</p> <p>At the time of ex-post evaluation, the framework of “Community Development Review Committee” exists and it is considered that the framework has been established for consultation on the diffusion development of the PDRD approach at the time of project completion.</p>
	<p>(Important Assumption) Budget approval to diffuse the PDRD approach and monitoring by the Rural Community, the Senegal Government and the Regional Government of Louga is confirmed by the end of the project.</p>	<p>This important assumption remains unfulfilled.</p> <p>The purpose of the project was to establish and diffuse the approach and the need to ascertain the acquisition status of the budget for carrying out “monitoring and diffusion activities of the PDRD approach” continuously was confirmed, even after completion of the project. The matter was also added as an important assumption for this ex-post evaluation (see also “Sustainability: Financial aspect” section described below).</p> <p>Through the project period, activities were continuously performed to support the budget application procedure to consolidate the PDRD approach by the Senegal Government and Regional Government. Consequently, some progress was confirmed, such as the Secretary General of the Ministry of Agriculture committing to issue a notice to DRDR to follow-up PDRD sites activity by utilizing the regular budget while meeting with the evaluation team at the time of the extension phase (Final Report in the extension phase), while the Regional Council also allocated a budget to cover the implementation of the PDRD approach in the budget of 2012 (Final Report in the extension phase).</p> <p>In addition, the use of the budget of Rural Community, which was the end of the local government, was also targeted in the extension phase. The project team aimed to acquire a portion of the three-year sectoral spending plan of the Ministry of Agriculture. The project experts provided information and supported efforts to prepare the documents (Material provided by JICA).</p> <p>Despite these efforts, since the start of efforts was somewhat delayed and it took time to adjust to the new budget acquired, budgetary approval at a national level and that of Louga Region and Rural Community was ultimately not achieved within this project period.</p>

Two indicators related to the Project Purpose set in the final version of PDM²⁰ were achieved and the Project Purpose had been determined to achieve on completion of the project on the PDM. However, based on the Impact and Sustainability of the current situation at the ex-post evaluation (see the following sections described later), it is difficult to consider that the Project Purpose of “Establishing a basis to achieve community development in Louga through experience in maintaining water supply facilities and collective activities” has been fully achieved. As the cause, it is considered that Output 1 “The persons responsible for diffusing community development are trained.” and Output 2 “Tools (guidebook & technical sheets for community development) are drafted to efficiently achieve community development via the population initiative.” were likely to be achieved by the end of the project out of three Outputs to achieve the Project Purpose. However, Output 3 “The diffusion system of the development model elaborated by the Project is strengthened.” had not been achieved by the end of the project.

The main points when establishing the PDRD approach are (1) Human resource development, (2) Creation of development tools and (3) Establishment of a diffusion system, although the main requirement was to secure the budget for (3) Establishment of a diffusion system. As in the above table, various efforts had been made in the project, but final budget approval was not attained and the system of monitoring and diffusing the PDRD approach at the time of ex-post evaluation remained problematic. Among the “Manpower, Materials, Money”, which are considered required elements of the business, “Manpower (human resource development, establishment of a diffusion system (framework)) and “Material (creation of development tools)” have been already covered in the project but the system will function as an approach when “Money (establishment of a diffusion system (budget))” is secured. Accordingly, when projects that aim to establish approaches like the current example are planned, as well as checking the financial status of the executing agency in terms of sustainability (budget transition and expectation), there is also a need to confirm budget approval and execution conditions for monitoring and diffusion on completion of the project as required factors to achieve the Project Purpose and for which important assumptions are made at the same level.

3.2.2 Impact

Within the project, the Overall PDM Goal has been switched from the original plan as mentioned above. Initially, autonomous community development utilizing the

²⁰ PDM ver. 1 (1st December, 2009)

organizational and financial capacities of ASUFOR was examined, but it was difficult to utilize the organization of ASUFOR other than for water supply works during checking at the beginning of the project, while diverting funds obtained from water charges for other purposes was prohibited by law. However, the Overall Goal itself, which targeted the diffusion of community development in the Louga Region, remained unchanged.

Nevertheless, as mentioned in the chapter of “Effectiveness”, a diffusion system has not been sufficiently established by the end of the project of three key elements comprising the PDRD approach (Human resource development, Creation of development tools and Establishment of a diffusion system) and the Project Purpose remained unachieved. These aspects proved hindrances to achieving the Overall Goal.

3.2.2.1 Achievement of the Overall Goal

Since no timing for achieving the Overall Goal was clearly set on the PDM, the extent to which the Overall Goal had been achieved at the time of the ex-post evaluation was assessed (which involved analyzing the latest available condition of generating effect during the ex-post evaluation and taking the same into account in the evaluation results).

(1) Achievement of Overall Goal indicators

At the time of ex-post evaluation, the Overall Goal indicators had not been fully achieved. The achievement level is as follows:

Achievement of Overall Goal

Overall Goal	Indicator	Actual
Achieve community development in the Louga region by leveraging experience in maintaining water supply facilities and collective activities	Development plans applying the PDRD approach are prepared and implemented by administrative organizations in the Region and local government etc.	<p>The indicator has not been sufficiently achieved. According to an interview with ARD, which prepares the regional development plan, although the current five-year regional development plan was prepared in 2012, the PDRD approach was not applied in the development plan on completion of the project.</p> <p>In addition, according to the DRDR, there was no opportunity to promote the PDRD approach in the Louga Region since DRDR was not included in the members when meeting to prepare the regional development plan due to insufficient approach (efforts).</p> <p>According to the appendix of the final report of the extension phase, a record states that the PDRD development program was integrated in the Thiamene Rural Community program. However, a change in Senegal’s decentralization policy meant this Rural Community no longer existed.</p>

		<p>In the second half of the fourth project year, the Regional Council selected three sites (Diakhaté, Nguer-Nguer and Guénéne) to disseminate and implement the “PDRD approach” with the support of DRDR, by utilizing the budget of the Regional Council in Louga. However, the activities have not started (despite budget approval by the Regional Council, it is difficult to confirm which level the budget execution remains stagnant). In addition, the DRDR is applying a budget to monitor the project for central government (Ministry of Agriculture), the Ministry of Agriculture has not monitored budgetary approval at the Ministry level and the budget has not been approved yet.</p> <p>Similar projects by other donors have been implemented, gaining inspiration from the project activities, the main elements of the PDRD approach (human resource development, creation of development tools and establishment of a diffusion system) were partly utilized.</p>
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(2) Factors hindering achievement of the Overall Goal indicator

As in the chapter of “Relevance”, it emerged that ASUFOR could not be used as a funding source in the project from the trial PDRD approach. Disseminating and expanding the PDRD approach to other sites were in mind and the project team requested the population to bear part of the project cost and sought budgetary support from the Region or Rural Community by integrating part of the disseminating activities of the PDRD approach into the development plan. However, as mentioned in the “Effectiveness” chapter, it takes long time to obtain such budget in Senegal, budgetary approval remained pending within the project period, including the extension.

In addition, no action to incorporate the diffusion and development of the PDRD approach into a regional development plan was seen at the time of ex-post evaluation for the following reason. No follow-up for the budget acquisition to be incorporated in the regional development plan to diffuse and develop the PDRD approach by executing agency was made upon completion of the project, the regime alternated after the election immediately after the project was completed and the system of the Ministry of Agriculture, which had supported the project from a central government level had also changed. Further changes included the infrastructure such as the Regional Council having supported the project being transferred to a Departmental Council and the Rural Community to a commune following a change in Senegal’s decentralization policy in 2014.

(3) Similar approach by other projects

In MVP (Phase 2) conducted in the Louga Region with the support of the Islamic Development Bank, “Guideline” and “Technical Sheets” were collaboratively developed during the project period, the outputs of which are still being utilized. In addition, in the Leona community, which is the MVP target site, despite vegetable cultivation flourishing utilizing shallow water wells, it is rare to see vegetable cultivation utilizing surplus borehole water as the target project site, some of the sites in the Leona community have been able to utilize surplus water from water supply facilities water for agriculture, leveraging transfer techniques learned under the project and some effects have been felt as the impact of the project during the ex-post evaluation.

Since DRDR lacks a budget to monitor and diffuse the PDRD approach, it is difficult to raise the fuel cost and the “Guideline” has not actively been distributed and disseminated to other donors and related organizations. However, when other donors visited for the survey to formulate a project in the Louga region, activities such as distributing the “Guidelines” and introducing the PDRD approach were seen. Consequently, reference was made to the PDRD approach when establishing the Food Security Support Project (Projet d’Appui à la Sécurité Alimentaire) (PASA)²¹ and Reservoirs and Boreholes Utilization Project (le Projet de Bassins de rétention et de valorisation de forages) (BARVAFOR)²², which generated some effects. Accordingly, there is no need for significant investment when most of the techniques in the “Technical Sheets” are introduced.

In addition, in the “Project to Promote rural development in harmonization with Ecology and Economy: Promotion of Ecovillages”, which is performed by JICA during the ex-post evaluation, since the same consultant has performed the project, most of the techniques in “technical sheets” are incorporated into part of the new technical sheets under development in this project.

Accordingly, via the activity of the other projects above, certain key elements of the PDRD approach (human resource development, creation of development tools and establishment of a diffusion system) have been adopted though no case has been made to incorporate all elements.

²¹ PASA is a project implemented by the African Development Bank and Global Agriculture and Food Security program (GAFSP) in the Louga Region, Matam and Kaffrine since 2013. The project activity in the Louga region was formulated with inspiration from PDRD. At the time of ex-post evaluation, eight sites had been selected but the activities remained pending. SDDR will oversee the project and there is a possibility to utilize “Guideline” and “Technical index card” (Information at SDDR Louga).

²² BARVAFOR is a project implemented with the assistance of Belgium in regions of Thies, Kaolack, Fatick, Diourbel and Kaffrine since 2013. Implementing twenty sub-projects utilizing reservoir and water supply facilities are planned. (extracted from le Soleil (newspaper in Senegal) on 14 December, 2013)

For the above reasons, the Overall Goal remains unachieved since the Regional administrative organizations and Regional Governments etc. could not include the PDRD approach in the development plan for these reasons: no follow-up for budget acquisition had been made at each level of Central Government, the Region and Rural Community upon completion of the project and there were major structural changes in Senegal at a Central Government level (Ministry of Agriculture).

3.2.2.2 Other impacts

(1) Situation of emerging outputs and Project Purpose (From the time of project completion to that of ex-post evaluation)

1) Situation utilizing techniques transferred to beneficiaries

Following the interview survey at each site, seven out of a total 27 techniques included in the “Technical Sheets” were still utilized in more than 60% of target sites at the time of ex-post evaluation (25.9%)²³, showing a decline from the 12 of 27 items (44.4%)²⁴ recorded on project completion. At the time of ex-post evaluation, there were no target sites with beneficiaries utilizing more than 60% of techniques. The acceptance rate of techniques also declined significantly, particularly in Taiba Ndiaye and Nguith, due to the lack of monitoring and follow-up by SDDR and the lack of training opportunities.

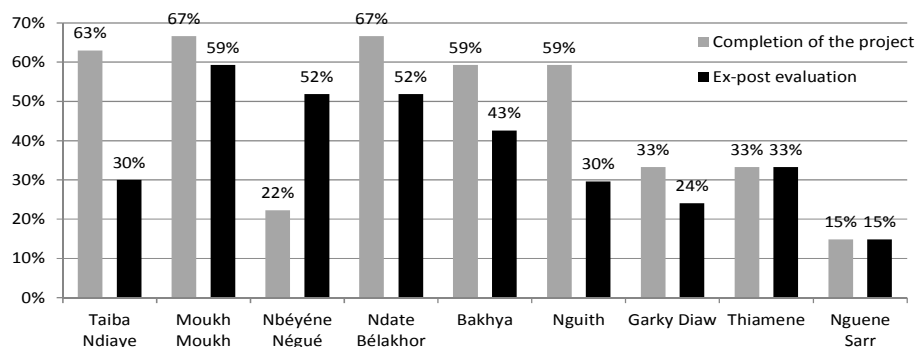


Figure 2: Acceptance rate of techniques included in “technical sheets” at the target sites on project completion and ex-post evaluation

In addition, according to the beneficiary survey²⁵, the only technique included in

²³ An interview survey with persons involved in community development at each target site was used to confirm whether 27 techniques were still utilized in the target sites at the time of ex-post evaluation.

²⁴ Final project report

²⁵ A questionnaire survey was conducted for 50 households at seven of the nine target site (excluding Ndate Bélakhor and Bakhya). A total of 349 persons responded, 14 of whom were male and 335 female, while the age composition included five people in their teens, 65 in 20s, 95 in 30s, 100 in 40s, 66 in 50s, 11 in 60s

“Technical Sheets” and utilized by more than 60% of beneficiaries throughout target sites was “teaching water saving at school” at present. It was also confirmed that agricultural techniques such as “organic fertilizer and compost” and “mulching” were still utilized in Moukh Moukh, Nbéyéne Négué and Nguen Sarr and “Fruit and vegetable processing” techniques were utilized in Taiba Ndiaye. According to the beneficiary survey, water awareness activities such as water saving and hygiene were relatively prevalent and the local population is considered to be aware of the importance of water saving.



Photo 1: Vegetable community farming in Moukh Moukh



Photo 2: Compost producing technique utilized in other project sites

In the project, there were three types of target sites, namely three sites continuously selected as PEPTAC1 target sites (Taiba Ndiaye, Moukh Moukh and Nbéyéne Négué), three sites newly selected for the project (Ndate Bélakhor, Bakhya and Nguith) and three sites where an experiment involving diffusing the PDRD approach via self-help efforts of counterparts was conducted (Garky Diaw, Thiamene and Nguen Sarr). No significant difference emerged among the sites in terms of the acceptance rate for techniques between PEPTAC1 sites and others newly selected. However, a significant difference did arise in the technical acceptance rate for sites involving self-help effort by counterparts when compared to other target sites. According to the interview survey at each site, the reasons for the low technical acceptance rate included: 1) agricultural activities were hampered due to the high salt content in the water from the water supply facility in Garky Diaw, despite the high development needs, 2) lack of training opportunities for livestock or food processing following the project in Thiamene and Nguen Sarr, since these sites were only selected as target sites during the one year extension period. However, agricultural activities involved in project training remain ongoing in Nguen Sarr. This is because the project could collaborate with NESAs

and seven people in their 70s.

(Projet Nutrition Enfant et Sécurité Alimentaire)²⁶ during the project period and there was also support such as budget until the techniques were established as well as an agricultural extension officer in Louga overseeing the site and continuing the monitoring.

2) Situation of utilization of development tools by implementing agencies etc.

The development tools developed by the project (“Guideline” and “Technical Sheets”) are still utilized by DRDR and SDDR officers in the Louga region at the time of ex-post evaluation. In addition, “Guideline” and “Technical Sheets” were distributed to major donors and DRDR and SDDR throughout Senegal.

(2) Other positive or negative indirect effects

1) Improvement in residents’ income

According to the beneficiary survey in the ex-post evaluation, the income of the population at the target sites, both before and after the project, was surveyed. According to the survey results, the number of residents who responded specifying an annual income of between 0-100 thousand CFA Francs²⁷ (hereinafter referred to as “FCFA”) constituted the majority before the project was implemented, but the same proportion only constituted two-thirds afterward. In addition, the number of residents specifying an annual income of between 200-500 thousand CFA Francs become the majority after the project was implemented (See Figure 3).

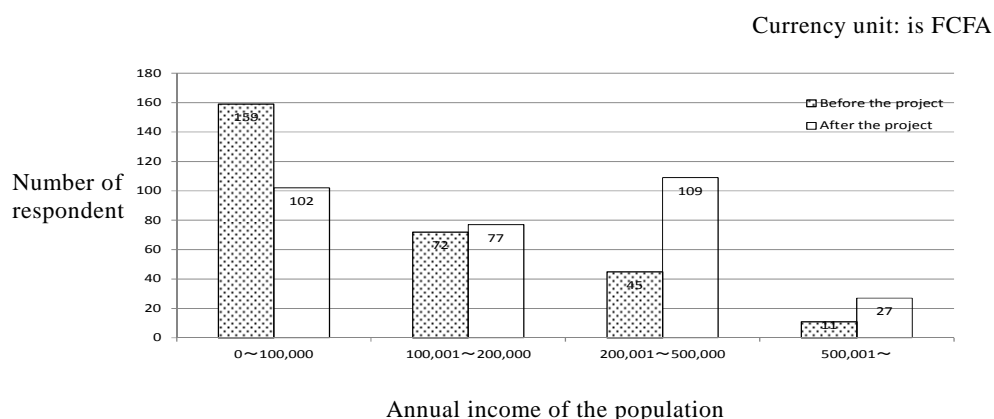


Figure 3: Situation of annual income of the population, both before and after implementing the project at seven sites

Data is separated and analyzed between Nbéyéne Négué, Moukh Moukh and Nguen Sarr, which have high percentages continuing the diffusion activities of the PDRD

²⁶ NESAs was a project on nutrition improvement implemented by UNICEF etc. from 2010 to 2012.

²⁷ Exchange rate at the time of ex-post evaluation is 1FCFA=0.2 Japanese Yen.

approach and Nguith, Gaiky Diaw, Taiba Ndiaye and Thiamene, where PDRD activities have stagnated and the same tendency is seen as the answer of Figure 2 for the former (See Figure 4).

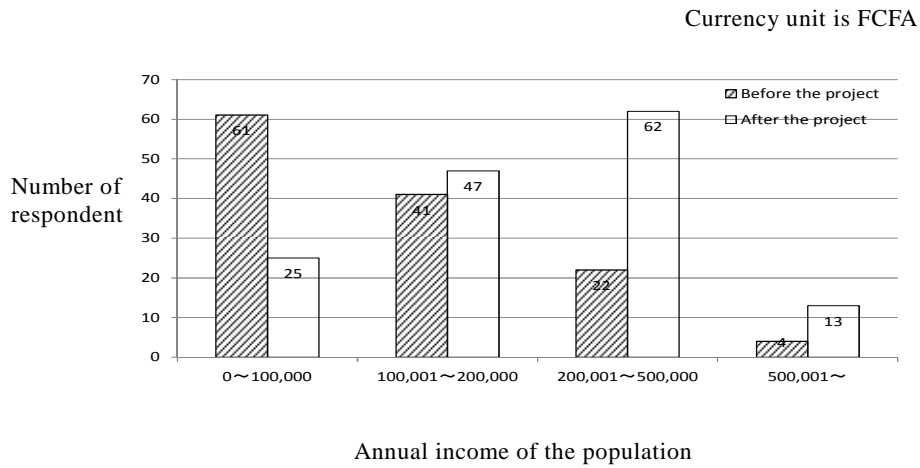


Figure 4: Situation of annual income of the population at three (Nbéyéne Négué, Moukh and Nguen Sarr) of a total seven sites, both before and after implementing the project at sites where the PDRD activities are deemed ongoing

Conversely, at four sites where almost no PDRD activities have continued (Nguith, Gaiky Diaw, Taiba Ndiaye and Thiamene), no significant difference in annual income emerged before and after the project, nor any tendency such as a significant decline in people responding with 0-100 thousand CFA Francs of annual income and an increase in those specifying 200-500 thousand CFA Francs of annual income in the results of sites continuing PDRD activities. (See Figure 5)

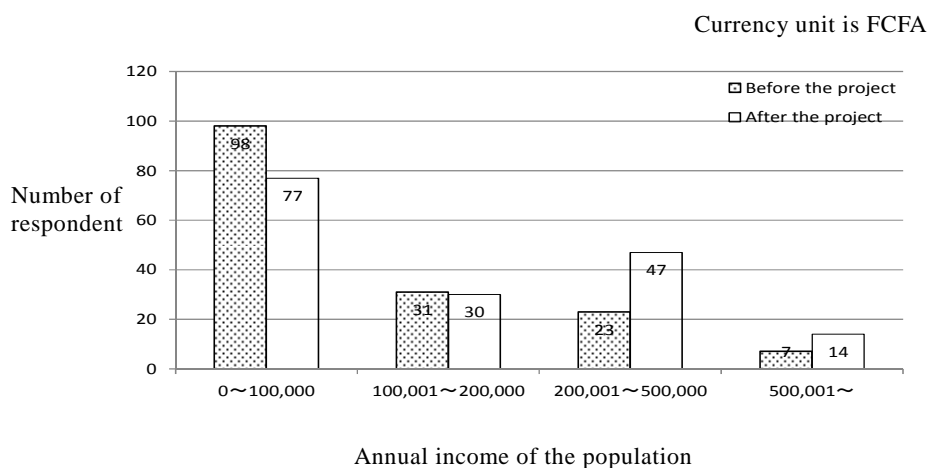


Figure 5: Situation of annual income of the population at four (Nguith, Gaiky Diaw, Taiba Ndiaye and Thiamene) of a total seven sites, both before and after implementing the project at sites where the PDRD activities were mostly discontinued

Consequently, survey results revealed an improving trend in terms of beneficiary revenue in sites continuing to disseminate the activities of the PDRD approach.

2) Establishment of a small-scale micro-finance system by the female group

During the ex-post evaluation site survey, it was observed that female groups in Taiba Ndiaye, Nguen Sarr and Bakhya utilized revenue from agricultural activities in the project and introduced a credit for daily necessities such as soap and the micro-finance system. The secondary impact of the project is high in the sense that women's activity groups launch such emergency funding system autonomously and promoted women's independence in the process.

3) Reduction in water quantity used

According to the beneficiary survey in the ex-post evaluation, implementing the project did not elicit any effect of reducing the water quantity used. The project targeted rural development with water-saving. According to the results of the beneficiary survey, 347 of a total 350 people (with three failing to respond) responded affirmatively to the question "After implementing the Project, have you tried to save water?" and "Do you understand the importance of saving water after implementing PDRD?".

Conversely, though four out of a total seven sites responded that the quantity of water used had reduced after implementing the project, only the result of Nguen Sarr is due to reduced water consumption following improved water saving awareness²⁸.

<Summary of effectiveness and impact>

For the Project Purpose, indicators for Outputs 1 and 2 were achieved but part of the indicator was not been achieved for Output 3, which meant the Project Purpose was not achieved. Further, no budget was secured for to establish the basis for diffusing the PDRD approach, nor any Project Purpose has not been achieved forming the basis for diffusing the PDRD approach sufficiently.

In the Louga region, part of the activities is seen as having an impact, such as improvement of income at the target sites and the ability to influence the project formation of other donors etc. However, in terms of the Overall Goal, no indicator in the form of diffusion of the PDRD approach through the Regional Government in

²⁸ According to the survey result, the quantity of water consumed in Nguith and Garky Diaw was reduced. However, the reasons for the reduced water consumption included: the difficulty in conducting agricultural activities due to the problematic soil in Nguith and the fact that water consumption in Garky Diaw had declined due to substandard water quality. In Thiamene, although the water consumption has declined, no significant difference emerged before and after implementing the project.

Louga or Rural Communities was observed.

Since this project has achieved the Project Purpose and Overall Goal to some extent, its effectiveness and impact are fair.

3.3 Efficiency (Rating: ①)

3.3.1 Inputs

The project inputs are as follows:

Inputs	Plan	Actual
(1) Experts	5 Short-Term (No information of MM*)	(Ordinary phase) 9 Short-Term (89.4 MM) (Extension phase) 5 Short-Term (32.0 MM)
(2) Trainees received	Six persons	(Ordinary phase) seven persons (Extension phase) five persons
(3) Equipment	Vehicle etc.	Photocopy machine, computers etc.
(4) Operational expense	-	63 million yen/ordinary phase
Japanese side Total Project Cost	310 million yen	510 million yen
Senegal side Operational Expenses	Salary of counterparts, providing facilities, land etc.	Assignment of counterparts, project office, salary of counterparts

* MM stands for man months.

3.3.1.1 Elements of Inputs

Concerning the dispatch of Japanese experts, the intention was to dispatch five short-term experts for project management, organization/village management, boosting living standards/gender, community development and diversification of productive activities. Finally, nine short-term experts had been dispatched during the ordinary phase as part of project manager/community development 1, Deputy project manager/Diversification of productive activities 1 (Agriculture), Community development 2, Diversification of productive activities 2 (Stock breeding), improved living standards/gender, Organization/village management, Diffusion 1, Administrative coordinator/Diffusion 2 and administrative coordinator/Social and environment consideration and five short-term experts were dispatched in the extension phase on Project manager/Community development, Deputy project manager/Diffusion 1, Agriculture/Stock breeding/Diffusion 2, Organization,

Improvement of living standards, exceeding the planned scope.

As far as accommodating trainees is concerned, two trainees per year and a total of six trainees were planned. In the actual results, seven trainees during the ordinary phase and five in the extension phase (for a total of 12) attended the training sessions in Japan, which exceeded the planned scope.

In terms of operational expense, no information was received on the various materials at the planning stage and 63 million yen was spent on the ordinary phase. However, there is no information on the extension phase.

As far as the total project cost on the Japanese side is concerned, once the actual figures in the report of the terminal evaluation and final report had been confirmed, the total project cost and project period were both found to have exceeded the plan, for reasons which will be specified below.

Input from the Senegal side included salary for the counterparts and the provision of a project office and was as planned.

3.3.1.2 Project Cost

The cost of the project was 310 million Japanese yen during the planning period but ultimately became 510 million (165% of the planned level), significantly exceeding the original estimate.

3.3.1.3 Cooperation Period

The planned project period was three years and three months (39 months) but it actually became four years (48 months) (123% of the planned), exceeding the original estimate.

One of the reasons why the cost exceeded the plan was the additional budget allocated in the ordinary phase. The purpose was to develop a “Guideline” to be utilized by many organization and groups beyond the project framework and various extra costs for the Japanese experts and allowances for their travel expenses and activities were added.

In addition, the project period was extended accordingly due to budget and deadline overruns. Ultimately, however, it was not possible to confirm the budget allocation of the administrative side by the end of the project, which was the main purpose of the extension phase, nor was any progress seen on the budget allocation by the administrative side at the time of ex-post evaluation (See chapters on “Effectiveness” and “Impact”). Accordingly, the extension phase could not obtain outputs commensurate with input and the efficiency was insufficient.

For the above reasons, although the generation of outputs helped achieve the Project Purpose to some extent, its cost and period exceeded the plan and the project efficiency was low.

3.4 Sustainability (Rating: ①)

3.4.1 Related Policy and Institutional Aspects for the Sustainability of Project Effects

To prolong the effect of the project, the PDRD approach had to be integrated into the development policies etc. on a regional level.

In NSESD as PRSP of Senegal, diversification of production, improvement of agricultural weaknesses, management of water and agricultural development were prioritized and will be supported by the Senegal Government. However, the meaning of the project as a “community development approach” based on ASUFOR, as assumed during the planning period due to various changes after implementing the project (See chapter on “Relevance”) became unclear.

According to interviews at DRDR, despite the fact the final version of “Guideline” was developed and its official certification approved with the Minister of Agriculture in attendance, no national diffusion activities of the PDRD approach led by the same have been observed and diffusion was not promoted in Louga region as the result.

In addition, interviews with ARD in Louga do not reveal any evidence of the PDRD approach being incorporated into the current regional development plan.

As described above, the PDRD approach was not incorporated into the Regional development plan and there was no significant change, even after the “Guidelines” were officially approved, and there are problems on the sustainability of policy and institutional aspects in the Louga region.

3.4.2 Organizational Aspects of the Implementing Agency for the Sustainability of Project Effects

In the project, there was a need to maintain the structure of community development organizations and organizational leaders trained by the project in the target sites. Another objective included establishing an appropriate diffusion system by the administration for disseminating PDRD; both within and outside the Louga region.

(1) Organizational structure of the administrative organization

The main administrative organization, which cooperated to perform the project, was the Direction of Analysis, Forecast and Statistics, the Ministry of Agriculture at a central level and DRDR and SDDR, as well as the Ministry of Agriculture on a regional

level.

1) Direction of Analysis, Forecast and Statistics, Ministry of Agriculture

This was the host institution of the project implemented by the Ministry of Agriculture and the major role played included various coordination work and the focal point with JICA at central government level, both within and outside the Ministry. According to the ex-post evaluation, no budget for diffusing the PDRD approach had yet been allocated and they are not particularly involved in diffusing and monitoring etc. the PDRD approach.

2) DRDR and SDDR in the Louga region

During the project period, the role of DRDR was to join various activities as a main body and coordinate related organizations; both on a regional level. In addition, SDDR played a role to implement substantial agricultural diffusion at the target sites.

Even at the time of ex-post evaluation, the staff of DRDR and SDDR in the Louga region showed an interest in diffusing and expanding the PDRD approach and were aware of the diffusion of the PDRD approach at present. As mentioned above, certain activities have commenced, such as; 1) distributing a “Guideline” when other donors etc. visit the Louga region and 2) incorporating experimental target sites of the PDRD approach into one of the target sites when other donors start a new project. However, DRDR did not contribute the expected function to incorporate the PDRD approach into the regional development plans sufficiently, since it is not a DRDR function.

3) Other main cooperating organizations

At the time of project completion, it was presumed that the Regional Council or ARD in the Louga region would lead and establish an implementing structure to disseminate the PDRD approach. At the time of ex-post evaluation, the organizations involved in disseminating PDRD approach mainly included DRDR and SDDR in the Louga region, but virtually no others. In addition, no implementing structure led by the Regional Council or ARD in the Louga region was established to disseminate the PDRD approach.

(2) Implementing structures at target sites

1) Implementing structure of leaders at the target sites

According to the site survey result, it was confirmed that activity groups in the communities had continued the activities and most of the trained leaders existed at each site. However, hardly any dissemination of activities beyond adjacent communities was

seen.

In the project, “low-input and circulation type activities” were targeted, since there were some cases of water in water supply facilities being endlessly used and the sites had undergone destructive development in previous PEPTAC1 projects. This was considered in line with local demand. However, a low-input is unlikely to increase the income of the population significantly and there was little economic incentive for the local population to pay training fees, invite instructors and imitate the technology, despite the importance of the techniques being understood by the beneficiaries (lack of success story such as “How much and who gets the profit”).

Accordingly, the diffusions results achieved by leaders were reportedly minimal, even during the project implementation period. In addition, on the teaching side, motivation may be lacking to visit remote sites at their own expense and transfer the techniques, though a technical transfer to the surrounding area remained relatively feasible, since no transport cost was incurred to visit.

In addition, public activities such as demonstration farms are stagnant and there is thought to be little incentive to repair, given the weak command structure and the fact that farmers do not own the actual fields.

2) Implementing structure of community development organizations at target sites

As described above, unlike when planning assumptions, the project team strove to establish and organize CDC to reinforce the capacity of the population, since the original ASUFOR work was likely to be hindered if ASUFOR extended significant time and effort for community development activities. In CDC, influential persons in the villages had to be recruited as members and problems solved rapidly to allow the project to be implemented. Since there was no major problem and women’s group federations could manage to continue the activities, CDC is considered to have finished the role. At the time of ex-post evaluation, the number of sites at which CDC operates was zero.

Conversely, women’s group federations managed the development group established in the project at five out of nine sites. Accordingly, it was difficult to launch new organizations such as CDC on track during the project period and existing organizations assumed the function until after the end of this project. At the time of post-evaluation, there was not considered to be any particular problem in terms of the sustainability of activities, although a planned system is subject to various circumstances.

(3) Implementing structure on project coordination and promotion

1) Community Development Review Committee

In the project, the “Community Development Review Committee” was organized based

on a “Guideline” drafting committee (Each ministry, local government, active projects and NGO) to coordinate community development activities, in which several sectors were involved. However, according to the interview at DRDR, even though a committee was in place at the time of ex-post evaluation, there was no activity except the project and no operational budget. This meant no regular activity and saw the activities stagnate (See the chapter of “Relevance”).

For the above reasons, it was presumed that CDC would alternate ASUFOR as the main body for activities on a site level and that the ARD and Community Development Review Committee would function as bodies to disseminate the PDRD approach but they did not function sufficiently. Conversely, on a target site level, implementing structures have been maintained to continue the activities, despite differences from the planned system.

3.4.3 Technical Aspects of the Implementing Agency for the Sustainability of Project Effects

In the project, there was a need to maintain the transferred techniques to manage organizations or develop communities at the target sites. In addition, in the administrative site, there was a need to maintain techniques on diffusion methods etc.

(1) Technical level at administrative organizations

Direction of Analysis, Forecast and Statistics, Ministry of Agriculture was positioned to coordinate at the central level and no technical transfer was performed when implementing the project, nor was there any change on a technical level.

The staff involved in the project at DRDR in the Louga region and SDDR in the Departments of Louga, Linguere and Kebemer have remained in the same position from the project period and the techniques of the PDRD approach were maintained, even after the project. In addition, efforts have been made to disseminate the PDRD approach by introducing it to other donors.

(2) Technical level at target sites

1) Technical level of the implementing organization

As mentioned in the clause of 2) Implementing structure of community development organizations at target sites, none of CDC has functioned in most of the sites and the implementing capacity of community development activities of CDC is considered low.

According to the interview survey conducted at each target site, the operation and management capacity of ASUFOR is considered high in Thiamene, Moukh Moukh and

Nguith where ASUFOR oversee the coordination of community activities. In addition, women’s group federations which oversee the coordination of community activities have high organizational capacity, since some organizations, e.g. in Nguene Sarr and Bakhya, established a micro-finance system to utilize the benefit from community farming activities and manage funds.

2) Situation of utilization of techniques transferred to leaders

According to the interview survey, it was confirmed that all 16 persons to whom techniques were transferred at the target sites had retained them and 12 of the total (75%) were still able to conduct PDRD activities. In addition, each technical leader disseminated the transferred techniques to the surrounding villages during the project period.

For the above reasons, the techniques of the implementing organizations have been kept at a target site and administrative level and there is no problem in terms of the sustainability of techniques of the implementing organization.

3.4.4 Financial Aspects of the Implementing Agency for the Sustainability of Project Effects

At the project target sites, a budget was required to continue and expand the techniques transferred in the project as well as budgetary support to disseminate and monitor the diffusion of the PDRD approach.

(1) Financial situation of administrative organizations

The budget of Direction of Analysis, Forecast and Statistics was as follows:

Table 1: Budget of Direction of Analysis, Forecast and Statistics

Unit: million FCFA

	Amount of executed budget
2012	734.1
2013	770.8

Source: Direction of Analysis, Forecast and Statistics

The budgets for DRDR and SDDR in the Louga region were as follows:

Table 2: Budget of DRDR and SDDR in the Louga region in 2014

Unit: million FCFA

	Budget in 2014
DRDR Louga	10.5
SDDR Linguere	5.9
SDDR Louga	5.6
SDDR Kebemer	6.0

Source: DRDR Louga

However, the budget allocated in these organizations was operational rather than an investment budget for use in monitoring activities etc. Accordingly, there was no budget for diffusion and monitoring the PDRD approach or diffusing to new sites. In the final report of the project in extension phase, it was recorded that the Secretary General of Ministry of Agriculture at the time promised to issue a notice indicating that a follow-up of the diffusion activities of the PDRD approach would be performed by utilizing the regular budget for DRDR Louga during visitation with the terminal evaluation team during the extension phase. However, this budget had not yet been approved at the time of ex-post evaluation.

In the Regional Council, a budget of three million FCFA for the fiscal year 2012-2013 was approved for implementing activities of the PDRD approach (for three experimental sites), but no budget had been allocated to DRDR, even at the time of the ex-post evaluation. This is considered due to some factors, such as the change of regime by the election, which was implemented just after the end of the project and the transfer of authority from the Regional Council to Departmental Council following the change in the decentralization policy in Senegal.

The approach in the project was low input and it was difficult to increase income significantly. Moreover, the economic incentive for the surrounding population to bear the cost of learning was low, while the population to which techniques were transferred in the project may lack motivation to cover their own costs and transfer the techniques elsewhere. Accordingly, support from the administrative side such as selecting resource persons and bearing the cost to their dispatch were indispensable. However, as mentioned above, despite efforts to obtain the budget from the local government etc., it could not be realized by the end of the project. Monitoring of progress did not continue after the project and this budget had yet to be approved, even at the time of ex-post evaluation.

(2) Financial situation of implementing organizations at the target sites

According to the interview survey at the target sites, major community activities were continued by utilizing their own financial sources, which meant no financial problem in simply continuing current activities. However, there had been no diffusion to new sites, given the lack of any financial source for community development activities.

For the above reasons, in terms of financial aspects for the implementing agency, it is expected that the current activities will continue without any significant funding, through self-help efforts on a target site level, although disseminating the PDRD approach to new sites will be difficult. Budget support for monitoring and diffusion as planned has not been performed at all on an administrative level, which has become one of the hindrances to disseminating the PDRD approach, making it extremely difficult to sustain.

<Summary of Sustainability>

Concerning sustainability of policy and institutional aspects, although the national policy prioritizing agriculture has been continued, there is no example showing the PDRD approach integrated into the development plan in the target Louga region. The priority to employ a PDRD approach declined since the budget for disseminating PDRD approach has not been allocated, at either a National or Regional level. Accordingly, many problems remain concerning the sustainability on policy and institutional aspects.

Concerning organizational aspects of the implementing agency, implementing structures have been maintained, although not as planned at the target site level. On the administrative level, though DRDR and SDDR structures have been maintained, the involvement of other organizations and the Community Development Review Committee in the PDRD approach have declined, which has exposed problems with the organizational aspects of the implementing agencies.

Concerning the technical aspects of the implementing agency, they have been maintained on both target site and administrative levels and have no problems.

The funding of the implementing agency is expected to suffice to continue current activities without major financing and with self-help efforts on a target site level. However, budgetary support for monitoring and diffusion as planned has not been materialized at all on an administrative level, which has become one of the hindrances. Accordingly, though it is possible to continue a part of the activities in village level, there is no policy support for diffusion of PDRD, the system on diffusion of PDRD approach is not functioning, there is no budget allocation for diffusion and monitoring, and it is extremely difficult to continue the PDRD approach.

For the above reasons, major problems have been observed in terms of the policy background, organizational and financial aspects of the implementing agency. Accordingly, the sustainability of the project effects is low.

4. Conclusion, Lessons Learned and Recommendations

4.1 Conclusion

PDRD is aimed at establishing a foundation to disseminate and expand a community development method built on the experience of operation and management of water supply facilities in the Louga Region and related organization activities.

The Project was consistent with the government policies of Senegal and Japan while the assessment of development needs and examination of project planning and approach at the planning stage all proved to be insufficient, which adversely affect the effectiveness, impact and sustainability of the project. Thus, its relevance is rated to be fair.

Regarding the Project purpose, establishing PDRD approach in the Louga Region, the development of human resources and preparation of development tools which constitute the outputs have been completed, though establishing a foundation of diffusion system was not sufficient before the termination of the Project. Thus the Project purpose remains partly unachieved. Accordingly, the Overall Goal aimed at disseminating the PDRD approach throughout the target region, also remains unachieved and theme for the effectiveness and impact are rated to be fair.

The Project period was extended to reinforce the diffusion capacity of the PDRD approach and secure budget and the project cost increased as against the plan. From the view point of efficiency, the Project efficiency is rated to be low.

In terms of sustainability, the Project has problems such as lack of the policy and system to promote the dissemination and expansion of PDRD approach (policy and institutional aspects), insufficient intuitional capacities of the implement agencies which execute and support the diffusion of the PDRD approach (organizational aspects) and budget constraints (financial aspects). Thus and the sustainability is rated to be low.

In conclusion, the overall rating of the project is unsatisfactory.

4.2 Recommendations

4.2.1 Recommendations to the Implementing Agency

None

4.2.2 Recommendations to JICA

None

4.3 Lessons Learned

(1) Necessity for in-depth studies at the detailed design stage

The Project was formulated the success of the community development through ASUFOR in PEPTAC1; however, the PDM of the Project had to be significantly revised and no alternative measures had been identified until the project ended. One of the reasons is considered that the Ministry of Water and the Ministry of Agriculture did not have prior coordination enough on utilizing ASUFOR by the Ministry of Agriculture after the separation of the two Ministries which took place before the project commenced. In addition, regarding the mandate except for water supply, basic survey was insufficient such as it was predicted to become neglected the involvement of ASUFOR to their original task of water supply if they were occupied by the activities of the project.

Therefore even at the time of ex-post evaluation, diffusion of the PDRD approach was not observed as planned. There was a need to look closely into the mandate and activities of the relevant organizations and consultation with them during the detailed design period not to happen the large change of the plan.

(2) Selection of “right” responsible organization toward achieving the Overall Goal

The project’s overall goal was to disseminate the PDRD approach in the whole region after having established its foundation; however, Directorate of Analysis, Forecast and Statistics, Ministry of Agriculture was mainly responsible for statistical works (collection, analysis, processing and dissemination of the agriculture-related) and did not have function sufficiently to diffuse the PDRD approach. In addition, DRDR and SDDR, as the counterpart organizations in the Louga region, though able to support the activities at the site level, could not contribute sufficiently to incorporate the PDRD approach into the regional development policy framework as targeted since the responsible organization to prepare the development plan of Rural Communities was ARD. It is recommended that the implementing agencies and counterpart organizations must be selected appropriately, taking into consideration the dissemination of project output.

(3) Confirmation of allocation of budget by the Partner country government within the project period

The project entailed activities to accelerate the progress to secure the budget from the Senegal Government, which is necessary for establishing a dissemination of the project outputs. However, the Project could not witness the budget allocation before it ended. Nor even at the time of the ex-post evaluation, as the efforts to secure budget have it been monitored thereafter. Thus, monitoring of the Project activities for the PDRD approach and its consequent dissemination have not taken place so far.

For those projects which have the establishment of an approach as its target, there is a need to ensure the financial resources for establishing the dissemination system (activity monitoring and dissemination after the project completion) within the project period. It is also necessary to confirm and agree with the recipient government to secure the budget for establishing the dissemination system through such as identifying it as an important assumption in the PDM at the planning stage which should be monitored through the implementation period.

Moreover, it is necessary for countries in Sub-Saharan Africa where public financial source is limited to establish a dissemination system which does not depend on the government budget at all. As such, it should be also considered to integrate a dissemination mechanism through farmer-to-farmer training which does not require the public financial support.

End