Internal Ex-Post Evaluation for Technical Cooperation Project

conducted by Senegal Office: October, 2021

Country Name	**Capacity-Building Project for the Control of Land Degradation and the Promotion of Land Recovery in Degraded Soil Areas**
Republic of Senegal	

I. Project Outline

Background	In Senegal, expansion of bare land, soil salinization, and weakening of cropland caused by the excessive practice of monoculture and overgrazing were serious issues. In the regions of Fatick and Kaolack, soil salinization caused by acid sulfate soil and sea water permeation, and soil degradation of inland farmlands were two major land degradation issues. Due to those issues, crop yield per unit area continuously reduced along with the decrease in farmland and forest land. In particular in the regions with rapid population growth, land degradation seriously affected the life of rural population.		
Objectives of the Project	Through improvement/development of necessary techniques, including local community awareness raising, the project aimed at reinforcement of capacities of stakeholders needed to control land degradation and promote land recovery, thereby contributing to implementation of activities for controlling land degradation and land recovery in the target areas of the project. 1. Overall Goal: The activities aiming at controlling land degradation and land recovery are conducted in the target areas[1] of the project. 2. Project Purpose: The capacities of stakeholders needed to control land degradation and to promote land recovery are reinforced.		
Activities of the Project	1. Project Site: departments of Fatick and Foundiougne in Fatick region and departments of Kaolack and Nioro du Rip in Kaolack region 2. Main Activities: 1) Definition of the priority areas[2] for the implementation of measures aiming at controlling land degradation and promoting land recovery, 2) Improvement/development of the necessary techniques to control land degradation and promote land recovery, 3) Definition of effective techniques and measures to control land degradation and to promote land recovery through the implementation of pilot projects[3], 4) Development of a system for awareness raising in communities and for dissemination of techniques to control soil degradation and promote efficient land use in the priority areas. 3. Inputs (to carry out above activities) Japanese Side 1) Experts: 5 persons 2) Trainees received: 14 persons 3) Equipment: cars, motorcycles, PCs, printers, projectors, GIS receivers, etc. Senegalese Side 1) Staff allocated: 43 persons 2) Land and facilities: project office 3) Local cost: cost for utility of offices (electricity, water, and telephone), fuel for cars and motorcycles		
Project Period	March 2011 - March 2017 (Extension: March 2016 - March 2017)	Project Cost	(ex-ante) 500 million yen, (actual) 694 million yen
Implementing Agency	Directorate of Water, Forestry, Hunting and Soil Conservation (DEFCCS: Direction des Eaux, Forêts, Chasses et de la Conservation des Sols), Ministry of Environment and Sustainable Development (MEDD: Ministère de l'Environnement et du Développement Durable)		
Cooperation Agency in Japan	Earth and Human Corporation		

II. Result of the Evaluation

<Special Perspectives Considered in the Ex-Post Evaluation>

・ Because there were no quantitative data available, the continuity of the Project Purpose and the achievement of the Overall Goal were evaluated by the qualitative data collected by the questionnaires, interviews, and observations conducted by the project and the ex-post evaluation.

1 Relevance

<Consistency with the Development Policy of Senegal at the Time of Ex-Ante Evaluation>

Following the publication of Environmental Sector Policy Letter (LPSE: Lettre de Politique Sectorielle de l'Environnement) in 2010, the government of Senegal launched its first "Medium-Term Sector Expenditure Framework 2011-2013" (CDSMT: Cadre de Dépenses Sectorielles à Moyen Terme) for robust implementation of LPSE. CDSMT prepared eight programs for improving the living standard of people through rational management of natural resources. One of the eight programs was the countermeasures for forest destruction and land degradation including a plan for recovery of salinized land. Therefore, the project was consistent with the development policies of Senegal at the time of ex-ante evaluation.

<Consistency with the Development Needs of Senegal at the Time of Ex-Ante Evaluation>

The government of Senegal took measures against land degradation by implementing projects of land improvement, forestration, protection areas setting, and others. However, the activities and technologies were deployed according to local decisions different from place to place and made insufficient effects. And those activities and technologies have neither been collected nor accumulated

[1] Target areas: 2 regions of Fatick and Kaolack.

[2] Priority areas: 25 villages in a department or 100 villages in 4 departments in 2 regions of Fatick and Kaolack.

[3] Pilot projects areas: 5 villages in 25 priority villages in a department or 20 villages in 100 priority villages in 4 departments in 2 regions of Fatick and Kaolack.

systematically. Therefore, comprehensive and systematic coordination of the projects and accumulation of knowledge and experience to be shared were required. For realizing this, capacity development of the forest officers (heads of forestry brigades) of the Regional Water and Forestry Inspectorates (IREF: Inspection Régionale des Eaux et Forêts) was an urgent issue. Therefore, the project was consistent with the development needs of Senegal at the time of ex-ante evaluation.

<Consistency with Japan's ODA Policy at the Time of Ex-Ante Evaluation>

In the "Country Assistance Program for the Republic of Senegal" (April 2009), one of the two minor goals for the Major Goal I of "improvement in the quality of life of poor population in rural areas" was rural development through the enhancement of the people's capacity to manage natural resources to secure sustainability and the assignment of independent and active roles to the people. Therefore, the project was consistent with the Japan's ODA policy for Senegal at the time of ex-ante evaluation.

<Evaluation Result>

In light of the above, the relevance of the project is high.

2 Effectiveness/Impact

<Status of Achievement of the Project Purpose at the time of Project Completion>

The Project Purpose was partially achieved by the time of project completion. Although the capacity of forest officers was improved and their activities became active at least in the pilot areas, the level of capacity improvement significantly varied from officer to officer due to frequent replacements of the personnel caused by transfers and turnovers (Indicator 1). According to the questionnaire survey conducted by the project, the ratio of the villages in the priority areas that introduced and utilized the techniques for land degradation control and efficient land-use verified by the project reached 81% (Indicator 2).

<Continuation Status of Project Effects at the time of Ex-post Evaluation>

The project effects have partially continued at the time of ex-post evaluation. Although knowledge and techniques of the forest officers involved in the project have been improved through the activities of the project, most of them have moved to other areas. However, IREFs in the Fatick and Kaolack regions encouraged the officers to transfer their knowledge and techniques to newly assigned forest officers. According to the questionnaires to and interviews with IREFs and forest officers of the regions, significant number of officers have transferred their knowledge and techniques to new forest officers, and some of the new officers have applied the knowledge and techniques to their community awareness raising activities with the help of technical manuals developed by the project. As for the continuation status at the community level, according to the observations made by the officials of IREFs and forest officers of the regions, in the priority areas, significant number of villages have introduced and utilized the techniques verified by the project such as the stone cordon[4] technique and framed bund[5] technique, and tree planting[6] have been progressing in some villages involved in the project.

<Status of Achievement for Overall Goal at the time of Ex-post Evaluation>

The Overall Goal has been partially achieved at the time of ex-post evaluation. The techniques introduced by the project have been continuously practiced in the priority areas, and anti-erosion techniques introduced by the project have been implemented under the mentorship of forest officers in some non-priority areas. However, the extension of the techniques in the target areas has not been verified because no data was available (Indicator 1). Although most of the forest officers involved in the project have moved to other areas, according to the questionnaires to and interviews with IREFs and forest officers of the regions, more than 50% of them have introduced and applied the knowledge and techniques learned in the project in the newly assigned areas (Indicator 2).

<Other Impacts at the time of Ex-post Evaluation>

Ecological sanitation (ECOSAN) latrines[7] for soil fertilization, composting[8], and training for gardening[9] techniques introduced by the project have made a positive impact on the yield of market gardening mainly practiced by women in villages. According to the interviews with women in villages, owing to the increase of yield of market gardening, their income has increased by selling the products including tomato, onion, eggplant, and lettuce in weekly markets. In some villages, they have started collective management of income from market gardening, which allowed them to be more financially independent and to prepare for further gardening activities. No negative impact on natural, social and economic environment has been observed at the time of ex-post evaluation.

<Evaluation Result>

Therefore, the effectiveness/impact of the project is fair.

Achievement of Project Purpose and Overall Goal

Aim	Indicators	Results
Project Purpose: The capacities of stakeholders needed to control land degradation and to promote land recovery are reinforced.	Indicator 1: Techniques and knowledge of forest officers regarding controlling land degradation and promoting efficient land-use are improved compared with the time when the project starts.	Status of the Achievement: Partially achieved (partially continued) (Project Completion) According to the interviews with the officials of IREFs and community members conducted by the project, capacity of the forest officers was improved, and their activities became active at least in the pilot areas. Questionnaire survey on the forest officers also indicated that they had become positive about their own capacity. However, the level of improvement significantly varied from officer to officer due to frequent replacements of them caused by transfers and turnovers.

[4] Stone line structures made to prevent sheet erosion caused by rainfall.

[5] Wooden frame structures filled with stones or sandbags made to prevent gully erosion caused by rainfall.

[6] Tree planting has preventive effects for soil flow, wind erosion, soil salinization, and has soil fertilization effect. The project also expected farmers' income generation by planting eucalyptus for timbers and fruit trees (mango, cashew, etc.).

[7] Environmentally friendly sanitation technology that allows economic use of human excreta after decomposition. In the project, weakening of cropland and overexploitation were reduced because organic manure produced by ECOSAN latrines fertilized croplands. Hygienic environment was also improved by the installation and utilization of latrines.

[8] See the footnote 7 for the effects of fertilization by composting. Increase of income associated with the increase of agricultural products by compost improved the motivation of farmers for the control of land degradation and promotion of land recovery, thus, contributed to the sustainability of the effects of the project.

[9] Gardening promoted effective utilization of non-cropland around houses and reduced weakening of cropland and overexploitation. In addition, increase of income from vegetable selling also had the effects on the sustainability of the project as stated in the footnote 8.

		(Ex-post Evaluation) Although techniques and knowledge of the forest officers involved in the project were improved through the activities of the project, most of them have moved to other areas. IREFs in Fatick and Kaolack regions encouraged the forest officers moved to other areas to transfer their knowledge and techniques to newly assigned forest officers in their posts. According to the questionnaires to and interviews with IREFs and forest officers of the regions, some new forest officers have applied the knowledge and techniques transferred from predecessors using the technical manuals developed by the project in their community awareness raising activities.
	Indicator 2: The techniques whose efficiency has been verified through the project to control land degradation and to promote efficient land-use are introduced and utilized in at least more than 50% of villages in the priority areas.	Status of the Achievement: Achieved (partially continued) (Project Completion) According to the questionnaire survey conducted by the project, the ratio of the villages in the priority areas that introduced and utilized the techniques for land degradation control and efficient land-use verified by the project reached 81%. (Ex-post Evaluation) According to the observations made by the officials of IREFs and forest officers of Fatick and Kaolack regions, some villages in the priority areas have continuously utilized the techniques verified by the project. For example, the stone cordon technique and framed bund technique have been practiced in some villages in the priority areas in the Departments of Nioro, Foundiougne, and Kaolack. In Keur Bakary village in Kaolack Department and Prokhane Toucouleur village in Nioro du Rip Department, more than 4 ha has been planted with trees in each village during and after the project.
Overall Goal: The activities aiming at controlling land degradation and land recovery are conducted in the target area of the project.	Indicator 1: The techniques whose efficiency has been verified through the project to control land degradation and to promote efficient land-use are implemented in more than 75% of rural communities[10] in the project's target areas.	(Ex-post Evaluation) Not verified. The techniques introduced by the project have been continuously practiced in the priority areas. Although anti-erosion techniques (bunds, stone cordons, windbreaks, assisted natural regeneration, etc.) introduced by the project have been implemented under the mentorship of forest officers in some non-priority areas such as Gossasse department in Fatick region, the extension of the techniques in the target areas has not been verified because no data was available.
	Indicator 2: More than 75% of forest officers introduce the techniques and knowledge to other areas in the project target areas.	(Ex-post Evaluation) Partially achieved Most of the forest officers involved in the project have moved to other areas as stated above. However, RFs in the regions encouraged them to introduce and apply their knowledge and techniques learned in the project in the newly assigned areas. According to the questionnaires to and interviews with IREFs and forest officers of the regions, more than 50% of the forest officers moved to other areas have introduced the knowledge and techniques in the newly assigned areas.

Source: DEFCCS, IREFs, forest officers, Terminal Evaluation Report (November 2015), Project Completion Report (February 2017)

3 Efficiency

Because of the delay in the achievement of the Project Purpose or capacity building of stakeholders in the priority areas, the terminal evaluation (July 2015) recommended the extension of the project period. The project was extended accordingly, thus the project period and cost exceeded the original plan (the ratios against the plan were 120% and 139% respectively). The outputs were produced as originally planned by the end of the extended period of the project. Therefore, efficiency of the project is fair.

4 Sustainability

<Policy Aspect>

The new policy of the "National Strategic Investment Framework for Sustainable Land Management 2020-2035" (CNIS/GDT: Cadre National d'Investissement Stratégique pour la Gestion durable des Terres) declared a determination of the government to create political, legal, institutional, technical and financial environments to enable Senegal to control land degradation in all ecosystems and promote land recovery for sustainable agroforestry production, food security, and well-being of the people.

<Institutional/Organizational Aspect>

There have been no major institutional and functional changes in MEDD, DEFCCS, and IREFs during and after the project. Insufficient human resources to fight against land degradation has been a significant issue at all levels of responsibility. Forestry sector, in particular, has faced challenges caused by the limited number of staff and slow-going recruitment due to budgetary constraints. In order to make up for the deficient and unstable IREFs' staffing, forest officers and brigades, the involvement of local authorities and community people have been encouraged. The project has introduced the Local and Green School Actions (AVLOS: Actions Vertes Locales et Scolaires), an approach developed by the project to disseminate the project's outcomes in wider areas using the existing education networks and encouraging the participation of administrations widely from the ministries to local governments. This approach has been continuously practiced by an environmental NGO called Nébéday[11] to promote reforestation mobilizing schools and school management committees.

<Technical Aspect>

The knowledge and techniques introduced by the project have been used after the project only to a limited extent because most of forest officers involved in the project have moved to other areas and/or other activities. Some officers continue to conduct the training of local population using the techniques learned in the project. Besides, some new forest officers keep using the technical manual developed by the project in their community awareness raising activities. Composting has been continued mainly by women to fertilize their plots for market

[10] Rural community (communauté rurale) is the fourth-level administrative division (below country, region and department) comprising the villages.

[11] A NGO based in Senegal and France, which aims to protect, manage and develop natural resources participatory by and for local populations. (Source: website of Nébéday)

gardening. Tree planting and ECOSSAN system have also been continued in some villages because the community members became aware of the benefits from these activities. The training materials provided by the project have been used by the local people for these activities.

<Financial Aspect>

Although the budget for land degradation control and land recovery promotion has been continuously allocated to DEFCCS, IREFs, and brigades, the amount of budget has not been sufficient. Therefore, the IREFs and brigades have requested the villages under the jurisdiction to get involved in the activities and make financial contributions. Since the means of transportation for IREFs and brigades were indispensable and critical for their daily activities visiting forests and villages, the project provided motorcycles for them. However, the fund for their maintenance, fuel, and additional procurement has been a challenging issue.

<Evaluation Result>

In light of the above, some problems have been observed in terms of the institutional/organizational, technical, and financial aspects of the implementing agency. Therefore, the sustainability of the effectiveness through the project is fair.

5 Summary of the Evaluation

The Project Purpose was partially achieved. Over 80% of the villages in the priority areas introduced the techniques verified by the project, and the capacity of forest officers has improved. However, the level of capacity improvement varied from officer to officer due to frequent replacements of the personnel. The Overall Goal was partially achieved. The techniques verified by the project have been applied in the priority areas in the two regions of Fatick and Kaolack. However, because most of the forest officers involved in the project have been transferred to other areas, dissemination of the techniques to other areas other than the priority areas has been limited. As for sustainability, some problems have been observed in terms of the institutional, technical, and financial aspects. As for efficiency, both the project period and cost exceeded the plan. Considering all of the above points, this project is evaluated to be partially satisfactory.

III. Recommendations & Lessons Learned

Recommendations for Implementing Agency:

- Since composting, tree planting, and ECOSSAN latrines have been continuously conducted and used in some villages in the priority areas, it is recommended that IREFs and forest officers strongly assist the local population with these activities, and disseminate composting, tree planting, and ECOSSAN latrines to other areas as a means of land degradation control and land recovery. It is recommended that MEDD backs up these activities by allocating necessary human and financial resources.

Lessons Learned for JICA:

- Land degradation control and land recovery, intending environmental improvement of land, requires farmers to employ restrained and deliberate farming by, for example, setting up protection areas and introducing fallow periods and fallow zones. It sometimes goes against economically efficient farming desired by farmers, which often result in monoculture farming, overgrazing, haphazard reclamation, etc. Therefore, it is not easy to get local population involved in the project activities, though their involvement is indispensable and highly required. And because it takes time to make visible land recovery accomplishments, after getting local population's involvement, it is necessary to keep their commitments. For that, some specific devices are required to maintain the motivations of farmers to be involved. Composting, tree planting, and ECOSSAN latrines introduced by the project have been continuously conducted and used after the project by the local population because they produce tangible benefits for the people in a relatively short period of time, working as motivators for farmers to keep them conducting restrained and deliberate farming. Therefore, it is recommended that a reforestation and land recovery project introduces some components to produce short-term tangible benefits for local population to keep getting them involved during the project and keep them doing right actions after the project.
- The project has developed and introduced an approach named AVLOS involving the education sector to disseminate the project's outcomes in wider areas using the existing education networks, and to raise awareness of the people including schoolteachers and students. The approach has functioned as expected making up for the staffing shortage of brigades and continued after the completion of the project. For a reforestation and land recovery project which requires the involvement of various stakeholders in large numbers, a mechanism for creating collaborations involving other sectors other than forest sector could be an effective and efficient approach.
- The project has made contributions towards the improvement of human resource development only leaving staffing shortages and financial constraints as issues for the sustainability of the project effects. Limited human and financial resources often stand in the way of success of a project particularly of the sustainability of project effects. Although staffing and financing are out of the scope of a technical cooperation project in many cases, it is recommended that a project includes possible tactics in its plan to improve staffing and financing of the counterpart agency and to mitigate negative effects on the project by the staffing and financing issues. For that, it is recommended to make a detail study on the staffing and financing situation of the counterpart agency at the initiation stage of a project.

Market garden cared by women
in Lerane Coly in Fatick region

Stone cordon for water erosion prevention
maintained by villagers in Kematane Bambara
in Fatick region