

## Summary of the Results of the Evaluation Survey

<b>1. Outline of the Project</b>	
<b>Country:</b> Republic of Senegal	<b>Project Title:</b> Capacity-building Project for the control of land degradation and the promotion of land recovery in degraded soil areas
<b>Issue Sector:</b> Nature Conservation— Revegetation of Degraded Land	<b>Cooperation Scheme:</b> Technical Cooperation
<b>Division in Charge:</b> Global Environment Department	<b>Total Cost:</b> Approximately 500 Million Japanese Yen (As of the June 2015 )
<b>Period of Cooperation:</b>	(R/D): March 4, 2011 to March 3, 2016
	<b>Partner Country's Implementing Organization:</b> Directorate of Water, Forests, Hunting and Soil Conservation (DEFCCS), Ministry of Environment and Sustainable Development (MEDD)
	<b>Implementing Organization:</b> Earth and Human Cooperation
<b>Supporting Organization:</b>	
<b>1-1 Background of the Project</b>	
<p>In Senegal, the expansion of bare land, soil salinization and weakening of cropland, caused by the excessive practice of monoculture in the groundnut basin and overgrazing, are becoming the serious issues. In this context, the Government of Senegal has developed the Medium Term Sector Expenditure Framework (Cadre de Dépenses Sectorielle à Moyen Terme : CDS-MT) for 3 years period, which aim to ensure effective funding for the implementation of defined strategies for achieving the goals set in the Strategic Document for Poverty Reduction and the Sector Policy Letter of Environment and Natural Resources. In the CDS-MT, 8 programs have been implemented to promote the rational management of natural resources to achieve sustainable development, reduce poverty and improve quality of life, and "The measures against forest destruction and degradation" constitute one of these programs.</p> <p>To date, a number of projects have carried out in the area for the improvement of soils, reforestation or establishment of protected forest areas etc. However, the activities have been implemented through isolated interventions and the capacity building for forest officers to accumulate the skills and experience are required. Furthermore, activities at village level often stagnate with the completion of projects. This then results in problems related to the resurgence of degradation or fault replication of activities and technical transfer at the other villages.</p> <p>Thus, the Government of Senegal requested the assistance to the Government of Japan, with a subject of capacity building of forest officers and local communities to address the issue on the land degradation. The Japan International Cooperation Agency (JICA) and the Government of Senegal signed the Record of Discussions (R/D) on the implementation of the project "Capacity building for the control of land degradation and promoting their valuation in areas of degraded land (CODEVAL)" (hereinafter referred as "the Project") in December 2010. The Project started under the technical cooperation project in March 2011 for a period of five years in collaboration with counterparts.</p>	
<b>1-2 Project Overview</b>	
<b>(1) Overall Goal:</b>	
The activities aiming at controlling land degradation and land recovery are conducted in the target area of the project.	
<b>(2) Project Purpose:</b>	
The capacities of stakeholders <sup>1</sup> needed to control land degradation and to promote land recovery are reinforced.	
<b>(3) Outputs</b>	
<b>Output 1:</b> Priority areas for the implementation of measures aiming at controlling land degradation and promoting land recovery are defined.	

<sup>1</sup> Forest officers and farmers in the priority area of the Project

- Output 2:** Necessary techniques to control land degradation and promote land recovery are improved/ developed.
- Output 3:** Effective techniques and measures to control land degradation and to promote land recovery are defined after the implementation of the pilot projects.
- Output 4:** A system for awareness raising among communities and for dissemination of techniques to control land degradation and promote efficient land use is developed in the priority areas.

**(4) Input (As of the terminal evaluation)**

1) Japanese Side :

Total budget : Approximately 500 million Japanese Yen

- Japanese Experts: 5 persons (Total 107.07 MM by the end of March 2016)

Project Manager/ Capacity building/ Measures for the restoration of degraded soils 1, Forestation, Measures for the restoration of degraded soils 2/ Village development 1 (Agriculture management), Training management/ Village development 2 (Community participation, Gender, Environmental education)

- Project operational cost: 155,385,000 Japanese Yen

- Training in Japan: The total number of the counterpart personnel having participated in training in Japan is 14 (1<sup>st</sup> year: 2 persons, 2<sup>nd</sup> year: 4 persons, 3<sup>rd</sup> year: 4 persons, 4<sup>th</sup> year: 4 persons).

- Provided Equipment: 24,288,582 Japanese Yen (provision of Vehicle, Motorcycle, Computer, Printer, Projector, Screen and Satellite image.)

2) Senegalese Side :

- Counterparts: 22 persons (Project Director, Project Manager and Counterpart Personnel)

- Local cost: FCFA 48,020,872 (Approximately 9.9 million Japanese yen)

**2. Evaluation Team**

Members of Evaluation Team	Designation	Name	Organization
Japanese Side	Team Leader	Ms. Kaori Tanaka	Senior Representative, JICA Senegal
	Dissemination Policy	Ms. Meri Fukai	Project formulation adviser, JICA Senegal
	Measures for Degraded Soil	Dr. Akira Kamidohzono (Mr.)	Visiting Senior Advisor, JICA
	Cooperation Planning	Ms. Etsuko Masuko	Deputy Director, Natural Environment Team2, Forestry and Nature Conservation Group, Global Environment Department, JICA
	Evaluation Analysis	Mr. Teppei Okano	Consultant, Icons Inc.
Senegalese Side		Mr. Baba Ba	Chief of Division Reboisement et Conservation des Sols (DRCS), DEFCCS
		Mr. Mustapha Sarr	Division Suivi, Evaluation, Formation et Sensibilisation (DSEFS), DEFCCS
Period of evaluation	June 27, 2015 ~ July 17, 2015		Type of Evaluation : Terminal Evaluation

**3. Results of Evaluation**

**3-1 Verification of Achievement**

**(1) Progress of Activities**

Most of the activities have been carried out and completed as planned. The priority areas were selected through discussion with stakeholders based on the maps developed by the Project in the 1st year (Output 1). According to the document review and analysis of the past experience of other projects, the appropriate techniques in the selected areas were identified (Output 2). These identified techniques were examined by the verification test in pilot site and improved from the point of view of acceptability, cost efficiency, simplicity, profitability and compatibility to the local needs (Output 3).

The activity plan related to dissemination of the result of the Project has been reviewed in response to the suggestion from the Mid-term review survey. The Project has carried out a dissemination approach which utilizing existing education network and encouraging the participation of local government (Output 4). Capacity building of forest officers, farmers and other stakeholders has been brought forward through direct involvement on above process in parallel with the trainings, workshops and seminars.

## **(2) Level of the achievement of Outputs**

### **Output 1**

The indicators of the output 1 have been achieved by the end of 2011. Land degradation map utilizing satellite images of the Advanced Land Observing Satellite (ALOS) and the Satellite Pour l'Observation de la Terre (SPOT) has been developed by local consultant and 100 villages were identified as priority areas. The criteria for the selection of priority area have been determined through the series of discussion with counterparts based on the synthesized information such as land use map, land degradation map and so on. To reach agreement on the selection of priority areas, several workshops have been organized by the Project and the selection process of priority areas were explained in detail.

### **Output 2**

The indicator of the output 2 has been achieved in the middle of 2012. Applicable techniques for the communities were identified and categorized by the type of land degradation through reviewing related documents, analyzing existing techniques and the result of on-site survey. The Project collected and analyzed the information not only techniques tested in Senegal but also in neighboring countries. By these efforts, the techniques which can be utilized in commune level and its improvement method have been listed per type of degradation (Water erosion, Wind erosion and Decreasing of soil fertility). Based on the result of above studies, the contents of activity in each pilot site were determined.

### **Output 3**

The indicators of output 3 have been partially achieved and expected to be achieved all in all by the end of the Project. Verification test has been continually conducted in the pilot sites considering the situation of land degradation in each area and the result of the verification tests have been compiled tentatively in draft version of the technical manual as well as the catalog of techniques. The verification test in the pilot sites has been continually conducted. Since the local farmers in pilot sites have been involved in the activities related to the verification test from planning stage, their knowledge and skills have been improved in practical basis.

### **Output 4**

The indicators of the output 4 have been achieved. Two methodologies for awareness rising among communities and for dissemination of techniques are suggested and 66 % of the priority area outside of pilot village have some plans for the countermeasure against land degradation or already have taken some countermeasures for the issue, according to the monitoring result by the School Management Committee (CGE) through the Green Actions / Local and School (AVLOS).

## **(3) Level of the achievement of Project Purpose**

The project purpose has not been achieved at this time, and it required more time to reap a concrete result of the Project. As to the indicator 1, the capacity of forest officers have been improved to some extent. According to the result of questionnaire survey conducted by the Project in June 2015, the number of forest officer who realize their upskilling is increased. During the field investigation by the terminal evaluation team, stakeholders pointed that the ability and skill of forest officers have been sufficient. However, most of forest officers have turned over during the project period and the result of the questionnaire survey is subjectively-base by respondents. Therefore it is difficult to measure correctly the level of improvement by the result. Regarding the indicator 2, the result of questionnaire survey shows that 64.4 % of villages in priority area (including pilot sites) utilize at least one technique introduced by the Project. Since some of the techniques introduced by the Project would be implemented during or after raining season and the ratio of utilization of the techniques are expected increase. On the other hand, the Project attempts to disseminate the

techniques to the priority areas through AVLOS approach since there is a limitation of human resources to conduct the same activities with pilot sites for other village in the priority areas. For the reason, the Project has carried out the activities in wider area out of the priority areas which are the target areas of the Project purpose. The way of dissemination may have led to a lowering in utilization of technique in the priority areas and sustainability of the Project.

**(4) Level of the achievement of Overall Goal**

As to the overall goal, it is necessary to accelerate the dissemination approach in remaining term of the Project. The dissemination target set in the indicator is more than 75% of communes in Kaolack region and Fatick region, and the Project needs to collaborate with existing system of information propagation in regional or national level. Therefore the Project suggested CODEVAL approach which utilizing existing education network, AVLOS and encouraging the participation of local government. Since the activities related the approach started in 4th year, the tangible result has not yet been observed.

**3-2 Summary of Evaluation Results**

**(1) Relevance (High)**

The Project is intended to enhance capacity of stakeholders to control land degradation and to promote land recovery. The contents and approach of the Project are highly consistent with the national policy. The Project is also consistent with Japan's cooperation policy for Senegal. Moreover, most of residents in the target area are farmers and decline of soil fertility due to deforestation and soil degradation are extremely serious issue for the area, therefore the Project meets the needs of the farmers and local governments.

**(2) Effectiveness (Moderate)**

Attaining the outputs contributes to achievement of the project purpose and the relationship between the project purpose and the outputs is appropriate. However the project purpose has not been achieved and it required more time to reap a concrete result of the Project. According to the result of questionnaire survey by the Project, both the indicators almost have been achieved, however the progress of reinforcement of capacities is different from farmers in pilot site and outside of the pilot sites. To fill the gap, the Project should focus on the dissemination of techniques to priority area outside of pilot sites to achieve the project purpose.

**(3) Efficiency (Relatively High)**

The quality and timing of the project inputs by Japanese side are adequate and lead to achievement of the outputs. The Project is implementing efficient project management and addressing the changing situation such as organizational restructure, turnover of the counterpart (C/P) personnel. The project inputs by Senegalese are improved comparing with the time of the Mid-term review.

Training in Japan provides the C/P with opportunities to enhance capabilities by learning the good example on natural resource management by local authority, the latest study on land conservation and so on. The contents of the training in Japan are considered by the needs of C/P to develop capabilities to conduct the project activities. As to equipment, considering the number of pilot sites and contents of wide range of activity, additional 2 vehicles were provided in the 2nd year. 13 motorcycles also provided additionally to secure the transportation means of forest officers. These provisions promote the activities in village level. Other equipment provided in proper timing and contributed to the achievement of the outputs.

**(4) Impact (Relatively High)**

Since the environmental issue requires time to be improved, significant impacts by the Project on the land recovery have not yet seen. Regarding capacity building of stakeholders, knowledge and skills of forest officer have been improved to some extent and awareness of local farmers has also been improved through their commitment to the Project activities. However it is observed that there is a lack of budget and human resources as well as structure to support communes to implement necessary countermeasures against land degradation in village level.

For the achievement of the overall goal, it is necessary to accelerate the dissemination activities in remaining term of the Project so that the stakeholders could spread the outcome of the activity after the completion of the Project. The approach utilizing education network is considered as effective to

spread information in the wide area. Environmental education at school creates awareness of children and local community on the land degradation issues. On the other hand, Communes, forest officers, CGE and CGE unions have been involved in the approach for encouragement of the implementation of the techniques. When the dissemination approach continues with active participation of stakeholders, the overall goal is expected to be achieved.

**(5) Sustainability (Moderate)**

The political sustainability will be secured as the Project has already been aligned with the existing policies. The technical sustainability will be also secured if technical manuals developed by the project are used by forest training center because the introduced technology for stakeholders is acceptable. From the organizational aspect, as the dissemination activity proceeding in the remaining term of the Project and after the completion of the Project, their burden of work is expected to be increase. To secure the sustainability of the Project, it is desirable to assign sufficient number of forest officer and to allocate budget for their activities in each area. As to financial aspect, although the situation of budget allocation by Senegalese side has been improved since 3rd year of the Project, there is still shortage of budget for effective implementation of the activities. To keep the activities of forest officer efficient, the Senegalese side will be required to provide fuel for motorcycles as well as maintenance cost after the completion of the Project. As to the financial sustainability in commune level, sufficient budget is not allocated to the land degradation issue and it is difficult to continue the activity only by its own efforts.

**3-3 Contributing Factors**

**(1) Ownership and consensus of stakeholders**

The Project has been implemented effectively through close coordination with C/P and other stakeholders involved. By stressing the ownership of C/P from the beginning of the Project, Forest officers and local farmers in pilot site comprehends the issues regarding land degradation in their area. Meanwhile the concept and contents of the activity have been shared to stakeholders whenever the new activity started and the approach contributes the smooth implementation of the project.

**(2) Transportation means for forest officer**

Additional provision of Motorcycles by JICA Senegal improves the efficiency of activities of forest officers. Accessibility to each village and the frequency of follow up by the forest officer increased. Many stakeholders pointed the betterment of performance of forest officers and expressed the appreciation of the provision.

**(3) Smooth communication among stakeholders in the pilot sites**

The project employees 4 animators and assigned in each of 4 target departments. They communicate with farmers in daily basis and take a role of a focal point among stakeholders in ground level. Since the number of pilot site of the Project is large, along with the effort of Japanese experts to establish good communication with each site, the role of the animator makes contributions to smooth communication among stakeholders. On the other hand, such active commitment of animator may cause the depression of ownership of forest officers and local farmers.

**3-4 Constraining Factors**

**(1) Turnover of counterparts personnel**

One of the most important inputs in any technical assistance projects is human resources. The frequent changes in human resources can cause partial or considerable loss of technical knowledge and skills transferred without sufficient handovers. As to the Project, 18 out of 22 C/P personnel have been turned over during the project period and the transferred technologies have not been taken over appropriately. Under the situation, the project organized refresh workshop to fill the gap of knowledge of each C/Ps and continues effort to accumulate the transferred technology.

**(2) C/P budget**

There has been shortage of budget by Senegalese side for effective implementation of the activities. Lack of inputs (activity budget and personnel allocation) was causing the difficulties to implement activities for the output 3 and 4 in the first half of the Project. The budget has been allocated since the middle of 3<sup>rd</sup> year and the situation was improved in part.

### (3) Utilization of local resources

The central government pointed that there was not enough opportunity to exchange expertise between Japanese experts and Senegalese experts in central level. Although the project focuses on the technology transfer to local C/Ps, it is considered as effective to utilize experts in Senegal to lead sustainable dissemination of the techniques.

### **3-5 Conclusion**

From the perspective of the five evaluation criteria, the relevance of the Project is assessed as high since the capacity building for the control of land degradation is one of the high priorities for the Government of Senegal and the Project's approach is also in line with the national strategy, which promote sustainable natural resource management for the measures against deforestation and land degradation. The effectiveness of the Project is deemed as moderate. The project purpose has not been achieved at this time and it required more time to reap a concrete result of the Project. The efficiency of the Project is assessed as relatively high. Most inputs that are necessary for the implementation of activities have been allocated as planned and converted into outputs. The Project's impact is deemed as relatively high since some challenge remains to disseminate the activities aiming at controlling land degradation and land recovery in the target area. All the external conditions to achieve the overall goal also have to be fulfilled. The Sustainability of the Project is assessed as moderate. The political and technical sustainability is expected to be secured and turnover of personnel and shortage of budget negatively affect both organizational and financial sustainability.

### **3-6 Recommendations**

#### **3-6-1 Recommendation before end of the Project**

Project activities which are not completed at the time of terminal evaluation are planned to be implemented until the completion of the project (October 2015). It is required to execute these activities during the remaining project term.

#### **3-6-2 Recommendation after end of the Project**

##### (1) Important aspects of the rest and extension of the project period

- 1) Based on the above observation, the project should focus on these aspects as below during the rest and extension of the project period to achieve project purpose.
  - Capacity building of forest officers and villagers in the priority areas especially in 40 villages in Kaolack region after the forum which will be held in September 2015 by cooperation with provincial department of education.
  - Selection and revision of techniques and knowledge regarding controlling land degradation and promote land recovery as the Project Purpose by reflecting experience in the pilot areas for the effective dissemination to priority areas
- 2) The project has also challenges in terms of organizational sustainability. The number of the forest officers is limited and the frequent changes of forest officers can cause partial or considerable loss of technical knowledge and skills without sufficient handovers. Therefore, the project should focus on this point as below during the rest and extension of the project period to secure organizational sustainability.
  - Sharing of knowledge and experience developed by the project with relevant organization such as training center for forestry officers and national soil research institute within the government.

##### (2) Extraction of lesson learned through collaboration with education sector

Collaboration with education sector for the dissemination of the knowledge and experience developed by the project is unique trial. Positive aspects were observed; people attending the forum could recognize problem of soil degradation in the region, and teachers could utilize the knowledge for environmental education to their pupils. Both positive and negative lessons learned through this trial should be extracted and analyzed furthermore.

##### (3) Securing mobility of forest officers

It is observed that the motorcycles provided by the project improved mobility of forest officers in the field. Government of Senegal should consider how to maintain this, especially for the budget

source of fuel, for further dissemination of knowledge through forest officers.

### **3-7 Lessons learned**

- (1) The introduced techniques have been designed from the point of view of acceptability and affordability of local residents and environmental condition. This is crucial for the sustainability of the techniques on the ground.
- (2) Collaboration with various stakeholders in the area such as education sector and communes is effective for awareness raising on environmental issues under such a situation that the number of officers on the ground is limited.
- (3) Project activities for the prevention of land degradation and the promotion of land recovery promoted to strengthen management and unity of farmers group such as women's group.
- (4) In severe environmental condition, there is a limitation for the utilization of economic incentives of local people for the environmental conservation activities including prevention of land degradation. Not only government support but also international budgetary support such as Green Climate Fund (GCF) should be utilized to solve this kind of issues because global climate change has accelerated environmental destruction.

### **3-8 Follow up**

None