

Ministry in Charge of the Feminine Condition, Childhood and Family
Islamic Republic of Mauritania

**THE STUDY
FOR
THE OASIS ZONE DEVELOPMENT
FOCUSED ON FEMININE PROMOTION
IN THE ISLAMIC REPUBLIC OF MAURITANIA

FINAL REPORT
MAIN REPORT**

MARCH 2008

**JAPAN INTERNATIONAL COOPERATION AGENCY
TAIYO CONSULTANTS CO., Ltd.
EARTH & HUMAN CORPORATION CO., Ltd.**

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PREFACE

In response to a request from the Government of the Islamic Republic of Mauritania, the Government of Japan decided to conduct the Study for the Oasis Zone Development focused on Feminine Promotion in the Islamic Republic of Mauritania and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a study team headed by Mr. Shigeru TAKAGI of Taiyo Consultants Co., Ltd. and consists of Earth & Human Corporation between September 2005 and February 2008.

The team held discussions with the officials concerned of the Government of Mauritania, and conducted field surveys in the study area. Upon returning to Japan, the team conducted further studies and prepared this final report.

I hope that this report will contribute to the promotion of the project and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials of the Government and those concerned in the Islamic Republic of Mauritania for their close cooperation extended to the study.

March 2008

Eiji HASHIMOTO
Vice-President
Japan International Cooperation Agency

Mr. Eiji HASHIMOTO
Vice-president
Japan International Cooperation Agency

Transmittal Letter

We are glad to submit the Final Report of “The Study for the Oasis Zone Development focused on the Feminine Promotion in the Islamic Republic of Mauritania”

"The Study on the Development of the Oasis Zone" was conducted by the Government of Japan in the period from April 2001 to September 2004, targeting Adrar and Tagant regions. By clarifying the importance and effectiveness of support for women in the oasis development, the study proposed the priorities projects focusing on women's activities. Apart from the above points, improvement of the extension structure through training of staff in charge of development is essential for sustainable development where the main actors are the inhabitants. At the same time, the elaboration of the development plan focused on women is needed given the situation where the support for women in the oases is difficult to achieve.

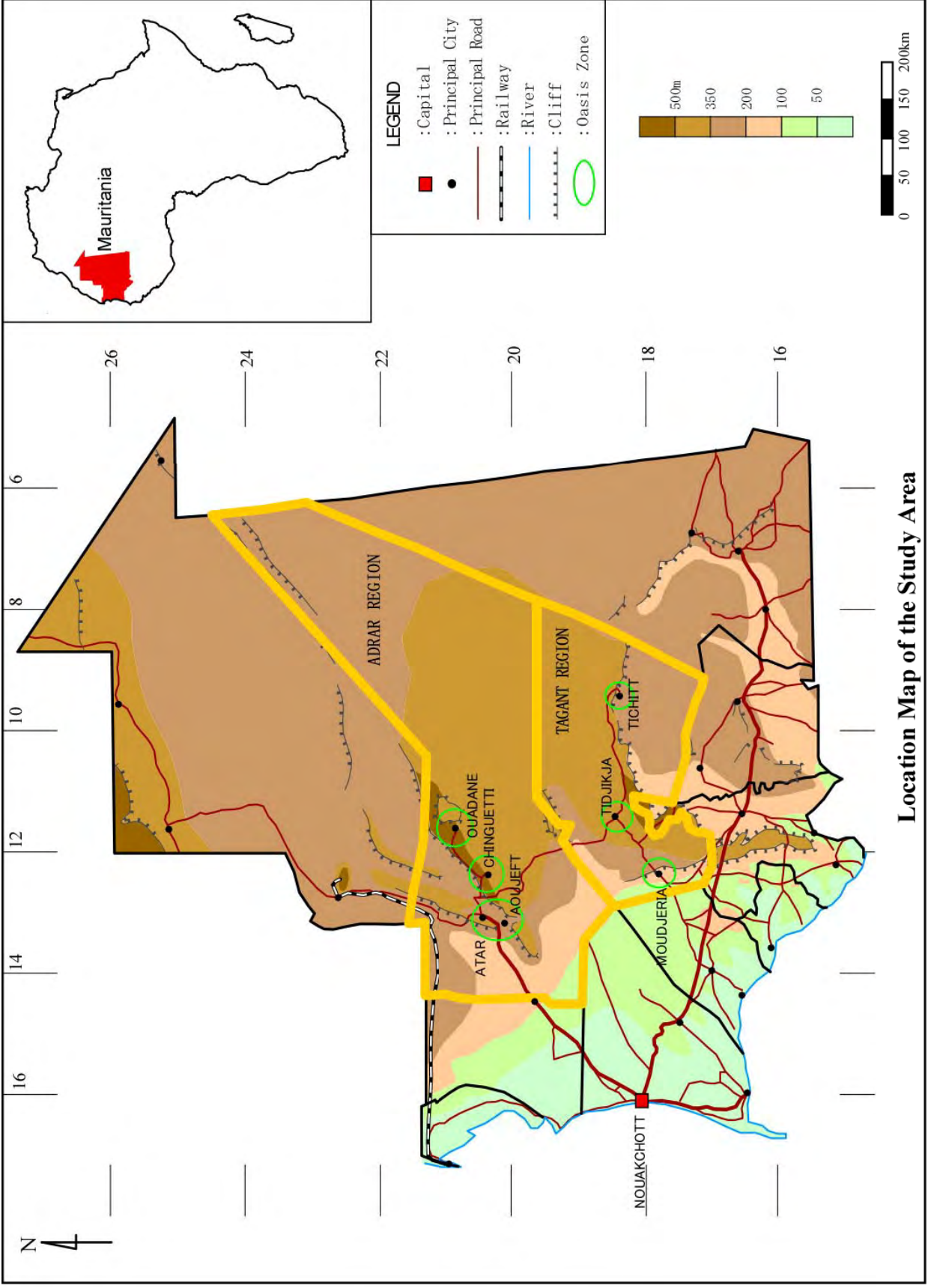
In view of tackling the above situation and promoting woman's activities, this study focused on formulating methodologies for women support with the capacity building of Ministry in charge of feminine condition, children and family (MCPFEF), and the reinforcement of extension system for women support. Thus, this study has implemented multi-sectoral pilot projects, namely agriculture, poultry, health, income generation activities etc., over 24 months between January 2006 and December 2007. All the experiences and lesson learned acquired through the pilot activities have been compiled into “the manual for livelihood improvement and women support” in Arabic language and distributed to all regional offices of MCPFEF, extension officers concerned and relevant authorities.

We hope that this report will assist MCPFEF and relevant authorities in achieving feminine promotion, and improving living conditions and poverty reduction in the oasis region. It is also sincere hope that this report will contribute to foster a long lasting partnership and friendship between the two nations of Japan and Mauritania.

Finally, we wish to express our sincere appreciation to the staff members concerned in your Agency for their continuous support throughout the Study. Our highest gratitude goes to the personnel concerned in your branch office in Senegal, the Embassy of Japan for Senegal, and MCPFEF for their cooperation extended to us during our fieldwork throughout the study period.

Sincerely yours,

Shigeru TAKAGI
Team Leader for the Study Team



Location Map of the Study Area

Vegetable gardening (1)



Land Preparation



Pots for the nursery



Transplantation



Watering with tube and cans



Growth of vegetables



Growth of vegetables



Vegetable measurement



Basket cultivation during the hot season

Vegetable gardening (2)



Shading for summer season cultivation



Shading for summer season cultivation



Vulgarization seminar in the oasis



Vulgarization seminar in delegation of MAE



Manuals for AVB and Oasis habitants



Monitoring by AVB



Dry vegetables



Tomato processing

Poultry



Demonstration cage



Demonstration cage



Training of watering



Construction of cage by resident



Construction of cage by resident



Cage constructed by resident



Cage constructed by resident



Cage constructed by resident

Income generation



Dyeing activity by group



Embroidery before dyeing



Practice of dyeing



Practice of dyeing



Trial to make child cloth



Training to use the sewing machine



Trial of child cloth



Exposition at women's day (8th March)

Hygiene and health



Activity of nurse at the health center



Monitoring of AA/ASC by nurse



Training of bacteria test



Training of growth monitoring



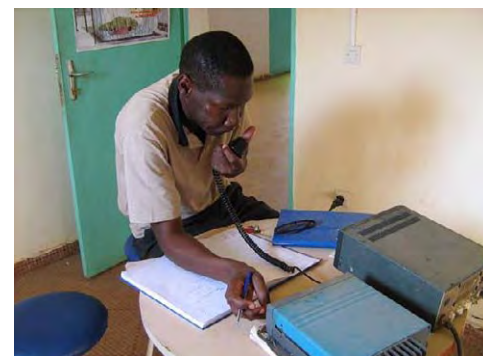
Activity of AA/ASC



Women support activity under initiative of AA/ASC



Installation of the radio transmission (health center)



Communication through radio

Seminar of the livelihood improvement



Explication of the livelihood improvement approach by the person who participate the training in Japan



Group discussion



Presentation of the result of discussion



Orientation of amelioration of the nutrition



Training of white meat and fish for the diversification of the sources of proteins



Doughnut making with egg



Training of improved stove(oven)



Group discussion on the action plan

Executive summary

Chapter 1 Introduction

(1) Introduction

"The Study on the oases Development Zone" (hereinafter referred to as "the previous JICA study") was conducted by the Government of Japan in the period from April 2001 to September 2004, targeting Adrar and Tagant regions. By clarifying the importance and effectiveness of support for women in the development of the oasis zone, this study proposed in its framework the following points focusing on women's activities; 1)Extension of vegetable cultivation technology, 2)Improvement of public health and condition, 3)Enhancement of living circumstances at small and remote oases.

However, in addition to the above points, improvement of the extension structure through the training of the staff in charge of development is essential for sustainable development where the main actors are the inhabitants. At the same time, the elaboration of the development plan focused on women is needed given the situation where the support for women in the oases is difficult to achieve.

In this context, following the previous JICA study, the Mauritanian government submitted a request to the Japanese government on December 22, 2004 for the realization of the "the Study for the Development of Oasis focused on the Feminine Promotion in the Islamic Republic of Mauritania" in order to reinforce the development of the oasis zone through supporting women.

(2) Objective of the Study

Targeting oasis area in Adrar and Tagant regions, the objectives of the study are as follows.

- 1) Develop the Action Plan of rural development that takes into account gender aspect to improve the living conditions and reduce the poverty of the oasis population.
- 2) Improve the human resources and the institutional capacity of the Ministry in charge of feminine condition, children and family (MCPFEF) and interested organizations.

The Action Plan shall be prepared in accordance with the evolution of the oasis development conducted so far in the country to be operated by the inhabitants themselves, administrative staff and NGOs. As a result, firstly, establishment of preliminary Action Plan which forms the basis of the pilot projects to be conducted jointly with the organizations concerned was conducted. Finally, it is aimed to realize the measures on the oasis development based on the lessons or the proposals that will be obtained through the implementation of these activities.

(3) Study Schedule

The study covers 31 months, from September 2005 to March 2008.

Chapter 2 Background of the Study

(1) Background of the Study

1) Poverty Reduction Strategy Paper (PRSP)

Developed in 2001, Poverty Reduction Strategy Paper (PRSP) is the main policy of the Mauritanian government which has set its objectives of reducing by half by year 2015 the level of poverty of less than 53.841UM/year/person in rural area, since poor people represent 3/4 of the population living in this environment.

The Mauritanian government has proceeded to the evaluation of the first phase of PRSP (from 2001 to 2004) during the period of 2005-2006 to revise the priority activities. Then, the action plan for the second phase of PRSP (2006-2010) was developed in October 2006. Thus, 4 priority sectors (education, health, water and infrastructure) and 2 priority areas (arid zone and urban slums) of intervention have been identified.

2) National Strategy for the Promotion of Women (NSPW)

Despite the adoption of the PRSP in 2001 by the government, which has recognized the fragility of women roles and position in socio-economic development, the integration in terms of gender in the strategy for each sector was not sufficient. Given this situation, the government has set a goal to involve women in decision-making as part of its "National Strategy for the Promotion of Women (SNPF) (2005-2008)" and decided to address the problems related to gender in the new PRSP.

The strategic objectives and priority activities listed in the NSPW are incorporated in the action plan for the second phase of PRSP 2006-2010. The emphasis is on, i) enhancing the productivity of women ii) the participation of women in decision-making and, iii) the development of the strategy that brings about change in behavioral through planning and the implementation of the sensitization and extension program(IEC).

3) Rural Development Policy

The Mauritanian government aims at "the improvement of productivity" and "the diversification of products" in its development strategy for the rural areas and has set the final objective of "the strengthening the competitiveness in both domestic and international markets." This policy focuses on the production of irrigated rice.

The strategic orientations of the oasis sector development have as overall objective a sustainable development of the sector owing to the fragility of the environment. Despite its low weight in the national economy, irrigated agriculture contributes to the settlement of the population, to the regeneration of the natural environment and to food security in the country.

(2) Outline of the Oasis Area

1) Outline

From the historical standpoint, the oases have always played a prominent role, both socially and culturally, having helped over the years the settlement of local populations. The oasis sub-sector has some 15,000 small-scale farms practicing agriculture based primarily on cereal and vegetable crops that combine the cultivation of date palms and irrigation, and livestock. In addition, the sector is experiencing a situation of imbalance marked on one hand by a high incidence of poverty, partly related to the isolation and the loss of traditional comparative advantages of oases in terms of shipping the goods and on the other hand, by over-exploitation of water resources, decrease of the water table or silting.

2) Evolution of the Social Condition

It can be cited the problem of exodus of rural population forced to go to the cities because of the persistent drought. As the most migrated people are men, the number of households that are headed by women increased considerably in rural areas. Therefore, the role of women as the engines of development in the area is becoming increasingly important.

Chapter 3 General Conditions of the Study Area

(1) Natural Conditions

Regarding the climate of the study area, it can be divided into three seasons, namely, the rainy season with high temperatures (July-October), the dry season with moderate temperatures (November-March) and the dry season with high temperatures (April-June). The mean annual rainfall is 75.0 mm in Atar and 118.1 mm in Tidjikja with 80-84% of the volume of rainfall concentrated in the rainy season. The dry years and the years abundant in rain appear irregularly and the fluctuation in rainfall varies greatly from year to year. In recent period, drought years with rainfall below 100mm/year return every two years.

The average annual temperature is 28.4 °C and the month in which the average temperature is the highest is July where it reaches 34.9 °C in Atar and 34.8 °C in Tidjikja. Difference between the average monthly maximum and minimum temperature is 24.4°C in Atar and 22.3°C in Tidjikja.

Geographically, the study area can be divided into plateaus, alluvions, dejection cones, floodplains, sand dunes and wadis. From the viewpoint of hydrogeology, the largest geographic unit is the wadi in the study area. The main wadis flow along the lineament and are closely linked with the distribution of many oases.

(2) Socio-Economic Conditions

The study area consists of 2 regions that are Adrar and Tagant, which are divided into 7 Moughataa (department). Under these departments, there are a total of 21 municipalities in the study area and each municipality is composed by several oases. There are 57 oases in Adrar and 60 in Tagant, 117 in total in the area of the present study. Number of oasis associations is 23 in the Region of Adrar and 18 in the Region of Tagant.

Population in the study area is approximately 78,000 residents in both Regions, which accounted for 3% of the total national population in 2,000. The population has declined from 1988 to 2001 with the average rate of 4.2%. The exodus of the rural population to urban areas due to the decline in agricultural output caused by drought or the high rate of infant mortality, can be cited as the causes for the declining population in the study area.

(3) Gender Issues

Approximately 29% of Mauritanian households are headed by women, and this figure rises to 32% in rural areas. The income level of the households headed by women being lower in comparison with other households, the pauperization of these households is an important factor for the development of oasis environment.

In the oasis environment, almost all the domestic chores are the responsibility of women. The time spent in this work being long, women cannot devote themselves to productive activities.

Only 36% of women earn some income through an income-generating activity and the remaining 64% are earning nothing. It is clear that women are the one who provide significant expenditures such as the purchase of food, the health or the education of children. It can be assumed that a reduction of their income may well influence the health and education of children. Women heads of households who are obliged to fulfill the tasks normally assigned to men have an extremely difficulty to find the resources needed.

Although the modern law allows land ownership to women, land ownership by women is extremely limited. During this investigation in the area, the difficulty for women to get land or the difficulty of access to land was revealed, and this fact prevents and limits their productivity activities. Without the right for land, the motivation of women for the protection or management of the land cannot be stimulated, and access to services and information relating to the management of the land or the agricultural extension becomes more difficult.

(4) Agriculture

Agriculture is practiced under arid or semi-arid climate in this country. Products that are mainly grown are millet, sorghum and beans in the flooding plains (cultivation using receding water), rice on the banks of the Senegal River, and the dates in the oases. Cultivation area or production volume varies greatly year by year depending on the rainfall situation.

Agriculture in the Regions of Adrar and Tagant consists of i) the cultivation of palm or vegetable gardening, and ii) cultivation using flood receding water for cultivation of millet or cowpeas. Livestock along with dates cultivation in the oases, cereal cultivation or vegetable gardening on the wadi beds are the main productive activities of the two regions.

Roles of men and women are separated in the oasis agriculture. Palms or cereals cultivation activities are carried out by men. As a matter of fact, men are engaged in commercial vegetable gardening of carrots in Adrar. However, vegetable gardening for domestic consumption is mostly practiced by women or their groups in both regions.

Livestock is an industry that is traditionally important in both Regions. Being seen as goods, animals are sold when people are in need of cash.

Date palms and vegetables are grown along wadis. Wells taking advantage of the shallow groundwater are dug along wadis and used for the cultivation of date palms. Vegetables are grown under the palm trees taking advantage of the water for palm trees irrigation.

Transportation of products, including agricultural products, and the displacement of people nearby the towns of Atar and Tidjikja, or the oases located along the main roads are provided by the bush taxis or the trucks. However, transport of goods or the movement of people in remote areas is provided by private 4WD pick-up tracks, this irregularly or rent are needed. In general, each producer sends its products in the absence of bulk shipping by the associations or the producer group.

(5) Health and Sanitation

Both regions targeted by present study are surrounded by a hostile natural environment and difficult access to medical services. Main diseases are respiratory diseases, diarrhea, conjunctivitis in Adrar, and respiratory diseases, malaria, diarrhea and parasitic diseases in Tagant. There are many cases of conjunctivitis in Adrar where the climate is relatively dry, and malaria in Tagant where rainfall is relatively rich.

Among 57 oases in Adrar, only 15 oases have health centers (PS) with nurses, basic medical personnel, and 22 oases have auxiliary midwives (AA) who have received short-term training in the National Health School. On the other hand, among 69 oases in Tagant, only 13 have health centers and oases with AA are only 17.

Number of per woman in Adrar and Tagant are 6.0 and 5.7 respectively and infant mortality rate

in these two regions are 1.4 and 1.2 respectively. More than half of women gave birth either at home (or under the tents) or outside without assistance. As there is small number of births recorded in specialized health facilities or health centers despite the existence of approximately half of the women who received any assistance at the birth, assistance is provided by the traditional midwives who do not belong to medical services.

(6) Income Generating Activities

Main income-generating activities for women in the oases environment are: market gardening, crafts, drying vegetables or small businesses. Income-generating activity that women have more interest is gardening. However, it is very difficult to ensure a sufficient quantity of harvest, which generates enough profit, as it is not easy for women or women groups to own land.

Most of the women are engaged in income generating activities by being members of groups such as women's cooperatives. However, these women's cooperatives have management problems, as they do not have any experience in the areas of planning, financing, accounting or coordination between organizations.

(7) Oases Development (projects concerned)

1) Program for Sustainable Development of the Oasis (PDDO)

This program is implemented under the joint funding of IFAD, Kuwait fund, Global Environment Fund (GEF) and the Mauritanian government. Taking over from Oases Project Phase II, which ended in 2003, the program started in February 2005 for a period of 8 years in the 5 regions of Adrar, Tagant, Assaba, Hodh El Garbi and Hodh El Chargui to lay the basis for oasis development by poverty reduction so that the people themselves can take care of part of the environment preservation. This program is made up of components; organization of the oasis communities, development of sustainable production capacity of the oases, financing, development of basic infrastructure and coordination / monitoring / evaluation.

2) Community Rural Development Project (PDRC)

Funded by the World Bank for the period from October 2004 to October 2010, the project operates in the 10 regions; Adrar, Tagant, Assaba, Hodh El Garbi, Hodh El Chargui, Gorgol, Brakna, Trarza, and Guidimaka Inchiri. These include the Agricultural Services Project (PSA) which began in 1994 and the Project for Management of Natural Resources in Pluvial Area (PGRNP) which began in 1997 as predecessor projects in the oases area also funded by the World Bank. PDRC follows PGRNP from which it capitalizes gains and extends the geographical reach and the scope of intervention. PGRNP has intervened in 66 municipalities

and has set up 295 Community Development Associations (CDA). PDRC aims at the creation of 700 CDA in 141 communes. While PGRNP focused solely on the villages, the PDRC add to that dimension a direct assistance to 10 pilot rural communes, a support to agricultural services and to micro-enterprises in rural areas.

This project consists of 3 components, capacity building, community investment funds (FIC) and project management / monitoring / evaluation.

3) Project for the Support of Health and Nutrition Sectors (PASN)

PASN is a project funded by the World Bank, which amounts to about 10 million dollars (International Development Association: IDA). The project is being implemented within 5 regions (Hodh El Gharbi, Assaba, Gorgol, Brakna and Tagant) and 2 towns (Nouakchott and Nouadhibou) for a period of 3-year from March 2007 to March 2010. Divided into 2 main components of health and nutrition, the implementing office of the nutrition component is installed within the MCPFEF. This project succeeds the activities of the project Nutricom that was executed between 1995 and 2005.

Upstream objectives being the improvement of health and nutrition as well as the improvement of the health system, the target beneficiaries of this project are women and children. The project is being implemented in accordance with the National Health and Social Action Policy (PNSAS) 2005 - 2010 and the National Policy for Nutrition Development (PNDN) 2005-2010.

Chapter 4 Development Issues

(1) Experiences of the Previous JICA Study and Similar Projects

The constraints given to the present study identified by the study objectives, as well as taking the remaining problems left by the previous JICA study are as follows.

- 1) In the framework of the previous study by JICA, tangible results relating to cultivation techniques or livestock have been achieved by realizing the development of agricultural techniques in the model oases. However, this has not led to the review of the extension execution structure in other areas or organizations.
- 2) Even though the importance of support to women activities for the development of the oasis environment was stressed, there is a position on the insufficiently training for women's organizations which must receive the support or participation of women in development.
- 3) Strengthening the capacity of MCPFEF who is in charge of gender and support to women through the training of personnel is necessary. This is a complementary topic that has been added for the start up of this study.

FIDA cites the importance of the participation of vulnerable groups as beneficiaries for the reduction of poverty in the rural areas as lesson learned from development assistance in Mauritania.

(2) Gender and Livelihoods Improvement in the Oases Society

The change in gender relationship that occurred in recent years in the oasis calls for women to participate in productive activities that they did not conduct so far. The agricultural or livestock productive activities being bounded by the major constraint of water, women's contribution to production is weak.

However, it will be possible for women to provide the necessary food for daily living through the implementation of cultivation or poultry farming techniques easily practicable by them.

It is necessary to develop a minimum medical service in the oases as the inhabitants of landlocked oases have difficult access to a hospital or a clinic.

By acknowledging the existence of opportunities for productive activities for women through various technical training or support for women's cooperatives to reform consciousness, women living in the oasis can exploit at its maximum their potential in their family or oasis life.

(3) Necessity to Satisfy the Needs of Women

Women eagerly wish a support for the organization of women's cooperatives or for the strengthening of management capacity they have never experienced even if they have received financial aid through development projects. In this context, the fact of satisfying the needs of women who did not receive much so far, while seizing the needs of men and women, will be crucial to the integrated development of the oases.

Chapter 5 Action Plan

(1) Basic Concept

The Action Plan for supporting women in oasis environment was developed on the basis of the following principles through the cultural and socio-economic situation or the experiences of the pilot projects carried out in this environment.

1) Community development of the oases through the promotion of latent capacity of women

Women and their groups who received little benefit from any development projects being the main beneficiaries and participants, one has to begin to carry out activities directed to them within the framework of the Action Plan. Thus, women are capable to contribute to the oases community development through activities related to the Action Plan for women who

gain experience and boost their latent capacity are targeted.

2) Creating synergistic effects with projects already underway

Unlike PDDO or PDRC engaged in activities focusing on community committees as AGPO or ADC, the approach taken in this Action Plan is targeted directly at women or their groups who have not benefited from projects in order to promote their participation in oases community development.

(2) Development Approach

1) Efficient Use of Local Resources

So far, the projects have always been using external personnel to provide support within the framework of rural development projects in Mauritania. But it is important to form the focal points selected from the inhabitant's capacity to carry out activities in a sustainable manner in an oasis environment where extension services are struggling to intervene.

The life of the oasis is based on the development of the local resources. Thus, people acquire food for animals while producing agricultural products or livestock. The use of secondary agricultural products or wastes generated by agricultural activities and local resources is essential for livestock. Agricultural production in the oases is based on the organic combination of agricultural production and animal husbandry. The fact that maintaining this cycle of resource use is vital to the sustainability of the activities.

2) Multi-Sector Approach

A multi-sector approach is more suited to the needs of the residents by the necessity to cope with the various problems of daily life in order to improve the living conditions and reduce poverty of the oasis residents, who are surrounded by a hostile environment. Furthermore, the fact that implementing each project separately being considered irrational even if these are priority projects or programs, it is desirable to achieve them by grouping topics concerned.

3) Dissemination of the Non-Wasting Philosophy (Low-Cost Approach)

Creating a better environment by improvising things in the surrounding to lower the cost of life instead of waiting for support or changes brought about by the outside world, is of vital importance to sustainable development. It is advisable to start with small activities at reduced cost or the inventory of self owned things and to develop them gradually.

(3) Action Plan

Women and the women's groups from the regions of Adrar and Tagant who did not receive a lot of development projects so far are targeted by the Actions Plan.

1) Objectives

The main objectives of the Action Plan are to improve the living conditions of the inhabitants and reduce poverty by focusing on support women and women groups' activities in the target area.

The following objectives are to be researched in the short term.

- i) Improvement in the rate of food self-sufficiency of households, rising incomes and improving nutrition.
- ii) Sustainable use of local resources
- iii) Improvement of the access to basic medical treatment and improvement of the oasis inhabitants' nutrition.
- iv) Promotion of women's participation in socio-economic activities and acceleration of men understanding of women's activities.

2) Expected Results

- i) Improvement of households' food self-sufficiency for women's groups and products diversification.
- ii) Improved knowledge about health and hygiene and change of behaviour and amelioration of the eating habits.
- iii) Improving the basic medical service.
- iv) Improved awareness of men and empowerment of women.

3) Axes of the Activity

The Action Plan for women support in the oasis zone is composed of the following axes.

- i) Training of local women leaders and strengthen of women's organizations

Objectives: training of women local leaders who take the initiative of various women's activities in the oases and strengthening the women's organizations.

Content of activities;

- Seminar for improvement of living conditions at the Regions level
- Recycling the AA (training on the subject of women leaders, the Promotion of Women and IEC)
- Training for local women leaders (training of leaders of women's organizations and AA

/ ASC)

- Strengthening of women's organizations

ii) Training / support related to the generation of income (production techniques) and the techniques of life

Objectives: Technical support for the promotion / diversification of income-generating activities for women (support to production techniques) and the improvement of living conditions.

Content of activities;

- Extension of the gardening and poultry farming activities in order to improve the food self-sufficiency rate
- Income generating activities (dyeing, sewing, crafts and small business etc.).
- Improved techniques of life

iii) Sensitization and extension activities (IEC)

Objectives; Promoting the participation of women who are aware of their rights and obligations in activities related to the overall improvement of the living conditions and the community development.

Content of activities;

- Sensitization and extension in the oases by the MCPFEF staff.
- Sensitization and extension by the women local leaders and their monitoring

iv) Strengthening the capacity of MCPFEF and seminar for the improvement of the living conditions

Objectives; Strengthening of the functioning of MCPFEF who is in charge of implementing the Action Plan and strengthening the capacity of regional MCPFEF, MOH and the MFA staff who are in charge of implementing the activities

- Extension of the concept and approach to improving the living conditions throughout the seminar for improvement of the living conditions.
- Realization of women support by using the experience of pilot projects in the model oases.
- Strengthening the capacity of the staff in charge of the seminar for improvement of the living conditions in the field.

4) Period of the Plan

The period covered by the Action Plan will be 5 years from 2008 to 2012, synchronizing in the last year the PDDO programs. Being considered as preparatory phase, the training of women leaders or the strengthening of MCPFEF staff's capacity etc will be realized in the first year. Starting from the second year, which is considered as extension phase, each activities at oases

must be carried out.

5) Implementation Structure

i) Central level

The implementation structure of the Action Plan is composed of MCPFEF as a coordinating organ, MOH and the MFA as collaboration organs. At the central level, coordination of all activities are performed by appointing a steering committee under the initiative of MCPFEF who consults with the MOH and the MFA. A project management unit for the implementation of the Action Plan will be installed within the Direction of Studies, Cooperation and follow up the MCPFEF.

ii) Regional Level

- Regional Administrative Structure

At the level of the Regions, appoint the regional technical committees under the initiative of the Regional Coordination of the MCPFEF to adjust activities with the regional services of the MOH and the MFA. This committee will be the site of development and periodic review of the business plan as well as passing on experiences learned in the field. It will also make periodic reports to the project's central unit and track the activities.

- Structure of the regional administration support to the people

The AGPO will interlocutor between the inhabitants of the oasis and the administration or external aid. And auxiliary midwives (AA) will be the focal point in the oases for the activities of the Action Plan by building their capacity in the areas of local health extension (ASC), or the training of leaders. These AA / ASC will serve as an intermediary between the oasis and the regional administration through the health posts.

6) Implementation Plan

The Action Plan should be implemented by identifying the oases zones in the following categories:

Category 1: oasis featuring AGPO and AA: 26 oases;

Category 2: oasis with only AA (without AGPO): 13 oases;

The implementation should be based on the four following ideas:

- i) Develop extension activities using as a basis for exchange the four model oases where pilot projects were conducted.
- ii) During the first period (from the 1st year to the 2nd year), run the exchange between

inhabitants at the model oases in addition to strengthening the capacity of various stakeholders like the MCPFEF.

- iii) Then in the second period (from the 2nd year to the 5th year), try to develop and extend each activity taking the oases in which the Women's Organizations training is going well to serve as basis oasis.
- iv) Develop activities in 4~5 new oases per year from the second year.

7) Methods for the Development of the Action Plan

The Action Plan proposed in the context of the present study is prepared on the basis of the assumption that the MCPFEF takes the lead for its development. The following implementation methods can be considered.

- i) The MCPFEF implements the Action Plan in collaboration with the ministerial departments concerned.
- ii) The MOH or the MFA implements part of the Action Plan independently under its own initiative.
- iii) A project such as PDDO, PDRC or PASN implements part of the Action Plan.
- iv) The inhabitants implement a part of the Action Plan taking advantage of the system of micro-credit.

8) Project Cost

The program of women support is composed of 4 axes of training or technical support. The investments required for the implementation and management of these activities are i) the cost for the Project Management Unit: ① experts, ② the office equipment such as computers ③ office management cost, and ④ management and maintenance of vehicles, and ii) the costs of training related to the programs, iii) the costs for preparation of the handbooks / manuals of extension, and iv) cost for monitoring and evaluation of the project.

If one evaluates the necessary costs for the realization of the investment above, the total cost with the exception of the expenditure of the Project Management Unit experts amounts to 110 million ouguiyas (about 0.44 million us dollars). The annual cost falls between 16 million ouguiyas (about 63,000 US dollars) and 28 million ouguiyas (111,000 US dollars). The activities of the first 2 years of strengthening the capacity of the MCPFEF staff are estimated to be 6 million ouguiyas (26,000 dollars) and the annual cost for the entire training between 8 million ouguiyas (32,000 dollars) and 20 million ouguiyas (80,000 dollars).

Chapter 6 Implementation of the Pilot Projects

(1) Objectives of the Pilot Projects

On the Basis of the preliminary Action Plan developed through the analysis of the current situation, the activities of the pilot projects should be performed to i) confirm the possibility of implementation of the Action Plan, and ii) grasp the constraints in the implementation through monitoring of the implementation process in order to iii) reflect to the Action Plan and iv) increase the feasibility of the Action Plan.

(2) Activities of the Pilot Projects

The following execution items for the pilot projects have been identified on the basis of the proposals of the previous study by JICA, the needs of the residents and the impacts on women support measures.

1) Improvement of farming techniques

In the framework of the improvement of agricultural techniques, i) vegetable gardening and ii) poultry farming for which the effect on women support is confirmed by the previous study of JICA, are to be achieved. The objectives of the vegetable gardening are improvement of productivity through the introduction of improved techniques, the review of water usage for rationalizing and improving nutrition through increased consumption of vegetables by the extension of the cultivation period. The objectives targeted by the poultry farming are the improvement of nutrition through the diversification of protein sources by the consumption of white meat and eggs, and rising incomes.

2) Improvement of health and hygiene

One seeks to ensure minimum medical service and the spontaneous participation of the inhabitants in these activities. In this context, train the auxiliary midwives (AA) to serve at the same time as community health worker (CSA) in order to conduct sensitization activities by the AA / ASC.

3) Income generating activities and support to women's organizations

At the same time as improving techniques for the life and production at the individual level, strengthen management capacity of women's organizations in order to rationalize and sustain the activities.

4) Strengthening the administration in charge of the extension for women support

Parallel to i) strengthening the capacity of the MCPFEF staff in charge of the coordination of women support actions or to the consideration of gender aspect, strengthen the collaboration between the departments concerned of the regional level and promote ii) Extension among residents at the oasis in order to strengthen the extension regional administration.

(3) Evolution of the Pilot Projects from the Previous JICA Study to the Present Study

Among the items listed above, 1) improvement of the farming techniques and 2) improvement of health and hygiene are the main point to be considered in the pilot projects undertaking as part of the previous study by JICA. In addition the following two points were added to support the women targeted by this study. That is to say, 3) income generating activities and support to women's organizations, and 4) strengthening of the administration related to the extension for supporting women are the tests that have been added this time for the preparation of the Action Plan.

(4) Principles of Execution

The principles of the execution of the pilot projects are the following.

- 1) Women and women's organizations are the main targets.
- 2) Taking into account sustainable development in the hands of the inhabitants, try to use in maximum the local resources or equipments / materials to be introduced at reduced cost.
- 3) The techniques to be introduced should be simple ones not requiring heavy cost and easy to understand.
- 4) Exploiting efficiently AGPO.
- 5) The administrative support for the extension is needed to develop the results of the pilot projects in other areas. To do this, the regional staff in charge of the extension (of MCPFEF, the MFA and the MOH) will be responsible for the extension activities along with the transfer of techniques.

(5) Selection of Oases

Oases to conduct pilot projects were selected by the criteria of i) the existence of functional AGPO, ii) the existence of active women's organizations within the AGPO, iii) the existence of agricultural production potential and iv) the potential as a centre of the zone.

Programs	Oasis Pilot Projects	Adrar		Tagant	
		M'Hairett	Tirabane	N'Titam	N'Batt
Support to agriculture and animal husbandry and resources management	Vegetable gardening/ Water use		○ ○	○ △	○ ○
	Poultry farming	◎M'Haireth	○	○Lemgueta ◎N'gereo	
Improvement of health and	Community health activities	○M'Haireth ○Faress	○	○ 6 satellite oases	○ 2 satellite oases

Programs	Oasis Pilot Projects	Adrar		Tagant	
		M'Hairett	Tirabane	N'Titam	N'Batt
hygiene	Training of auxiliary midwives	○M'Haireth ◎Fares	○	□	
Income generating activities	Technical training/ Strengthening of the organizations		○ ○	○ △	○ ○
Strengthening the capacity of SECF (Regional Coordination)			○		○

Note1) ○=ongoing execution since the first year, △=Conducted mainly through the initiative of the inhabitants, □=Conducted since 2007 through the initiative of the SECF, ◎ ; Conducted since 2007 following a strong demand from the inhabitants

Note 2) There are two oases in M'Haireth (M'Haireth et Fares). The oasis of N'Titam is composed of 6 small oases

(6) Time-frame for Execution of the Pilot Projects

Having an execution period from January 2006 to December 2007, the pilot projects have been implemented in 3 stages.

- First Step of "preparation period and partial implementation" (January-March 2006)
- The second stage of "preparation period of vegetable gardening and start up / monitoring other activities" (May-September 2006)
- Third stage of "implementation / monitoring of all the pilot projects" (October 2006 - December 2007)

(7) Status of Implementation and Results Obtained from the Pilot Projects

1) Outline

i) First Step (January-March 2006)

Prior to the start up of the pilot projects, the general assembly of the inhabitants in each targeted oasis was organized in order to proceed with the explanation of the direction and approach of the study.

Regarding agricultural activities (gardening and poultry farming), the activities of vegetable gardening in the oases of Tirabane, N'Batt and N'Titam, and those of the poultry farming in the oasis and Tirabane N'Titam were started after the selection of groups involved in the activities by the residents themselves. As for other activities, discussion with the inhabitants on the content / business plan took place.

In Tirabane where the activities of poultry farming have been conducted, 10 households have begun breeding in 2 months before the end of March.

ii) Second Step (May-September 2006)

Upon entering the period of hot summer, the activities of validation of extended period of vegetable gardening in the shade were initiated. The extension of the period until July for eggplant and until the end of June for tomato is confirmed. As for poultry, the number of spawning has declined because of the heat. The number of poultry has declined in Lemguetah because of the stress or damage by wild animals when people have moved their residence place during the rainy season.

In the sector of health and hygiene, a "participatory training on health issues and problems that exist in the oasis" and a "training on the subject of women support and gender" for 11 candidates of the auxiliary midwife (AA) were carried out. AAs have been trained at the National Health School after acknowledging health problems themselves and their role to be played through these trainings.

For the income-generating activities and support to women's organizations, the training on the topic of organization and management, support for the development of the plan of activities or consideration and awareness of the gender aspect for Regional Coordination staff and the AVB was carried out around mid-June. And the training on manual sewing and training for the production of compost (the group members of vegetable gardening have already learned and practiced the preparation of compost and have taught other members) were conducted towards the end of June to mid-July.

The training on the gender aspect for people concerned at the regional level has been achieved in the framework of strengthening the capacity of MCPFEF and support activities related to gender in order to incorporate the consideration of the gender aspect in the technical support activities or the support for organizations. Another training on the sensitization and extension methods destined to AA / ASC has been carried out.

iii) First Half of the Third Step (October 2006 - March 2007)

The activities for winter vegetable gardening campaign were started with 3 groups of women from 3 oases in the month of October 2006. A workshop was held in December with video images or cultivation manuals in order to transfer the techniques to other groups of the trained oases. The exchange of information on vegetable gardening among the groups of women has become denser.

The number of Tirabane households practicing poultry farming has risen to 18 in January 2007. By watching (or hearing about) the success of Tirabane activities, a group of M'Haireth women asked the study team for technical support. The demonstrations were realized in M'Haireth in Adrar and in the village of N'Drew in Tagant during the same month.

After 6 months of training at the National School of Health, 9 among 11 candidates have obtained their auxiliary midwives certificates. The ASC training and sensitization were carried

out after the training so that the woman (the same) can carry out activities in various areas of assistance in delivery, of local health, of sensitization. These AA / ASC began the activities in their respective oases from January 2007.

Following the strong request made by M'Haireth and Tirabane women, the support for dyeing was started from November 2007. As for sewing, activities were started during the second step, training on the average techniques and the basis for use of sewing machine has been completed. In addition, as Tirabane women have requested training on the method of construction of the henhouse needed for poultry farming, training was conducted at the same time as that of sewing. A workshop for simplified analysis of the problems relating to women's activities chaired by the AA / ASC was organized as part of the training on the management of women's organizations. At the central level, the persons in charge of support to regional offices were designated in the framework of strengthening the functioning of regional offices. These persons should check the progress of activities of the Regional offices and pilot projects by bringing the monthly meetings on the basis of monthly reports prepared by the Regional Coordinator for their advice. Regarding the support on genre, training on gender for men and women of the oasis and training on the considerations to the gender aspect in the sensitization and extension activities for the AA / ASC were continued.

One year have passed since the start of pilot projects, the mid-term evaluation of activities was carried out to understand the results obtained or impacts on the inhabitants during the period from late January to early February 2007.

iv) Second Half of the Third Step (May-December 2007)

It was confirmed by the mid-term evaluation that the activities have begun to yield results and that small actions to improve the living conditions mainly among women have begun to emerge. On the other hand, the pilot projects covering many areas at the initiative of several departments, the roles to be played by each of these departments for the implementation of pilot projects and the Action Plan, and the potential of execution structure's under the initiative (coordination) of MCPFEF some activities are left as problems to be addressed and solved.

In this context, the pilot projects were conducted under the initiative of MCPFEF during this stage, and the committee for development of the Action Plan in which the content of the Plan is reviewed and the effectiveness of the methods of extension by the seminars for improvement of the living conditions, has been set up.

2) Readjustment of the Pilot Projects following the Mid-Term Evaluation

Despite the tangible results achieved by sector activities, the need to put in order of the general idea of an Action Plan to provide support to women and clarify the roles of the departments

concerned (MCPFEF and others) while clarifying the organ in charge of coordination has been evidenced.

Thus, the review of the Action Plan's implementation structure for supporting women under the initiative of MCPFEF and the reorganization of the pilot projects by the viewpoint of women support, were carried out for the Year 2007 which is the last year of this study.

- i) Execute in an integrated manner the improvement of the lives (dyeing, cooking, improved stove or sensitization on nutrition) of the women in charge of managing household along with the techniques of vegetable gardening and poultry farming.
- ii) Train the AA / ASC capable of conducting activities in support of women in addition to those of the local health as local women leaders.
- iii) The MCPFEF executes the seminar for improvement of the living conditions (techniques of production or life, and sensitization on gender aspect) by receiving technical assistance from the MFA and the MOH.

3) Results Obtained from the Pilot Projects

i) Improvement of Vegetable Productivity

The techniques for transplanting and composting in addition to those of ridge and shading for which the effectiveness is approved in the previous study by JICA, have been implemented within the framework of the gardening activities. These activities have shown the possibility of obtaining a level of performance comparable to the one targeted by the CNRADA or the one obtained with the previous study by JICA, by the hands of women with locally available materials.

The cultivation of tomato and eggplant in hot summer period is possible with the correct shade with the locally available materials. Thus the harvest period can be extended, respectively, until June and July.

The possibility of extension to small proximity oases or within the oases through information exchange between the inhabitants, the demonstration of cultivation and the activities of extension combining simple cultivation manuals and image projection sessions, was confirmed

ii) Improvement of Water Utilization

The possibility of obtaining the level of performance achieved by the pilot projects reducing the volume irrigation by 30-50% compared to the traditionally way one was confirmed. With the exception of low temperature period, it is desirable to irrigate every day in order not to give water stress to the plants.

It is possible to achieve the water-saving cultivation at the farms without major investments in the area where pumping is done manually as is the case in Tagant. By contrast, in the area where

the water pumping is widely practiced by use of motorized pumps, it is better to save water by reducing loss in the supply system using techniques such as drip irrigation.

iii) Improvement of the Poultry Productivity

Having as basic principles the locally available materials and the poultry farming in cages, improved cages, special cages for chicks or rooms for egg-laying in the improved method of poultry farming practiced in the oases were introduced. The number of households involved in the farming has increased considerably in Tirabane and in M'Haireth in Adrar. They reached the stage of marketing eggs and meat. Especially in Tirabane, 40 households representing approximately 40% of the total households in this oasis began raising poultry spontaneously.

iv) Improvement of Dietary Life

The domestic consumption of vegetables, eggs and white meat is increased through the pilot projects of gardening and poultry farming. The eggs are eaten mainly by children and meat is consumed by family members and guests. The egg-based cakes or fish are eaten after the cooking training session.

iv) Assurance of Basic Medical Service and Training of Women Leaders

The 11 AA / ASC were trained among residents. Thus, people can enjoy the basic medical service in the oases thanks to the assistance for childbirth or the local health activities conducted by the AA / ASC.

Local leaders became carrying out extension among the inhabitants not only in the health sector but also in support for women's activities have been trained in giving the AA / ASC additional training in terms of sensitization and extension, or to become leaders.

vi) Activation of Income Generating / Women's Activities

The trainings of dyeing and sewing were conducted as part of income-generating activities (production techniques). The trainings on the subject of cooking, improved stoves, techniques of vegetable transformation, techniques of improvement living conditions and the accounting bookkeeping or the business planning for the strengthening of organization were carried out. The joint materials supply in group for dyeing / sewing and marketing mutual being conducted accordingly, these activities have contributed to the household economy.

Above all, the activities have been developed in Tirabane, M'Haireth and N'Titam where the groups are restructured (13 groups into 2 in Tirabane and 6 groups into only 1 in M'Haireth and 7 groups into only 1 in N'Titam) thanks to the dyeing activity.

vii) Strengthening Extension Structure for Supporting Women

The methods or content of collaboration with the technical departments, the current capacity of MCPFEF staff and the problems to be solved have been clarified by developing activities in support of women under the initiative of MCPFEF.

(8) Final Evaluation of the Pilot Projects and Lessons Learned

1) Contribution to the Improvement of the Living Conditions and Poverty Reduction

a. Activation of Production Activities and Improvement of the Techniques

The pilot projects where productivity is improved were i) market gardening, ii) sewing, iii) dyeing and iv) small business. Being familiar to women, the market gardening activities were stimulated the most. As for sewing and dyeing which are new techniques for the oases, these activities have contributed to the diversification of activities hitherto limited.

The cultivation of new vegetables being started through the pilot projects of market gardening, the varieties of vegetables grown in the model oases has been significantly increased from 2-4 before the start of activities to 9-10.

b. Increase of Home Consumption and Improvement of Nutrition

Two changes in the food habit were found through the pilot projects. The first is the increase in domestic consumption and the second to the diversification of food.

The following two strategies are proposed to ensure household food security and improve nutrition through vegetable production.

Strategy 1: Extend the period of vegetables cultivation.

Promote the off-season gardening by using shading technique.

Strategy 2: Increase the number of people who has cultivation experiences.

People who do not cultivate consume little vegetables for only half of the year, the period during which one can consume vegetables by practicing cultivation is extend.

c. Increase of Incomes and Improvement of Living Conditions

Many women feel that "life is improved" through pilot projects. Even though the various living conditions are improved, women feel the improvement in: i) nutrition, ii) health, iii) increase in income and, iv) food security.

Better nutrition seems realized through the following i) food for household consumption is provided through market gardening and poultry farming, ii) the support for the improvement of

the living conditions creates the consumption of vegetables or protein sources such as eggs, meat or fish that were not previously consumed, and iii) the change of behavior towards nutrition or drinking water through the activities or community health sensitization / extension conducted by the AA / ASC. As for the improvement of health and food assurance they formed similar effects.

Rising incomes appears to result from the marketing of dye or sewing thanks to the learning of new techniques and knowledge by women who did not receive the opportunity of training or support in addition to the limited activities of market gardening and small-scale business.

d. Sensitization relating to the Health and Improvement of Living Conditions

The activities of sensitization have been conducted as one of the measures for empowerment of the inhabitants within the framework of this study. The activities were carried out by the AA / ASC that are at the same time inhabitants of the oasis in the form of flipchart or discussion sessions. Thus, a total of 1,675 people took part in activities where the topics were "women right and the relationship between family members", "nutrition", "causes and prevention of diseases", "importance of immunization" and "information related to reproductive health". The fact that implementing the health actions learned (washing hands or sterilize drinking water) through these sensitization activities, the change of ideas (consciousness) among people has been brought about as the people feel that "the incidence of diarrhea or fever in children has been reduced (men of N'Batt) "and that" assistance in childbirth becomes a commonplace (N'Titam women)."

These changes have appeared through many repetitions of the activities of sensitization during a long period of time. The mentality or the inhabitants' habit can be changed little by little through the synergistic effects of various activities by investing for long time. This is a lesson obtained by the activities of the pilot projects.

2) Contribution to the Gender Aspect and the Strengthening of Women Capacity

a. Improvement of the Access to Information / Training for Livelihood Improvement

Oasis women can access information and training through pilot projects or those conducted by local leaders (various trainings, sensitization activities by the AA / ASC or distribution of manuals). The fact of being able to access information and training through various support provided by the Administration or the local leaders, leads to the improvement of knowledge and techniques, the satisfaction of basic needs or the capacity building for women.

b. Training of Women Leaders

By positioning the AA / ASC as local focal point, the coordination of the various activities in

support of women was assigned within the framework of this study. This allowed a wider provision of information such as the organization of training session gathering representatives of several groups through the AA / ASC, which are responsible for the coordination.

c. Awareness and Empowerment of Women

As part of this study, we tried to provide training opportunities to women whose active participation was limited, while training the women leaders. Having emphasized on the view point of "starting up self-ingeniousness with surrounding materials" instead of "waiting for the change from outside," the awareness of women who have understood that "they can begin improving the living conditions by themselves (leader of the women of N'Titam and N'Batt)" has improved. Thus, a tendency among women to organize themselves better by receiving training in various fields in order to learn the techniques and knowledge, diversify and expand the business, was born.

3) Improvement of the Extension System for Women Support

a. Strengthening the Capacity of MCPFEF

It can be said that the ability of planning and execution of the contents of the activities at central and regional levels have been improved to some degree as a whole through the implementation of the pilot projects or as on the job training. However, it is necessary to correct guidance in conducting the evaluation and analysis of the impacts of supporting women in the development of the oasis in addition to executing the programs for the implementation of the Action Plan. These items are not necessarily sufficient at the moment. Therefore it is necessary to implement the Action Plan by strengthening the capacity throughout seminar for improvement of the living conditions and by periodically requesting the services of outside specialists.

b. Improvement of the Administrative Structure of Extension Activity for Women Support

The establishment of the structure of extension linking the various levels through strengthening the capacity of the regional coordination by the central level staff and that of the oasis inhabitants by the staff of regional offices within the framework of the pilot projects was targeted. The support activities in the oases were carried out primarily by working with the cooperation department, MCPFEF at the central level and exploiting women working effectively in volunteering at the regional level. The women leaders of such as AA / ASC which ensure the sustainability of the activities by receiving public assistance (compensation or monitoring) have been trained to serve as interlocutor in supporting women. By linking them through the administrative support, it is possible to establish the template of the extension

structure from the central level to that of the oases.

4) 5 Evaluation Items

The evaluation by the viewpoint of 5 evaluation items is as follows.

i) Sustainability and Self-reliance

Having developed the pilot projects in all fields under their own initiative throughout the implementation period, the inhabitants have a strong desire to continue. The training of personnel and the vitalization of activities in the oases are considered efficient for the sustainability of the development activities of the inhabitants with limited resources.

Having appreciated the content of the Action Plan and the manuals developed in the framework of the present study, The MCPFEF has proceeded to printing the manuals by their own budget and distributed them widely to the regional offices and to people in charge of the extension in supporting women. The MCPFEF express their will to carry out according to the plan and secures the necessary budgets.

ii) Relevance

Being targeted at the women and the women's organizations who did not receive a lot of support from the development activities, the activities are in line with the national objectives set by the PRSP or SNPF. Moreover, the spontaneous activities of the inhabitants such as the purchase of necessary equipment, the request for funding, the development of activities until the marketing of the products, the integration of agricultural products in the food habit or the contribution of women activities to the domestic economy have been identified. So, one can say that the activities to support women carried out within the framework of this study correspond to the women's needs and are also relevant to the inhabitants. The actions undertaken such as the collaboration with AGPO, training the leaders of the inhabitants, the development of extension activities by the trained leaders and the administrative support based on the central oasis are relevant compared to the basic measures of oases development mainly carried out by the residents.

iii) Effectiveness

Women support activities are those in agriculture, health and income-generating closely related to life. The products are utilized efficiently by domestic consumption or marketing of surplus. Medical services benefit all people in the oases. The expenditure for the supply of food, transportation costs, medical expenses or expenses for the purchase of clothing that can be saved, render possible a more effective use of the money for the activities, the children

education or the purchase of missing food in order to improve the living conditions and household food security.

iv) Impact

The impacts are; the women who contribute to the improvement of living support, to improved nutrition or household economics, and the training of AA / ASC capable of sustainable activities while helping the activities of women. Thus, the activities are developed with those of improvement of living conditions in households, in groups or in the social life in addition to benefiting women and women's organizations.

Women groups members involved in the pilot projects and those of the other groups are beginning to have confidence in the results obtained by the repetition of pilot projects.

Efficient use of childbirth assistants who were trained in large numbers in the context of development projects was a problem to be solved. As it has demonstrated the effective improvement of AA more active than before, the additional training of AA (ASC, training for leaders) realized within the framework of the present study can be considered a positive impact.

(9) Feedback to the Action Plan

Some points are identified in the lesson learned from the pilot projects at the completion of the Action Plan, which have been required to be reflected. It is therefore necessary to rectify the Action Plan on the basis of the important lessons learned from the pilot projects and add points on the basis of the points that have been clarified.

1) Correction Based on the Lessons Learned

i) Readjustment of the Activities

Depending on the outcome of the mid-term evaluation, add the following viewpoints.

- a. Realize the improvement of the living conditions (dyeing, kitchen, awareness about nutrition etc.) in an integrated manner along with that of agricultural techniques.
- b. Train the AA / ASC as leaders capable to take in charge the support to women.
- c. Implement seminar for improvement of the living conditions (production techniques, technique of living or training of inhabitants) under the initiative of the MCPFEF.

The importance of women role in the household or in the oasis society in the development of oases could be confirmed through the pilot projects reviewed. Therefore, the viewpoints above will be reflected in the Action Plan.

ii) Effective Extension Method

The activities which take into account the following points should be conducted in order to

achieve effective extension activity at lower cost.

- d. Integrate the seminar for improvement of the living conditions as a method of extension.
- e. Integrate the extension combining demonstration, workshop for presentation of the techniques, distribution of handbooks / manuals or exchange of information between the inhabitants.
- f. Integrate the extension by women's local leaders, that within the groups and that between the inhabitants through the exchange between the groups.
- g. Introduce the activities of vegetable gardening, poultry farming, dyeing or sewing for which the level of needs among women is high and the benefits are clear to households as income activities.
- h. Consider the understanding of men (husbands) from the beginning even if the activities are aimed at women.

iii) Utilization of the AA / ASC for Women Support Activities

AA / ASC trained in the framework of the present study have become indispensable for the women leaders by carrying out various activities other than health.

The reasons why the AA / ASC were welcomed by the inhabitants are as follows. I) they are selected among the residents, ii) having received formal training, they possess specialized and accurate knowledge iii) they can approach the people by focusing on the problems of health, and iv) they can carry out sensitization activities in the framework of the improvement of the living conditions that can meet the diverse needs of the inhabitants. Thus they possess capacities that the women leaders did not have so far. The use of these AA / ASC as a local leader can be a model for women support in the future.

2) Points Clarified

The following points being clarified through the activities of the pilot projects, they will be reflected in the Action Plan.

i) Number of Target Oases

The prominent importance of the roles of AGPO and AA / ASC for the implementation of the Action Plan was confirmed by the pilot projects. Therefore, the oases to train in the implementation of the Action Plan are i) the 26 oases featuring both AGPO and AA, and ii) the 13 oasis without AGPO but with AA.

ii) Clarification of Execution Structure

a. Reflection to the Execution Structure of the Actions Plan

The forms of coordination relative to women support and gender, and collaboration with government's technical departments as well as the problems to be solved were highlighted.

Central level: The MCPFEF as a coordinating body of all the activities, the MOH and the MFA as an organization providing support will establish a collaborative relationship in their specialized fields. The MCPFEF will implement a transverse and logistic support covering the support to women's organizations or the awareness. The MFA will mainly bring technical support in the fields of production techniques and improvement of living condition while working with the MCPFEF. The MCPFEF and the MOH work in supporting the activities of local health and the promotion of women's activities for the training of AA / ASC.

Regional level: The regional level activities of the regional offices of the MCPFEF, the MOH and the MFA are coordinated under the initiative of the MCPFEF. The latter with the help of the MOH and the MFA regularly conduct the preparation and review of the business plan as well as the reflection of the activities on the ground.

b. Smooth Implementation of the Actions Plan by further Strengthening the MCPFEF

Programs for women support covering many fields (agriculture, health, income generation, living and technical support to organizations) should be implemented by the MCPFEF which coordinates and cooperates with other government departments. The problems of capacity in the fields of planning, implementation, coordination exists always in the MCPFEF, the activities of capacity building of this ministry should be implemented in parallel to those programs (during the first and second year) in order to ensure the proper unfolding of the activities.

Chapter 7 Conclusions and Recommendations

(1) Conclusions

Thanks to the results of the present study, the importance of the role that women play in the household, in the oasis society and even in the development process of the oases, which are confined and landlocked spaces, has been confirmed. It was highlighted that the development of latent capacity of women is an essential element of sustainable development of the oasis society. The contribution to the improvement of the living conditions or the household food security in the oasis environment as well as the care to gender aspect and the strengthening of women capacities in the Action Plan to support women proposed in the framework of this study could be confirmed. As a result, the Mauritanian government, especially the MCPFEF will develop

and implement this Action Plan in the two targeted regions of Adrar and Tagant by its own budget or by obtaining external aid. This plan will also be applied to activities in support of women in other regions.

(2) Recommendations

- i) The Action Plan proposed here is consistent with PRSP and SNPF. Even if it is developed through the validation activities in the model oases of Adrar and Tagant regions, we propose to apply it to the entire oasis area in the framework of the policy of MCPFEF.
- ii) To carve the activities of improving the living conditions proposed in the Plan of Actions in their daily lives, the inhabitants should administer and develop activities by their own thinking. To do so, the administration of the extension should emphasize on the technical support in addition to investment in materials.
- iii) Contributing to the improvement of living conditions, the improvement of nutrition, the vitalization of the latent capacity of women or the poverty reduction, the Action Plan should be implemented quickly. There is a need to seek technical assistance from outside sources for activities that require technical assistance in the training of personnel engaged in supporting women.
- iv) As regards to the health sector, it is proposed to MOH to give additional ASC training to the already trained auxiliary midwives or those to be trained in the future with the assistance of MCPFEF in order to develop effectively the people living in the oasis environment.
- v) The MFA will have to cooperate with the MCPFEF with regard to agriculture sector. As the present Action Plan has a complementary relationship with the development projects such as PDDO or PDRC, it is proposed to seek their attention so that the projects include the activities of the Action Plan in order to raise the synergistic effects of the activities.
- vi) It is proposed that the MCPFEF and the MOH integrate the activities of Action Plan in the programs of the PASN (World Bank), which started in 2007 by similar activities.

**THE STUDY
FOR
THE OASIS ZONE DEVELOPMENT
FOCUSED ON FEMININE PROMOTION
IN THE ISLAMIC REPUBLIC OF MAURITANIA**

Final Report

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Abbreviations (1/2)

Abbreviation	Full Text
AA	Auxilier Midwife
ACD	Association of Community Development
IDA	International Development Association
GA	General Assembly
AGPO	Association for Participatory Management of the Oases
AGREMET (AD)	Agrometeorological Division
ASECNA	Agency for the Security of the Air Navigation in Africa and Madagascar
HCW	Health Communication Worker
BEW	Basic Extention Worker
AfDB	African Development Bank
AEDB	African Economic Development Bank
SOSAEM	Support Office for Small Artisanal Enterprise in Mauritania
ILO	International Labour Organization
CFC	Community Food Center
PCEDC	Purchasing Center of Essential Drugs and Consumables
EC	Electrical Conductivity
TCWP	Training Center for Women Promotion
WRNC	Water Resources National Center
CNRADA(NRCAAD)	National Research Center for Agronomy and Agricultural Development
MSC	Monitoring Steering Committee
CSPFS	Commisary for Social Protection and Food Security
RSC	Regional Support Cell
RCC	Regional Coordination Committee
CRNE	Centre for Rehabilitation and Nutrition Education
HC	Health Center
PRSP	Poverty Reduction Strategy Paper
TCNM	Technical Committee of the Nutrition Monitoring
PA	Participatory Approach
PDCME	Political Direction for Cooperation, Monitoring and Evaluation
RDSSP	Regional Direction for Sanitation and Social Promotion
S/W	Scope of Work
PRA	Participatory Rural Appraisal
SDHM	Survey on Demographic and Health in Mauritania
SHFE	Survey on Households and Farmers Exploitation
PSHLC	Permanent Survey on Households Living Conditions
AFESD	Arabic Fund for Economic and Social Development
WEF	World Environment Fund
CIF	Community Investigation Fund
IFAD (FIDA)	International Fund for Agricultural Development
VIF	Villagers Investment Fund
IMF	International Monetary Fund
UNFPA	United Nations Population Fund
GWP	Group for Women Promotion
GMG	Gender Monitoring Group
TGNS	Technical Group for Nutrition Specialist
GTZ	Deutsche Gesellschaft fur Technische Zusammenarbeit (Germany)
IEC	Information, Education, Communication
JICA	Japan International Cooperation Agency
MEF	Ministry of Economy and Finance

Abbreviations (2/2)

Abbreviation	Full Text
WM	Weaving in Mauritania
PDM	Project Design Matrix
MAP (MAE)	Ministry of Agriculture and Poultry
MNE	Ministry of National Education
MICO	Mutual Investment and Oasis Credit
MH	Ministry of Health
ONA	Organization for Nutrition and Agriculture
WHO	World Health Organization
NGO	Non Government Organization
M/P	Master Plan
PAROA	Project Management in Adrar Oases
PASN (PSHMS)	Project for the Support of Health and Nutrition Sectors
RDMP	Raining District Management Project
PDRC (CRDP)	Community Rural Development Plan
OCDP	Oases Community Development Plan
PDDO (PSDO)	Program for Sustainable Development in Oases
RCDP	Regional Communities Development Project
NRUPR	Natural Resources Utilization Project in Raining zone
GDP	Gross Domestic Product
RGDP	Regional Gross Domestic Product
CIP	Community Investment Plan
PRPCGVASP	Poverty Reduction Project by Cooperating and Getting Value of Agriculture-Sylviculture-Pasture
HIPC	Heavily Indebted Poor Countries
NPGG	National Program for Good Government
UNDP (PNUD)	United Nations Development Program
RSP	Regional Solar Program
HS (HP)	Health Post
ASP	Agriculture Service Project
SAR	Sodium Adsorption Report
IRM	Islamic Republic of Mauritania
AWS	Air Weather Service
MCPFEF	Ministry in charge of the Feminine Condition, Children and Family
HES	Health Education Services
GIS	Geographical Information System
NSGE	National Strategy on Gender Experiences
NSWA	National Strategy for the Women Advancement
NSRD	National Society for Rural Development
NSWE	National Society of Water and Electricity
NSIE	National Society of Import and Export
ARAI	Average Rate of Annual Inflation
ST	Specialized Technician
UAGPO	Union of Association for Participatory Management of Oasis
CCU	Central Coordination Unit
PMU	Programme Management Unit
EU	European Union
UM	Mauritanian Ouguiya
RCU	Regional Coordination Unit
RUOD	Regional Unit for Oases Development
BHU	Basic Health Unit

Weights and Measures

Units	English
mm	millimeter
cm	centimeter
m	meter
km	kilometer
m ²	square meter
km ²	square kilometer
a	are
ha	hectare
m ³	cubic meter
l	liter
kg	kilogram
t	ton
sec	second
min	minute
h	hour
μS	micro siemens
UM	mauritanian ouguiya
%	per cent
°C	degree centigrade

CHAPTER 1

Introduction

CHAPTER 1 Introduction

1.1 Introduction

“The Study on the Development of the Oasis Zone” was conducted by the government of Japan from April 2001 to September 2004, targeting Adrar and Tagant regions. The aim of the study was to seek the possibility of structuring the institutional capacities making it possible to ensure a more stable life of the populations by means of the sustainable development of the oases resources. With this intention, “the Plan of Development of the Oasis” (called “the Master Plan”) was elaborated based on the strategic policy of the government of the Islamic Republic of Mauritania. By clarifying the importance and effectiveness of support for women in the development of the oasis zone, this study proposed in its framework the following points by focusing on women's activities; 1)Extension of vegetable cultivation technology, 2)Improvement of public health and condition, 3)Enhancement of living circumstances at small and remote oases.

With regard to the oasis zone development, the Project of the Oasis Development (Phase 1: 1985 - 1993, Phase 2: 1995 - 2003) was carried out by the Ministry of rural development and environment with the support of IFAD (International Funds for Agricultural Development) and of FADES (Arab Funds for Economic and Social Development). Its main activities include agricultural development, exploitation of the water resources, environmental protection and reinforcement of the institutions and organizations (creation of oases associations, etc). The third phase, which is entitled the “Programme of Sustainable Development of the Oases” (PDDO), began in 2005 with an implementation period of 8 years.

The expansion of the sustainable development project in the rural area towards other oases, in particular, the small oases, which will have to be undertaken under the initiative of the populations, imperatively supposes the reinforcement of the extension system through the training of staffs and the improvement of the capacities of agricultural associations and organizations concerned (the Ministry in charge of economic affairs and development, the Directorate of Agriculture, the Directorate of the PDDO under the Ministry in charge of rural development and environment, the Ministry in charge of health and human services, the Ministry in charge of the feminine condition, childhood and family, the Commission of Human rights, Fight Against Poverty and Insertion, the National Centre of Water Resources, ... etc). Furthermore, in the oases areas where women have seldom reach from the support of the government, the development of a program of rural development focussed on women, which aims to

improve the living conditions and reduce poverty, is in many ways more than necessary. In this context, following the Study on the Development of the Oasis Zone (called “the previous JICA study”), the government of Mauritania addressed a request to the government of Japan, relating to the development of an Action Plan of oasis development centred on a gender approach and contributing in the long term to the reinforcement of the capacities of the Ministry in charge of the feminine condition, childhood and family (MCPFEF), which is the implementing organization of the Plan. In response to this request, the government of Japan sent a preliminary mission to Mauritania and concluded an agreement on “the Study for the Oasis Zone Development focused on Feminine Promotion in the Islamic Republic of Mauritania”, with the Scope of Work (S/W) exchanged on December 22, 2004.

1.2 Objectives of the Study

The objectives of the study are as follows.

- (1) To clarify measures of rural development in order to improve the living environment of the oases populations and to reduce poverty in consideration of the gender aspect.
- (2) To improve the capacities of the human and institutional resources of the Ministry in charge of the feminine condition, childhood and family, as well as those of the organizations concerned.

1.3 Study area

The study area covers 117 oases in the Regions of Adrar and Tagant for the previous JICA study, and several central oases as well as small oases selected in the above mentioned 2 regions for the present JICA study.

1.4 Process of the Study

The study will cover 31 months, from September 2005 to March 2008. It consists of the two following stages.

【1st Stage: September 2005 - December 2005】

Development of the preliminary Action Plan

The preliminary Action Plan (called preliminary AP) will be worked out after reflection on concrete actions related to rural development and their extension in order to improve

the living conditions and to reduce poverty, taking into account the gender aspect along with actions related to the staff training and the reinforcement of the institutional capacities of the Ministry in charge of the feminine condition, childhood and family (MCPFEF), and those of the organizations concerned. The AP will be elaborated with precaution so as to seek coordination and collaboration with the PDDO (3rd phase of the Project of Oasis Zone Development) or other existing projects.

【2nd Stage: January 2006 - March 2008】

Realization of the Pilot Projects and development of the Action Plan

Pilot projects were carried out with the aim of examining the relevance of each component of the preliminary AP and that of the on-the-job training of the personnel of the organizations concerned. The preliminary AP is the subject of readjustment or modification on the basis of the results obtained in the pilot projects, leading to a final AP. Figure 1.1.1 below shows the diagram of the course of the study.

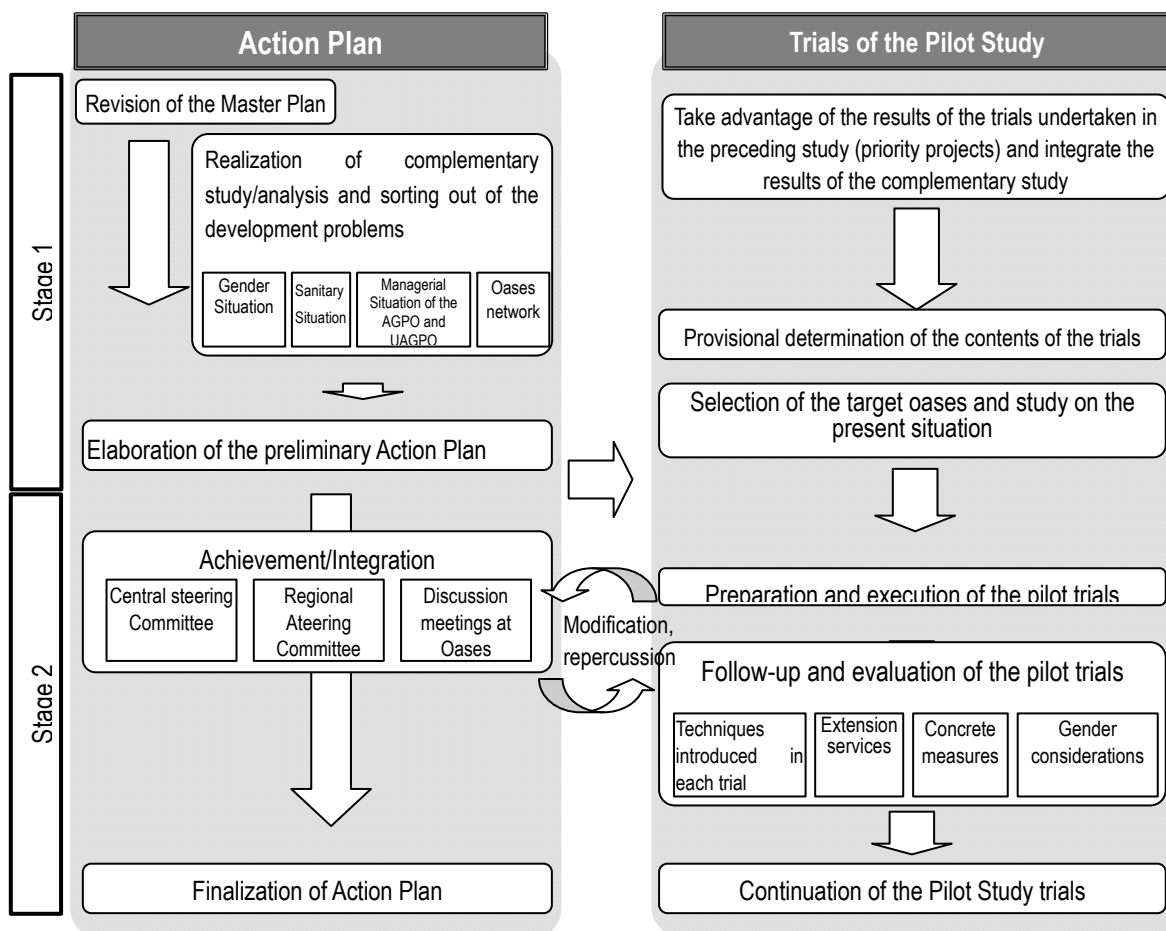


Figure 1.1.1 Course of the Study

1.5 Structure of Implementation of the Study

The Ministry in charge of the feminine condition, childhood and family (MCPFEF) is the counterpart organization of this study. The steering committees were organized with aims of smooth implementation of the study and reinforcement of coordination between the departments concerned. The principal components of the steering committee are as follows:

- Ministry in charge of economic affairs and development (MAED)
- Ministry in charge of the feminine condition, childhood and family (MCF)
- Ministry in charge of rural development and environment (MDRE)
 - Directorate of the Policies of Cooperation, Follow-up and Evaluation
 - Directorate of Agriculture (DA)
 - Directorate of the Programme of Sustainable Development of the Oases (PDDO)
 - Ministry in charge of health and human services (MS)
- National Center of the Water Resources (CNRE)
- Commission of Human Rights, Fight Against Poverty and Insertion (CDHLCPI)

The Action Plan above must be elaborated in accordance with the orientation of the development of the oases undertaken in the country up to now and shall be used by the inhabitants, the administrative staff or NGOs. In this regard, first of all, it is to be established a preliminary Action Plan that will be used as a basis of the activities of the pilot projects which are carried out jointly with the organizations concerned. Lastly, the goal would be to make concrete and finalized measures of the oasis zone development that would be popularized for the improvement of the living conditions and the poverty reduction, taking into account the gender aspects, and based on the lessons learned or recommendations from the pilot projects.

CHAPTER 2

Background of the Study

CHAPTER 2 Background of the Study

2.1 Background

As mentioned in Chapter 1, the government of Japan conducted a study entitled "Study on the Development of Oases Areas" for the period of April 2001 to September 2004 in the Regions of Adrar and Tagant. Through this previous JICA study, baseline information on the underground water resources, agriculture in the arid zone, social infrastructure (water supply, school and health) of the area had been compiled in the form of data of the Geographic Information System (GIS). In addition, having conducted extensive testing of the pilot projects in the oases selected for 2 years implementation, this previous JICA study developed a Master Plan, aiming to improve living conditions in a sustainable manner based on the rational use of natural resources taking into account the lessons learned from pilot projects.

The Master Plan proposes 5 priority projects for the development of the oases; 1) the project for the technical extension on vegetable gardening, 2) the project of improving health and sanitation, 3) the project of improving living conditions of small oases and those located in remote areas, 4) the project for the improvement of drinking water systems, and 5) the project for the development of basic infrastructures. In addition, by the fact that women have been targeted as the main beneficiaries of the test of the pilot projects (vegetable gardening, water saving cultivation of date palms, poultry breeding or activities related to health and sanitation), which were conducted in the 6 oases of the area concerned, the basis of support for the work of women was constructed (see the final report of the Study on the Development of Oasis Zone).

2.2 National Policy and Prior Projects

2.2.1 Poverty Reduction Strategy Paper (PRSP)

Approved in January 2001, Poverty Reduction Strategy Paper (PRSP) is the main policy of the Mauritanian government whose principal guidelines are: 1) increasing of the promotion of economic growth that is the basis for the poverty reduction, improving economic competitiveness and reducing the degree of dependence on foreign aid and investment, 2) improving productivity, 3) development of the human resources and improvement of the access to basic infrastructures, and 4) the development of organizations involved in poverty reduction. The Mauritanian government set the following four objectives aimed at reducing poverty by half by the year 2015; 1) the diversification of agricultural products and the quality improvement through improved

access to productive resources and agricultural services, 2) the development of rural infrastructure, 3) the undertaking of organizational and institutional measures, and 4) the protection of natural resources.

Furthermore, the improvement of socio-economic conditions of women is regarded as an important focus of development, and various activities to support women are carried out; (i) legal development concerning the family and children, (ii) attainment of vocational training and literacy in the Training Center for the Advancement of Women (CFPF), (iii) expansion of the credit system for women, and (iv) improving conditions of women through the support of the women organization¹.

During the period 2005-2006, the Mauritanian government evaluated the first phase of PRSP (from 2001 to 2004) to review priority activities. Then, the Action Plan for the second phase of PRSP (2006-2010) was developed in October 2006. Notable point of this PRSP review is the review of areas and priority areas of intervention, which was based on an analysis of the situation of poverty in rural areas. In this regard, 4 priority areas (education, health, water and infrastructure) and 2 priority areas (rural arid and poor area of urban areas) were identified.

The 5 priority areas of education, health, water, rural and urban development were identified in the first phase of the PRSP. However, determining the priority activities by sector made the coordination of these activities insufficient. Based on this lesson, the priority areas of the second phase of PRSP are education, health, water and infrastructure, while the priority areas of intervention are those of arid rural areas and slum urban centers, in which the improvement of living conditions is not observed.

These revisions result from a finding that, so far, support for the development was carried out within the framework of a sector approach and not an integrated approach, in spite of the cross and multi-dimensional characteristics of poverty, which is a complex phenomenon. However, according to the outcome of surveys on living conditions conducted in 2000 and 2004, the poverty rate in the rural areas reduced from 66.2% in 2000 to 59% in 2004. Yet it is the area of the Senegal River, which has contributed to this reduction in the poverty rate (reduction of 11 points), while that of the dry lands has not changed much (reduction of 2.5 points). It concludes that a large gap between the rural areas has not been observed.

¹ According to the PRSP report.

2.2.2 National Strategy for the Feminine Promotion

Since March 1995, the Mauritanian government strived to encourage the participation of women in social, economic and political rights and developed a strategy for the feminine promotion within the framework of national development plan. However, because of the limit of the social infrastructure development (access to services, safe drinking water or health facilities) in the rural areas, the objectives of interventions set by the government are still difficult to reach.

In Mauritania, the socio-economic and legal equality of the sexes was approved by the revision of the constitution in 1991. With this revision of the constitution, it was approved that all citizens can exercise their right without being discriminated against because of their birth, ethnicity, gender or social difference. Following this review, the Secretariat of State for Women's Affairs (SECF) was established in 1992 with the objective to take in charge of the National Policy on the Feminine Promotion and Family Welfare.

The National Strategy for the Feminine Promotion, which was developed in 1995, set its goals to improve the socio-economic status of women or to reduce gender inequality. Although the status of women in the field of communication was considerably improved by this strategy, the areas of intervention are limited, and improvements are still needed.

Despite the adoption of the PRSP in 2001 by the government and its recognition of the fragility of roles and the position of women in socio-economic development, the integration of the gender dimension in the strategy of each sector was insufficient. To overcome this shortcoming, the government has set a goal to involve women in decision-making as part of its "National Strategy for Feminine Promotion (SNPF) (2005-2008)" and decided to tackle gender problems in the New PRSP. This SNPF is based on 5 pillars, which are: (i) strengthening the economic participation of women, (ii) enhancement of women's access to basic social services, (iii) promoting the right of women and their participation, (iv) the development of strategies for behavioural change, and (v) institutional strengthening of SECF.

In addition, the government says in the new Poverty Reduction Strategy Paper (PRSP 2006-2010) that it incorporates the gender aspect in the stage of the development and execution of the strategy.

The strategic objectives and priority activities identified in the SNPF were included in the action plan for the second phase of PRSP 2006-2010. In this context the focus will be on (i) the strengthening of women's productivity, (ii) the participation of women in

decision making, and (iii) development of the strategy that brings behavioural change through the planning and execution of the program of sensitization and extension (IEC). However, activities under this second phase are not sufficient to propel the cross dimensional consideration of gender in its true sense. To do this, the interest will focus on: (i) the institutionalization of gender aspect at the ministerial departments concerned to systematize the gender analysis, (ii) data collection and (iii) the allocation of special budgets to achieve the previous two points becomes necessary.

2.2.3 Rural Development Policy

The Mauritanian government is "improving productivity and product diversification" in its development strategy for the rural areas and set a goal of "enhancing competitiveness in domestic and international markets". This policy focuses on irrigated rice production.

The strategic orientations of the oases sector development have the overall goal of sustainable development of the sector because of the fragility of the environment. Despite its low weight in the national economy, oases agriculture contributes to the settlement of the people, regeneration of the natural environment and the country's food security. The areas of intervention identified by the national policy documents (PRSP and Rural Development) in the oases areas target the following points. These points are elaborated on the basis of the strategy of Project Oasis (the present phase is called the PDDO) implemented by the MAE.

- Develop social infrastructure and the opening of the production areas
- Improve yields of the Phoenician agriculture and vegetable production by the popularization of tailored technology packages
- Foster-recharging groundwater and develop techniques for water saving
- Combat the sand encroachment of the oases
- Develop credit unions in the oases
- Develop tourism in the oases

2.3 Relevant Ministries

The key ministries of the present study are the Ministry in charge of feminine condition, children and family (MCPFEF), the Ministry of Agriculture and Livestock (MEA) and the Ministry of Health (MS).

2.3.1 Ministry in charge of the Feminine Condition, Children and Family (MCPFEF)

(1) Objective of Creation

The Secretariat of State for Women's Affairs (SECF) was established in 1992 with the objective of ensuring the Advancement of Women and the Mauritanian Family Welfare. The personal status code, which ensures the equality of both sexes, was enacted in 2001. In 2007 the SECF became the Ministry in charge of Feminine Condition, Children and Family with the same mission to ensure the rights and obligations of women and children's rights through the implementation of the code as well as the development of sector policies that take into account the gender aspect, the advancement of women or development projects.

(2) Executive Structure

Having Minister at the top of its hierarchy, MCPFEF is under the supervision of the Prime Minister, in the same category as other departments. The Cabinet of the Minister is composed of two special envoys, three Advisers, the internal inspection, and the Secretary. The central administration includes the Cabinet of the Minister, the Secretary General, the Directorate of Studies, Cooperation and Monitoring, The Directorate of the Promotion of Women, the Directorate of Children, the Directorate of Family, the Directorate of Administrative and Financial affairs. It also includes the Regional Coordination (1 in each region), and two centres (the Training Centre for the Advancement of Women and the Training Centre for Early Childhood) which are subject to the technical supervision of the MCPFEF. The total number of personnel is about 170.

(3) Finance

The budget of the SECF in the year 2004 is approximately 242 million UM (about 930,000 US\$) compared to 112 million UM (about 430,000 US\$) in 2000 and is comprised of 2 components consisting of the cost of administration and cost related to the projects. In addition to the national budget, programs for the advancement of women, child welfare and family benefits from the assistance of the cooperation projects of the major donors (UNFPA, the World Bank, the African Development Bank, UNDP, the International Labor Organization (ILO) and the government of Qatar, UNICEF, GTZ, etc) which amounts to approximately 52 million UM (200,000 US\$).

(4) Executive Structure/Situation of the Activities of the Directorate of Cooperation and Projects Planning

The counterpart of the present study is the Directorate of Studies, Cooperation and Monitoring. This department is composed of 3 Sections: the Section of Research and Statistics; the Section of Cooperation; the Section of Monitoring. The main activities are: develop action plans and annual reports of activities of the department; develop and coordinate policies and strategies of the department; seek funds, monitoring and evaluation, coordination with other departments concerned or donors; contribution to the identification of development projects for women and children carried out by other departments, monitoring and implementation of the policy of strengthening the capacity of the Ministry in collaboration with development partners.

(5) Regional Coordination

Under the direct authority of the governor according to the decree and also under the tutelage of the Central Administration of MCPFEF, the Regional Coordination is made up of: one coordinator, one official in charge of Cooperation, one in charge of women's affairs, one in charge of family and one in charge of children's affairs. The number of staff who is in charge of coordination varies from one region to another. In Adrar, in addition to the coordinator, there are 5 officials, among which 3 are regularly employed. One of the officials is responsible for managing the Training Centre for the Advancement of Women (CFPF), being the director. One of the staff deals with family's problems and two are responsible for the education of children. The Coordination is basically responsible for the management of kindergarten and sensitization activities. A kindergarten keeps about 80 children from 3 to 6 years. Being undertaken irregularly, the sensitization work in 2004 consisted of; the mobilization and awareness of women to the family and women rights, HIV/AIDS, reproductive health and education, literacy. Health activities were conducted jointly with the Coordination and the MS which is responsible of the trainers. In addition to these activities, women's participation in the education in the long term and the sensitization activities are being reviewed. The budget of the Coordination was 200,000 UM (about 770 U.S. dollars) for 3 years in the period 2001-2004, which is divided into mission expenses from the central administration, miscellaneous expenses and operation costs. Not included in that amount, the costs of staff and electricity are paid from the state budget.

2.3.2 Ministry of Agriculture and Livestock (MAE)

(1) Central and Regional Office

The Ministry of Rural Development and Environment (MDRE) has become the Ministry of Agriculture and Livestock (MAE) at the ministerial reform of June 2007. The MAE is a technical ministry responsible for the development and implementation of policies relating to the development of Agriculture, Livestock and Rural Development. Each region has a regional delegation. The officials appointed by the MAE are grouped under the responsibility of the delegation.

Under the supervision of the governor in the region and in the context of national and regional policy, the officer is responsible for supporting the implementation of developmental activities of Agriculture and Livestock being carried out in his region. Projects and programs such as PDIAM, PDDO and PDRC are implemented within this framework by coordination units installed in the Ministry.

Regional representatives of the departments of agriculture, animal husbandry and research, training and extension are the collaborators of the delegate who is the direct spokesperson of the Ministry in his region; they perform activities of the delegation providing technical support (see flowchart of the MAE and the delegations of Adrar and Tagant). However, due to the lack of personnel and budget, the status of the activities in these two regions of Adrar and Tagant is not satisfactory, except for those carried out by the PDDO.

(2) Technical Departments at the Central Level

Roles of the central technical departments that have relationships with regional departments are as follows.

1) Directorate of Agriculture (DA):

The Directorate of Agriculture is responsible for developing and overseeing the implementation of the national policy in the field of agro-industrial production and proposes policies to ensure the development of these products. It is also responsible for plant protection and quality control of all agricultural products. It takes relevant measures to boost the various activities relating to the whole system of production (production, market prices or techniques involved).

2) Directorate of Livestock (DE):

The Directorate of Livestock is responsible for providing veterinary services and animal production. It is responsible for assisting the animal production and productivity

through technical advices, disease control, services of veterinary for public health and training.

3) Directorate of Research, Training and Extension (DRFV):

The Directorate of Research, Training and Extension is responsible in participating in the formulation and implementation of policies relating to producers and professional organizations for development, structuring and organization of the rural areas. It is responsible for coordinating, monitoring and providing technical support services to producers and their socio-professional organizations through the regional delegation of the MAE. It is also responsible for facilitating the relationship between agricultural research, farmers and the ministry, in order to harmonize the contents and approaches to research and development, and provides technical and educational support to the regions and to facilitate information and experiences exchange.

4) Directorate for Rural Facilities (DAR):

The Directorate for Rural Facilities is responsible for ensuring the sustainable use and preservation of renewable natural resources (soil, surface water, etc). It conducts an inventory of natural resources, infrastructure and ensure the rationalization of the use of water resources; establishes regulations for their use; develops planning policies aimed at sustainable use; defines and implements policies for the development of irrigation.

2.3.3 Ministry of Health

(1) Health Administration

As a ministry responsible for the overall health in Mauritania, the Ministry of Health (MS) carries out treatment, prevention, sanitation, health education, nutrition, consultation, training of medical personnel, and various medical researches. In addition, the ministry has to determine regulations, methods of production and processing, or codes relating to drugs, in order to provide basic medications at fixed national prices. The field of social affairs which was evolved from the former Ministry of Health and Social Affairs was transferred to the Commission of Social Welfare and Food Security (CPSSA) under the reform of June 2007, which took effect after the arrival of the new government. The Directorate of Basic Health Services has been newly created to replace the DAS which was in charge of these transferred functions². Based on the recognition of the importance of health activities at the

² Decree No. 087-2007/PM setting the attributions of the minister of health and the organization of the central administration of his department: June 2007

community level, the creation of this new directorate is aimed at expanding medical services to the population scattered in the vast area of the desert, while having community participation in local health activities or staff training at the local level as a strategy. The MS, which has so far trained about 700 auxiliary midwives (AA) in the context of the policy of reproductive health (2002 -) to strengthen the regional staff, did not involve community health workers trained by UNICEF and GTZ; rejecting them from its administrative system. But in its new local health policy, it has to intervene in the activities of these agents based on the needs of the communities.

Apart from the above mentioned directorates, there are 7 other directorates within the Ministry of Health: the Directorate of Planning, Cooperation and Health Information; the Directorate of Hospital Medicine, the Directorate for the Fight against Diseases, the Directorate of Pharmacy and Laboratory, the Directorate of Human Resources, the Directorate of Financial Affairs and the Directorate of Infrastructure, Equipment and Maintenance.

(2) Medical Care System

The medical system has a pyramid-shaped, composed by national (regional) hospitals at the top of the pyramid, followed by health Care Centres (CS) and the Health Posts (PS), and the beneficiaries from this system, depending on the severity of the disease. The categories of the medical personnel are doctors, nurses, assistant nurses, midwives and auxiliary midwives. Lack of medical personnel is serious; for example, considering the number of people in relation with the medical staff for the Tagant region, whose population is about 86,000 people, it is limited one doctor for 10,783 and one nurse for 3,595 inhabitants³. Most of the budget is devoted to medical services on the upper level, and the amount devoted to primary and secondary institutions is relatively small⁴.

Table 2.3.1 Budget of the Ministry of Health by Category of Institutions

Level	Amount million			Rate of execution
	estimation	%	execution	
Primary	2,867,491	29	1,917,095	67%
Secondary	884,883	9	750,102	85%
Tertiary	3,240,511	33	1,931,969	60%
Central	2,779,946	28	2,028,901	73%
Total	9,772,831		6,628,067	68%

Source: Health Statistics Yearbook 2005: Ministry of Health, April 2007

³ Presentation of the Region of Tagant 2005: Dr. Hamahoullah Ould Cheikh, DRPSS

⁴ Health Statistics Yearbook 2005: Ministry of Health, April 2007

(3) Measures to Improve Nutrition

Measures to improve nutrition in Mauritania are addressed by the Ministry of Health and the Commission for Social Welfare and Food Security. In the view of the treatment of disease, the Ministry of Health deals with cases of severe nutritional deficiency by monitoring activities, rehabilitation of health institutions and the establishment of Rehabilitation Centres and Nutritional Education (CREN). CPSSA whose origin is the Emergency Aid in 1970 created by the army during the food crisis is working to address the food crisis in all territories by the viewpoint of food safety.

As emergency assistance for food security for the period from 2002 to 2017 declines, the Mauritanian government has created the Community Food Center (CAC) to improve the nutrition of children under 5 years and built CREN to deal with serious cases for nutritional deficiency, requiring medical care in addition to nutrition. Thanks to the construction of 632 CAC and 70 CREN as part of this national program, we can save 31,600 children. The CPSSA is funded under the government budget (14 billion ouguiya in 2003) and the financing of the European Union, Japan, WFP and China. CPSSA is implementing a program to improve nutrition for 6 months per year before the harvest period with the help of Italy for the northern region and the EU for other Regions.

2.4 Outline of the Oases Area

2.4.1 Outline

From the historical point of view, oases always played a prevalent part, as well as social and cultural part, having allowed the settlement of the local populations throughout the years. In the oasis area, date palm plantation takes the primarily role among agricultural activities. Oases sub-sector relates to some 15,000 exploitations of very small dimension (32 ares, on average). Palm tree cultivation (approximately 1.9 million palm trees) associated with irrigated crops, cereals along with vegetables and alfalfa is carried out in the oases area. Oases agriculture is distributed according to ecological zones; including various systems of production which integrate a mobile or itinerant livestock breeding with a flood receding water agriculture and oasis agriculture and traditional oases systems based on a sedentary livestock breeding (Adrar and Tagant). Moreover, while on the one hand, this sector is known in a situation of imbalanced market by a strong incidence of poverty and partly landlocked situation and the loss of the traditional comparative advantages of the oases in terms of the forwarding of the products, on the other hand, the fall of the ground water table and/or

sand encroachment is observed, caused by an overexploitation of the water resources.

2.4.2 Agriculture

(1) Agriculture Production

In Mauritania, there are 12 Regions: Adrar, Tagant, Assaba, Brakna, Daklet Nouadhibou, Gorgor, Guidimaka, Hodh El Chargui, Hodh El Gharbi, Inchiri, Tiris Zemmour and Trarza as well as the Capital Nouakchott.

Among them, 5 principal oases areas of Mauritania (Adrar, Tagant, Assaba, Hodh El Gharbi and Hodh El Chargui) integrate in their potential the phoenician type of cropping system consisted of 5,000 ha of palm plantations and approximately 30,000 ha of flood receding water areas and 60,000 ha of rain-fed crops. The agricultural production with its 16,000 tons of dates, 27,000 tons of rain-fed cereals, 20,000 tons of flood receding water cereals, 4,000 to 5,000 tons of vegetables, approximately 4,000 tons of corn and barley, constitutes an important component of Mauritania agricultural sector. The systems of production which one finds in the various oasis areas vary with the natural and socio-economic conditions which are characteristic to them.

Adrar region constitutes of the oasis zone where the production systems are very intensive, due to the control of the farming populations to the cultivation methods, as well as by the control of the date palm plantation for the subjacent crops that are very diversified (vegetables are intended for the markets in the administrative centres and the capital Nouakchott, while cereals and alfalfa are intended for the local markets and for self-consumption). However, weaknesses of the potential of the water table do not make it possible any more to ensure an optimal irrigation of the crops in place in the palm plantations. Sewage farming is currently possible only in good rainfall year, once every four years on average. The camel breeding remains important and constitutes the principal source of meat of the populations. The breeding is limited in general to a small goat breeding in enclosure but remains important for the needs of the family self-consumption.

Tagant region is similar in its northern part with Adrar regions with regard to the characteristics of the palm plantation and its operating system. The subjacent crops to the palm tree are dominated by cereals and vegetables intended for the local market and for self-consumption. The drought which also affects this area reduces the possibilities of regular practice of the flood receding water cultivation.

Assaba region benefits from climatic conditions that allow the practice of rain-fed and flood receding water cultivations which represent more than 60% of the agricultural

area. The palm plantation is practiced extensively, and its production complements the other agricultural productions among which livestock breeding is a considerable component. The practice of agriculture under the palm trees has been started for a few years in certain oases but remains still marginal.

Both Hodhs (Gharbi and Chargui) regions have only a reduced number of led palm plantations exploited in an extensive way. The agricultural production of these two areas consists of rain-fed and flood receding water cultivations.

Above is the summary of the agriculture of the 5 oasis areas. Among these 5 areas, the 2 Regions, which are concerned with the present study and whose degree of dependence to the palm trees is especially high, have the following problem. More than half of the national production of dates, which varies from 10.000 to 20.000 tons per annum, is carried out in the Regions of Adrar and Tagant (approximately 13.000 tons in 2000). The production per palm tree remains weak, varying between 11 to 15 kg against 150 to 200 kg in the countries of the sub-region. This underproduction is due to the Bayoud disease or the rudimentary crop management techniques. Due to the natural conditions constraints or the poor distribution network, the vegetable or cereal production is intended for self-consumption except for a small part.

(2) Support to agriculture

1) Marketing

The agricultural production, in particular the production of dates, vegetables and certain cereals, is the principal economic activity in the oases. There currently does not exist any reliable statistical data on the productions (activities of production and evolution of the produced quantities) nor on the marketing of the agricultural productions. Each stockholder uses his own statistics obtained from his own investigations or from the crossing of data received from other stockholders. However one can affirm that in the majority of the oases and in addition to the date palms, one practises vegetables growing intended mainly for self-consumption and occasionally for the local markets, along with flood receding water or rain-fed food crops (cereals). Certain oases are specialized in vegetables production intended for the consumption of the urban centres. In general the oases of Adrar feed the town of Nouakchott; those of other Regions feed the administrative centres of the provinces.

The marketing of dates does not pose particular problems; indeed the dates are marketed during the period of harvest commonly called “the guetna”, period during which the oasis people face various date purchasers. The sales are generally done

directly and interest only part of the palm plantation. The production of dates is primarily intended to satisfy the needs of the family throughout the year.

The prices of dates vary considerably according to the place of production. The average price of dates collected in the area of Adrar is by far higher than the average prices of dates collected in the other areas and for the same variety. It is generally estimated that the climate and the hydraulic and geological conditions of the area of Adrar are adapted better to dates production and its dates are sold at high prices.

Vegetables cultivation quickly developed since the creation of AGPOs in the oasis areas, and more particularly in the oases close to the central cities or the administrative centers such as Atar, Tidjkja, Kiffa, Ayoun and Nema. The vegetables are dispatched not only towards the closer cities but also towards the large cities of the country. In between seasons (in the off-season between harvest and next growing season), the vegetables record very significant price hikes (more than 200%). The choice is thus related to speculations directed towards the market (easily transportable food products and of long shelf life); however almost no administrative measures appropriate to the levels of the distribution chains are taken. As support to the agricultural sector, one can note that SONIMEX (National Company of Import and Export) intervened through the purchase of the carrot production in Adrar. But this subsidized intervention stopped at the end of the fourth season in 2003. The result is that one observes an important production at the oasis level but it is impossible to sell it by lack at the same time of potential buyers and means of transport; the current landlocked situation of the oases contributes much to the marketing difficulties.

2) Agricultural support services

As regards the advisory services, the Project for the Agricultural Services (PSA), financed by the World Bank, contributed to the implementation of the policy of the department as regards agricultural extension and which had as principal objectives:

- i) To gradually harmonize the activities of the agricultural advisory services that would be based on the principles of a professional management directed towards the satisfaction of the demands and needs of the farmers.
- ii) To reinforce the bonds between research and extension, mainly sticking to adaptive and applied research in accordance with the sector policy of the Government.

The programs of agricultural extension implemented within the framework of the PSA did not target the oasis sector through a given system and specific and adapted themes. However other programs such as the Oasis Project tried to carry out actions of agricultural advisory services specific to the oasis sector.

Indeed the oasis populations were supported, as regards acquisition of know-how, by a programme of extension which has two constituents:

- i) an approach based on training and visit carried out under the project, the qualified regional structures and sometimes the NGOs
- ii) an innovating approach known as “an agricultural advisory service by farmers”

This second approach aimed at the introduction of exchanges between Maghreb and Mauritania farmers to support a transfer of know-how and practices developed by populations having adapted their production and way of life to the constraints of the hostile environment of the arid areas. This approach is based on the assumption that nothing replaces the reality observed and lived by the actors themselves alongside other actors who have worked under similar conditions. Though this approach showed its effectiveness as regards the improvement of the living conditions of the women (pastry making etc), its impact was not visible in the field of agricultural techniques or the extension of these techniques.

2.4.3 Evolution of the Social Condition

One can note the problem of exodus of the rural population towards the cities because of the persistent drought (the rainfall of the oasis area is between 50 to 100mm). The majority of these people being men, the number of women headed households increased considerably in the rural area. Consequently, the role of women as engines of development of the area becomes increasingly important.