

**Japan International  
Cooperation Agency**

**Ministry of  
Agricultural  
Development**

**Study on Sahel Oasis Development  
In the Republic of Niger**

**Final Report**

**- Second volume: The pilots projects -**

**November 2009**

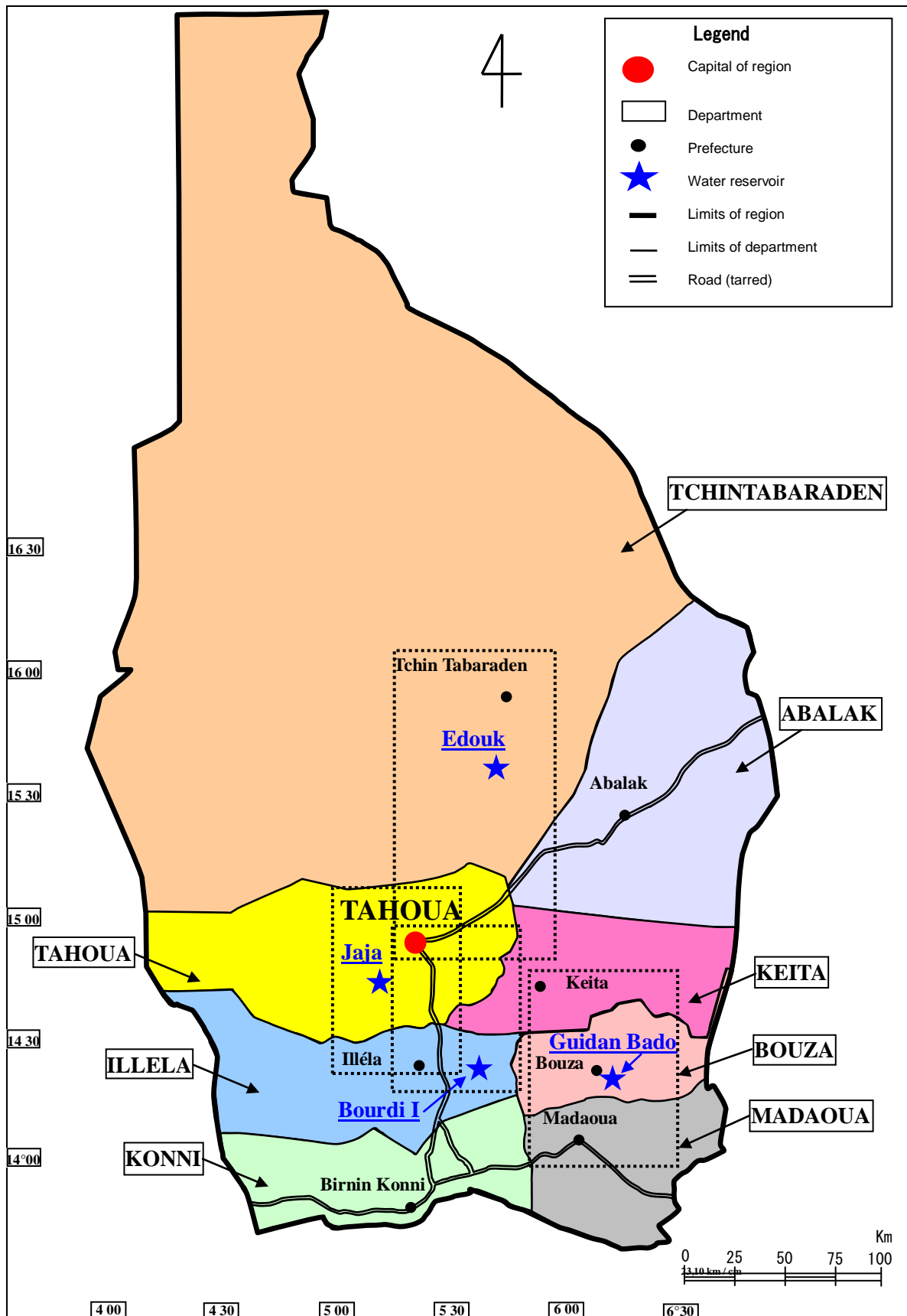
**Japan International Research Center  
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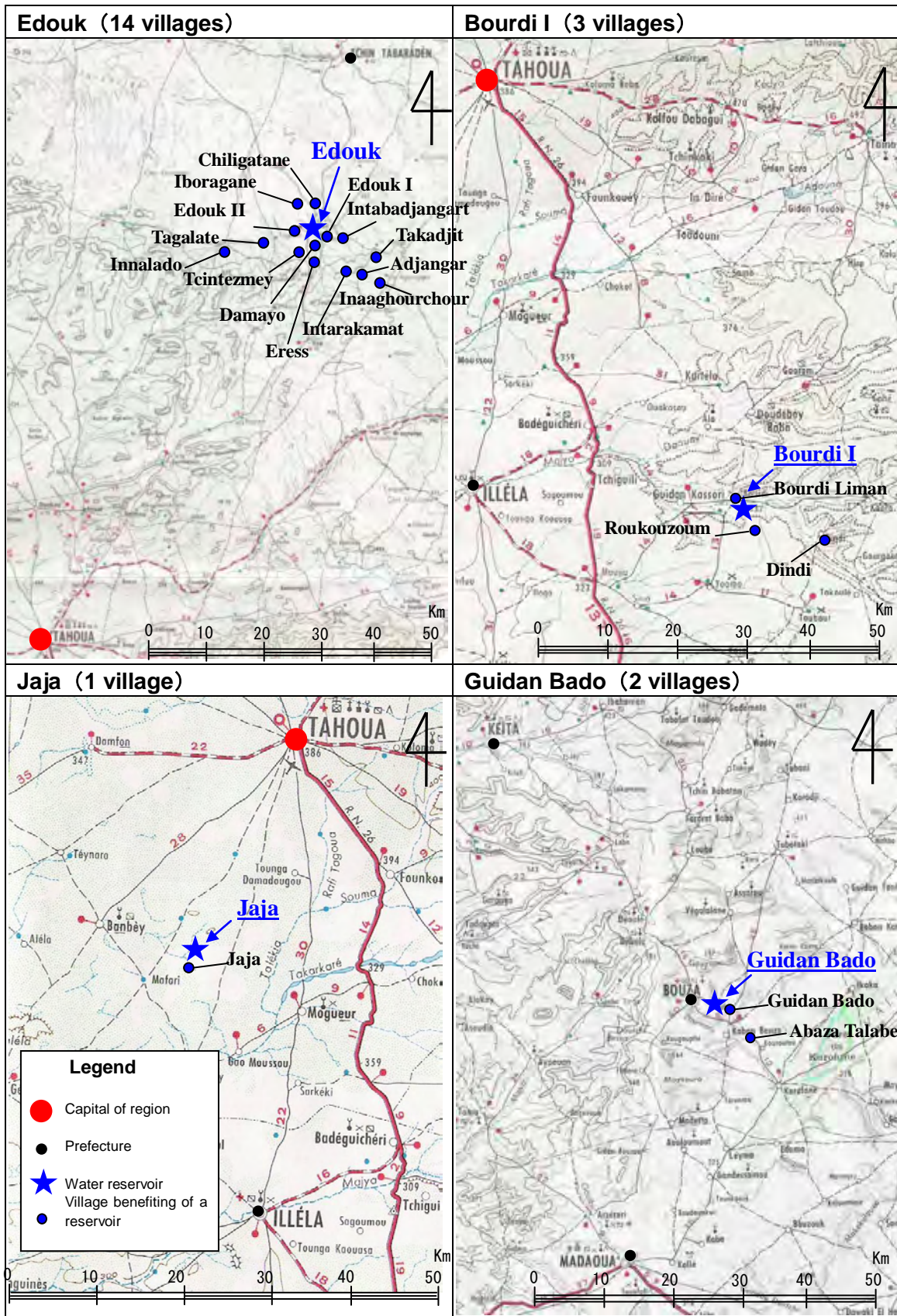
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# Map of the water reservoirs object of the pilots projects



## Maps of the 20 villages benefiting of the water reservoirs



## Second volume: The pilots projects

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## Chapter 1: Contents of the pilot projects

### 1.1 Objective

The objective of the pilot projects (in summary PP hereafter) is well to seize the relevance of the project of Action plan and the problems encountered by testing on real scale its principal activities to contribute thus to the establishment of an Action plan of a greater feasibility.

For that, all the activities the draft of the Action plan established in 2006 were tested. The differences between the pilot projects and the Action plan are indicated in table 1.1(1).

**Table 1.1 (1) Bonds between the Action Plan and the pilot projects**

Headings		Action Plan	Pilot Projects
Target regions		5 Regions	1 Regions
Number of target reservoirs		36 sites	4 sites
Number of target villages		159 villages	20 villages
Execution time		6 years (2010-2015)	3 years (oct.2006-June 2009)
Components of Activities		Various activities whose targets are the government agents, the populations and the reservoirs	Idem
Follow-up	Basic study	To carry out	To carry out
	Study PRA	-	To carry out
	Meeting	1 time every 2 months	1 time per month
Various guides		Use of handbooks prepared within the framework of the Pilot Projects. Possibly improved	Making of new guides

### 1.2 Basic Orientations

The orientations for the execution of the pilots projects based on the 4 following points:

- ① To design the targets of the actions in terms of state services, water reservoirs and villages
- ② To promote the participation of the populations in all the levels
- ③ To reinforce the collaboration between the local administrations, the decentralized technical services, the financial backers and the NGO.
- ④ To adopt in the plans some techniques and methods easily understood by the populations, In the event of execution of the actions requiring an external support, it will be retained only the activities realizable with only a starting investment.

### 1.3 Contents of the Pilot Projects

The contents of the actions by pilot project are indicated in Table 1.3(1) hereafter. For more detail, the PDM matrix of this survey is joined in Appendix PP1.

**Table 1.3 (1) Contents of the activities of the pilot projects**

Type of action	Target	Action	Project	Contents		
Minimum package	Level of the official services	Actions of reinforcement of the support system for the populations by the official services	Project of reinforcement of the means of work for basic extension agents	Equipment in motor bike, necessary fuel, regular maintenance of the motor bikes		
			Project of reinforcement of the capacities of the basic extension agents	Participation in the various trainings (village and reservoirs levels)		
			Project of installation of a system of capitalization and share information	Equipment of the basic extension agents with of guides. Holding of the monthly meetings of follow-up and those of the consultative committee		
	Level of the sites of the reservoirs	Actions of reinforcement of the capacities of the reservoirs users in management of the actions	Project of support to the installation of the reservoirs users organization	Support to the set up of reservoirs users organization		
			Project of support for the reinforcement of the capacities of the executive members of the cooperatives of reservoirs users	Support to the establishment of the Reservoirs Valorization Plans		
			Project of reinforcement of the capacities in maintenance of the reservoirs	Support in reinforcing reservoir maintenance capacities		
			Project of installation of a system of information flow and share of the techniques between recipients	Support to the popularization of the techniques between the sites of reservoirs and between villages Holding of seminars between the cooperatives of reservoirs users and the organizations at villages level		
	Level of the villages	Actions of reinforcement of the capacities of the populations in management of the actions	Project of support for the organization of the populations	Support with the installation of a village organization (VDC)		
			Project of support for the reinforcement of the capacities of the executive members of the organizations	Support to the planning for the Development of the village		
	small scale Integrated actions	Level of the sites of the reservoirs	Actions of improvement of the incomes	Project of improvement of the agricultural techniques	1.Basic notions on the crops, plant health prevention	Training on the basic concepts for the crops and the protection measures against the harmful insects
					2.Introduction of the ecofarms	Training on the agricultural techniques aiming at the economy of water
					3.Introduction of improved varieties	Demonstrations of the crop with the improved varieties of millet and sorghum
Project of improvement of the agricultural management techniques				Training on the methods of grouped purchase of the inputs and their use, the methods of self production of the seeds, conservation and adjustment of shipments, the management of the risks, the accumulation and the capitalization of information on the prices		
Project of experimentation of the introduction of rice NERICA				Support to the Introduction of rice growing with varieties NERICA		
Project of introduction of fish farming				Support to the Introduction of fish farming		
Project of reinforcement of the capacities in maintenance of the irrigation equipment				Introduction of the techniques of construction of the concrete wells. Demonstrations on the system of pumping out with animal trained equipment		
Project of conservation of the arable lands				Training in agroforestry, and protection techniques and soil conservation. Equipping with necessary materials		
Project of prevention of the damage caused by the animals				Materialization of the passage corridors and the grazing land		
Project of support to income generating activities				Training on management and marketing		
Actions of improvements of the life condition				Project of reinforcement of capacities in reading and writing	Training of literacy instructors, training of the populations of the villages benefiting of the reservoirs in literacy	
				Project of reinforcement of knowledge in health and hygiene	Training of the users of the reservoirs on certain concepts of health and hygiene (malaria, diarrhea...) related to water	
				Project of introduction of the improved cooking stoves	Training of the users of the reservoirs on the manufacture of the improved cooking stoves	
Level of the villages		Actions of improvements of the incomes	Project of introduction of a system of saving and turning credit (tontine)	Support to the introduction of micro-finance		

## 1.4 Need for the contribution of the populations

To carry out a durable development by the villagers, it is important that they are convinced of the contents of the activities in order to raise their ownership and take in charge a part of the expenses of the activities.

When the contribution of the populations is raised, the population adapts more the infrastructures and/or the techniques used. Unfortunately, the level of the income of the populations in the target zone is very low; consequently it is impossible to start the new activities with a high rate of financial contribution.

For that, by taking account of these 2 elements, the rate of the financial contribution of the populations was given on the basis of following principles:

### (1) Activities targeting the reservoirs

- ① For the activities relating to the reinforcement of the capacities of the rural populations (such as the trainings), the contribution of the populations will not be required.
- ② As regards the activities requiring the use of local materials such as earth blocks, those will be the responsibility of the populations.
- ③ The activities of public interest such as the soil conservation around the reservoir and the maintenance and the repair of the reservoir will be dealt with by the population with regard to simple work
- ④ Concerning the activities which directly touch the incomes of the farmers with beneficial effects, they will be dealt with at 100% for the techniques locally known (fertilizer) but not for the locally unknown techniques which will be introduced (Improved seeds, rice Nérica or pisciculture)
- ⑤ According to CP's opinions, charge of the tools and materials which be used collectively was at 5% by the cooperative in 2007. But the pilot project showed that it could pay more in a cooperative, it could be 20% in 2008.

The financial contribution of the populations will be mobilized within the cooperatives of the reservoirs users, and will be used as starting funds for the system of purchase and sale in common of the agricultural inputs (Inputs Project).

### (2) Activities targeting the villages.

- ① For the activities relating to the reinforcement of the capacities of the rural populations (such as the trainings), the contribution of the populations will not be required.
- ② The activities conceived by the populations will be their responsibility at 100%, they will not profit from any financial and material support.

## 1.5 Execution plan of the pilot projects

The period of execution of the pilot projects is 2 years and 9 months (from October 2006 to June 2009), and the most significant contents of these pilot projects to carry out per year on the level of the state services, the villages and the sites of the reservoirs are as follows:

- Year 2006:** Reinforcement of the system of popularization for the state services; collection of basic information on the level of the sites of the reservoirs. The organizations are installed on the village level.
- Year 2007:** Continuation of the activities of 2006 for the state services; on the level of the reservoirs, installation of the organizations and implementation of small scale integrated projects. Implementation of small scale integrated projects in the villages.
- Year 2008:** Continuation of the activities of 2007, and approaches for the extension of the assets.

-**Year 2009:** Final evaluation and establishment of an Action plan which will take into account the results of the evaluation.

According to the orientations listed above, the contents of the actions for each year are presented in figure 1.5(1) of the pilot projects implementation program below.

**Table 1.5 (1) Annual execution plan of the pilot projects by level of intervention: state services, villages and water reservoirs**

	State services	Sites of the water reservoirs	Villages	
	Reinforcement of the capacities of the state services and extension agents	Development of the water reservoirs (4 sites)	Prevalent benefit villages (4 villages)	Benefit villages (16 villages)
2006	<ul style="list-style-type: none"> <li>- Reinforcement of the working means of the extension agents;</li> <li>- Meetings of follow-up;</li> <li>- Training for the reinforcement of the activities of the extension agents by the NGO;</li> <li>- Establishment of the various guides (projects) and their distribution to all the actors</li> </ul>	<ul style="list-style-type: none"> <li>- Execution of the basic study</li> <li>- Study on the real State of the income generating Activities</li> <li>- Study on the Use possibilities of subsoil water</li> <li>- Study on the current state of the small scale irrigation</li> </ul>	<ul style="list-style-type: none"> <li>- Support for the installation of the village Development Committees through the services of NGO</li> <li>- Support for the establishment of the village development plan for the Village Development Committees set up,</li> <li>- Partial execution of integrated micro projects (literacy)</li> </ul>	<ul style="list-style-type: none"> <li>- Support for the installation of the village development Committees through the services of NGO</li> <li>- Support for the establishment of the village development plans for the Village Development Committees set up,</li> <li>- Partial execution of small scale integrated projects (literacy)</li> </ul>
2007	<ul style="list-style-type: none"> <li>- Reinforcement of the working means of the extension agents</li> <li>- Meetings of follow-up</li> <li>- Establishment of the various handbooks (projects) and their distribution on the level of all the actors</li> <li>- Holding of exchange of views meetings with the sponsors and the NGO</li> </ul>	<ul style="list-style-type: none"> <li>- Support to the installation of the cooperatives of reservoirs users;</li> <li>- Support to the establishment of the reservoirs valorization plans</li> <li>- Support to the execution of the activities of maintenance of the reservoirs;</li> <li>- Actions of improvement of the agricultural techniques and agricultural management techniques</li> <li>- Actions of reinforcement of the capacities in maintenance of the irrigation equipment</li> <li>- Actions of adjustment to prevention of the damage caused by the animal</li> <li>- Actions of conservation of the arable lands</li> <li>- experimentation of the introduction of rice Nérica</li> <li>- Introduction of fish farming</li> <li>- Support and training for the establishment of requests</li> <li>- Implementation of achievable projects by the populations</li> </ul>	<ul style="list-style-type: none"> <li>- Execution of achievable projects by the populations themselves</li> </ul>	<ul style="list-style-type: none"> <li>- Execution of achievable projects by the populations themselves</li> <li>- Participation to the various technical trainings especially which take place in the prevalent benefiting villages</li> </ul>
2008	<ul style="list-style-type: none"> <li>- Continuation of previous actions</li> <li>- Technical extension between villagers</li> <li>- Organization of seminars for the administrative and extension agents of the 5 regions</li> </ul>	<ul style="list-style-type: none"> <li>- Continuation of the preceding actions</li> <li>- technical extension between villager,</li> <li>- technical extension on the sites between villages (support for the organization of seminar)</li> </ul>	<ul style="list-style-type: none"> <li>Continuation of the preceding actions</li> </ul>	<ul style="list-style-type: none"> <li>- Continuation of the projects carried out by the populations themselves</li> <li>- Participation in the training especially technical held in the largest benefiting villages</li> <li>- technical extension on the sites (support for the organization of seminar)</li> </ul>
2009	Final evaluation, approach for the implementation of the Action plan at the end of the pilot projects			

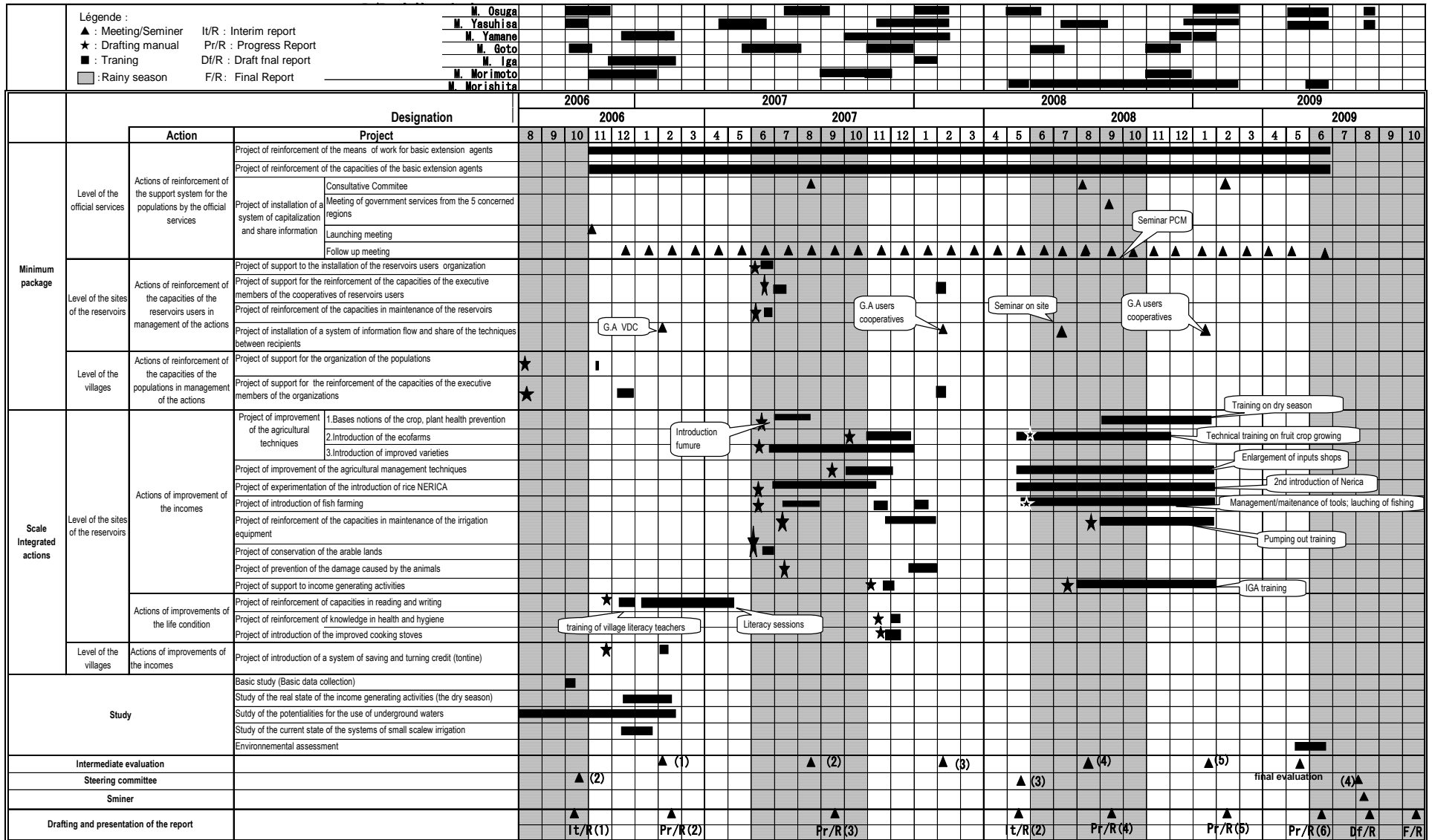


Figure 1.5 (1) Pilot projects implementation program (PP)

## 1.6 Method of evaluation

The evaluation of the pilot projects is made through two axes which are those of the evaluation of the processes and the evaluation of the assets.

### (1) Evaluation of the processes

It is a question of evaluating the relevance of the contents, the quantity and the period of the investments for each project.

### (2) Evaluation of the assets

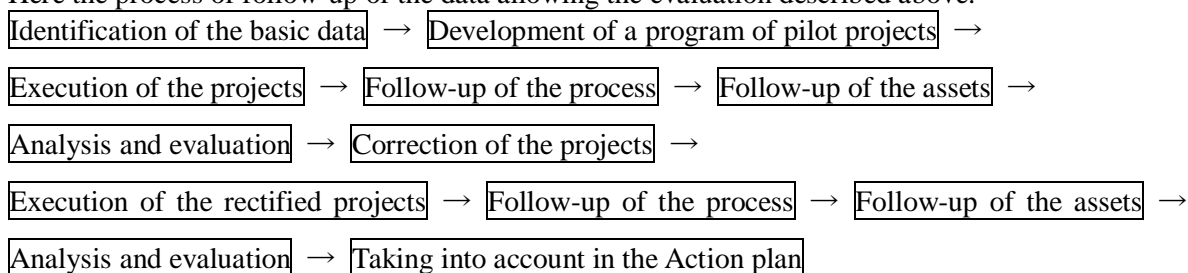
The result of each project evaluates whether the objective which carried out initial establishment was reached. Moreover, the effect (positive and negative) of the project which was not expected at the beginning is analyzed.

The results of this evaluation are taken into account for the continuation of the projects, through the modifications of the adopted techniques and the examination of additional projects, and in same time their taking into account in the development of the final action plan.

## 1.7 Method of follow-up

### (1) The process of follow-up

Here the process of follow-up of the data allowing the evaluation described above.



### (2) Mode of acquisition of the data within the framework of the follow-up

One can classify the pilot projects into three great groups: projects targeting the state services, the projects targeting the villages, and the projects targeting the sites of the reservoirs. The data for these projects are collected in the following way:

- ① Notes taken by the model peasants
- ② Studies, notes taken by the field extension agents
- ③ Data acquisition through the studies undertaken directly by the homologous structures or the study mission
- ④ Reports of the NGO or consulting service provider
- ⑤ Investigations of all kinds carried out by the study mission during the execution and the completion of the pilot projects.

### (3) Device of execution and follow-up of the projects

Meetings of follow-up of the pilot's projects are held, in theory once per month. The first Consultative Committee was held on August 21, 2007 and the second was held on February 12, 2009 to give a progress report on the results of the activities undertaken including the monthly follow up meetings; it was also used as framework of dialogue on the manner of extending the assets in time and space. With the participation of 55 persons (the first) and 54 persons (the second), namely the persons concerned by the Study (at the levels of region, department, commune and village), the representatives of other projects of rural development and NGO, it made it possible to more promote the sharing of information between the concerned parts, and the constitution of a

system of co-operation (For the details, to see the recapitulative form of follow-up 3.1(4) on the reinforcement of the system of support to the populations by the state services (Project of adjustment of a system of capitalization and sharing of information) of Chapter 3 (Result of the Monitoring PP), in second volume.

Here is a diagrammatic representation of the execution unit and follow-up of the pilot projects.

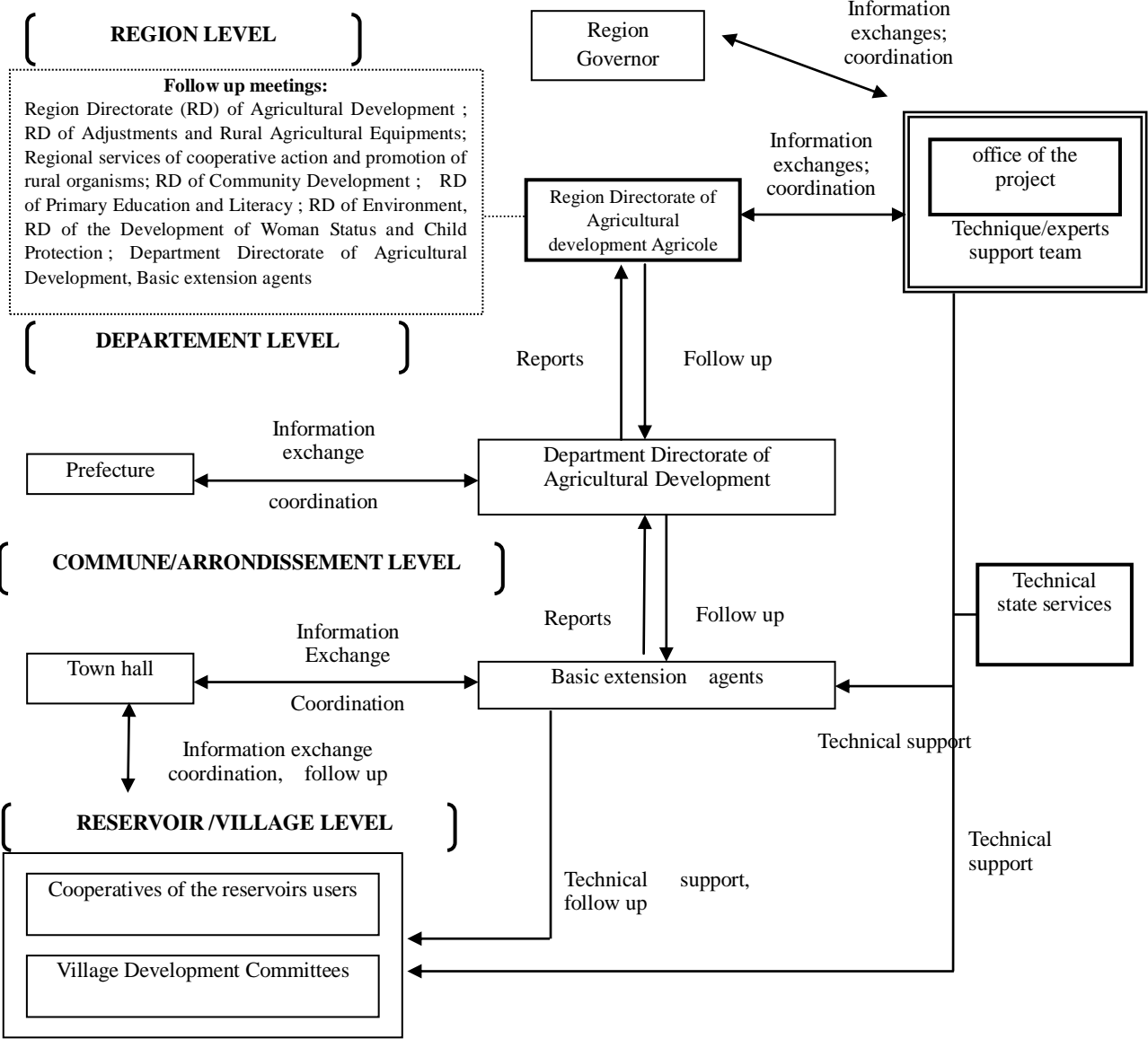


Figure 1.7 (1) Structure of follow-up of the Pilot Projects

## **Chapter 2 : Selection of the reservoirs and the targeted villages, presentation of these reservoirs and these villages**

### **2.1 Selection procedure of the sites of water reservoirs and their outlines**

#### **2.1.1 Selection procedure of the sites of water reservoirs targeted for the pilot projects**

##### **(1) Conditions for the selection of the sites objects of the pilots project**

The conditions for the selection of the sites objects of the pilots projects are as follows:

- ① Sites where it is possible to test the 3 categories of listed reservoirs;
- ② Sites where it can be checked out the differences in ethnic characteristics between farmers and nomads;
- ③ Sites where it can be checked out the differences in situation when ever an organisation of reservoirs management exists or not;
- ④ Sites where we can test the 3 great problems in terms of the utilisation of the water reservoir.

The reasons for which these conditions were retained are as follows:

##### ① Categorization into 3 types of reservoirs

The water reservoirs built within the framework of the Special Program of the President of the Republic were classified into 3 categories according to the mode of storage of surface water and depending on the functionality. According to chapter 3.2 (first volume), this categorization is based on two great divisions which are on one hand the reservoirs in a situation such that the water resources are usable for agriculture, and on the other hand the reservoirs for which the use is currently problematic or it will be in a few years. The water reservoir whose water resources are usable for agriculture are also subdivided into small scale dams which retain surface water, and into weirs which give rise to a zone of flood. Thus a total of three categories of water reservoir were obtained (see figure 3.2 (5) in first volume). Consequently, it will be selected at least one site of water reservoir in each one of these 3 categories among those which will be the subject of the pilot projects.

It was counted 22 sites of reservoirs of the second category (thresholds of spreading), that is 1.4 times more than the 16 sites of reservoirs of the first category (of small scale dams' type), and it can be chosen an additional site for the second category, which are two sites for this category. The third category includes the greatest number of sites with 28 reservoirs, however they are sites where the use of the water reservoirs at agricultural ends is difficult, and one will thus select only one site of water reservoir where it can be examined only the development on a village scale. Thus four sites were selected out of the 66 reservoirs for the implementation of the pilot projects.

##### ② Difference in ethnic characteristics

The ethnic groups of Niger are of a great diversity, and one can establish a great distribution according to their activities between the farmer's ethnic groups and the nomadic ethnic groups. These last years, the nomadism is made increasingly becoming difficult because of the reduction in the pastures, and the nomadic populations are becoming more sedentary and practise agriculture. This tendency probably will continue in the future. To the origin, the nomadic people lead their activities by family and one can think that they are not used to collective work completed by several families or village district. This is why the sites of water reservoirs will be selected including the sites whose main beneficiaries are the farmer's ethnic groups and others whose main recipients are the nomadic ethnic groups and this in order to check the differences between the organisational forms and the approaches of village development in the farmers and nomadic ethnic groups.



③ Existence or not of an organization of water reservoirs users

The action plan forecasts the installation of organizations of water reservoir users in order to carry out an effective exploitation of their water resources. In addition, the inventory study of the water reservoirs allowed checking that there were already some organizations of use for 4 reservoirs out of 66. To check the differences in performance in terms of the use of the water reservoir, according to the current existence or not of such organizations, the selection of the sites objects of the pilot projects will include sites where a management committee of the water reservoir already exists and others where it does not exist.

④ The three great factors of constraint for the use of the water reservoirs

The three great factors of constraints highlighted in the inventory study the water reservoirs are the lack of water, the insufficiency of arable lands and the damage caused to crops by the cattle. This is why our choice will be made on the sites where these three great factors of constraint are sorted out in order to be able to test some measures for these three factors in the pilot projects.

**(2) Headings for the examination of an application widened in 5 regions**

The sites of water reservoirs objects of the pilots projects which were selected on the basis of 4 condition mentioned above must at the same time and as much as possible have an applicability for a great number of natural and socio-economic conditions in order to facilitate the deployment in the 5 regions of the zone object of the Action plan. For that, one will examine in which proportion the distribution of the natural and socio-economic conditions in the 4 sites of reservoirs objects of the pilot projects corresponds to that of the whole of the 66 sites. The examined headings are indicated in Chapter 4 volume AP. They are the 6 following points according to the results of analysis of the inventory study of the water reservoirs.

- ① Annual rainfall
- ② Number of farmerson the sites of water reservoir
- ③ Surface area cultivated on the sites of water reservoir
- ④ Cultivated surface area per farmer
- ⑤ Percentage of surface area already cropped
- ⑥ Distance from the larg benefiting village to the market

Table 2.1(1) indicates the distribution of the 4 conditions for the selection and the 6 headings studied for the applicability in the 66 water reservoirs. The number “1” is mentionned when the sites fulfilling the conditions and the examined headings.

The aplicability level to other sites in the 5 regions selected for the pilots projects is pospoined under the form of coverage rate. The coverage rate is conceived as follows.

For instance, concerning the condition for the distribution of annual rainfall in table 2.1(1), the quantities indicated are : range between 200mm to 350mm and between 350mm to 600mm, and between 600mm to 800mm ; to each intervalle correspond respectively 6, 51 and 9 sites, witch respectively gives in percentage of the total of sites of wter reservoir: 9%, 77% and 14%. If we conform to this idea, the quantity of rainfall in the wter reservoir of Kongou Gorou is situated in the intervalle ranged between 350mm and 600mm, and if we only consider annual rainfall, Kongou Gorou can be considered representative of 77% of sites of water reservoirs in the 5 regions. It is working with this conception that the coverage rate of 6 headings indicated above has been indicated in the last line of table 2.1 (1)



the highest value to the average coverage rate (applicability in other regions) in the 5 regions in (2). The selection results obtained with these conditions give for the first category of reservoirs, the water reservoir of Guidan Bado (Tahoua region) where there exist an organisation of water reservoir users and where it is possible to check the problem of lack of water and damages caused to crops. For the second category, one of the following 4 sites was retained with the applicability view point: Chanyassou (Tahoua region), Bakassomouba (Maradi region), Bourdi I (Tahoua region), Kounchi (Maradi region), and Magagi Rogo (Maradi region). For the third category, the site of Bokologi (Maradi region), which is small scale dam where it is possible to check out the problem of arable lands insufficiency, was selected. Such a combination permits to cover about an average of 85% of the 6 headings for the applicability examination to the 66 water reservoirs.

The headings where we can not check the distribution of the whole of water reservoirs through the combination of the 4 sites of water reservoirs are: annual rainfall of more than 601mm (14%); Number of farmers of more than 501 persons (8%); Cropped surface area of more than 100.1 ha (8%); surface area cultivated by farmers of more than 0.51 ha (5%); rate of surface area already cultivated of more than 0.1% to less than 50% (22%); distance from the largest benefiting village to the market far of 0 km to less than 1 km (11%) and more than 10.1 km (18%).

#### **(4) Case No.2: Selection going from one region**

The African Development Bank projects to bring a support to a part of the water reservoirs that were built in the frame work of the Special Program of the president of the Republic in the 3 regions of Dosso, Maradi and Tillabery. To avoid the overlapping it is desirable to avoid as much as possible targeting these 3 regions for the pilot projects. Consequently, we study the selection of sites that will be the objects of the pilot projects in Tahoua region, and in this case, we will proceed through the following manner:

- ① Selection from the distribution into 3 categories:  
In Tahoua region, we find only one site qualified for the third category, even though the site of water reservoir of Jaja is inevitably selected.
- ② Selection from the distinction between the farmers and nomadic ethnic groups:  
Only the prevalent benefiting village of Edouk is selected in Tahoua region. Consequently, the choice focused Edouk as one of the two sites candidates of water reservoirs for the pilot projects of the second category.
- ③ Selection according to an existence or not of an organisation of reservoir users:  
We raise 3 sites of water reservoirs where exists an organisation of reservoir users in Tahoua region: Guidan Bado, Tarwada, and Edouk; the water reservoir of Edouk is already selected in point ②.
- ④ Selection according to factors of constraint to development:  
The only site where we can check the measures facing the lack of water being that of Guidan Bado, this water reservoir will be selected as site of object for the pilot projects in the first category. To check the measures against the damages caused to crops by animals, the two sites envisaged are Guidan Bado and Edouk selected in point ②.  
The only water reservoirs where the measures facing the insufficiency of arable lands that can be checked out are those 4, Bourdi I, Bourdi II, Edir, and Gadiyaw (all from the 2<sup>nd</sup> category).
- ⑤ Selection considering the importance and the applicability to other sites  
The water reservoirs candidates for the remaining site to be selected for the pilot projects are 4 from the second category indicated in ④: Bourdi I, Bourdi II, Edir, and Gadiyaw. The site of water reservoir selected after carrying an study on how to obtain a combination that allow to study the highest number of possible annual rainfall distribution diagrams, surface area cultivated, number of farmers, surface area cultivated by farmer, rate of surface area already

cropped in relation to the surface area for cultivation , and the distance from villages to the market.

The natural and socio-economic conditions of the 4 sites selected during the process from ① to ⑤ were examined to be able to determine to which level their applicability can be extended to 66 other sites in 5 regions. The proportion in which the 4 sites selected can cover the 6 headings of distribution of natural and socio-economic conditions in whole the 66 sites is of 79% in average.

#### (5) Selection of sites objects of the pilots projects

The summary of results obtained in points (3) and (4) above is presented in table 2.1(2) below. For information, in this table are mentioned the site of water reservoirs and also the average coverage rate in cases where only the applicability to other site is considered for the selection of water reservoirs objects of the pilots projects, ignoring conditions such as differences in farmers and nomadic ethnic groups, neither the existence or the absence of organisations of reservoir use. Even in this case, the coverage rate does not reach 100%.

**Table 2.1(2) Results of selection according to cases of the water reservoirs objects of the pilot projects**

CASE	Average coverage rate	Category 1	Category 2-1	Category 2-2	Category 3
Case No.1	85%	Gombewa (Dosso)	Chanyassou (Tahoua)	Bourdi I(Tahoua) or Magagi Rogo(Maradi) or Bakassomouba(Maradi) or Kouchi(Maradi)	Bokolgi (Maradi)
Case No.2	79%	Guidan Bado (Tahoua)	Edouk (Tahoua)	Bourdi I (Tahoua)	Jaja (Tahoua)
For information (case where only applicability to other sites is taken into account for the selection of the water reservoirs objects of the pilot projects, without taking account of the ethnic differences between farmers and nomad, nor of the existence or the absence of organizations of reservoir use)	93%	Gombewa (Dosso)	Kananbache (Maradi)	Edir(Tahoua) or Zongon Roukouzoum (Tahoua) or Iyataoua (Maradi)	Koire Kobardeye (Dosso)

As indicated in the Case No.2 of the previous table, if we carry out the pilot projects in only one region, average coverage rate is 79%, which represents a variation of 6% with the average coverage rate of 85% obtained in the case No.1 if the sites of the pilots projects were selected starting from all the 5 regions. However, in spite of a less rate of 6%, the execution of the pilot projects in only one region presents a greater priority, we think, if one takes into account ① an increased effectiveness of the management of the pilot projects, ② an increase in their impact by their deployment in only one region, and ③ the fact that it is possible to check synergy in the vertical organization of the state services on the levels village-commune-province-region.

In addition, as we can see it in the Case No.2, the region of the pilot projects, if those were carried out in only one region, would be that of Tahoua; in addition to the points ① to ③ above, the following point to underline why it has priority to carry out the pilot projects in this region of Tahoua:

It is possible to share the experiences in carrying the democratic elections by the population organisation, and in the establishment and implementation of activities programs centered on

populations, which were acquired in the “Project school for all in Tahoua region” carry out the technical cooperation of JICA.

The headings exposed above were considered in their totality and the pilot projects will be carried out in the 4 water reservoirs of Guidan Bado, Edouk, Bourdi II and Jaja in Tahoua region.

### 2.1.2 Outline of the sites of targeted water reservoirs

Here is now a presentation of the characteristics in terms of equipment, water resources, agriculture, socio-economic situation etc of the four water reservoirs of Tahoua region which are the subject of the pilot projects (Guidan Bado, Bourdi I, Edouk and Jaja).

The tool for detection by simplified seismic waves implemented to analyze the water resources finds its limits to a depth of the rock substratum of ten and a few meters. We consequently eliminated on the four sites that of Jaja for which the probabilities of presence of a water table not very deep are very weak. In addition, in Bourdi I, results of the observations on the usage state condition of the existing wells in the surroundings of the site, and evidences of many peasants who are used to subsoil waters, according to which, any where a well is sunk, water is found, induced us to judge that the need for a detection by seismic waves was not essential on Bourdi I which was thus not targeted. The results of the detections carried out in January 2007 in Edouk and Guidan Bado are presented below and in the document appendix PP3. The results of the detection carried out in January 2008 in Jaja, at ends of technics transfer are also mentioned. As the problem of salinisation appeared in an obvious way only in Guidan Bado, it is on this site only that the study on the salinisation was undertaken, whose results are found in the appendix PP2.

#### (1) Bourdi I

(a) The reservoir

Built to bar the valley of Badaguichiri which extends from West to West, this reservoir is located at 1km upstream the reservoir of Bourdi II and at 5km upstream of the reservoir being constructed in Zongon Roukouzoum. In the fertile silts of the valley bed. One will find the basic data on the design of the reservoir of Guidan Bado in table 2.1(3) below:

**Table 2.1(3) Specifications of the water reservoir of Bourdi I**

Name of the work	Bourdi1	What is the objective of the reservoir	Infiltration (Threshold of Spreading)
Department	Illéla	Catchment surface area:(km <sup>2</sup> )	650
Commune of	Badaguichiri	Initial surface of reservoir (ha)	80
Central latitude of the reservoir	14° 26.770' N	Length of the reservoir (m) and hauteur:(m) Width (m)	679.1X3X10
Central Longitude of the reservoir	5° 31.823' E	Length of the outfall (of the exit of flooding water(m) and Charge(m)	121X1
Annual rainfall (mm)	300-400	Exploitable surface in dry season (ha)	80
Date of construction	2004	EC of the water in the dam (µS / cm)	164
What is the type of reservoir	lateritic gabion + dam	PH of the water in the dam	8.5

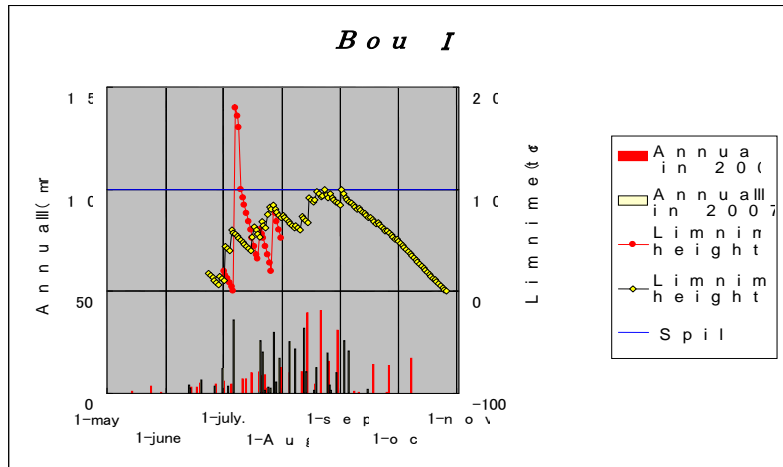
Source: Team of SSOD (Study of the current conditions of small size water reservoirs, documents provided by the regional service of installations and agricultural rural equipment of Tahoua).



**Site of Bourdi I**

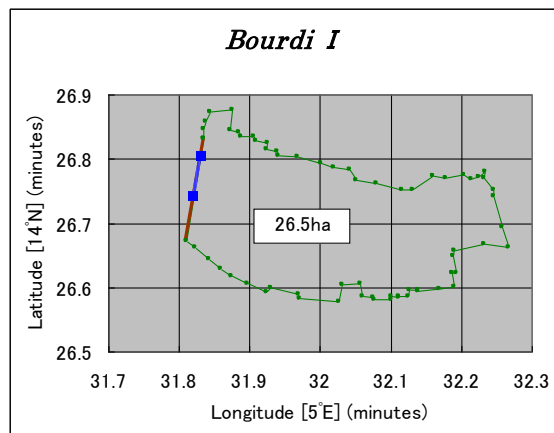
**(b) Water resources**

The grounds in edge of the limit of high waters are devoted to onion cropping. Many traditional wells, in which water is reached to a depth of 4 to 6m, were dug on the bank of reservoir and are used as auxiliary irrigation for onion cropping and fall cropping. The reservoir, full at the beginning of September 2006, knew a drawdown of about 1,8 cm/j and was drained at the end of October. For the year 2007-2008, according to data's collected near the population, the daily fall of the water level below the level of the outfall was faster than the year 2006-2007, and there is a possibility that the dam for example is damaged due to flood. Figure 2.1 (1) has the daily rainfall and limnimetric heights for these two years. The grounds occupied by the fall crops around reservoir is surrounded by fences. Figure 2.1(2) indicates the approximate perimeter.



(Graph : Team SSOD)

**Figure 2.1(1) Daily rainfall and limnimetric height (Bourdi I)**



(Graph : Team SSOD)

**Figure 2.1(2) Area occupied by fall cropping around the reservoir (Bourdi I)**

(c) Agriculture

The site of Bourdi I is the most active of the four sites in terms of gardening. Upstream and downstream of the reservoir (Threshold of spreading) are cultivated the tomato, garden pea, the potato, cowpea, etc in the form of fall crops. Moreover, all around the reservoir, tomatoes, the okra, sweet peppers, onions, etc are cultivated by irrigation with the water from the sumps. On the lands close to the reservoir which allow the fall cropping, some tradesmen occupied significant areas and many villager practise a small scale irrigated agriculture on pieces of land of an average surface area of 0.5 are. The conservation of the sumps and the prevention of the accidents during sinking are significant problems.

(d) Socio-economic situation

The reservoir of Bourdi I is a threshold of spreading located in the commune of Badaguichiri, department of Illéla. In the immediate vicinity of this threshold two water reservoirs were built within the framework of the Special Program of the President of the Republic (reservoir of Bourdi II and Zongon Roukouzoum). The villages which use the reservoir of Bourdi I are Bourdi Liman, Dindi and Roukouzoum. All these villages are very significant with a population of more than 23,000 inhabitants. Haoussa are in a majority in these villages but one finds also nomads Fulani and touaregs. The infrastructures are relatively arranged in these villages.

Weekly markets are held in Dindi and in Roukouzoum but the populations of these villages sell and buy more actively at the market of Badaguichiri, the chief town of the commune which is held each week to about thirty kilometres.

There is in addition a village development committee in each of the three (3) villages (Bourdi Liman, Dindi and Roukouzoum) since 2005. These VDC were created within the framework of the project Italy Funds of the ICFDS (Inter states Committee of Fight against the Drought in the Sahel) One has the impression that women express more than in the other target sites, perhaps because the NGO Care International exerts a support in terms of non formal credit near the female organizations of the three villages.

**(2) Edouk**

(a) The reservoir

This reservoir, whose catchment area is formed of the slopes of a broad range of hills in South-east, has the broadest underwater surface. We find the basic data on the design of the reservoir of Edouk in table 2.1(4) below:

**Table 2.1(4) Specifications of the water reservoir of Edouk**

Name of the reservoir	Edouk	What is the objective of the reservoir	Infiltration (Threshold of Spreading)
Department	Tchintabaraden	Catchment Surface area:(km2)	30
Commune of	Kaou	Initial surface area of the reservoir (ha)	120
Central latitude of the reservoir	15' 35.333' N	Length of the reservoir (m) and hauteur:(m) Width (m)	760X3X15
Central Longitude of the reservoir	5' 44.942' E	Length of the outfall (of the exit of flooding water(m) and Charge(m)	86X1
Annual rainfall (mm)	200-300	Exploitable area in dry season (ha)	120
Date of construction	2004	EC of the water in the dam (µS / cm)	630
What is the type of reservoir	Lateritic Gabions+banking	PH of the water in the dam	9.1

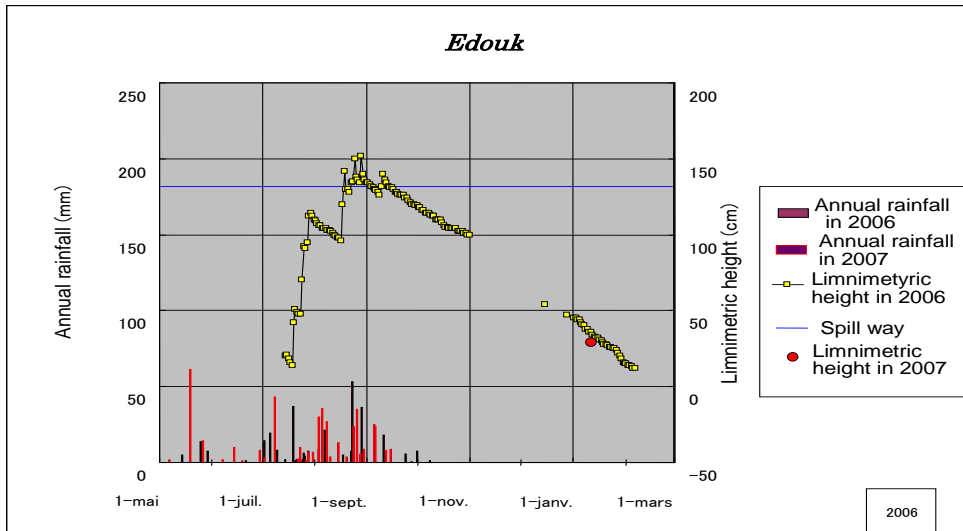
Source: Team SSOD (Study of the current conditions of small size water reservoirs, documents provided by the regional service of installations and rural agricultural equipment of Tahoua)



**Site of Edouk**

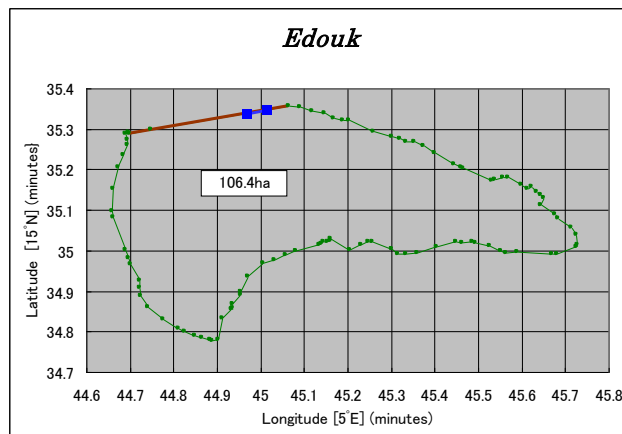
**(b)Water resources**

After the end of the rainy season, the fall cropping extends as the level of water is lowering. The reservoir, full in September 2006, knew a drawdown of about 0.8 cm/j and was drained in February. There were no significant changes in the limnimetric level in Edouk, between the year 2006-2007 and the year 2007-2008. Figure 2.1(3) presents the daily rainfall and limnimetric heights for these two years. The land occupied by the fall crops around the reservoir is surrounded by fences. Figure 2.1(4) indicates the approximate perimeter.



(Graph: Team SSOD)

**Figure 2.1(3) Daily rainfall and limnimetric height (Edouk)**



(Graph: Team SSOD)

**Figure 2.1(4) Surface area occupied by fall cropping around the reservoir (Edouk)**



An estimate depth of the rocky substratum, thickness of the sedimentary layers, and depth of the water table was carried out on the basis of detection by simplified seismic waves operated within the framework of this Study.

Around the reservoir of Edouk, we find to a depth of 2 to 4 meters a sedimentary layer of clayey nature, and the second layer is supposed to be an alluvial layer a little thicker. The limits depth accessible to detection by seismic waves did not make it possible to note the presence of a third layer. The agents of the state services which worked with the geological investigation at the time of construction gave the information that the reservoir surface was covered with a layer of 2 to 3 meters depth of clayey nature and which the sub-base contained much water, but the geological structure to a more significant depth is not certainly known.

The farmers who practise the irrigated agriculture directly on the downstream side of the dam dug sumps of approximately 5 m near the dam, but, according to their evidences, they did not find water. If the first clayey layer going from the surface contains water, we can find water there by digging a sump there, but we can suppose that when this water is exhausted, the subsoil water of the lower sedimentary layer becomes inaccessible to some usable depths.

There is to a few 800 m downstream from the reserve of Edouk a flooded depression in wintering, and irrigation agriculture there was already practised before with a drill. Plans of extension of irrigated agriculture are currently implemented, and FAO and an NGO arranges 10 wells each one for gardening.

In an objective of comparison with the results of detection around reservoir, a detection by seismic waves near the site of sinking of these wells. The presence of 3 layers within the limits of depth accessible to this detection was noted. The results indicate the presence of an impermeable or not easily permeable layer to a depth of approximately 17 m, and of a sandy alluvial aquifer layer of approximately 15 m thickness. The nature of the alluvial aquifer layer could be checked on the place using the spoil of the wells being sinking, and the geological structure makes it possible to state that it is about an appropriate place for sinking wells.

From now on, if there is the need to arrange a water supply facilities, it will be necessary to select the site and the type of water supply facilities by refining the results of this detection and by studying in a more detailed way the geological structure of the layers not very deep, through the observation of the state of the sumps dug by the farmers in dry season and samplings using an auger. The results of the synthesis of detections by simplified seismic waves are indicated in the appendixPP3.

#### (c) Agriculture

Part of the villages around Edouk practically do not have arranged infrastructures, partly because they rather appeared recently (in the Sixties) with the fixing of nomadic populations, and they practically profited only from very limited support of the government and the backers. For that in many of target villages, there is no well nor of drillings and the problem of water is raised by the populations like main significant problem. Gardening has been practised on the site for two years with a support in seeds from FAO program but since there is no technical support, the cropping is done by groping. In spite of a strong will to practise the rainfed agriculture and of dry season agriculture many farmers have only few experiments on the cropping, they pain to identify even the nature of problems to which they are confronted. The food of the populations grew rich in particular with gardening but there is the problem of flow and of transformation during year of overproduction in this case a great part rots on the place. The fall cropping combined with watering are practised but in February 2006 we saw crops being desiccated before harvest because the peasants had not

taken account of the period of the low water level. To overcome that the farmers dig sumps but those break down in a repetitive way every year. The reservoir is not only of agricultural vocation, it is also useful for the breeding. The damage due to the intrusions of the animals is numerous, among other reasons it can be quoted the insufficiency of the fence of the fields.

(d) Socio-economic situation

The reservoir of Edouk is in the commune of Kao, department of Tchir Tabaraden and it is the reservoir more in north among the four reservoirs targeted for the pilot projects. It has also the lowest rainfall of the four sites with 200 to 300 millimetres per annum. This site has more than 100 hectares of cultivated lands and the reservoir is used by the populations of 14 villages in 2006. It is thus the target reservoir which has the greatest number of benefiting villages. The majority of the populations around the reservoir are Touaregs nomads. Touaregs have their own writing characters which and which they transmitted since the old days, named characters "Tifinagh", many men and women in the target villages can use these characters. The total population of the 14 villages is of 10,137 inhabitants but the number of inhabitants per village varies from 120 to approximately 1,500 inhabitants. The most significant village, Edouk 2 is a relatively large village, among other reasons because it is connected by a lateritic road to the chief town of the commune, Kao where there is a market which is held once per week.

**(3) Guidan Bado**

(a) The reservoir

The catchment area of this water reservoir is made up partly of the hills which extend to the East from the commune of Bouza. These hills deeply eroded in valleys present a complicated topography. The upstream of the reservoir is divided into two arms and the left bank is notably eroded. From the outfall located on right bank at 200m upstream of the dam, the surplus of water flows in a kori (river bed where water runs only due to rainfall). In its upstream part, the soil of reservoir is clayey and on right bank of the reservoir we observe sandy sediments. Hills with the steep slopes overhang from 20 to 30 m left bank of the reservoir basin. On right bank, the bank rises gently and the arable lands extend progressively with the fall.

The basic data on the design of the reservoir of Guidan Bado are indicated in table 2.1(5) below:

**Table 2.1(5) Specifications of the water reservoir of Guidan Bado**

Name of the reservoir	Guidan Bado	What is the objective of the reservoir	Storage of water (small scale dam)
Department	Bouza	Catchment surface area:(km <sup>2</sup> )	2.5
Commune of	Bouza	Initial surface area of the reservoir (ha)	8.5
Central latitude of the reservoir	14' 24.673' N	Length of the reservoir (m) and hauteur:(m) Width (m)	323X7X24
Central Longitude of the reservoir	6' 3.458' E	Length of the outfall (of the exit of flooding water(m) and Charge(m)	36X0.5
Annual rainfall (mm)	300~700	Exploitable surface area in dry season (ha)	8.3
Date of construction	reservoir not completed	EC of the water in the dam (µS / cm)	450
What is the type of reservoir	Lateritic Gabions +bankment	PH of the water in the dam	7.4

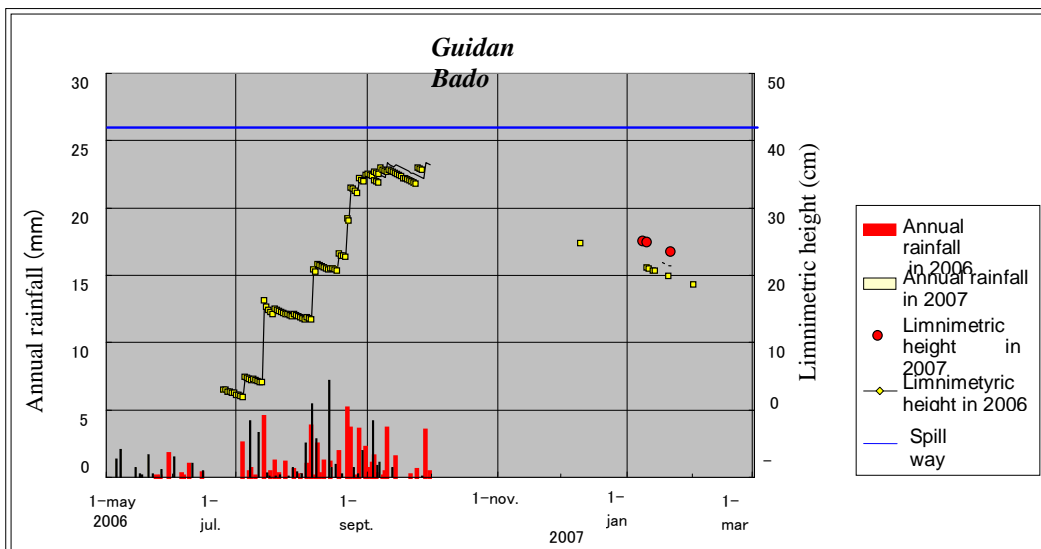
Source: Team SSOD (Study of the current conditions of small scale water reservoirs, documents provided by the regional service of installations and rural agricultural equipment of Tahoua).



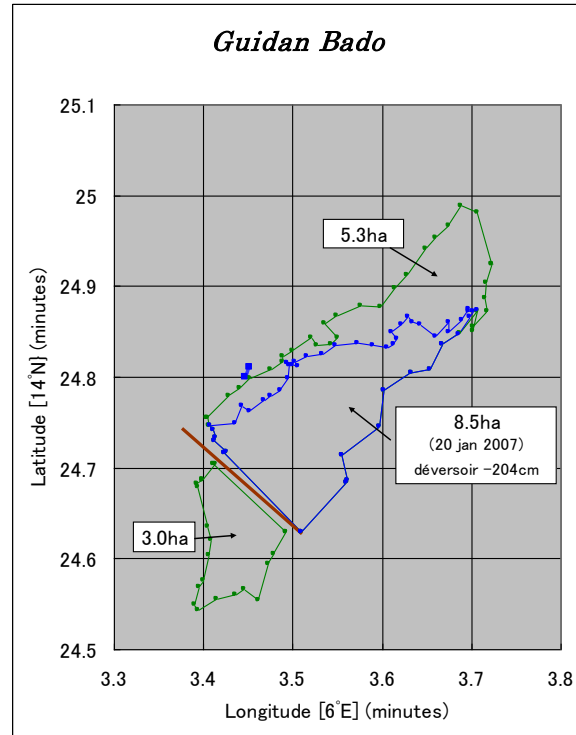
**Site of Guidan Bado**

**(b) Water resources**

Reservoir, full at the beginning of October 2006, knew a drawdown of about 1.3 cm/j. The daily rainfall and the limnimetric heights of Guidan Bado are presented in figure 2.1(5). Figure 2.1(6) presents the extent (maximum) of the water reservoir, its extent at January 20, 2007, and the approximate circumference of the downstream irrigated arable lands.



**Figure 2.1 (5) Daily rainfall and limnimetric heights (Guidan Bado)**



(Graph : Team SSOD)

**Figure 2.1(6) Surface area usable for cultivation around the reservoir (Guidan Bado)**

Here are the results of the study on salinisation:

① The water of reservoir:

Electric conductivity (EC) in the water of the reserve, which is almost equal to a point immediately to the upstream of the dyke and the point upstream of the reservoir, is of 0,41~0,42mS/cm, which is high. The water of the reservoir thus contains salt.

② Ground water downstream:

Stagnant water coming from the drain of the core of the dyke has the very high EC of 2mS/cm, and it is possible that the embankment soil used to assemble the dam contains salt with a high concentration, and that this one thus re-appears. In general, the EC drops as we move away from the dike.

③ The lixiviate

The sampling points of the soil samples on fields downstream are inside the fields of irrigated cultivation for the No 1 and 2, and in extreme cases bordering with the fields for rainfed agriculture for the No 3. The No 1 and 2 are clayey, and No 2 contained a significant quantity of water during sampling, so much so that water came out. The No 3 is a compact sandy ground; it has a value of EC to a figure of less than the two others. The three sampling areas show an ascending value according to the depth. These are the detail of the results of the study on salinization in the appendix PP2.

According to results' of simplified seismic detections by wave carried out by the present study, the reservoir of Guidan Bado is covered with a tender sandy layer of a depth from 7 to 10 meters, under which we supposes the presence of a layer of sandstone. The presence of a third layer could not be detected with depths accessible to detection by seismic waves. The propagation velocity of the waves in the second layer is not high, which makes to judge that it is about a semi permeable layer.

From now on, if it is necessary to arrange a water supply facility, it will be necessary to select the site and the type of water supply facility by refining the results of this detection and by studying in a more detailed way the geological structure of the layers not very deep, through the observation of the state of the sumps dug by the farmers in dry season and of samplings using an auger. The details of the results of detection by simplified seismic waves are presented in the appendix PP3.

(c) Agriculture

Since the construction of the reservoirs, only some peasants practised in 2005-2006 the tomato and lettuce cropping, but the number of peasants practising gardening during dry season obviously increased in 2006-2007, then in 2007-2008. The situation of the small scale dam in terms of water reservoir is good, but it is noted the problem of the salinity which can be an obstacle to the practice of certain cropping. Damage due to salinisation started to appear immediately under the dike. Moreover, there is no water intake starting from the dam, which prevents the use downstream of the stored water. Downstream, the soils in which clay and sand mix let appear stones that and there, but it is possible to arrange to obtain good exploitable surfaces. At the end of the rainy season, the level of the table downstream goes up until approximately 1 meter to the top of the soil surface. The farmers attribute the non-development of gardening to the fact that they do not have experience on the matter and that many villagers go for migration during the dry season, consequently there is no labour force. Some of them also evoked the absence of a device of water intake and the non adjustment of arable land.

(d) Socio-economic situation

The reservoir of Guidan Bado, of small scale dam type, is located in the commune of Bouza, department of Bouza. It is found to less than 5 kilometres of the chief town of the commune and the department that is the town of Bouza which houses a significant market where the purchases and sales are done. Rainfall, with 300 to 700 millimetres per annum is highest among the four sites. The villages' users of the reservoir are those of Guidan Bado and Abaza Talabé in addition to Bouza. The population of Guidan Bado is very significant with 5,000 inhabitants and that of Abaza talabe is of 1,117 inhabitants. In dry season, many men go in migration, in particular in Nigeria and Cameroon.

**(4) Jaja**

(a) The reservoir

Small reservoir enclosed on the two sides by hills of a relative height of approximately 20m. The topography of the upstream located contrary to the dam is that of a flat and low plateau, but a watershed closes the catchment's area. There is no arable land in the vicinity which could use the water of the reservoir. Even though first of all classified threshold of spreading; it is a small scale dam from its function. The basic data on the design of the reservoir of Jaja are presented in table 2.1(6) below:

**Table 2.1(6) Specifications of the water reservoir of Jaja**

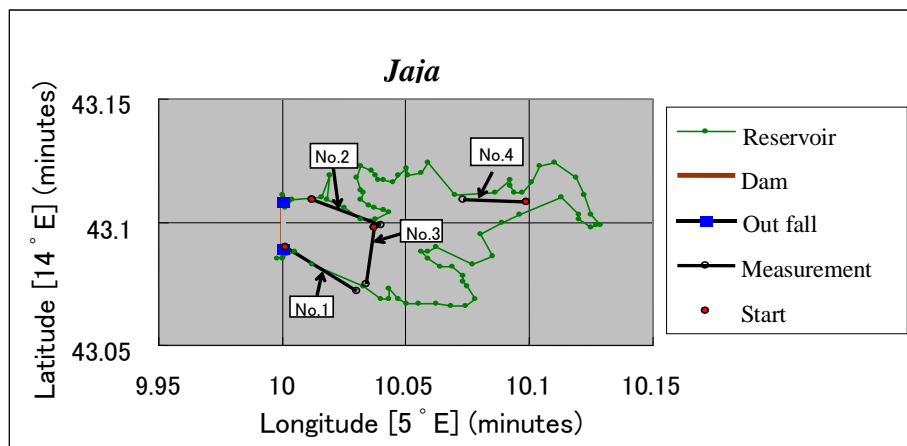
Name of the reservoir	Jaja	What is the objective of the reservoir	Storage of water (Small scale dam)
Department	Tahoua	Catchment Surface area:(km <sup>2</sup> )	2
Commune of	Bambèye	Initial reservoir surface area (ha)	2
Central latitude of the reservoir	14' 43.098' N	Length of the reservoir (m) and hauteur:(m) Width (m)	82X2X6
Central Longitude of the reservoir	5' 10.000' E	Length of the outfall (of the exit of flooding water (m) and Charge(m)	40X0.2
Annual rainfall (mm)	200-400	Exploitable surface area in dry season (ha)	0
Date of construction	2001	EC of the water in the dam (µS / cm)	80
What is the type of reservoir	Cyclopean concrete	PH of the water in the dam	8.1

Source: Team SSOD (Study of the current conditions of small size water reservoirs , documents provided by the regional service of installations and rural agricultural equipment of Tahoua).



**Site of Jaja**

In January 2008, within the framework of the transfer of techniques of detection by seismic waves, a detection was carried out on four measurement lines on the site of Jaja. The analysis of the data of the measurements taken on the lines no 1 and 3 make to suppose that the surface layer near the dam is made up of tender sediments on a depth from 1 to 2 meters, and that the sub-soil is a sedimentary layer a little thicker. The curves of arrival of the waves on lines No 1 and 2 present discontinuities, which makes to think that more tender sedimentary layers, inducing a propagation velocity of the slower seismic waves, are overlapping in the second layer. The measurement line No 4 a little bit upstream made it possible to judge that the higher limit of the third layer was at a depth of approximately 10 meters. Figure 2.1(7) presents the site of the measurement lines

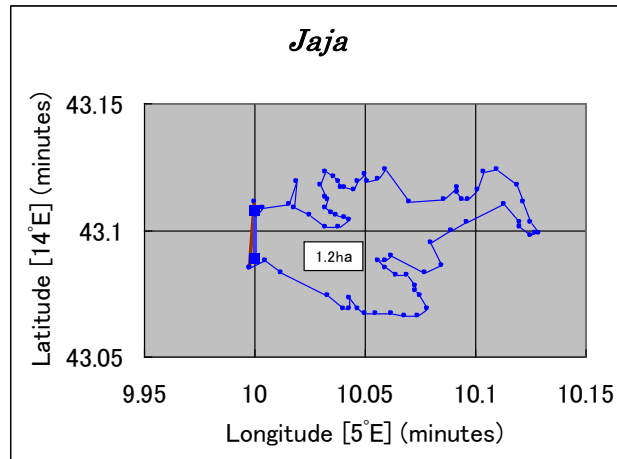


Source : team SSOD

**Figure 2.1(7) Surface area occupied by fall cropping around the reservoir (Jaja)**

(b) Water resources

Constructed for watering animals, water in the reservoir is also consumed by the inhabitants. According to villagers, the last rain fell at the end of September and the reservoir was dried end of November/beginning of December. Figure 2.1(8) indicates the flooded surface area (of high quantity water) of the reservoir.



(Graph: Team SSOD)

**Figure 2.1(8) Level of high quantity water (Jaja)**

(c) Agriculture

In the surroundings of the reservoir, there are no arable lands allowing the use of the water from the reservoir.

(d) Socio-economic situation

The reservoir of Jaja is located in the commune of Bambeye, department of Tahoua. This reservoir was constructed not for agriculture but for live stock rising, it is of small size and according to populations', it is emptied of its water two months after the end of the rains in September. While there is water, the dependence of the populations in terms of daily consumption water (drinking water and for other domestic uses) is high. Soils around the reservoir are in some places sandy, but the presence of stones makes the use of these soils for agricultural ends not envisaged. These last years knew a significant reduction in the millet yields, due to decrease in rainfall and soil fertility. The village of Jaja and some hamlets use the reservoir. This village has a population of 975 inhabitants mainly Haoussa. Before it was a target site of German project PDRT and the populations have experience of the autonomous activities of natural resources management.

**(5) Socio economy**

The main data on the socio-economic situation of the sites of reservoirs are gathered in table 2.1(7):

**Table 2.1(7) Socio-economic situation of targeted reservoirs**

Name of the site of water reservoir		Bourdi 1	Edouk	Guidan Bado	Jaja
Categories		Category 2	Category 2	Category 1	Category 3
Type of water reservoir		Threshold of spreading	Threshold of spreading	Small scale dam	Threshold of spreading
Year of construction		2004	2004	In construction since 2001	2001
Name of the department		Illéla	Thintabaraden	Bouza	Tahoua
Annual rainfalls		400 mm/ annum	300 mm/ annum	400 mm/ annum	300 mm/ annum
Distance from Tahoua, chief town of the region		74km	133km	139km	25km
Name of the nearest market		Roukouzoum	Edouk II	Bouza	Bombaye
Distance from the nearest market		3km	3km	4km	12km
Access by truck in dry season		Possible	possible	Possible	Possible
Total numbers of nearby villages		3 villages	14 villages	4 villages	5 villages
Number of villages benefiting of agriculture		3 villages	14 villages	4 villages	0
Name of the prevalent benefiting village		Bourdi	Edouk II	Guidan Bado	Jaja
Cultivable surface area		80ha	120ha	13ha	0
Cropping surface area		80ha	120ha	25ha	0
Total number of farmers	July 2006	270 per.	500 per.	149 per.	0
	Of which women	95 per.	101 per.	30 per.	0
Surface area cultivated per farmer		0.3ha/per.	0.2ha/per.	0.2ha/per.	0
Number of visits of the basic extension agents		6 visit/year	1 visits/year	3 visits/year	0
Organization of the water reservoir users		Non-existent	Existing	Existing	Non-existent
Organizations of the water reservoir users (In December 2006)	Existence	Yes (only the village of Bourdi Liman)	Yes	Yes	No
	Number of members	7 (As that concerns only the village of Bourdi Liman, the number is very low.)	345(Number is lower than the users)	300 (massive Increase compared to July 2006)	-
	Year of creation	2006	2004	2003	-
	Objective	Development of agriculture	Development of the dry season agriculture	Development of the dry season agriculture	-
	Rules of procedure	No	No	No	-
	Contribution	50 FCFA per annum	Not	Not	-
	Contents of the activities	Agricultural production of rain and dry season and sale of Fattened animal	Provisioning agricultural inputs Agricultural Production and sale	Provisioning of agricultural inputs	-
Problems related to the valorization of reservoir	Various information	lacking	lacking	lacking	-
	Basic Agricultural techniques	lacking	Very insufficient	lacking	-
	Arable lands	Insufficient	-	-	Non-existent
	Damage due to the cattle	-	yes	yes	-
	Insufficient agricultural Intransit	-	yes	-	-
	Duration of water storage	5.5 months	10 months	12 months	6 months
	Physical characters			The dam is not yet entirely embanked. The outfall is located low than the dam, but the flood ridges on an obstacle downstream and the outfall is not sufficiently function. In the event of flood it is to be feared that the dam does not break	Water leakage starting from the dam. But it is not a problem which can carry damage on the security of the dam

Source: worked out by the mission of study

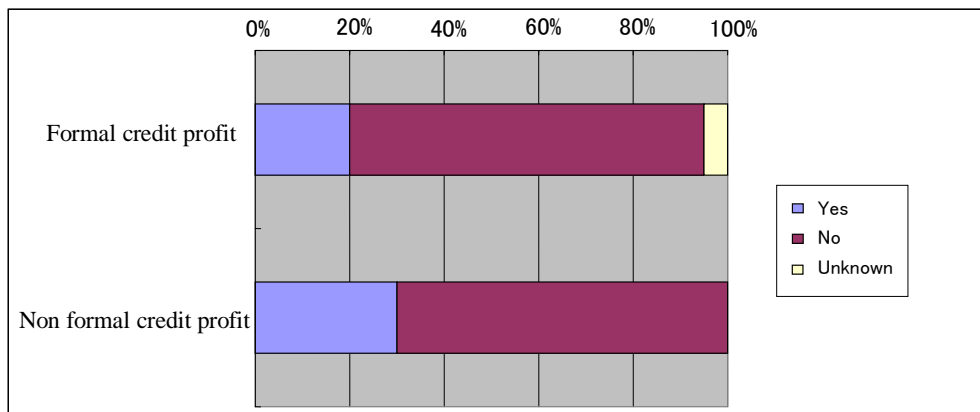
Here which are the characteristics of the sites of works of socio-economic matter water reserve, field by field:



(a) Level of the income of the inhabitants

1) Situation of access to the credit

4 villages out of 20 answered that they have the possibility of access to a informal institution of credit. The distance between the village and the institution is 20 to 40 km; the interest of refunding is of 1 to 2 % per month. There are 6 villages which have access to the system of informal credit such as the tontine. The interest of refunding is high 10% per month. But accessibility is high insofar as it is between the close relations that they grant loans. The system of tontine is supported by Care International in the departments of Illéla and Bouza. For that, the surrounding villages of Bourdi and Guidan Bado know this system relatively better. There is no village which has a system of tontine sacking without interest.

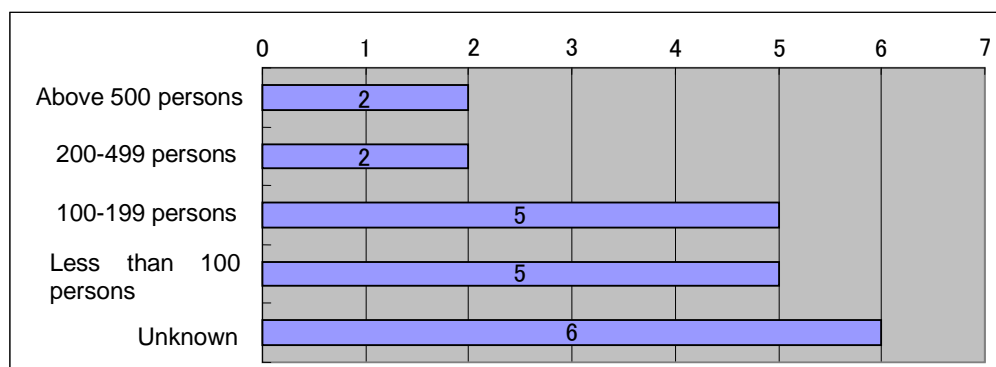


Source : Basic study october 2006

**Figure 2.1(9) Accesses to formal and informal credit**

2) Situation of the IGA (Income Generating Activities)

19 out of 20 target villages answered that the inhabitants carry out some Income Generating Activities. The number of people practising the income generating activities is 2,659, of which 55 % (1,463) women (given based on the answers obtained in 14 villages) the distribution is presented in figure 2.1(10) below. There are on average 189 persons per village (average of the 14 villages) practising these IGA. The average population of the 20 target villages being of 2014 inhabitants, the IGA are practised by 9% of the villagers on average. It is supposed that there are still many villagers who do not practise the IGA, and it is necessary to promote new IGA.



Source : Basic study october 2006

Unit : Village

**Figure 2.1(10) Number of practitioners of IGA**

The type of IGA most practised is the small trade:14 villages. The fattening is in the second place that is 12 villages.4 villages carry out IGA of gardening, Craft industry and Sale of jewels. Apart from that, there are villages which carry out IGA specific to the zones such as the make up of traditional bed or the sale of jewels.



Source : Basic study october 2006

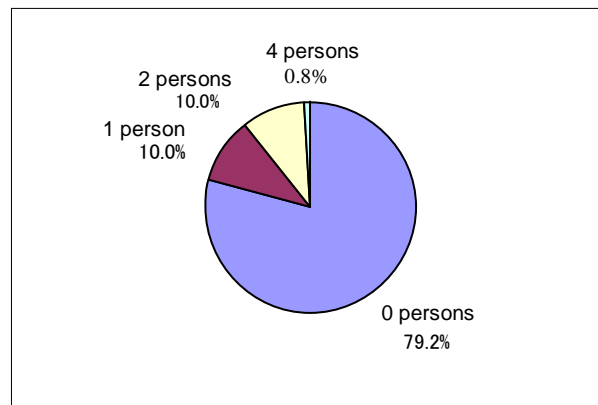
Unit : Village

**Figure 2.1(11) Type of IGA carried out in the 20 target villages of the study**

(b) Situation of the opulation life conditions

1) Literacy

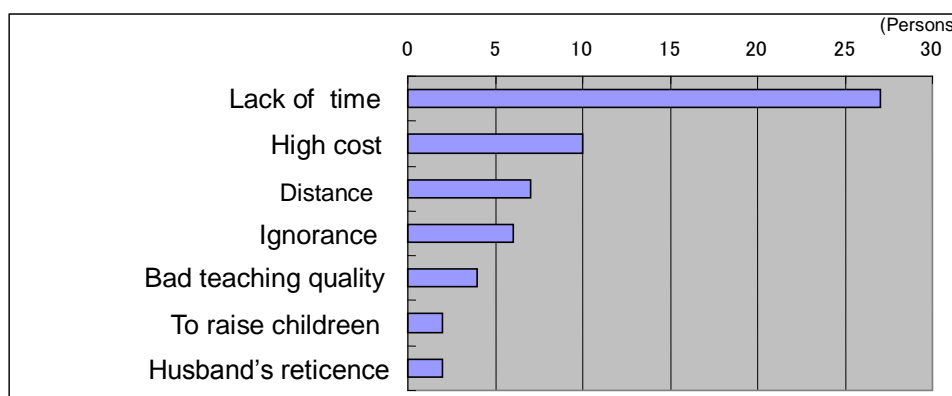
On 120 households of the target villages, the households which do not comprise any person that can read and write are many in number (95), followed by 12 households with 1 person knowing to read and write and 12 households with 2 persons knowing to read and write. It is seen that the number of persons that know how to read and to write in the target villages is very limited.



Source :Basic study october 2006

**Figure 2.1(12) Number of persons that know how to read and write in the households**

The main reasons for which the questioned persons (questionnaire with several possible answers) do not attend the courses of literacy are for the majority of persons (27) the lack of time, then the high cost (10), the distance (7).



Source : Basic study october 2006

**Figure 2.1(13) Factors unfavourable for literacy in households**

There were 11 villages out of the 20 target villages which had already held some literacy sessions in the past, and it was thus clear that 9 villages had never practised the literacy.

All the villages close to the four (4) reservoirs covered by the study profited from training on literacy. The villages of the study area having profited very recently from the literacy centers are presented in table 2.1(8) below:

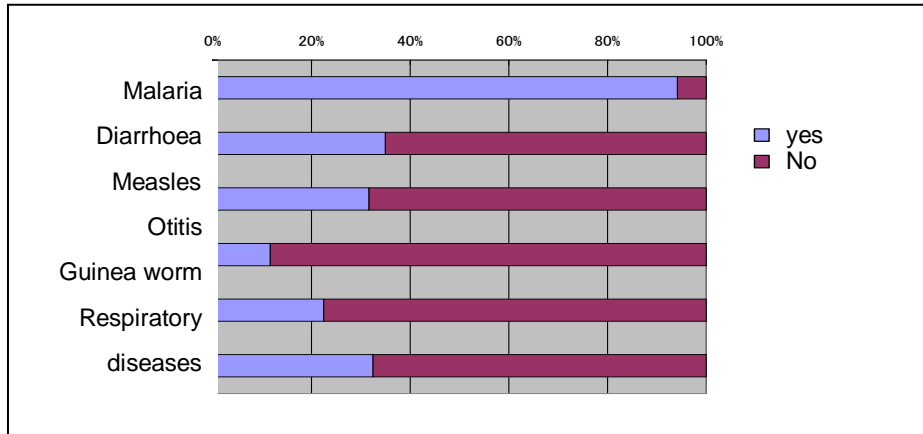
**Table 2.1(8) Villages benefiting from the literacy centers from 2004 to 2006**

Village	Number of centers and Year			Contribution of the inhabitants	Source of financing
	2006	2005	2004		
Edouk 1	1	1	1	Construction of the hangar, accommodation and support of instructor, mobilization to the listeners	NGO TANAT Work PROSOPAS, UNICEF
Edouk 2	1			500FCFA per listener	Not determined
Imboragane	1	1	1	Construction of hangar, accommodation and support to instructor	SIL Niger
Innaghourhour	1			Construction of the hangar, accommodation and support to instructor	NGO TANAT Work
Bourdi Liman	2		2	Construction hangar, accommodation and support to instructor	NGO CARE, IFAD, NGO GED GAO
Tagalate		1		Construction of hangar, accommodation and support to instructor	NGO TANAT Work
Takadjit		1	1	Construction of the hangar	SIL Niger
Roukouzoum		2	2	Construction of hangar, accommodation and support to instructor, chalk, oil	Not determined
Dindi			1	Nothing	Not determined
Guidan bado			1	Construction of centers made up of earth	Not determined
Jaja		2		Nothing	ALAFIA, PDRT
Total	6	8	9		

The rate of frequentation in the villages where the literacy sessions were held was 100 % in the most assiduous villages, but there were also several villages in which the participation was only of 10 %. The tendency to a weak participation is particularly pronounced with men. The contributions of the recipients were generally instituted for the construction of the room, this in 8 of the 11 villages, and there were 6 villages which instituted a contribution to the fees of the instructor, and 4 villages which provided the accommodation.

2) The situation of the hygiene of the population

In reply to the investigation on the most frequent diseases in the houses near 120 persons, 113 persons evoked malaria. The diarrhoea was quoted 42 times, the respiratory diseases 39 times, measles 38 times.

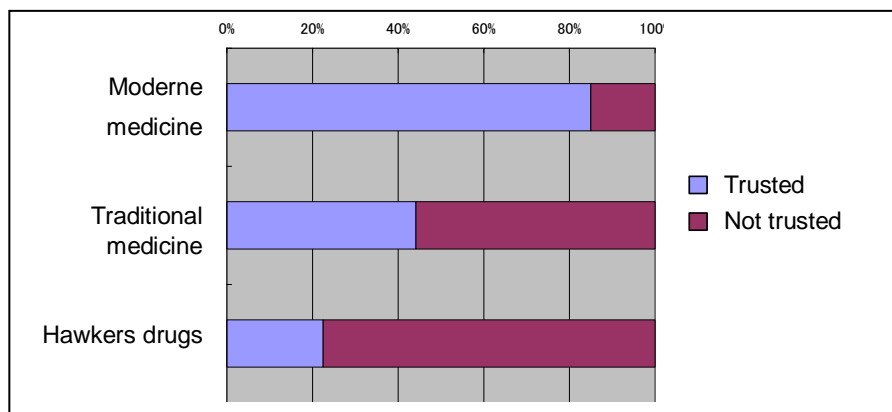


Source: Results of the study on the collection of basic data (October 2006)

**Figure 2.1(14) Most frequent diseases in the houses (investigation near 120 houses)**

The reaction to these diseases consists for 102 persons investigated out of the 120 house to go to a center of modern care. There a health center in the villages of Guidan Bado, Dindi, Edouk 2 and Abaza Talabe. One health center is how ever being constructed in Takadjit.

The reason called upon for the recourse to the modern care is the quality of the care. However, 18 persons indicate not to use at all these centers of modern care for the reasons that "the center of care is moved away", that they "are not used to" or that "the care cost is high". 53 persons use the traditional medicine and it is clear that a number of villagers alternatively have recourse to the traditional medicine and modern medicine for well differentiated uses. It was highlighted that 27 persons used the drugs sold by the hawkers, whose quality is doubtful (exceeded validity date, problem of conservation, etc.)

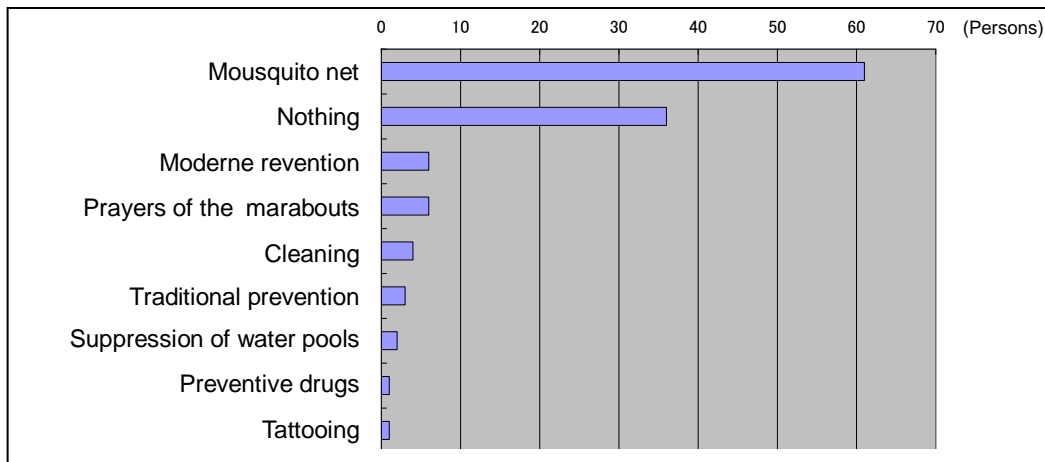


Source: Results of the study of the basic data collection (october 2006)

**Figure 2.1(15) Structures of health care used by families (Investigation near 120 households)**

61 persons out of 113 stated to use the mosquito nets for the prevention of malaria, but 36 persons say not to take any prevention measure. There were also some persons, even if they are in minority, which have advanced that the prayers (6 persons) or tattooing (1 person) of the marabouts have

prevented malaria.



Source: results of the study of the basic data collection (October 2006)

**Figure 2.1(16) Malaria prevention mode**

Only 15 questioned persons out of 120 indicate to take diarrhoea prevention measures. In terms of concrete prevention measures, there are only 3 persons who evoke the filtering of water and 2 persons who answer to do what is necessary for drinking of clean water.

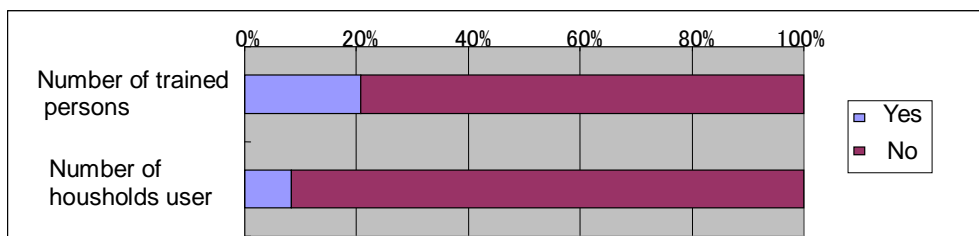
14 households out of the 120 have latrines on their premises. Only one household speaks about common latrines, and the majority of the villagers have recourse to the bush, out of the sight of human, the night.

86 persons out of 120 feel that their village is dirty, but only 25 persons indicated the existence of a Community system of collection of the refuse. We can think that this context as regards hygiene is a factor of propagation of malaria and diarrhoea.

### 3) The report of women’s work

On the whole concerned villages, six (6) only profited from a training on the improved hearth cooking stoves. The number of persons having received the training and the number of households using the improved hearth cooking stoves are presented in figure 2.1 (17) below:

Generally it should be noted that the trainings in this field are not followed of application. The majority of the target villages of the study were not concerned by the trainings on the construction of the improved hearth cooking stoves leading to the weaker use of improved earth cooking stoves in the villages. It results from this situation a weak awakening of the populations on the advantages of the improved hearth cooking stoves.

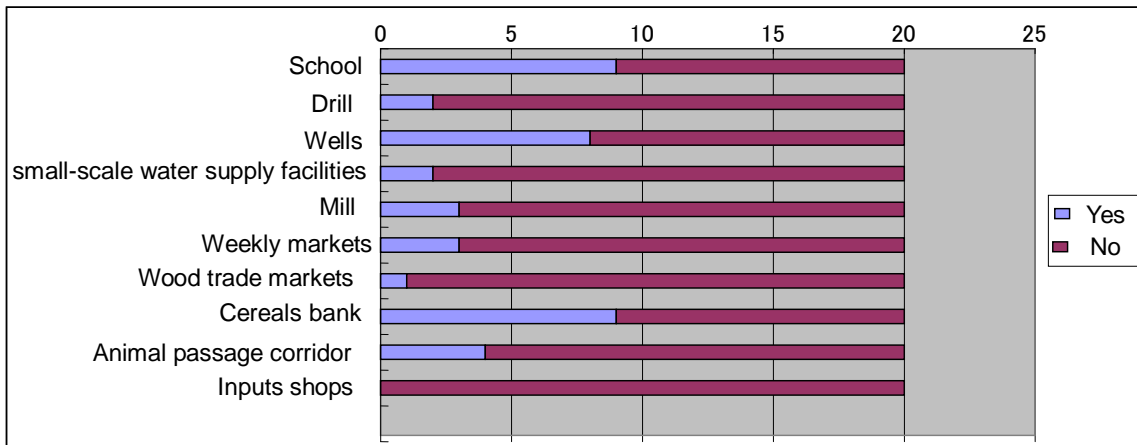


Source : Basic study october 2006

**Figure 2.1(17) Number of trained persons per village and users of improved cooking stoves**

4) Situation of socio-economic infrastructures

In the 20 target villages of the basic Study, the situation of the infrastructures is as follows. The Cereal Banks and the Schools are comparatively numerous. But in general, the access to the socio-economic infrastructures is not on a satisfactory level. There are 9 villages which answered to have neither well, neither drilling, nor small scale water facility. 3 villages (Bourdi, Dindi and Roukouzoum) answered that there are mills in their villages. In fact the villages have populations relatively numerous. A weekly market exists in the villages of Bourdi, Roukouzoum and Edouk II. A corridor for animal passage exists in 3 villages out of the 20 villages. There is no village which is provided with agricultural inputs shop.



Source : Basic study october 2006

Unit : Village

**Figure 2.1(18) Level of access to socioeconomic infrastructures**

(6) Problems of development of the main benefit villages of the water reservoirs

Here are the problems mentioned by the populations in the main benefit villages of the reservoirs object of the pilot projects:

**Table 2.1(9) Outline of the prevalent benefit villages in the agricultural use of the 4 water reservoirs objects of the pilot projects**

Prevalent benefit villages		Bourdi I	Edouk II	Guidan Bado	Jaja	
Problems of development	(Men)	No.1	Lack of water	Lack of water	Measurements against unemployment necessary	Lack of water
		No.2	No health center	Damage caused to crops in the fields	System of credit	No health center
		No.3	Need literacy	Lack of drugs	Roads necessary	Lack of food
		No.4	Lack of food	Lack support from the administration	Insufficient school facilities	Insufficient school facilities
		No.5	Roads necessary	Insufficient school facilities	Need literacy	Need literacy
	(Women)	No.1	Lack of water	Lack of drinking water	No mill	Lack of water
		No.2	Lack of food	Income generating activities required.	System of credit necessary	Insufficient school facilities
		No.3	No mill	No mill	Income generating activities required.	No maternity
		No.4	Defective system of credit	No maternity	Education for the girls necessary	No mill
		No.5	Literacy needed.	FM radio station required for the sharing of information .	Electrification of the village required	System of credit necessary

## 2.2 Selected villages and the process of their selection

### 2.2.1 Process of selection of the target villages

The villages object of the pilot projects being the villages which profit from the targeted water reservoirs, they are automatically given as soon as the water reservoirs are selected. Thus the villages which surround the 4 target reservoirs are found in the following table:

**Table 2.2(1) Villages object of the pilot projects**

Reservoir	Guidan Bado	Edouk	Bourdi I	Jaja	Remarks
Category	Category 1	Category 2	Category 2	Category 3	
Structure	Small scale dam	Threshold of spreading	Threshold of spreading	Threshold of spreading	
Department	Bouza	Tchintabaraden	Illela	Tahoua	
Commune	Bouza	Kaou	Badaguichiri	Bambaye	
Main benefit village	Guidan Bado	Edouk II	Bourdi Liman	Jaja	
Other benefit villages	Abaza Talabe	Edouk I Intarakamat Takadjit Intabadjangart Inaaghourchour Adjangarow Damayo Tcintezmey Eress Innalado Tagalate Chiligatane Iboragane	Dindi Roukouzoum		
Total number of villages around the reservoir	2	14	3	1	Total 20

Source: worked out by the mission of study

### 2.2.2 Villages

#### (1) Main data on the concerned villages

The main data on the benefit villages of the reservoirs object of the pilot projects are presented in table 2.2(2) below:

**Table 2.2(2) Main data on the benefit villages of the reservoirs object of the pilot projects**

Villages benefiting of the reservoir	Population	Main decision makers	Number of existing village organisations	Literacy course already carried on	Primary schools	Wells	Swamps	Simplified irrigation equipment	Mill	Weekly held market	Cereals bank	Corridor for animal passage	First crops	Second crops	Third crops	Problems of soils degradation	Land property problems	Access to public credit facilities	Access to non formal credit facilities
Site of Guidan Bado (Category 1)																			
Guidan Bado	5000	Chief of village, elders	10	✓	✓	-	-	✓	-	-	-	✓	Onion	Cabbage	Cowpea	-	-	-	✓
Abaza Talabe	1117	Chief of village	2	✓	✓	-	✓	-	-	-	✓	-	Cabbage	-	-	-	-	-	-
Site of Bourdi I (Category 2)																			
Bourdi Liman	3015	Chief of village, elders, religious leaders	7	✓	✓	-	✓	-	✓	-	-	✓	Onion	Tomatoes	Sweat pepper	✓	-	-	✓
Dindi	4329	Chief of village, elders, religious leaders	7	✓	✓	✓	✓	-	✓	✓	✓	✓	Onion	Tomatoes	Pigeon pea	-	✓	-	✓
Roukouzoum	8045	Chief of village, elders, religious leaders	11	✓	✓	✓	-	✓	✓	✓	✓	-	Onion	Tomatoes	Pigeon pea	-	-	-	-
Site of Edouk (Category 2)																			
Edouk 1	637	Chief of village	8	✓	✓	-	✓	-	-	-	✓	-	Cowpea	Tomatoes	Cabbage	✓	-	-	-
Edouk 2	1543	Chief of village, elders	5	✓	✓	-	✓	-	-	✓	✓	-	Onion	Cowea	Tomatoes	-	-	✓	-
Adjangarow	700	Chief of village, elders	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chiligitane	300	Village assembly	2	-	-	-	-	-	-	-	✓	-	Cowpea	Tomatoes	Cabbage	✓	-	-	-
Damayo	370	Chief of village, elders	1	-	-	-	✓	-	-	-	-	-	Tomatoes	Cabbage	Onion	-	-	-	-
Eress	400	Village assembly	2	-	-	-	-	-	-	-	-	-	-	-	-	✓	-	-	-
Iboragane	700	Village assembly	0	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inaaghourhour	750	Village assembly	0	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Innabado	1100	Chief of village, elders	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intabadjangart	500	Village assembly	1	-	-	-	✓	-	-	-	✓	-	Tomatoes	Potatoe	-	✓	-	-	-
Intaracmat	117	Chief of village, elders	0	-	-	-	-	-	-	-	-	✓	-	-	-	-	-	-	-
Tagalate	1070	Chief of village, elders	1	✓	-	-	-	-	-	-	✓	-	Cowpea	Tomatoes	Cabbage	-	-	✓	-
Takadjit	850	Chief of village, elders	2	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	✓	-
Tchintzmev	1100	Village assembly	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Site of Jaja (Category 3)																			
Jaja	975	Chief of village, elders, religious leaders	3	✓	✓	-	✓	-	-	-	✓	-	-	-	-	-	-	-	✓

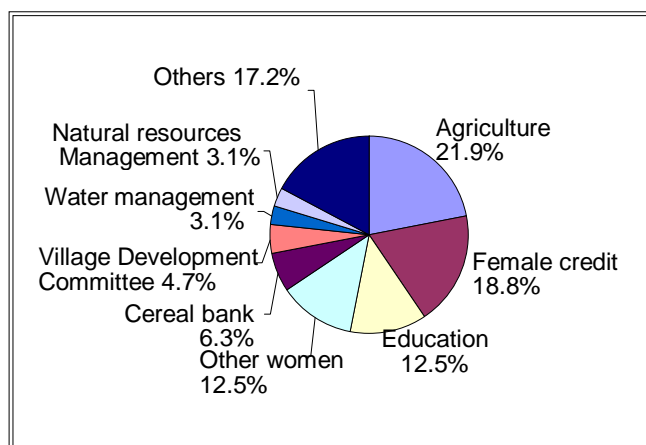


## (2) Situation of the organization and activity

(a) Situation of existence of the village organizations such as the Village Committee of Development

On all the 20 concerned villages there are only 3 villages that is 15.0% (Bourdi Liman, Dindi and Roukouzoum) which only set up a village development committee (VDC) and which treats all the situations in the village. These VDC were set up from 2005 to 2006 at the beginning of the support for the cereal banks by the project Fund Italy/CILSS. 15 villages have rural organizations. There are 5 villages around Edouk which do not have organization.

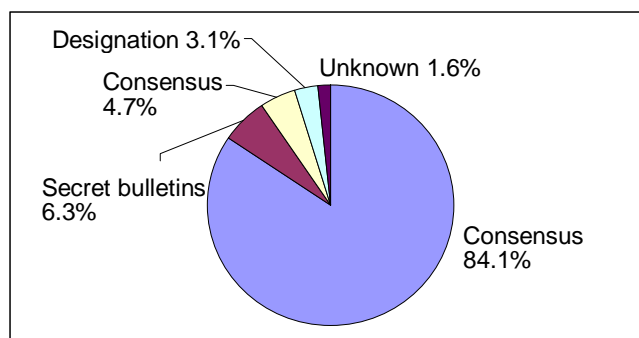
It was counted a total of 64 organizations in the 20 villages. The average number of organizations per village is of 3.2. The village which has the numerous organizations is Roukouzoum: 11 organizations in total. The numerous organizations are those which are related to agriculture and account for 22.2% of the total (14 organizations). They are organizations that practise gardening especially. The category which follows is that of the organizations of credit for the women which represents 19.0% (12 organizations). Joining them to other targeted organizations of women, we obtain a significant percentage which represents the one third of the total. There are then the organizations in connection with education, in particular the Schools Management Committees (SMC). There are also among the minor organizations an association of soil management (natural resources), an association of blacksmiths, an association of marabouts, a committee of health and a dam management committee, an association of young people.



Source : Basic study october 2006

**Figure 2.2(1) Category of organizations existing in the 20 villages' targets of the Basic Study.**

3,551 persons are members of these organisation of witch 54.6% are women. Concerning the method of selection of the executive members 4.1%(53 organizations) select the executive members by consensus. That means that the democracy within these organizations is not anchored in the target villages. There are 4 organizations (6.3%) which chose the executive members by secret bulletin. Among these 4, there are 3 SMC whose support is made within the framework of the Project School for All and 1 VDC. After their installation, 38 organizations (59.4%) worked out some rules of procedure and were approved.



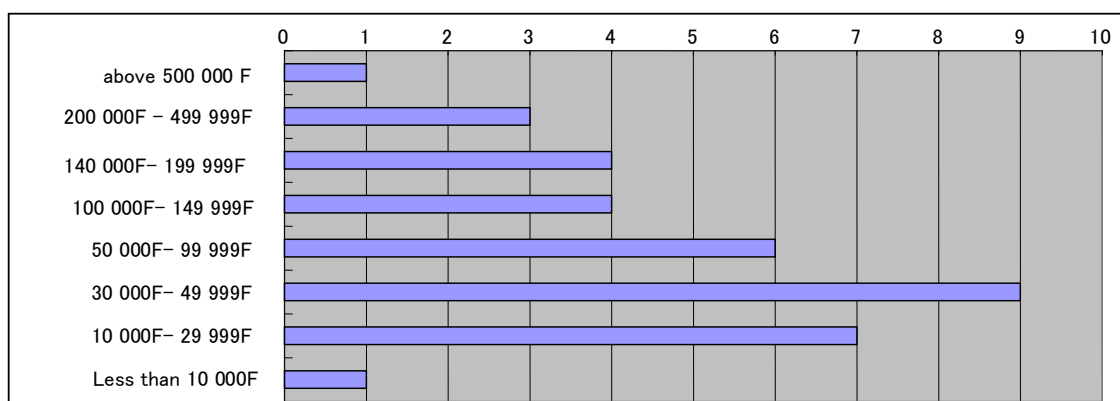
Source : Basic study october 2006

**Figure 2.2(2) Mode of selection of executive members of rural organisations**

(b) Situation of the activities.

1) Contribution

To know if the organization functions or not, the collection and the level of the contributions can be a significant index. However, among the 64 organizations, 39 organizations (61.9% of the total) collect contributions. The average amount of the annual contributions of the 39 organizations which have contributions is 98,832 CFA. The female groupings are 10 in number and the organizations relating to agriculture are 9 in number. Comparing the amount of the annual contributions, it is the organizations that have annual contributions of 30,000 CFA to 40,000 CFA which are most numerous. In fact the female groupings of Guidan Bado that have more contributions: 720,000 CFA. The organizations which hold of the case registering books to manage these funds are 42 (66.6%).



Source : Basic study october 2006

Unit : organization

**Figure 2.2(3) Amounts of annual contributions**

2) Holding of meetings

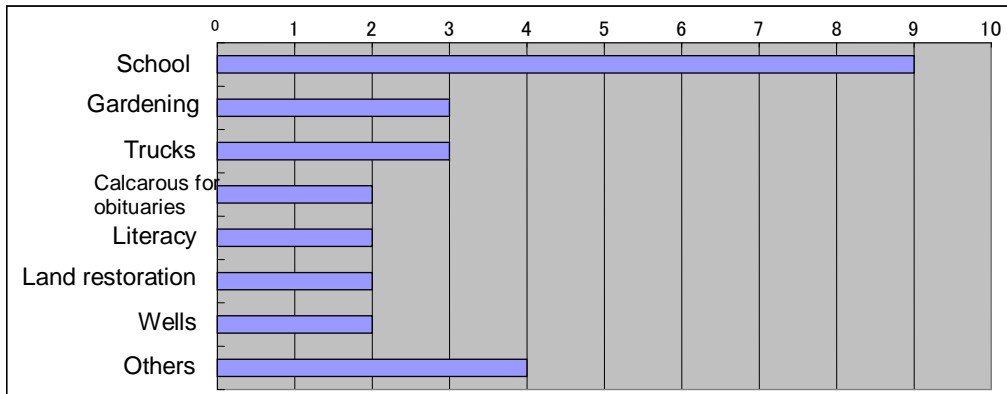
The numbers of organizations which hold the general assemblies during which all members join together to exchange is 51 out of 64. The organizations for which the executive members hold of the meetings are 44 in number of which 44.4 % draw up the proceeding minutes (P.M) during these meetings.

3) Realization and planning of village activities by the villagers.

There are 16 out of 20 villages which already carried out village activities undertaken by the villagers and 100 % by the village. 12 villages carried out village activities during the years 2005 and 2006. The listed collective activities are 27. That means that the 12 villages make on average 1.1 activities per year. If the fields of the activities are analyzed, it is the activities related to the

school that are most numerous, that is 9 villages, followed by the gardening activities (3 villages) and maintenance of the tracks (3 villages).

Nevertheless, the planning of schools put aside, much of these activities do not form part of a plan, and none of the 3 existing village development committees had worked out of plan. 30.2% of the 64 village organizations had worked out a plan, which is very low. It can be seen by there that the practice of establishing plans for the realization of activities is not taken.

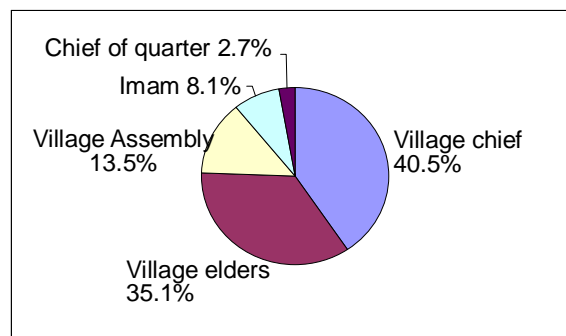


Source : Basic study october 2006

Unit : Village

**Figure 2.2(4) Fields of the activities 100% carried out with the village's own resources**

- 4) The perception of the populations on the collective management of the village by the inhabitants. To understand the perception of the populations on the collective activities of the village, the question "Which makes the decisions in village for all the questions which engage the village?" was asked and most answers are "the head of the village" that is 40.5% of the answers (15 villages). Also 35.1% (13 villages) answered "Elders". That shows that the management of the village is not made only by some of the people. On the other hand there are 5 villages (15.3%) which quoted "village assembly". These are all the touaregs villages around the dam of Edouk.



Source : Basic study october 2006

**Figure 2.2(5) Decision making on village level**

## Chapter 3 : Results of the Monitoring of PP

At the beginning of the study the orientation is based on the valorization of the reservoirs and the activities of rural development carried out in the villages benefiting of the reservoir. But, during the execution of the pilot projects, the orientation was changed to be centered on the valorization of the reservoirs for the reason of limitation in budget and precocity effectiveness of activities .The monitoring sheets were recorded the process, without eliminating the past assessment.

**Table 3.1(1) List of the monitoring sheets**

Projects		Activities	Sites	No.table	page
Project of reinforcement of the means of work of the basic extension agents		Equipment in motor bikes, necessary fuel, regular maintenance of the motor bikes.	Tahoua region	Table 3.1(2)	3-7
Project of reinforcement of the capacities of the basic extension agents		Participation in the various trainings ( village and reservoirs levels)	Tahoua region	Table 3.1(3)	3-10
Project of installation of a system of capitalization and share information.		Equipment of the basic extension agents with of guides. Holding of the monthly meetings of follow-up and those of the consultative committee.	Tahoua region	Table 3.1(4)	3-13
Project of support to the installation of the reservoir users organization		Support to the set up of reservoir users organization	4 reservoir sites	Table 3.1(5)	3-21
Project of support for the reinforcement of the capacities of the executive member of the cooperative of reservoir users		Support in Planning for Valuing reservoirs	4 reservoir sites	Table 3.1(6)	3-27
Project of reinforcement of the capacities in maintenance of the reservoir		Support in reinforcing reservoir maintenance capacities	4 reservoir sites	Table 3.1(7)	3-32
Project of support for the organization of the populations		Support with the installation of a village organization (VDC)	the 22 villages (20 benefiting villages + 2 other villages)	Table 3.1(8)	3-36
Project of support for the reinforcement of the capacities of the executive member of the organizations		Support to Planning for the Development of the villages	the 22 villages (20 benefiting villages + 2 other villages)	Table 3.1(9)	3-41
Project of improvement of the agricultural techniques	1. basic notions on the crops, plant health prevention	Training on the basic concepts for the crops and the protection measures against the harmful insects.	4 sites of the reservoirs	Table 3.1(10)	3-49
	2.Introduction of ecofarm	Training on the agricultural techniques aiming at the economy of water	Guidan Bado, Bourdi I, Edouk	Table 3.1(11)	3-52
	3.Introduction of improved varieties	Demonstrations of the crop with the improved varieties of millet and sorghum.	4 sites of the reservoirs	Table 3.1(12)	3-55
Project of improvement of the agricultural management techniques		Training on the methods of grouped purchase of the inputs and their use, the methods of self production of the seeds, conservation and adjustment of shipments, the management of the risks, the accumulation and the capitalization of information on the prices.	4 sites of the reservoirs	Table 3.1(13)	3-58

Project of experimentation of the introduction of rice NERICA	Introduction of rice growing with varieties NERICA.	Bourdi I, Edouk	Table 3.1(14)	3-64
Project of introduction of fish farming	Introduction of pisciculture.	Guidan Bado	Table 3.1(15)	3-72
Project of reinforcement of the capacities in maintenance of the irrigation equipments	Introduction of the techniques of construction of the concrete wells. Demonstrations on the system of pumping out with animal trained equipment.	Guidan Bado, Bourdi I, Edouk	Table 3.1(16)	3-77
Project of conservation of the arable lands	Training in agroforestry, and protection techniques and soil conservation. Equipping with necessary materials	4 sites of the reservoirs	Table 3.1(17)	3-82
Project of prevention of the damages caused by the animals	Materialization of the passage corridors and the grazing land.	4 sites of the reservoirs	Table 3.1(18)	3-85
Project of support to the incomes generating activities	Training on management and marketing	4 sites of the reservoirs	Table 3.1(19)	3-90
Project of reinforcement of the capacities in reading and writing	Training of literacy instructors, training of the populations of the villages benefiting of the reservoirs in literacy.	4 sites of the reservoirs	Table 3.1(20)	3-94
Project of reinforcement of knowledge in terms of health and hygiene	Training of the users of the reservoirs on certain concepts of health and hygiene (malaria, diarrhoea...) related to water	4 sites of the reservoirs	Table 3.1(21)	3-97
Project of introduction of the improved cooking stoves	Training of the users of the reservoirs on the manufacture of the improved cooking stoves	4 sites of the reservoirs	Table 3.1(22)	3-101
Project of introduction of a system saving and turning credit ( tontine )	Support to the introduction of micro finance	22 villages (20 benefiting villages + 2 other villages)	Table 3.1(23)	3-104

Figures 3.1.(1) to Figure 3.1.(4) presents the special distribution of activities per site.

# Bourdi I (Weir) : activities SSOD 2007-2008

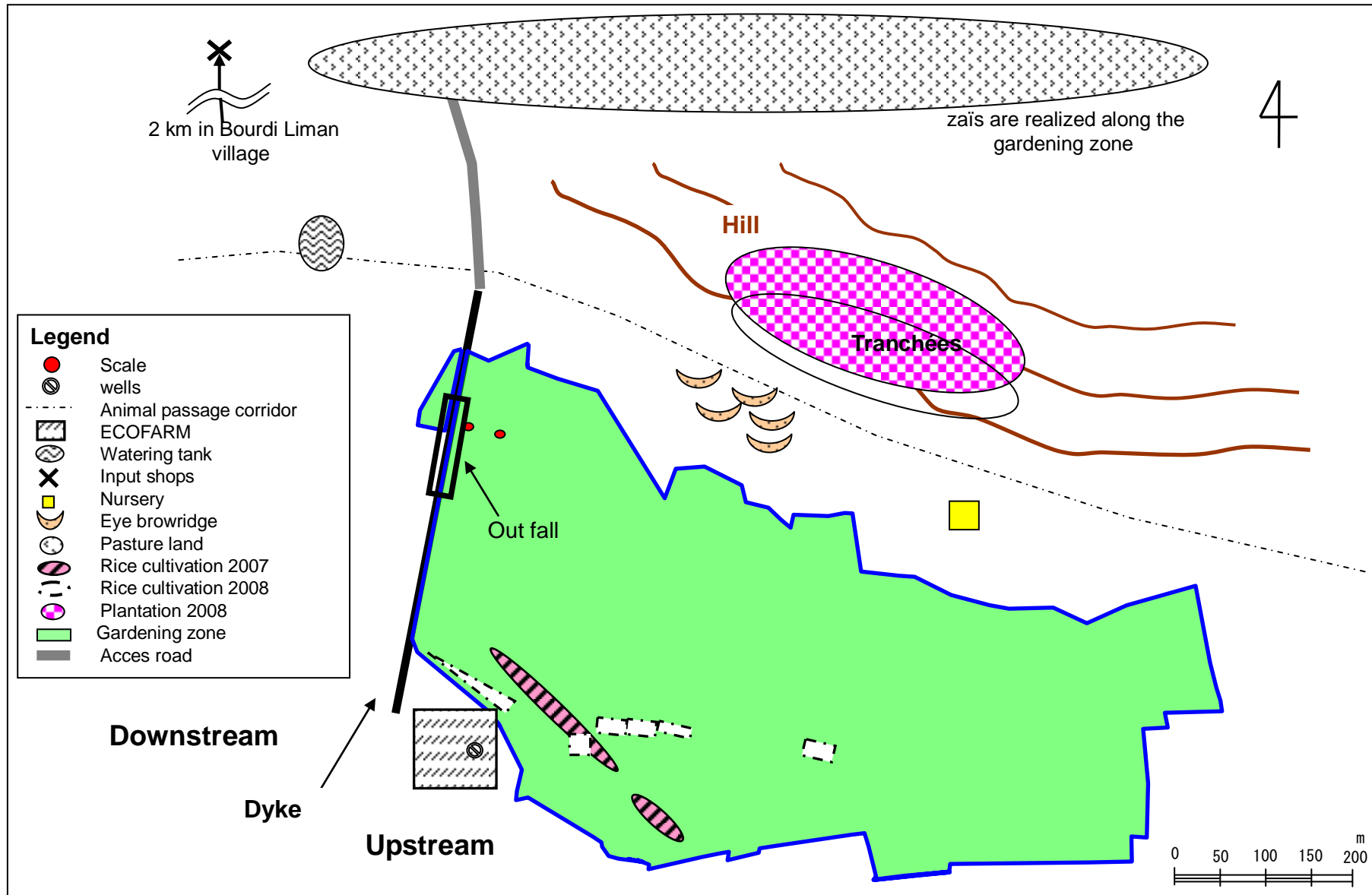


Figure 3.1(1) Spatial distribution of activities of the pilot projects (Bourdi I)

# Edouk (Weir) : activities SSOD 2007-2008

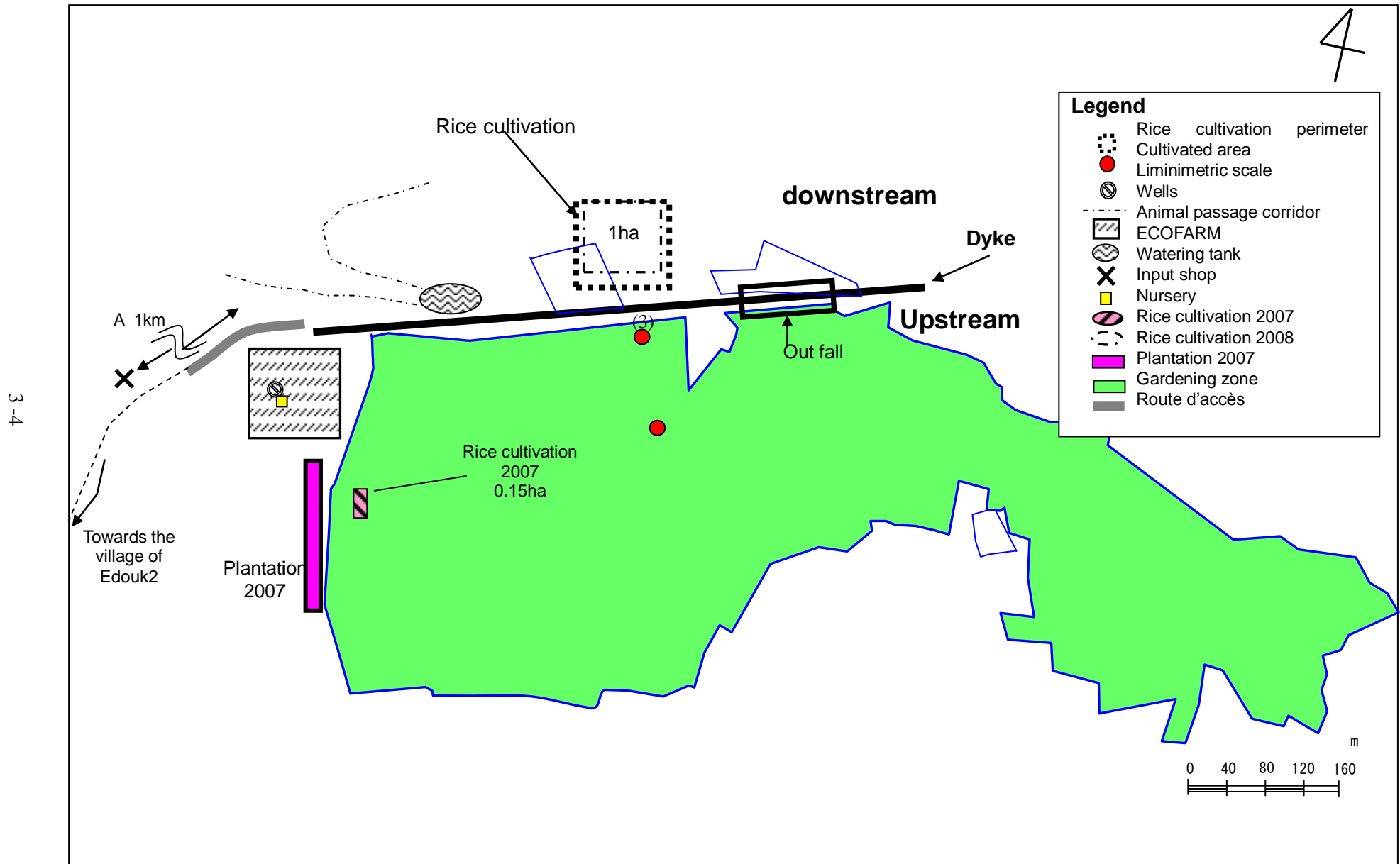


Figure 3.1(2) Spatial distribution of activities of the pilot projects (Edouk)

# Guidan Bado (Dam) : Activities SSOD 2007 - 2008

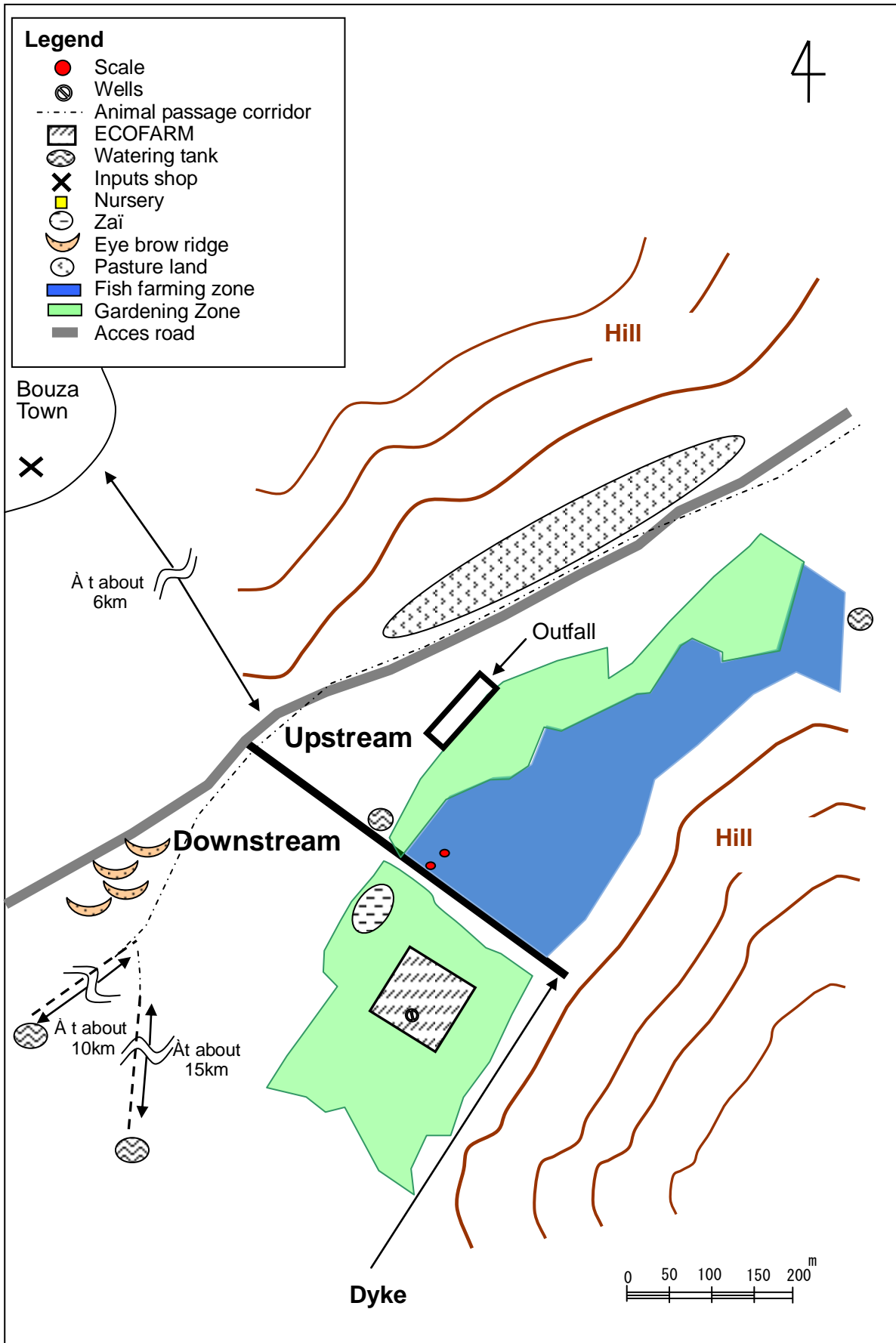


Figure 3.1(3) Spatial distribution of activities of the pilot projects (Guidan Bado)



# Jaja (Weir) : Activities SSOD 2007- 2008

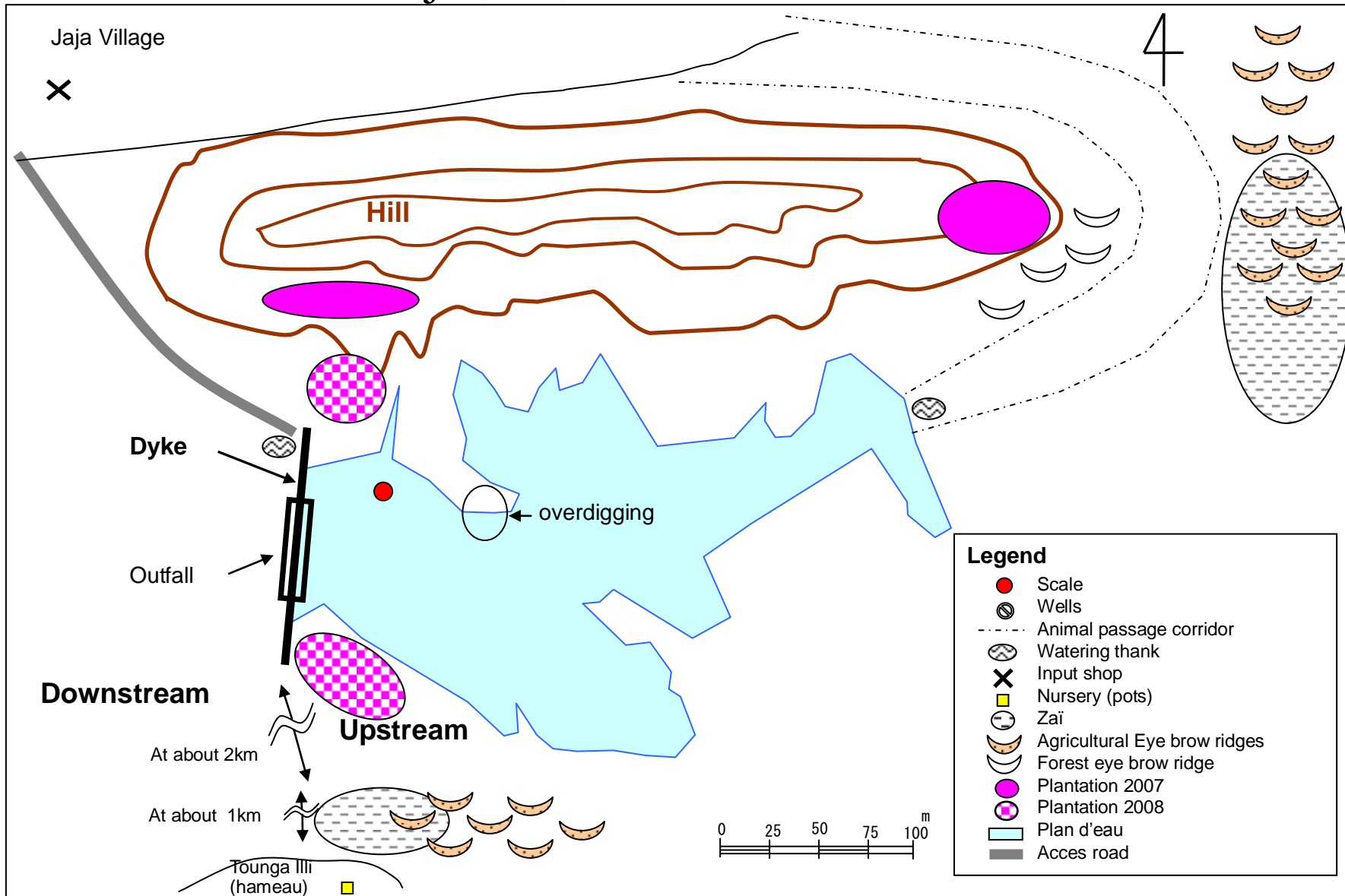



Figure 3.1(4) Spatial distribution of activities of the pilot projects (Jaja)

**Table 3.1(2) Monitoring sheet of the project of reinforcement of the means of work for basic extension agents**

Heading		Contents
Name of Action		<b>Actions of reinforcement of the support system for the populations by the official services</b>
Name of Project		<b>Project of reinforcement of the means of work for basic extension agents</b>
Context		It is essential to support the basic extension agents in their activities so that they can effectively support the rural populations to develop a spirit of initiative to deal with the various obstacles which slow down the development of their villages and that in a durable way. However this support does not have until now been exerted adequately. This situation is partly due to the state often very defective of the means of displacement of these agents and weak fuel equipment. Also, the fact that certain actors allocate excessive allowances to the basic extension agents, does not guarantee the durability of the system of support to the village populations after the project. To avoid this problem, it is necessary to support at a minimum the basic extension agents by the provision of motor bikes and fuel.
Objective		To improve the conditions of monitoring of the activities by the basic extension agents
Awaited results and their indicators		<ul style="list-style-type: none"> <li>● <u>Value targets indicator 1</u>: site for the follow-up of the activities by the basic extension agents on the level of the sites of reservoirs and the benefiting villages</li> <li>● <u>Mode of acquisition of the data</u>: Investigation carried out by SSOD near the basic extension agents</li> <li>● <u>Period of acquisition of the data</u>: August 2007 (At the moment of the 2nd interim evaluation)</li>   <li>● <u>Value targets indicator 2</u>: The basic extension agents visited for the monitoring of the activities on the level of the sites of reservoirs and the benefiting villages at least once a month.</li> <li>● <u>Mode of acquisition of the data</u>: Investigation carried out by SSOD near the basic extension agents</li> <li>● <u>Period of acquisition of the data</u>: August 2008 (At the moment of the 4th interim evaluation)</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1, 2) or for live stock raising (category 3)</li> <li>● Existence of the basic extension agents in charge of the monitoring of the sites of the reservoirs</li> </ul>
	State of the request	Checking of the needs of the DRDA
	Decision of adoption	Execution to support the basic extension agents of the four targeted communes (Badaguichiri, Kao, Bambeye, Bouza) which are in charge of the monitoring of the 4 sites of the reservoirs (Bourdi I, Edouk, Jaja, Guidan Bado).
	Project cost	<ul style="list-style-type: none"> <li>● Purchase of a motor bike: 1,850,000 CFA per motor bike (for each of the 2 CDA)</li> <li>● Maintenance fees per motor bike: 590,875 CFA per motor bike (for each of the 2 motor bikes of 2 CDA repaired)</li> <li>● Fees for annual fuel for the follow-up carried out by one basic extension agent: 1,692,550 CFA per motor bike (for each of the 4 CDA)</li> <li>● Annual regular Maintenance of the motor bikes: 239,580 CFA per motor bike (for each of the 4 CDA)</li> <li>● Fees for annual fuel and lubricant per DDDA: 1,292,460 CFA per vehicle (for each of the 4 DDDA)</li> </ul>
	Contents of the project	<ul style="list-style-type: none"> <li>● Provision of the basic extension agents of motor bikes</li> <li>● Supply of the fuel necessary for the follow-up of the activities by the concerned basic extension agents</li> <li>● Regular maintenance of the motor bikes</li> <li>● Supply of fuel and lubricating to the DDDA for the evaluation</li> <li>● Training on motor bike driving for CDA.</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>● CDA: follow-up of the activities (a village and a site 1 time per month)</li> <li>● DDDA: evaluation (a site 1 time per month)</li> <li>● SSOD: supply of the fuel and regular maintenance of the motor bikes of the CDA and fuel supply and lubricating for the vehicle of the HDDA</li> </ul>
	Contributions of the State services	<ul style="list-style-type: none"> <li>● Assignment of the CDA by the DRDA on the level of each site</li> <li>● Provision of the DDDA of the concerned zones for the evaluation</li> <li>● Provision of homologous by the concerned region services</li> <li>● Provision of the vehicles by the DDDA</li> </ul>

Heading	Contents											
<p>Process of the activities and results</p>	<ul style="list-style-type: none"> <li>• Since November 2006: at least one activity of extension per month is carried out in of the 22 villages and 4 targeted sites of reservoirs . Provision of the necessary fuel to the basic extension agents for their activities and regular maintenance of their motor bikes (1 time a month)</li> <li>• January 2007 : Training on the maintenance of motor bikes</li> <li>• August 2007 : realisation of an investigation and an evaluation (during the second interim evaluation) : information on the indicator 1</li> <li>• August 2008 : Realisation of the fourth interim evaluation to inform the indicator 2</li> </ul>											
												
	<p>Training on the maintenance of motor bikes</p>											
	<table border="1"> <thead> <tr> <th>CDA</th> <th>Opinions</th> </tr> </thead> <tbody> <tr> <td>Bambeye (Jaja)</td> <td>Before the project the villages are visited 2 times per annum and with the project 52 times per annum that is 1 time per week. After the project the fuel and the maintenance of the motor bike will be required from superiors (Town hall and DDA) to visit the villages at least 1 time every fifteen days that is 2 times per month</td> </tr> <tr> <td>Kao (Edouk)</td> <td>Before the project the villages are not visited due to lack of means (motor bike, fuel and maintenance) and the contact with the peasants are done the day of the market only in Kao. With the project the villages are visited 2 to 3 times per month and the site 20 to 22 times per month (gardening in dry season and rice growing in rainy season) After the project the fuel and the maintenance of the motor bike will be required from superiors (Town hall and DDDA) to visit the villages and the site.</td> </tr> <tr> <td>Bouza (Guidan Bado)</td> <td>Before the project the villages are not visited due to lack of means (motor bike, fuel and maintenance).With the project the site is visited 4 times per week (dry season agriculture and requests of the cooperative by contact with cel phone) and the villages 3 times per week. After the project the fuel and the maintenance of the motor bike will be requested from the town hall by providing the explanations necessary to the mayor.</td> </tr> <tr> <td>Badaguichiri (Bourdi 1)</td> <td>Before the project the villages are visited by chance or in the event of attack of the insects on the crops due to lack of means (motor bike, fuel and maintenance).With the project the site is visited 3 to 4 times per week and the villages 2 to 3 times per week. After the project the fuel and the maintenance of the motor bike will be requested from the town hall and the DDDA. This because there is much asset to safeguard.</td> </tr> </tbody> </table>	CDA	Opinions	Bambeye (Jaja)	Before the project the villages are visited 2 times per annum and with the project 52 times per annum that is 1 time per week. After the project the fuel and the maintenance of the motor bike will be required from superiors (Town hall and DDA) to visit the villages at least 1 time every fifteen days that is 2 times per month	Kao (Edouk)	Before the project the villages are not visited due to lack of means (motor bike, fuel and maintenance) and the contact with the peasants are done the day of the market only in Kao. With the project the villages are visited 2 to 3 times per month and the site 20 to 22 times per month (gardening in dry season and rice growing in rainy season) After the project the fuel and the maintenance of the motor bike will be required from superiors (Town hall and DDDA) to visit the villages and the site.	Bouza (Guidan Bado)	Before the project the villages are not visited due to lack of means (motor bike, fuel and maintenance).With the project the site is visited 4 times per week (dry season agriculture and requests of the cooperative by contact with cel phone) and the villages 3 times per week. After the project the fuel and the maintenance of the motor bike will be requested from the town hall by providing the explanations necessary to the mayor.	Badaguichiri (Bourdi 1)	Before the project the villages are visited by chance or in the event of attack of the insects on the crops due to lack of means (motor bike, fuel and maintenance).With the project the site is visited 3 to 4 times per week and the villages 2 to 3 times per week. After the project the fuel and the maintenance of the motor bike will be requested from the town hall and the DDDA. This because there is much asset to safeguard.	
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Heading	Contents
Assessment by populations.	<ul style="list-style-type: none"> <li>• Good reputation towards populations since occasions for asking advises in different areas have been increased</li> </ul>
Assessment by Extension agents	<ul style="list-style-type: none"> <li>• According to the out comes of an investigation conducted in August, 2007 4 extension agents answered that the working conditions have improved. One of the agents during this investigation said 'Before, we could not get on field from November to May every year due to lack of means. In other areas, many agents execute any activity. He added that actually i have a monthly allowance for fuel and l'm satisfied of being able to carry on the activities'.</li> <li>• Therefore some of these agents hope to allowances for travelling in addition to fees for fuel..</li> </ul>
Assessment by the study	<ul style="list-style-type: none"> <li>• Level of indicator 1 in august, 2007: Till now, the extension activities are normally executed due to the disposal of motorbikes and fuel. In 22 villages investigated during the basic study, 13 villages of 20 confirmed never receive assistance from Agriculture before the beginning of the study. This shows that many extension agents could not go on field. Actually 20 over 20 villages receiving the assistance Agriculture services.</li> <li>• Therefore one basic extension agent got an accident when driving his motorbike and was not able to monitor during 2 months. That is why it is necessary to prospect training on motor bike driving for laymen.</li> <li>• Following the set up of Village Development Committee (VDC) in december,2006 the basic extension agents monitor their activities. Cooperative of reservoirs users established between April and July 2007, the mission of the study hopes that the monitor realized by the extension agents essentially concern the technology transfer form the cooperatives of reservoirs users to VDC. Even though they monitor as usual the activities of VDC .During the monthly monitoring meetings from January to February 2008, the agents have mastered the modes of diffusing technics to benefiting populations, explained by the study mission particularly concerning the cooperative of reservoirs users.</li> <li>• Level of indicator 2 in august 2008: Before the study the relationship between the CDA, farmers on sites and villagers were poor due to lack of means (motorbike, fuel and maintenance) and populations organisations. During the study, the CDA benefit of means (motorbike, fuel and maintenance). After the study, the four CDA agreed all that it should be asked to town halls and DDDA for monitoring means. The interviews realized towards the concerned town halls show that also the possibility for CDA to be assisted in their monitoring activities. This shows that realizations between CDA, cooperative of reservoirs users and VDC will develop, will be reinforced and will continue even after the project with the assistance of town halls and DDDA.</li> </ul>

**Table 3.1(3) Monitoring sheet of the project of reinforcement of the capacities of the basic extension agents**

Heading		Content
Action name		<b>Actions of reinforcement of the support system for the populations by the official services</b>
Project name		<b>Project of reinforcement of the capacities of the basic extension agents</b>
Context		<p>Populations by themselves must find solutions to problems in their villages and to do what they are able to. Therefore, at the beginning of the study, majority of basic extension agents minimize rural populations capacities. A part from that, these agents do not master the animation technics in such a way to value the intrinsic capacities of populations. The aim pursued here by the study is that the basic extension agents acquire capacities in terms of animation that permit populations the appropriation of actions promoting the rural development through their own initiative.</p> <p>As the capacities of basic extension agents in terms of their duties management and in terms of other different technics are a little bit improved, their capacities reinforcement is prospected in the meantime.</p>
Objective		<ul style="list-style-type: none"> <li>• Reinforcement of basic extension agent's capacities in terms of animation towards populations.</li> <li>• Reinforcement of basic extension agent's capacities in terms of managing their works and in various technics</li> </ul>
Expected results and indicators target values		<ul style="list-style-type: none"> <li>• <u>Target value for indicator 1</u>: 80 % of basic extension agents answered that there are activities that can be realized with only population's resources.</li> <li>• <u>Target value for indicator 2</u>: All targeted basic extension agent have well understood the importance the set up of reservoirs users organisation and the village level , the planning for valuing these reservoirs and village development</li> <li>• <u>Data acquisition mode</u>: Investigation conducted by SSOD towards basic extension agent</li> <li>• <u>Data acquisition period</u>: August, 2007 (during the 2<sup>nd</sup> interim assessment)</li> <li>• <u>Target value for the indicator 3</u>:The improvement of knowledge acquired by the basic extension agent</li> <li>• <u>Data acquisition mode</u>: Investigation conducted by SSOD towards basic extension agents</li> <li>• <u>Data acquisition period</u>: August, 2008 (during the 4th interim assessment)</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>• Presence of farmable reservoir (category 1,2), or for live stock raising (category 3)</li> <li>• Existence of basic extension agent in charge of monitoring the sites of reservoirs</li> </ul>
	Demand state	Check out of needs DRDA
	Decision of adoption	To execute for assisting the basic extension agent from the four target communes (Badaguichiri, Kao, Bambeye, Bouza) witch are in charge of the follow up of the 4 sites (Bourdi I, Edouk, Jaja, Guidan Bado).
	Project cost	Included in training fees in different scopes (daily allowance, accommodation fees, travelling fees, etc. for basic extension agents)
	Content of the Project	<ul style="list-style-type: none"> <li>• Training on the reinforcement of animation capacities</li> <li>• Execution of animation activities</li> <li>• Training on the reinforcement of capacities in other areas</li> <li>• Monitoring of farmers and villagers activities in other scopes.</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>• Service provider : Execution of training</li> <li>• CDA : Attendance to training, animation activities execution and follow up of farmers and villagers activities in other scopes</li> <li>• SSOD :Technology transfer to concerned workers</li> </ul>
	Contributions of the State services	<ul style="list-style-type: none"> <li>• Allocation of CDA by the DRDA to each site.</li> <li>• The disposal of homologous by the concerned region services</li> </ul>



Heading	Content										
<p>Process of activities and their outcomes</p>	<ul style="list-style-type: none"> <li>• Since November,2006:Monitoring activities after training (about once a month)</li> <li>• November 2006: participation to training on election of executive members of the Village Development Committee.</li> <li>• December 2006 : Training on the reinforcement of the capacities of Village Development Committee</li> <li>• January, 2007 :Training on computer application</li> <li>• February, 2007 : Training on micro finance of tontine type</li> <li>• June, 2007 : Training on the set up of Cooperatives of Reservoirs Users</li> <li>• June, 2007 : Training on the introduction of improved varieties of seeds (millet and sorghum)</li> <li>• July, 2007 : Training on the introduction of wet field rice cultivation with NERICA variety (2 CDA)</li> <li>• July, 2007 : Training on the protection and conservation of agricultural lands</li> <li>• August, 2007: Training on self production and self stocking of horticultural seeds, methods in relation with the purchase of materials and agricultural inputs, and on the storage of agricultural products.</li> <li>• August, 2007 : Training fish farming technics and the maintenance of fishing equipments (1CDA)</li> <li>• August, 2007 : Training on the maintenance of reservoirs</li> <li>• August,2007 : Conduct of an investigation and one assessment(during the 2<sup>nd</sup> interim assessment) : Information on the level of indicator 1 and 2</li> <li>• September, 2007 : Training on the establishment, execution, monitoring and assessment of Reservoirs Valuing Plan</li> <li>• December, 2007 : Training on the use of GPS (3 CDA)</li> <li>• January, 2008 : Training on IGA</li> <li>• January, 2008 : Training on the operation of detection by reduced seismic waves</li> <li>• August and October ,2008 : Training on fruit growing (3 CDA)</li> <li>• August, 2008 : Training on the maintenance of fishing equipments (1CDA)</li> <li>• August, 2008 : Training on manipulation and conservation of fish (1 CDA)</li> <li>• August, 2008 : During the 4th interim assessment, conduct of an investigation and an assessment by SSOD towards the basic extension agents (To inform the indicator 3)</li> </ul> <table border="1"> <thead> <tr> <th>CDA</th> <th>Opinions</th> </tr> </thead> <tbody> <tr> <td>Bambeye (Jaja)</td> <td>My monitoring capacities have been reinforced and I also received practical training in other scopes, this makes easier for me to carry on supervisory work; This Project is different from other projects since it has been asked to population to realize what they are able to by themselves with own resources. 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<p>Assessment by the populations</p>	<ul style="list-style-type: none"> <li>• The different trainings received by CDA permitted to bring some assistance/advises to populations in he scopes of organisation and agro-sylvo-pastoral technics (with demonstrations in some cases).</li> </ul>										

Heading	Content
Assessment by extension agents	<ul style="list-style-type: none"> <li>• Level of indicator 1 in august, 2007: According to the basic study carried out in October, 2006 towards 13 agents (CDA and DDDA), 6 (46%) answered that there are activities that can be entirely realised by villagers. Or, according to the study carried out in august, 2007, it is all the 13 agents (100%) that gave this answer, but 2 of them related it to the existence of village's organisations. During the basic study, 1 agent over 4 ( 25%) supported that against 4 agents over 4 (100%) actually.</li> <li>• Level of indicator 2 in August, 2007: All agents targeted by the investigation answered that the methods of the study permitting to populations to establish reservoirs valuing plan and village development plan are one Model to popularize every where in Niger.</li> </ul>
Assessment by the study mission	<ul style="list-style-type: none"> <li>• Since November, 2006, through trainings, courses and monitor of all types, the number of technics acquired by the extension agents has been increased and their capacities reinforced.</li> <li>• Level of indicator 1 in august, 2007: According to result of the basic study, this shows that it the sensitization is being well carried out, there may be many activities that can be realized through population's initiative without external financial and material assistance. Agents are actually conscious of that.</li> <li>• Level of indicator 2 in August, 2007: According to result of the basic study, this shows that these agents have well understood the importance the rural development through population's initiatives. In other words, through the participation to different training and to monitoring activities, we observe a change of targeted agent's consciousness.</li> <li>• Level of indicator 3in august, 2008: All the CDA have recognised that their technical capacities have been improved. The basic extension agents have also well understood the self development strategy. They are able to motivate populations with the guides and supports.</li> <li>• Capacities of basic extension agents we think can permit them to realise the monitor and supervision in terms of the set up of different organisations and planning. It is difficult for the CDA to be teachers due to their limited capacity in the scope if training for the set up of organisations.</li> </ul>

**Table 3.1(4) Monitoring sheet of the Project of installation of a system of capitalization and share information**

Heading		Content
Action name		<b>Actions of reinforcement of the support system for the populations by the official services</b>
Project name		<b>Project of installation of a system of capitalisation and share information</b>
Context		Before, in the target study areas, the basic extension agents did not possess a formal consultation frame for sharing, discussing and solving with their colleagues and their superior, problems related to support activities to populations. So, in all target study areas only one extension agent over four recognized the existence of a consultation frame to witch he attends. That is why, it is necessary to organise meetings and to manage them in a participative manner with public workers to share information.
Objective		Sharing of information and their capitalisation with different state services and or technical and financial partners.
Expected results and target value indicator		<ul style="list-style-type: none"> <li>• <u>Target value for indicator 1</u> : establishment of guides and supports for realised trainings</li> <li>• <u>Data acquisition mode</u> : Registering of the number of established documents by SSOD</li> <li>• <u>Data acquisition period</u>: August, 2007, august, 2008 and January, 2009</li>   <li>• <u>Target value for indicator 2</u>: putting at the disposal of different contributors in rural area guides and supports for the realised trainings.</li> <li>• <u>Data acquisition mode</u> : Registering of the number of distributed documents by SSOD</li> <li>• <u>Data acquisition period</u> : August 2007, August, 2008 and January, 2009</li>   <li>• <u>Target value for indicator 3</u>: 80 % of the rate of attending the monthly monitoring meetings and to the consultative committee.</li> <li>• <u>Data acquisition mode</u> : Registering by SSOD of the number of participants to meetings and the consultative committee</li> <li>• <u>Data acquisition period</u> : August, 2007, august, 2008 and February, 2009</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>• Presence of a farmable reservoir (category 1,2) or for live stock raising (category 3)</li> <li>• Existence of a basic extension agent in charge of monitoring reservoirs sites</li> </ul>
	State of the request	Checkout of needs by the DRDA
	Decision of adoption	Execute to support agents within Tahoua region, four departments (Illéla, Tchintabaraden, Tahoua, et Bouza), four communes (Badaguichiri, Kao, Bambeye, Bouza) containing the 4 sites of reservoirs (Bourdi I, Edouk, Jaja, Guidan Bado)
	Project cost	<ul style="list-style-type: none"> <li>• Monthly monitoring meetings : 344,517 CFA per meeting (12 Times a year)</li> <li>• Consultative committee : 2,458, 665 CFA per committee (Once a year)</li> </ul>
	Content of the project	<ul style="list-style-type: none"> <li>• Monthly monitoring meetings</li> <li>• Consultative committee that consist in the same time a frame of information exchange with the NGOs and the TFPs</li> <li>• Preparation and improvement of different training guides and supports</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>• CDA :Attending monthly monitoring meetings and consultative committee</li> <li>• DDDA :Attending monthly monitoring meetings and consultative committee</li> <li>• DRDA : Attending monthly monitoring meetings and consultative committee</li> <li>• Region homologous : Attending monthly monitoring meetings and consultative committee</li> <li>• National homologous: Consultative commitee</li> </ul>
	Contributions of the state services	<ul style="list-style-type: none"> <li>• Assignment of CDA by the DRDA to each site</li> <li>• Disposal of DRDA and DDDA of concerned zones</li> <li>• Disposal of national and concerned region homologous</li> </ul>



Heading	Content																													
Process of activities and their results	<ul style="list-style-type: none"> <li>• Since October, 2006: disposal and improvement of different training guides and supports.</li> <li>• Since November, 2006 : holding of monthly monitoring meetings under the presidency of the DRDA during witch, each basic extension agent presents the monitored activities and problems encountered and then the debates are engaged.</li> </ul>																													
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No	Title of document	Guide (for the facilitators)	Support (for villagers)		
			Fr.	Ha	Ta
1	Training on the support to the installation of the reservoirs users committee	x	x		
2	Training on support to the establishment of reservoir valuing plan	x	x	x	x
3	Training on the reinforcement of capacities in the maintenance of reservoirs	x	x	x	x
4	Training on the reinforcement of agricultural technics	x	x	x	x
5	Training on the reinforcement of agricultural management technics	x	x	x	x
6	Training on reinforcement of management capacities and maintenance of irrigation infrastructures	x	x	x	x
7	Training on the protection and conservation of arable lands	x	x	x	x
8	Training on the adjustment for the prevention of damages caused by animals	x	x	x	x
9	Training on the introduction of wet field rice cultivation( NERICA variety)	x	x	x	x
10	Training on fish stocking in a reservoir	x	x	x	x
11	Training on the improvement of knowledge in health and hygiene	x	x	x	x
12	Training on the introduction of improved cooking stoves	x	x	x	x
13	Training on support to income generating activities	x	x	x	x
14	Training on self development and installation of villages development committees	x	x	x	
15	Training on leadership and establishment, execution and evaluation of Villages Development Plan	x	x	x	x
16	Training in micro finance tontine type	x	x	x	
17	Literacy for the trainers of instructors	x			
18	Literacy for the instructors	x			
19	Literacy hand book for the inhabitants			x	x
20	Catalogue of income generating activities during rainy season		x		
21	Catalogue of income generating activities during dry season		x		
22	Booklet of income generating activities during the dry season		x		
23	Training of farmers on pumping out technics ( animal haulage and utilization and maintenance of motor pump) and irrigation network(2008)	-			
24	Organisation of an internal exchange seminar on the site between the cooperative of reservoirs users, villages development committees and the villages chiefs(2008)	x			
25	Training of farmers on fruit growing technics(2008)	-	-		
26	Training on fish conservation and marketing(2008)	-	-		
27	Training on support to income generating activities (2008)				

X final version

- Temporary version



To be established



Not necessary

- January, 2009 : information from indicators 1 and 2

No	Document title	Guide (for facilitators)	Support (for Villagers)		
			Fr	Ha	Ta
1	Training on assistance to the set up of reservoir users committees	x	x		
2	Training on assistance to the establishment of reservoir utilisation plan	x	x	x	x
3	Training on capacities reinforcement in terms of reservoir maintenance	x	x	x	x
4	Training on the reinforcement of capacities in terms of agricultural technics	x	x	x	x
5	Training on the reinforcement of capacities in terms of management of agricultural land	x	x	x	x
6	Training on the reinforcement of capacities in terms of management and maintenance of irrigation infrastructures	x	x	x	x
7	Training on protection and conservation of agricultural land	x	x	x	x
8	Training on planning for the prevention of damages caused by animals	x	x	x	x
9	Training on the introduction of wet field rice cultivation (NERICA variety)	x	x	x	x
10	Training on fish stocking in a reservoir	x	x	x	x
11	Training on the improvement of knowledge in terms of health and hygiene	x	x	x	x
12	Training on the introduction of improved cooking stoves	x	x	x	x
13	Training on support to incomes generating activities	x	x	x	x
14	Training on self development and democratic set up of Village Development Plan	x	x	x	x
15	Training on Leadership and on Planning Execution and Assessment of Village Development Plan	x	x	x	x
16	Training on micro finance tontine type	x	x	x	x
17	Literacy for instructor's teachers	x			
18	Literacy for instructors	x			
19	Literacy handbook for inhabitants			x	x
19'	Literacy handbook for inhabitants (2008)			x	x
20	Catalogue of income generating activities during rainy season		x	x	x
21	Catalogue of income generating activities during dry season		x	x	x
22	Handbook of income generating activities during dry season		x	x	x
23	Farmer's training on irrigation skills (animal trained equipments and motor pump utilisation and maintenance) and irrigation system (2008)	-	x	x	x
24	Animation of an internal exchange meeting on the site between the cooperative of reservoir users, village development committee and villages chiefs (2008)	x			

No	Document title	Guide ( for facilitators)	Support ( for villagers)		
			Fr	Ha	Ta
25	Farmers training on fruits growing technics (2008)	x	x	x	x
26	Training on fish conservation and marketing (2008)	x	x	-	-
27	Training on the support to income generating activities (2008)	-	-	-	-
28	Training on gardening (2008)	x	x	x	x

X: final version      - : temporary version

- January, 2009 : participation to the national agro-sylvo pastoral trade fair :
- February,2009 : informations from indicator 3

Monthly monitoring meeting attendance rate (Sep.2007 – August 2008)

Period	2008				2009
	Sep	Oct	Nov	Dec	Jan
<b>Attendance rate: (%)</b>	93.75	87.50	87.50	81.25	81.25

- February,2009 : holding of Consultative committee that serves in the same time the frame for information exchange with NGOs and financial backers

Number of participants to Consultative Committee (per scope)

NGO	1 person	Study Team	5 persons	
Projects	4 persons	Commune	5 persons	
Central level Agents	8 persons	DDDA	4 persons	
Region level Agents	11 persons	DDDC	3 persons	Guests : 55 pers.
Farmers	4 persons	CDA	4 persons	Total participants :
JICA Niger	2 person	Gouvernorat	2 person	54 persons

Assessment by populations	<ul style="list-style-type: none"> <li>• Non available data</li> </ul>
Assessment by State services agents (superiors)	<ul style="list-style-type: none"> <li>• <b>Level of indicator 3 in august, 2007</b> : The monthly monitoring meetings have permitted a good capitalization and share of informations. A transformation of consciousness turned towards the appropriation of activities appears due to the implication of agents in the management of meetings. In fact, during the Consultative Committee meeting, one DDDA declared that 'The administration in sufficiently involved and communes and heads of Departments are equally fully informed of the monthly monitoring meetings'. The outcomes of the investigation conducted towards 9 concerned agents in august, 2007 highlighted that they all appreciate the monthly monitoring meetings since that permit to create an occasion for ideas exchanges.</li> <li>• <b>Level of indicator 2 in august, 2008</b> : Guides and supports are highly practical and well adapted</li> <li>• <b>Level of indicator 3 in august, 2008</b>: All 4 CDA have appreciated the holding of monthly meetings. In addition, the CDA have given each his opinion on the holding of these monthly meetings :  CDA Kao : They permit to correct possible errors'  CDA Bouza : Ideas and experiences exchange'  CDA Badiguishiri : Share of experiences and information'  CDA Bambeye : comparison of the situation between different sites'</li> </ul>

Assessment by the study mission





- **Level of the indicator 1 in august, 2007:** 13 guides and supports finished over 25 prospected. That is due to the fact that the preparation and signing of services providing contracts took two and half months instead of one as prospected; that did not permit the consultants to get sufficient time to finish the document.
- **Level of the indicator 3 in august, 2007:** The percentage of attending the monthly monitoring meetings varies from 81% to 100% over a period from January to august, 2007. The first monthly monitoring meetings concerned only the extension agents, the heads of department directorate of agriculture and the region head of directorate of agriculture. But since January, 2007 one representative of region directorate of environment and struggle against desertification, one representative woman promotion and child protection, one representative of region directorate of primary education and of literacy, representative of different concerned services of the DRDA (service of rural engineering, extension service, service of cooperative action and promotion of rural organisms), one representative of region directorate of territory arrangement and community development have been participating to the meetings reinforcing the collaboration between actors. The share of information continues through the communication of outcomes from the monthly monitoring meetings to mayors by the extension agents, and to the heads of department by the heads of department directorate of agriculture, and it can be seen that these meetings are significant. The consultative Committee observed 100% attendance of guest persons and structures. It noticed the attendance of managers of others projects (PAC, PIP2, ASAPI), that declared 'to be ready to assist villages development for a good request' this type of propositions show the interest of holding the Consultative Committee meetings.
- It is necessary to reinforce the implication of central administration because since the study office has been transferred to Tahoua (550 km from Niamey); information exchanges with central level have decreased. It is important to redefine the roles of central level homologous and to fully involve them in the interim assessment, etc. for the implementation of the Action Plan.
- The study has participated to the 4<sup>th</sup> agro-sylvo pastoral trade fair organised on January 25 to 27, 2008 in Niamey. By this occasion, it has been explained the content of the study and 300 leaflet copies and information letter have been distributed to visitors of SSOD stand witch been honourably visited by the Prime Minister with some government members, the President of the Economic and Social Consil, representatives of international organisations, NGOs, training and research institutions and projects. During this trade fair, visitors interested by the study activities asked for guides and support of different pilot projects.
- **Level of the indicator 1 and 2 in august 2008:** 27 types of documents have been prospected of witch 17 entirely finished and remain 10 to be established. The documents to be established are either for trainings in 2008 or those for previous trainings being finalized. Those for the previous trainings, this concerns the translation of documents in local languages. Remember that training supports have not been utilised during trainings being held in local languages. They are put at the participant's disposal after training permitting them to remember easily the content of training. One CD containing 17 types of finished documents has been conceived and 57 copies have been distributed to technical services, projects, international organisations, NGOs, training and research institutions and study office concerned by the rural development.

	<ul style="list-style-type: none"> <li>• Consultants came in the frame work of establishing a new project sponsored by GTZ and AFD after an interview with SSOD in June, 2008 have estimated that 'the approach use by the study can constitute the beginning of a real rural development'.</li> <li>• <b>Level of the indicator 3 in august, 2008:</b> The attendance rate monthly monitoring meeting varies from 88% to 94% for a period of January to august, 2008. The DRDA and the representative of region office for literacy because of their concerns have not been able to regularly attend the monthly monitoring meetings. How ever, the outcomes of each meeting are put at their disposal.</li> <li>• Other projects (PAC, PIP2, ASAPI), that declared "to be ready to support villages development plans for a good request'. But" since December, 2008, any of these projects has started.</li> <li>• <b>Level of the indicator 1 and 2 in January,2009:</b> 28 types of documents have been prospected of witch 27 entirely finalised and it remains 1 on IGA to be established for witch the temporary version has been deposited. It must be noted the training supports are not utilised during trainings dispensed in local languages. They are put at the disposal of participants after training permitting them to remember easily the content of the training.</li> <li>• <b>Level of the indicator 3 in February, 2009:</b> The attendance rate to monthly monitoring meetings passed from 93.75 to 81.25% from September, 2008 to January, 2009. The DRDA, the representatives of RDTA/CD and that of women promotion and child protection because their preoccupations have not been able to regularly attend the monthly monitoring <b>meetings</b>. In addition to that there is also the absence of the region responsible of RSCA/PRO went for training in Japan. How ever the outcomes of each meeting are put at their disposal</li> <li>• The study has participated to 5th agro-sylvo pastoral trade fair organised from January 30 to 03 February 03, 2009 in Niamey. By this occasion, it has been explained the content of the study and 250 leaflets copies and 262 information letters have been distributed to the visitor of SSOD stand witch was honourably visited by some government members, some national deputies, the Assistant to the head of the President of the Republic Cabinet in charge of piloting the Special Program, advisers of the President of the Republic Cabinet and that of Prime Minister, ambassadors and the representatives, international organisations, NGOs, training and research institutions and projects. Among the visitors we must notice the technicians intervening in the rural sector, farmers from all regions of Niger and also the participants to a seminar of the Economic Community of West African States (ECOWAS) and participants to a meeting of the peasant platform came from Africa, America and Europe. During this trade fair, farmer of site from Edouk brought by SSOD was interviewed on wet field rice cultivation by a Belgium TV (canal c). Further more the manager of the journal Echo du Sahel witch is a quarterly magazine specialist of rural area and development made contact with SSOD for an appointment during a visit in a little bit time in Tahoua region.</li> <li>• The manual of IGA was distributed to all the cooperatives in May, 2009. The details of guides and supports finished are presented in the appendix PP4</li> </ul>
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**Table 3.1(5) Monitoring sheet of the Project of support to the installation of the reservoir users organisations**

Heading		Content
<b>Action name</b>		<b>Actions of reinforcement of the capacities of the reservoir users in management of the actions</b>
<b>Project name</b>		<b>Project of support to the installation of the reservoir users organisation</b>
Context		Reservoirs constructed are not yet sufficiently implemented, it is necessary to organise the users for their implementation.
Objective		Promote the implementation of reservoirs, through the organisation of reservoir users
Expected results and target values for the indicators		<ul style="list-style-type: none"> <li>• <u>Target value for the indicator 1</u> : All reservoir users cooperatives set up</li> <li>• <u>Data acquisition mode</u> : Investigation conducted by the basic extension agent towards the sites farmers</li> <li>• <u>Data acquisition period</u> : august, 2007</li>   <li>• <u>Target value for the indicator 2</u>: The General Assembly (GA) of reservoir users Cooperative is hold at least once a year.</li> <li>• <u>Data acquisition mode</u>: investigation conducted by the basic extension agents towards farmers and executive members.</li> <li>• <u>Data acquisition Period</u>: February, 2008 (During the 3rd interim assessment) and February, 2009 (During the 5th interim assessment)</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>• Presence of a farmable site (category 1, 2) or usable for livestock raising (category 3)</li> <li>• Existence of non organised or insufficiently organised reservoir users</li> </ul>
	State of the request	Check out of needs of farmers from the 4 sites (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision for adoption	Execution on 4 sites
	Project cost	10, 276,420 CFA (2, 569,105 CFA per site)
	Content of the project	<ul style="list-style-type: none"> <li>• Study trip</li> <li>• Training on the election of reservoir users organisation executive members</li> <li>• Training of leaders (Aims and objectives of an organisation, Marketing, organisation management, accounting)</li> <li>• Establishment of training guides and supports</li> <li>• Monitoring activities</li> <li>• Assessment of activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>• Service provider (NGO ADA): in charge of the execution of trainings</li> <li>• Farmers from sites : participation to training</li> <li>• CDA : Monitor process</li> <li>• SSOD : evaluation</li> </ul>
	contributions of the populations	This training is free of charge for the populations
Process of activities and their results		<ul style="list-style-type: none"> <li>• December, 2005-october, 2006 : study of the present state of the reservoirs, socio-economic study, analysis of potentials</li> <li>• October, 2006-april ,2007 : basic data collection, check out of villagers needs</li> <li>• February to March, 2007 : establishment of training guides (proposition)</li> <li>• April, 2007 : Trial of the set up of reservoir users cooperative of Bourdi 1</li> <li>• May – June, 2007 : formalities for service providing contract for this project</li> <li>• June, 2007 : establishment of training guides and supports</li> <li>• June, 2007 : Visit of advanced site (Site of Project of Water Mobilisation of Tahoua, Lilingo village Dep.Thadoua, 10 farmers per + CDA, concerned foresters and animal resources agents)</li> <li>• June, 2007: Training of 4 CDA, 3 foresters and 1 animal resources agent on the mode of setting up the reservoir users cooperatives for the 4 concerned sites.</li> </ul>



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	<ul style="list-style-type: none"> <li>June to July, 2007: Confirmation of the number of users and sensitization by the extension agents CDA</li> </ul> <p style="text-align: center;"><b>Table 1 : Number of farmers and their delegates to the GA</b></p> <table border="1"> <thead> <tr> <th>Site</th> <th>Date</th> <th>Total number of farmers</th> <th>Delegates to GA</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>2 - 3 April</td> <td>726</td> <td>41</td> </tr> <tr> <td>Edouk</td> <td>12 July</td> <td>700</td> <td>51</td> </tr> <tr> <td>Guidan Bado</td> <td>15 July</td> <td>272</td> <td>39</td> </tr> <tr> <td>Jaja</td> <td>11 July</td> <td>229</td> <td>63</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>July, 2007 : Training of the executive members of the 4 sites on leadership (10 farmers per site )</li> </ul>	Site	Date	Total number of farmers	Delegates to GA	Bourdi I	2 - 3 April	726	41	Edouk	12 July	700	51	Guidan Bado	15 July	272	39	Jaja	11 July	229	63
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	<ul style="list-style-type: none"> <li>February, 2008 : General Assembly of reservoir users organisation (in the frame work of the third interim assessment; indicator 2)</li> </ul> <p style="text-align: center;">Table 2 : content of the discussions during the GA</p> <table border="1"> <thead> <tr> <th rowspan="2">Site</th> <th rowspan="2">Types of GA</th> <th rowspan="2">Number of GA</th> <th colspan="4">Content of the discussion</th> </tr> <tr> <th>Accounting</th> <th>The RVP</th> <th>Maintenance of the reservoir</th> <th>Training by SSOD</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Bourdi I</td> <td>Ordinary</td> <td>4</td> <td>X</td> <td>-</td> <td>-</td> <td>X</td> </tr> <tr> <td>Extraordinary</td> <td>11</td> <td>X</td> <td>X</td> <td>-</td> <td>X</td> </tr> <tr> <td rowspan="2">Edouk</td> <td>Ordinary</td> <td>2</td> <td>X</td> <td>X</td> <td>-</td> <td>X</td> </tr> <tr> <td>Extraordinary</td> <td>6</td> <td>X</td> <td>-</td> <td>X</td> <td>X</td> </tr> <tr> <td rowspan="2">Guidan Bado</td> <td>Ordinary</td> <td>1</td> <td>X</td> <td>-</td> <td>-</td> <td>X</td> </tr> <tr> <td>Extraordinary</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> <tr> <td rowspan="2">Jaja</td> <td>Ordinary</td> <td>20</td> <td>X</td> <td>X</td> <td>-</td> <td>X</td> </tr> <tr> <td>Extraordinary</td> <td>5</td> <td>X</td> <td>-</td> <td>-</td> <td>X</td> </tr> </tbody> </table> <p style="text-align: center;">Table 3 : situation of the establishment of sub- committees</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="7">Sub- committees</th> </tr> <tr> <th>Agriculture</th> <th>Live stock raising</th> <th>Reservoir maintenance squad</th> <th>Fishing</th> <th>Management of inputs boutique</th> <th>Environment</th> <th>Others</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>10 (5)</td> <td></td> <td>10 (5)</td> <td style="text-align: center;">/</td> <td>8 (1)</td> <td>25 (3)</td> <td></td> </tr> <tr> <td>Edouk</td> <td>8 (0)</td> <td>8 (0)</td> <td>6 (1)</td> <td style="text-align: center;">/</td> <td>5 (1)</td> <td>25 (0)</td> <td></td> </tr> <tr> <td>Guidan Bado</td> <td></td> <td></td> <td>10 (2)</td> <td>25 (9)</td> <td>5 (2)</td> <td></td> <td>Self supervision10 (3)</td> </tr> <tr> <td>Jaja</td> <td></td> <td></td> <td>6 (3)</td> <td style="text-align: center;">/</td> <td>5 (0)</td> <td></td> <td>Self supervision 5 (0)</td> </tr> </tbody> </table> <p>( ) number of weemen</p> <p style="text-align: center;">Table 4 : transmission of GA contents</p> <table border="1"> <thead> <tr> <th>Site</th> <th>Date of acceptance by town hall</th> <th>Number of members</th> <th>Number of participants to GA who transmit the contents of GA</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>.May 24,2007</td> <td>1,045 (110)</td> <td>35 (17)</td> </tr> <tr> <td>Edouk</td> <td>Sept 26,2007</td> <td>555 ( 97)</td> <td>78 (19)</td> </tr> <tr> <td>Guidan Bado</td> <td>July 15,2007</td> <td>533 (264)</td> <td>57 (29)</td> </tr> <tr> <td>Jaja</td> <td>Dec 23,2007</td> <td>142 ( 67)</td> <td>27 ( 9)</td> </tr> </tbody> </table> <p>( ) number of weemen</p>	Site	Types of GA	Number of GA	Content of the discussion				Accounting	The RVP	Maintenance of the reservoir	Training by SSOD	Bourdi I	Ordinary	4	X	-	-	X	Extraordinary	11	X	X	-	X	Edouk	Ordinary	2	X	X	-	X	Extraordinary	6	X	-	X	X	Guidan Bado	Ordinary	1	X	-	-	X	Extraordinary	5	X	X	X	X	Jaja	Ordinary	20	X	X	-	X	Extraordinary	5	X	-	-	X		Sub- committees							Agriculture	Live stock raising	Reservoir maintenance squad	Fishing	Management of inputs boutique	Environment	Others	Bourdi I	10 (5)		10 (5)	/	8 (1)	25 (3)		Edouk	8 (0)	8 (0)	6 (1)	/	5 (1)	25 (0)		Guidan Bado			10 (2)	25 (9)	5 (2)		Self supervision10 (3)	Jaja			6 (3)	/	5 (0)		Self supervision 5 (0)	Site	Date of acceptance by town hall	Number of members	Number of participants to GA who transmit the contents of GA	Bourdi I	.May 24,2007	1,045 (110)	35 (17)	Edouk	Sept 26,2007	555 ( 97)	78 (19)	Guidan Bado	July 15,2007	533 (264)	57 (29)	Jaja	Dec 23,2007	142 ( 67)	27 ( 9)
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	<ul style="list-style-type: none"> <li>• <b>February, 2009</b> : During the fifth interim assessment, held seminar on sites with the cooperatives, and assessment by SSOD ( to inform the indicator 2)</li> </ul> <p>Table 5 : content of the discussions during GA</p> <table border="1"> <thead> <tr> <th rowspan="2">Site</th> <th rowspan="2">Types of GA</th> <th rowspan="2">Number of GA</th> <th colspan="5">Content of the discussion</th> </tr> <tr> <th>Accounting</th> <th>The RVP</th> <th>Reservoir maintenance</th> <th>Training by SSOD</th> <th>Other subjects</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Bourdi I</td> <td>Ordinary</td> <td>2</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Extraordinary</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> <tr> <td rowspan="2">Edouk</td> <td>Ordinary</td> <td>4</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td></td> </tr> <tr> <td>Extraordinary</td> <td>5</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> <tr> <td rowspan="2">Guidan Bado</td> <td>Ordinary</td> <td>5</td> <td>X</td> <td>X</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Extraordinary</td> <td>16</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>Land distribution</td> </tr> <tr> <td rowspan="2">Jaja</td> <td>Ordinary</td> <td>12</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td></td> </tr> <tr> <td>Extraordinary</td> <td>20</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>Inputs boutique</td> </tr> </tbody> </table> <p>Table 6 : situation of the establishment of sub-committees</p> <table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="7">Sous-comité</th> </tr> <tr> <th>Agriculture</th> <th>Live stock raising</th> <th>Reservoir maintenance squad</th> <th>Fishing</th> <th>Management of inputs boutique</th> <th>Environment</th> <th>Others</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td></td> </tr> <tr> <td>Edouk</td> <td>X</td> <td>X</td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td>Well makers</td> </tr> <tr> <td>Guidan Bado</td> <td></td> <td></td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> <td>Self supervision</td> </tr> <tr> <td>Jaja</td> <td></td> <td></td> <td>X</td> <td></td> <td>X</td> <td>X</td> <td>Self supervision</td> </tr> </tbody> </table> <p>Table 7 : transmission of GA contents</p> <table border="1"> <thead> <tr> <th>Site</th> <th>Number of members (in 2007)</th> <th>Number of members in 2008</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>1,045 (110)</td> <td>1,056(117)</td> </tr> <tr> <td>Edouk</td> <td>555 (97)</td> <td>566(97)</td> </tr> <tr> <td>Guidan Bado</td> <td>533 (264)</td> <td>533 (264)</td> </tr> <tr> <td>Jaja</td> <td>142 (67)</td> <td>142 (59)</td> </tr> </tbody> </table> <p>( ) number of women</p> <table border="1"> <thead> <tr> <th rowspan="2">Site</th> <th rowspan="2">Adherence fees</th> <th colspan="3">Annual contribution (CFA)</th> <th rowspan="2">Total special contributions</th> </tr> <tr> <th>Amount per member</th> <th>Amount collected</th> <th>Amount to be collected</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>500</td> <td>500</td> <td>226,000</td> <td>302,000</td> <td></td> </tr> <tr> <td>Edouk</td> <td>500</td> <td>500</td> <td>60,000</td> <td>223,000</td> <td>67,500 (collective works, strangers reception)</td> </tr> <tr> <td>Guidan Bado</td> <td>300</td> <td>200</td> <td>6,100</td> <td>100,500</td> <td></td> </tr> <tr> <td>Jaja</td> <td>500</td> <td>300</td> <td>70,000</td> <td>84,000</td> <td></td> </tr> </tbody> </table> <p><b>NB:</b> Contributions for year 2009 have started to be collected in January</p>	Site	Types of GA	Number of GA	Content of the discussion					Accounting	The RVP	Reservoir maintenance	Training by SSOD	Other subjects	Bourdi I	Ordinary	2	X	X				Extraordinary	5	X	X	X	X		Edouk	Ordinary	4	X	X	X			Extraordinary	5	X	X	X	X		Guidan Bado	Ordinary	5	X	X				Extraordinary	16			X	X	Land distribution	Jaja	Ordinary	12	X	X	X	X		Extraordinary	20	X	X	X	X	Inputs boutique		Sous-comité							Agriculture	Live stock raising	Reservoir maintenance squad	Fishing	Management of inputs boutique	Environment	Others	Bourdi I	X	X	X		X	X		Edouk	X	X	X		X	X	Well makers	Guidan Bado			X	X	X	X	Self supervision	Jaja			X		X	X	Self supervision	Site	Number of members (in 2007)	Number of members in 2008	Bourdi I	1,045 (110)	1,056(117)	Edouk	555 (97)	566(97)	Guidan Bado	533 (264)	533 (264)	Jaja	142 (67)	142 (59)	Site	Adherence fees	Annual contribution (CFA)			Total special contributions	Amount per member	Amount collected	Amount to be collected	Bourdi I	500	500	226,000	302,000		Edouk	500	500	60,000	223,000	67,500 (collective works, strangers reception)	Guidan Bado	300	200	6,100	100,500		Jaja	500	300	70,000	84,000	
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Assessment by populations	<p>According to farmers during the 3rd interim assessment (February, 2008), the set up of reservoir users organisation permit:</p> <ul style="list-style-type: none"> <li>• A good planning and a good coordination of reservoir valuing actions,</li> <li>• A social cohesion reinforcement,</li> <li>• Making the inputs stocking easier,</li> <li>• Reservoirs preservation,</li> <li>• Members freedom of expression.</li> </ul> <p>As disadvantages, according to farmers from Bourdi I site we must note :</p> <ul style="list-style-type: none"> <li>• The participation to meetings that sometimes did not allow the realisation of certain daily activities,</li> <li>• Some problems emerge between the village chiefs and the cooperatives; (these problems have already been treated during exchange seminars organised on all the sites).</li> </ul>
Evaluation by the study mission	<ul style="list-style-type: none"> <li>• <b>Level of indicator 1 in August 2007:</b> all the cooperatives of the reservoir users were set up at the level of the four sites. The process of obtaining an approval was engaged on the level of their respective communes. The cooperative of reservoir users of Bourdi I also counts among its members farmers from the reservoir of Bourdi II, because the downstream of Bourdi I reservoir is part of the upstream of Bourdi II reservoir.</li> <li>• <b>Level of indicator 2 in February 2008: Table 2:</b> all the cooperatives organized ordinary and extraordinary general assemblies since their creation. The discussions turn around the topics like the countable report, the trainings given by SSOD and the reservoir valuing plans on the level of the four sites. But, for the maintenance of the reservoir, it is only on the level of the cooperatives of Edouk and Guidan Bado that the topic was discussed. <b>Table3:</b> all the co-operatives posses the three sub-committees "agriculture", "management of inputs shop " and "reservoir maintenance squad".The sites which are in pastoral zone (Edouk, Jaja) posses in addition one sub-committee "live stock raising". In support to fish stocking carried out on the level of the site of Guidan Bado, the reservoir cooperative set up a " fishing sub-committee". Only Bourdi I and Edouk set up a sub-committee "environment". This is why it is necessary to continue sensitizing on the level of the sites on the importance of the environment protection. <b>Table 4:</b> the number of cooperatives members is significant in Bourdi I and Guidan Bado and weak in Edouk and Jaja. The rate of participation in the cooperative in the villages of Edouk and Jaja is weak. It is supposed that it is because the users of the reservoirs are not sufficiently well informed of the need for adhering to the cooperative. It is necessary thus that the basic extension agents continue their activities of sensitizing in 2008 in order to make adhere the users to the cooperatives. The restitution of the contents of GA is done orally for the majority of the sites except for the case of the sites of Jaja and Bourdi I where it is also done by the presentation of meeting minutes. The contents of GA are thus transmitted to the level of benefiting villages. For the site of Edouk where the benefiting villages are scattered, the participants to GA use the occasions like the marriages, the markets, drawing up with the wells to transmit the contents of GA.</li> </ul>

<p>Evaluation by the study mission</p>	<ul style="list-style-type: none"> <li>• The visits of advanced sites are effective for the sensitizing of the populations. The choice of the persons in charge, the establishment of internal rules and regulations are well proceeded.</li> <li>• The interim evaluation carried out in February 2008 highlighted a case of disagreement between the users cooperative and the village chief. The follow-up carried out thereafter made it possible to determine the state of these disagreements and their causes. One of them is apparently the fact that the position of the village chief in the users cooperative lately established is not specified; this is why the seminars organized on the sites of reservoir clearly specify the allocation of the functions and the positioning of the user reservoir cooperative, the VDC and the village chief.</li> <li>• On the level of the site of Bourdi I, the project of emergency struggle against the locusts pilgrims wanted to support without conter part the farmers of the site by the digging of 50 concreted gardening wells. But, the cooperative with the support of the supervision (CDA, DDDA) asked for a participation of 50,000 CFA by well to the recipients on two campaigns of dry season agriculture. These amounts will be put in the case of the reservoir users cooperative . It was as noted for the site of Guidan Bado as there is a good collaboration between the cooperative, the technical offices and the Town hall within the framework of fish stocking in the reservoir (see the monitoring sheet of fish stocking for the details).What lets think that the spirit of the self development is being settled as well near the farmers as the technical offices.</li> <li>• During exchange seminars organized on the level of the 4 sites, it was noted that there are not functional relations between the cooperative and the VCD. The reasons were identified and studied during a PCM seminar organized with the region homologous. With this occasion, it was noted that the CDA do not have animation in the direction of these functional relations because they estimate that the cooperative and the VCD are organizations completely different from their objectives point of view. Thus it was proposed a system of diffusion of information based on the village delegates of the cooperatives who will be charged to diffuse the techniques acquired to the villagers instead of VCD.</li> <li>• <b>Level of indicator 2 in February 2009: Table 5:</b> all the cooperatives organized ordinary and extraordinary general assemblies since their creation. The discussions turn around the topics like accountancy, the valuing plan , the reservoir maintenance and the trainings given by SSOD. <b>Table 6:</b>all the cooperatives actually posses sub-committees "management of inputs boutique", " reservoir maintenance squad", "environment" and "agriculture", "livestock raising" on the level of all the sites (the self supervision deals with agriculture at the level of the sites of Jaja and Guidan Bado). In support to fish stocking carried out on the level of the site of Guidan Bado, the cooperative set up a " fishing sub-committee". It was set up a committee "well makers" at the level of the cooperative of Edouk only. <b>Table 7:</b> By comparing the year 2007 and 2008, the number of members on the level of the cooperatives of Bourdi I and Edouk increased because of carried out sensitizing. But, on the level of the cooperatives of Jaja and Guidan Bado, the number of members did not change. It should be recalled that at the time of the inventory study of the reservoirs carried out in 2006, the number of reservoir users in Jaja is of 229 people whereas the number of members to the cooperative is 142. What gives a very low rate of adhesion of 62%.This weak rate of adhesion is related to the fact that the work does not give much exploitation opportunities to the populations: The reservoir is essentially used for the watering of the animals and the household consumption</li> </ul>
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**Table 3.1(6) Monitoring sheet of the Project of support for the reinforcement of the capacities of the executive members of cooperative of the reservoir users**

Heading		Content
<b>Action name</b>		<b>Actions of reinforcement of the capacities of the reservoir users in management of the actions</b>
<b>Project name</b>		<b>Project of support for the reinforcement of the capacities of the executive members of the cooperative of reservoir users</b>
Context		The built reservoir are not yet sufficiently implemented. It is necessary to establish plans of valuing the reservoirs for their best implementation.
Objective		To establish and execute plans of valuing the reservoir by the organizations of the users.
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>• <u>Values target of the indicator 1</u>: on the level of all the sites, a Plan of valuing the reservoir has been established on the initiative of the farmers.</li> <li>• <u>Values target of the indicator 2</u>: at least 80% of the Plans of valuing the reservoir are carried out. <u>Data acquisition mode</u> : investigation carried out by basic extension agents near the executive members of the cooperatives</li> <li>• <u>Data acquisition period</u>: February 2008 (at the moment of the 3rd interim evaluation) and February 2009 (at the moment of the 5th interim evaluation)</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>• Presence of a farmable reservoir (category 1,2) or at ends of live stock raising (category 3)</li> <li>• Existence of basic extension agents in charge of the monitoring of the sites of the reservoir</li> </ul>
	State of the request	Checking of the needs for the 4 organizations of the users of the reservoir (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution on the 4 sites
	Project cost	8,534,966 CFA (2,133,741 CFA per site)
	Project content	<ul style="list-style-type: none"> <li>• Training on planning</li> <li>• Training the establishment of requests</li> <li>• Planning of the activities by the farmers of the sites of the reservoirs</li> <li>• Making of Training guides and supports</li> <li>• Follow up of activities</li> <li>• Evaluation of the activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>• Services provider (NGO ADA): responsible for the execution of the Training</li> <li>• Members of the offices of the cooperatives of the reservoir users: participation in the Training</li> <li>• CDA: follow-up of process</li> <li>• SSOD: evaluation</li> </ul>
Contributions of the population	For this Training, it is not asked contributions to the populations.	
Process of the activities and their results		<ul style="list-style-type: none"> <li>• December 2005-October 2006: study of the current state of the reservoirs, socio-economic study, analyzes potentialities</li> <li>• October 2006-April 2007: basic data-gathering, checking of the needs for the villagers</li> <li>• May -June 2007: formalities for the contract of provision of services for this project</li> <li>• July 2007: installation of the cooperatives of the reservoir users</li> <li>• August 2007: making of training guides and supports</li> <li>• September 2007: support for the establishment of the plans of valuing the reservoir</li> </ul>

Heading	Content									
	<b>List of actions of the reservoir users cooperative proposed during the constitutive GA.</b>									
	<table border="1"> <thead> <tr> <th>Site</th> <th>Bourdi</th> <th>Edouk</th> <th>Guidan Bado</th> <th>Jaja</th> </tr> </thead> </table>	Site	Bourdi	Edouk	Guidan Bado	Jaja				
Site	Bourdi	Edouk	Guidan Bado	Jaja						
	Development of rainfed agriculture	x	x	x						
	Development of rainy season agriculture	x	x	x						
	Prévention des conflits entre agriculteurs et éleveurs		x	x	x					
	Development of the animal production	x	x	x						
	Introduction of fishing and pisciculture		x	x						
	Agricultural inputs stocking	x	x	x						
	Development of the marketing of agricultural productions	x	x	x						
	Follow up, maintenance and repare of reservoirs	x	x	x	x					
	Protection of reservoirs using mechanical and biological actions		x	x	x					
	Development of fruit production			x						
	Adjustment of site to enlarge the farmable land			x						
	Popularization of production technics in the valley by the promotion of innovations in production means, irrigation equipment, water resources facilities and divers production factors.		x	x						
	Improvement of the quality of water for domestic usage and to make it potable for human consumption.				x					
	Research of water satisfaction needs for all users				x					
	renforcement of the solidarity between cooperative members				x					
	Best reservoir valuing				x					
	Development of incomes generating activities		x							

Heading	Content																																																																						
	<ul style="list-style-type: none"> <li>February, 2008 General assembly of the reservoir users cooperative (in the frame work of the third intermediate evaluation ; indicators 1 et 2)</li> </ul>																																																																						
	<table border="1"> <thead> <tr> <th>Site</th> <th>Activities</th> <th>Period</th> <th>Realisation</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Jaja</td> <td>1.Weeding around the dam</td> <td>february</td> <td>In progress</td> </tr> <tr> <td>2.Extension of the reservoir</td> <td>(3 times per month) March-April</td> <td>Not stated</td> </tr> <tr> <td>3.Tree plantation</td> <td>February July</td> <td>Meetings of planning the activites</td> </tr> <tr> <td>4.Construction of improved cooking stoves (5 per month ; total: 40)</td> <td>January-June , and November-December</td> <td>Sensitization, construction of 5 improved cooking stoves per month</td> </tr> <tr> <td>5.Diffusion of improved seed of millet and sorghum</td> <td>May, june to october</td> <td>Seeds of millet and sorghum are being prepared</td> </tr> <tr> <td rowspan="5">Bourdi I</td> <td>1.Protection and maintenance of the reservoir</td> <td>Janvary-August</td> <td>Postponed to April because of the unavailability of peoples</td> </tr> <tr> <td>2.Gardening , marketing</td> <td>April-June</td> <td>Not started</td> </tr> <tr> <td>3.Sensitization for the respect of rules and regulations</td> <td>January</td> <td>Information/sensitization about the internal regulations</td> </tr> <tr> <td>4. Assistance to gardening (purchase of fertilizers and onion seed)</td> <td>June</td> <td>Funds collection (850,000 F) and lunching the prospected fertilizer command</td> </tr> <tr> <td>5.Opening the literacy center</td> <td>January-february</td> <td>Activity non realised because of difficulties of choice of the site for the center</td> </tr> <tr> <td rowspan="6">Edouk</td> <td>1. 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Evaluation by populations	<ul style="list-style-type: none"> <li>• According to farmers during the 3rd interim evaluation (february,2008), the support to the establishment of reservoir valuing plans permit a good planning and a good management (execution, follow up and assessment) of actions for valuing the reservoirs. However, we can encounter certain problems on certain sites such as the non realization of planned activities and sponsoring problems (gathering of contributions for instance)</li> </ul>																																				
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>• <b>Level of indicator 1 in February 2008:</b>all the co-operatives worked out a plan of valuing of their reservoir. All the planned actions are self-managed by the farmers themselves. It was also planned actions of maintenance of the reservoir on the level of all the valuing plans in accordance with the spirit of the trainings given by SSOD.</li> <li>• <b>Level of indicator 2 in February 2008:</b>the plans of valuing the reservoirs were validated very recently. With the result that the majority of the planned actions are either in the course of execution or to be realized. So the need for continuing the monitoring of the implementation of these plans to ensure the realization of the actions.</li> <li>• To apply and extend the various techniques of the Action plan, which were checked in the sites of water reserves, at the concerned villages near the reservoirs, a system of popularizing these technics was established at the villages level. To this end, it was decided to add, from the coming fiscal year a project of adjustment of a technical system of popularization and information flow between recipients in the place of the inter-villagers seminars till then prospected in the plan.</li> <li>• <b>Level of indicator 1 in February 2009:</b>all the co-operatives worked out for the second time a plan of valuing their reservoirs. All the planned actions are self-managed by the farmers themselves. It has also been integrated actions of reservoir maintenance into the valuing plan in accordance with the spirit of the given trainings.</li> <li>• <b>Level of indicator 2 in February 2009:</b>all the reservoir valuing plans are in the course of execution on the level of the four sites. The level of execution and the type of activities carried out vary from one site to another. In Jaja, the absence of young men did not make it possible to carry out the extension of the reservoir. While in the cooperative of Bourdi I, the marketing of the garden products was not carried out because the special committee of purchase is not yet set up; the center of illiteracy has not been opened because the members of the cooperative did not agree on the choice of the site for the implantation of the center. For the cooperative of Guidan Bado, it is only the first-aid box that was not set up because of the non mobilization of the contributions specific to this activity.</li> <li>• February 2009; All the participants to the training on the establishment of requests are unanimous on the need for this training in order to benefit from the external supports. At this moment no organization has not worked out a file for request but however talks are engaged near the town halls, certain NGOs and the technical offices of the state.</li> </ul>																																				

**Table 3.1(7) Monitoring sheet of the Project of reinforcing capacities in maintenance of the reservoirs**

Heading		Content
<b>Action name</b>		<b>Actions of reinforcement of the capacities of the reservoir users in management of the actions</b>
<b>Project name</b>		<b>Project of reinforcement of the capacities in maintenance of the reservoirs</b>
Context		If the constructed reservoirs are not maintained, they fastly degrade. Therefore users must be organised and their capacities in terms of reservoir maintenance must be reinforced for them to be able to protect the reservoirs.
Objective		Establishment and execution of reservoir valuing plans by the users organisations.
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>• <u>Target value of indicator 1</u> : On all the sites, a reservoir maintenance plan is established trough populations initiative.</li> <li>• <u>Target value of the indicator 2</u> : At least 80% of reservoir maintenance plans are executed</li> <li>• <u>Data acquisition mode</u> : investigation conducted by the basic extension agents towards the executive members of the cooperative</li> <li>• <u>Data acquisition period</u>: February, 2008 (during the 3rd interim evaluation) and February, 2009 (during the 5th interim evaluation)</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>• Presence of a farmable reservoir (category 1, 2) or usable for livestock raising (category 3)</li> <li>• Installation of a cooperative for the reservoir users</li> </ul>
	State of the request	Check out of needs for the 4 cooperatives of reservoir users (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution on the 4 sites
	Project cost	2,862,772 CFA (715,693 CFA per site)
	Content of the project	<ul style="list-style-type: none"> <li>• Training on reservoir maintenance technics for members in charge of reservoir maintenance</li> <li>• Planning of maintenance activities by the farmers of arroud the reservoir</li> <li>• Establishment of training guides and supports</li> <li>• Follow up of activities</li> <li>• Evaluation of activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>• Service provider (NGO ADA): in charge of executing the training</li> <li>• Members of maintenance squad of the reservoir : participation to the training</li> <li>• CDA : Follow up process</li> <li>• SSOD : evaluation</li> </ul>
Contributions of the populations	For this training, it is not ask populations for contributions.	



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Process of activities and their results	<ul style="list-style-type: none"> <li>December, 2005 – october, 2006 : study on the present state of reservoirs, socio-economic study, potentialities analysis</li> <li>October, 2006 – april, 2007 : basic data collection, check out villagers needs</li> <li>May – june, 2007 : formalities for service roviding contract for this project</li> <li>July, 2007 :Set up of cooperatives of reservoir users</li> <li>August, 2007: establishment of training guides and supports</li> <li>August, 2007 : Training on reservoir maintenance (1<sup>st</sup> day : theory ; 2<sup>nd</sup> day : practical) ; it concerns the sensitization on the importance of reservoir capable of containing water. After this sensitization, it is more easy to understand the importance of maintenance.</li> </ul>																																																											
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Evaluation by populations	<p>According to famers during the 3rd interim evaluation (February 2008), the reinforcement of the capacities in management and maintenance of the reservoir allow:</p> <ul style="list-style-type: none"> <li>• The sustainable use of the reservoir</li> <li>• Reinforcement of knowledge on the problems which the reservoir can encounter and the suitable manners to regulate them.</li> <li>• However, the maintenance unit by the maintenance squad of the reservoir not being sufficiently well established, it does not make it possible to regulate the problem of the compliance with the rules of use of the reservoirs by sensitizing the population.</li> <li>• At the second year of existence, the unit of maintenance functioned well thanks to the sensitizing of the members of the cooperative.</li> </ul>
Evaluation by the study mission	<ul style="list-style-type: none"> <li>• <b>Level of indicator 1 in February 2008:</b>all the co-operatives worked out a plan of maintenance of their reservoir which they integrated in the valuing plan.</li> <li>• <b>Level of indicator 2 in February 2008:</b> the plans of maintenance of the reservoirs were recently established. With the result that the majority of the planned actions are either in the course of execution or to be realized. So the need for continuing the monitoring of the implementation of these plans to ensure the realization of the actions.</li> <li>• The problems which were identified during the training and measures which can be realizable by the populations were already almost taken by the farmers. It is significant from now on that maintenance is made in a durable way. The populations need external support for what they cannot do. In Jaja, a water leakage was noted on the part downstream from the dyke. To increase the quantity of water stocked, it is significant to repair to stop the escape. Also, on the site of Guidan Bado, the altitude of the top of the dyke is lower than that of the spillway. Consequently, the sill way is not functional. According to the population, water passed over the dyke in August 2007. The farmers thus put lateritic ground at the top of the dyke to raise it. If it rains much in this situation, the reservoir can cease and the situation can be very dangerous.</li> <li>• Following this situation the cooperative requested for the rehabilitation of the reservoir addressed to the regional agriculture service and the regional service of the rural engineering worked out two technical files which were submitted to the Special Program of the President of the Republic for financing. This shows the type of relation governing the collaboration between the technical offices of the State and the populations which they are brought to support.</li> <li>• <b>Level of indicator 1 in February 2009:</b> all the cooperatives worked out a plan of maintenance of their reservoir which they integrated in the valuing plan.</li> <li>• <b>Level of indicator 2 in February 2009:</b>100% of the plans of maintenance of the reservoirs were carried out on the level of the four sites.</li> </ul>

**Table 3.1(8) Monitoring sheet of the Project of support for the organization of the populations**

Heading		Contents
<b>Name of Action</b>		<b>Actions of reinforcement of the capacities of the populations in management of the actions</b>
<b>Name of Project</b>		<b>Project of support for the organization of the populations</b>
Context		In the targeted villages, at the beginning, it was frequent that the decisions concerning the problems of development of the village are made by the chief of village or the elders of the village in a unilateral way, in the majority of the cases without true village consensus. Indeed, at the time of the basic study, the question "Who makes the decisions in the village for all the questions which engage the village?" was posed and the most answers were "the chief of the village" that is 40,5% (15 villages). Only 5 villages (15,3%) quoted "the village Assembly" The villages do not have almost to meet to solve the problems together. This is why it is desirable to set up democratically an organization in order to be able to express the will of development of all the villagers, and to carry out activities of greater width. Moreover, for a durable village development, it is necessary to implement an approach of the self development, through which the villagers devote themselves durably and in an autonomous way to the resolution of the problems of development of the village.
Objectives		To promote the development of the villages through the installation of the Village Development Committees (VDC)
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>• <u>Values target of indicator 1</u>: the Village Development Committees are set up in the targeted villages</li> <li>• <u>Data acquisition mode</u>: Investigation carried out by basic extension agents near the villagers.</li> <li>• <u>Data acquisition period</u>: February 2007 (1st interim evaluation)</li> <li>• <u>Values target of indicator 2</u>: the General Assembly (GA) of the Village Development Committees is held at least once per annum.</li> <li>• <u>Data acquisition mode</u> : investigation carried out by basic extension agents near the executive members the VDC.</li> <li>• <u>Data acquisition period</u>: April, 2008 and February ,2009 (5th interim evaluation)</li> </ul>
Establishment of the plan Project content	Conditions for the adotion of the project	Presence of an exploitable reservoir for agriculture (category 1,2) or at ends of live stock raising (category 3)
	State of the request	Checking of the populations needs of the 20 benefiting villages around the 4 sites of the reservoirs (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution on the 22 villages (20 benefiting villages + 2 other villages)
	Project cost	9,771,610 CFA (444,164 CFA by a village)
	Content of the project	<ul style="list-style-type: none"> <li>• Making of training guides and supports</li> <li>• Training on the election of the executive members of the Village Development Committee</li> <li>• Training on the leadership (role of the leaders, methods of establishing the statutes and rules of procedure, Goals and objectives of an organization, Management of an organization, Accountancy)</li> </ul> <p><b><u>NB</u></b>: This training was carried out at the same time as that on the establishment, the execution, the follow-up and the evaluation of the village development plan</p> <ul style="list-style-type: none"> <li>• Follow up of activities</li> <li>• Evaluation of the activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>• Services provider (NGO ADA): responsible for the execution of the training</li> <li>• Populations of the benefiting villages: participation to the training, election of the executive members of the VDC</li> <li>• CDA: follow-up of process</li> <li>• SSOD: evaluation</li> </ul>
Contributions of the populations	For this training, it is not asked populations for the contributions.	
Process of activities and their results		<ul style="list-style-type: none"> <li>• December, 2005-October, 2006: Study on the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>• October, 2006:Basic data collection, checking of the request of the villagers</li> <li>• October, 2006:Formalities for the contract of provision of services for this project</li> <li>• October, 2006: Making of training guides and supports</li> </ul>

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	Jaja	Jaja	Not available		Not available	
		Mallamawa	Not available		Not available	
	Bourdi I	Bourdi Liman	3		6	
		Roukouzoum	6		18	
		Dindi	4		10	
	Edouk	Edouk I	10		6	
		Edouk II	5		10	
		Akankar	13		4	
		Innaghourhour	12		6	
		Adjangaroum	14		3	
		Imboragane	24		10	
		Eress	7		14	
		Intarakamat	13		11	
		Damayok	14		8	
		Intabadjangart	8		15	
		Chintezmey	30		8	
		Tagalalt	15		10	
		Innabado	8		5	
		Chillijitane	14		8	
		Tikadjit	11		7	
	Guidan	Guidan Bado	4		8	
	Bado	Abaza Talabé	3		7	
	<ul style="list-style-type: none"> <li>February, 2009 : investigation carried out by the basic extension agents towards the villagers (to inform the indicator 2) during the 5<sup>th</sup> interim evaluation</li> </ul>					
	<b>Number of ordinary and extra ordinary general assemblies (may, 2008 – december, 2008)</b>					
	Site	VDC	Ordinary GA		Extraordinary GA	
			Nu mb er	Main scopes	Nu mb er	Main scopes
	Jaja	Jaja	17	Implementation VDP,accountency	35	Proposition solution to emergencies
		Mallamawa	12	Implementation of VDP ,accountency	30	Decision making about unprospected situation, implementation of VDP
	Bourdi I	Bourdi Liman	3	Establishment of VDP Stocking in cereals bank	2	Evaluation of realised activities Sensitization of members
		Roukouzoum	3	Stocking in cereals bank Purchase of animals for fattening Establishment of VDP	4	Problem of water Cereal bank Fattening Evaluation of VDP
		Dindi	2	Establishment of VDP Information Sensitization of members Evaluation of realised activities	1	Sensitization of members on VDP Evaluation of realised activities

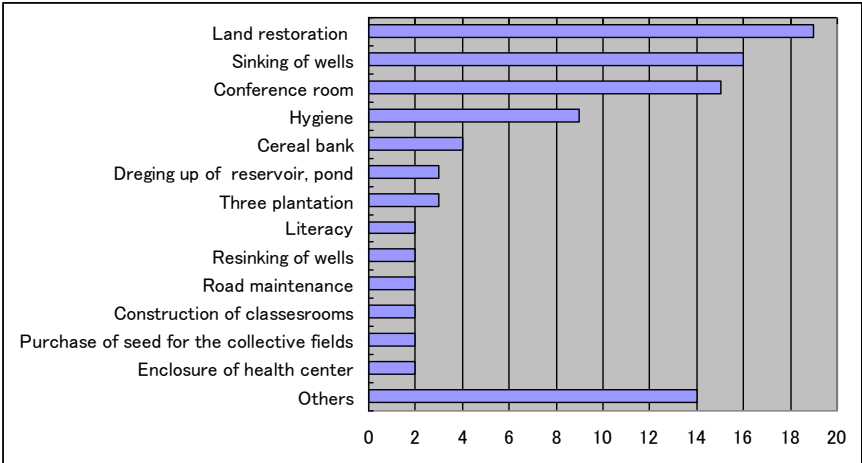
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According to them, the VDC allowed mainly: <ul style="list-style-type: none"> <li>✓ The broadmindedness of the villagers,</li> <li>✓ Reinforcement of social cohesion,</li> <li>✓ The realization of several activities of common interest.</li> </ul> </li> <li>• The main insufficiency raised by the villagers is the lack of recycling of the trainings in the field of the organization.</li> </ul>
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Heading	Contents
Evaluation by the study mission	<ul style="list-style-type: none"> <li>• <b>Level of indicator 1 in February 2007:</b> all the 22 CVD were set up in December 2006. The percentage of the women within the executive members of the VDC is very low (13,2%). Like sensitizing was well carried out by the CDA and the school head masters of certain villages, the democratic election by vote with secret bulletin was well organized. The school head masters who followed the Training of School For All of the JICA had experiences as regards to democratic election and highly contributed to the installation of the VDC. Some school head masters continue to give advises during the establishment and the execution of the Village Development plan. Also according to the interview carried out near part of the populations, the vote with secret bulletin has a good reputation.</li> <li>• <b>Level of indicator 2 in April 2008:</b> all the VDC hold of the general assemblies. The number of GA held up to now varies from 3 to 30. They possess each a statute and rules of procedure and are approved on the level of their respective communes. All the members of the VDC discharged their expenses of adhesion which vary between 100 and 2,000 CFA with in majority 500 CFA and 1,000 CFA. Moreover, all the VDC instituted annual contributions which vary between 250 and 7,000 CFA with an average of 1,000 CFA per person. Also, certain VDC organize special contributions at the time of the realization of certain activities. Each VDC has several specialized sub- committees (nature and the number vary according to the VDC). But, for the majority, they have sub-committees agriculture, live stock raising, microfinances, COGES and craftsmen. From the point of view of their functionality, all the VDC organized ordinary and extra ordinary general assemblies. The main topics of discussion during these general assemblies are: accountancy, validation of the village plan of development (VDP), evaluation of the activities, contributions, restitution of the trainings. In the framework of the management of the VDC, there exist 4 CVD whose treasurer does not hold a registering book because of the lack of training in Bourdi Liman, illiteracy of the treasurer in Roukouzoum, Dindi and Abaza Talabé. For the three other villages around the site of Bourdi I, their VDC existed before the arrival of the project and at the time of GA of installation, it was decided to take back the same executive members.</li> <li>• <b>Level of indicator 2 in February 2009:</b> From the point of view of their functionality, all the VDC organized ordinary and extraordinary general assemblies. The main topics of discussion during these general assemblies are: accountancy, validation of the village plan of development (VDP), evaluation of the activities, contributions. At their second year of existence, one can say that all the VDC understood the approach of self development. For the moment, there is no VDC which has problems with the chief of the village. It is because before the installation of the VDC, the discussion was well carried out between the chief of the village and the VDC. Certain villagers noted the "necessity of recycling" at the time of the last evaluation. At the time we asked for the details, it was about the revision of the method of establishing and evaluation of the VDC. For that the CDA explained again the methods.</li> </ul>

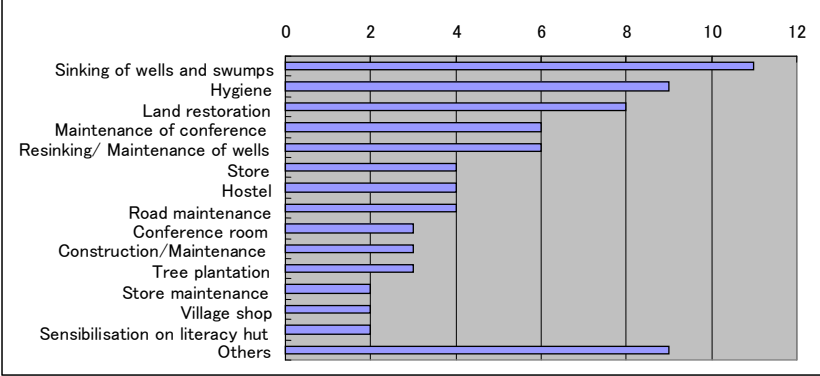
**Table 3.1(9) Monitoring sheet of the Project of support for the reinforcement of the capacities of the executive members of the organizations**

Heading		Contents
Name of Action		<b>Actions of reinforcement of the capacities of the populations in management of the actions</b>
Name of Project		<b>Project of support for the reinforcement of the capacities of the executive members of the organizations</b>
Context		The resources of the villages are not yet sufficiently implemented. It is necessary to establish plans of village development for their best implementation.
Objectives		To establish and carry out plans of village development by the VDC
Awaited results and their indicators		<ul style="list-style-type: none"> <li>• <u>Values target of indicator 1</u>: in all the villages, a village development plan is established on the initiative of the villagers.</li> <li>• <u>Data acquisition mode</u> : investigation out by basic extension agents near the villagers and the executive members of the VDC</li> <li>• <u>Data acquisition period</u>: February 2007 (At the moment of the 1st intermediate evaluation) April 2008</li>   <li>• <u>Values target indicator 2</u>: at least 80% of the plans of village development are carried out</li> <li>• <u>Data acquisition mode</u>: investigation carried out by basic extension agents near the villagers and the executive members of the VDC</li> <li>• <u>Data acquisition period</u>: August 2007, November 2008</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>• Presence of an exploitable reservoir for agriculture (category 1,2) or at ends of live stock raising (category 3)</li> <li>• Existence of Village development committee.</li> </ul>
	State of the request	Checking of the needs of the CVD of the 22 villages (20 benefiting villages + 2 other hamlets) around the 4 sites of the reservoirs (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution in 22 villages
	Project cost	9,199,794 CFA (418,172 CFA by village)
	Contents of the project	<ul style="list-style-type: none"> <li>• Making of training guides and supports</li> <li>• Training on planning</li> <li>• Training on the execution of a plan</li> <li>• Training on the skills of negotiation</li> <li>• The follow-up of the activities</li> <li>• The evaluation of the activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>• Service provider (NGO ADA): responsible for the execution of the training</li> <li>• Populations of the benefiting villages: participation in the training, establishment of a plan, self follow up and self evaluation</li> <li>• CDA: follow-up of process</li> <li>• SSOD: evaluation</li> </ul>
	Contributions of the populations	For this training, it is not asked populations for contributions.









Heading	Contents											
Process of activities and their results	<ul style="list-style-type: none"> <li>●December 2005-October 2006:study on the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>●October 2006:basic data collection, checking of the request of the villagers</li> <li>●October 2006:formalities for the contract of provision of services for this project</li> <li>●October 2006: making of training guides and supports</li> <li>●November 2006: Conducting the training on the democratic installation of the executive members of the Village Development Committees</li> <li>●December 2006:village development committees were set up in all 22 villages.</li> <li>●December 2006:conduct of the training on the reinforcement of the capacities of the village development committees</li> </ul> <p style="text-align: center;"><b>Outline of the training on the reinforcement of the capacities of the VDC</b></p> <table border="1"> <tbody> <tr> <td><b>Date</b></td> <td>Tahoua: from the 11 to December 17, 2006, Kao: from the 22 to December 28, 2006</td> </tr> <tr> <td><b>Place</b></td> <td>Tahoua: The Chamber of Commerce, Kao: Ecole normale</td> </tr> <tr> <td rowspan="2"><b>Participants</b></td> <td>Tahoua:37 persons (4 members of VDC by village, 5 CDA, 1 Instructor of literacy, 1 Agent of Community Development, 4 local councillors)</td> </tr> <tr> <td>Kao:59 persons (2 members of the VDC absent) (4 members of VDC by village, 1 local councillor)</td> </tr> <tr> <td><b>Organizers</b></td> <td>Tahoua: 3 Organizers of NGO ADA Kao: 2 CDA, 1 local councillor, 1 Instructor of literacy (the control was made by the 3 organizers of NGO ADA).</td> </tr> <tr> <td><b>Topics</b></td> <td> <ul style="list-style-type: none"> <li>•What is the self development?(revision )</li> <li>•the objectives and bodies of the VDC (Revision)</li> <li>•roles and qualities of the executive members of the VDC (Revision)</li> <li>•Establishment of the Plan of Village Development</li> <li>•Execution, monitoring, evaluation of the Plan of Village Development</li> <li>•Mobilization of the local resources</li> <li>•financial and material management</li> <li>•Organization of the meetings and information management</li> </ul> </td> </tr> </tbody> </table>	<b>Date</b>	Tahoua: from the 11 to December 17, 2006, Kao: from the 22 to December 28, 2006	<b>Place</b>	Tahoua: The Chamber of Commerce, Kao: Ecole normale	<b>Participants</b>	Tahoua:37 persons (4 members of VDC by village, 5 CDA, 1 Instructor of literacy, 1 Agent of Community Development, 4 local councillors)	Kao:59 persons (2 members of the VDC absent) (4 members of VDC by village, 1 local councillor)	<b>Organizers</b>	Tahoua: 3 Organizers of NGO ADA Kao: 2 CDA, 1 local councillor, 1 Instructor of literacy (the control was made by the 3 organizers of NGO ADA).	<b>Topics</b>	<ul style="list-style-type: none"> <li>•What is the self development?(revision )</li> <li>•the objectives and bodies of the VDC (Revision)</li> <li>•roles and qualities of the executive members of the VDC (Revision)</li> <li>•Establishment of the Plan of Village Development</li> <li>•Execution, monitoring, evaluation of the Plan of Village Development</li> <li>•Mobilization of the local resources</li> <li>•financial and material management</li> <li>•Organization of the meetings and information management</li> </ul>
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Heading	Contents
Evaluation by the populations	<p>August, 2007, according to villagers' "the activities carried out allowed especially the reinforcement of social cohesion and facilitated the realization of the actions of common interest". "These activities enabled us to rely on us and to carry out activities of development with our own resources.</p> <p>November, 2008, according to a carried out interview all the 22 villages answered to intend to continue the establishment the execution of the VDP. The young people of the village also learned how to work out and carry out VDP (Edouk I). That proves that there will be a continuity of these activities even after the project. The spirit of self development (Tashi Da Kanka) is well settled in the villages (Tagalalt) due to the intervention of the project. The president of the VDC of Mallamawa is impressed by the participation of all the villagers in the realization of the activities. The VDP made it possible to reinforce solidarity between the villagers, to restore confidence and to carry out the activities with our own efforts (Damayok).</p>
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>● <b>Level of indicator 1 in February 2007:</b> finalization of the establishment of the Village Development Plans in all 22 villages for the year 2007.</li> <li>● <b>Level of indicator 2 in August 2007:</b> The rate of execution of the 100 activities of the VDP is carried out on average to 91 %. That is to say that 4 activities on average were carried out per village. For the execution of the village development plans, the contributions are mobilized by the villagers themselves. On the level of certain villages, it was recorded the contribution of their nationals who reside abroad and the people influential such as the great traders. On other part, it should be noted that in addition to that, the populations provided physical and material contributions. The amount of the contribution is generally given according to the number of families at the time of GA. Then, the executive members of the VDC sensitize the villagers on the need for the activities by visiting each family. In a total way, according to the situation in August for all these achievements the populations of the 22 villages mobilized as financial resources 5,616,525 cfa and 30,622 men/day in the form of physical participation, that is on average respectively by village 255,296 cfa and 1.392 men/day. The comparison between the 4 sites reveals that there is not difference between the sites with regard to the level of realization. Concerning the types of activities, on the level of the villages around the site of Edouk, there are the activities of eyebrow ridges made especially in the pasture zones. On the other hand in the villages around Bourdi I, Guidan Bado and Jaja, there were especially the activities of realization of zaï and stone cords on the level of the agricultural sites, of the methods which adapt to this kind of field. Also, on the level of the site of Edouk, many villages not having a conference room constructed hangars. Many wells were also built to solve the problems of drinking water for men and livestock. The interview of the villagers has shown that they are proud of themselves and started to rely on themselves by solving certain problems of the village (source: Report of monitoring of the basic extension agents, February at July 2007).</li> <li>● <b>Level of indicator 1 in April 2008:</b> all the VDC worked out for the second time a village development plan. According to villagers', the establishment of these VDP makes it possible to plan well, execute, follow up and evaluate the actions of development. The VDP allows the execution of the activities in time and their distribution in time and space. The VDP made it possible to the villagers to understand more the self development.</li> </ul>

Heading	Contents
	<p><b>Level of indicator 2 in November 2008:</b> 78 activities were programmed in the VDP of witch 70 realized either that is a rate of execution of 90%. Moreover, 9 other not programmed activities were added and carried out. This gives an average of 4 activities carried out by villages. In a total way, the populations of the 22 villages mobilized an amount of 2,606,780 CFA that is an average of 118,490 CFA per village for the financing of the VDP. The activity undertaken in the majority of the villages is related to the construction of well and sumps for the satisfaction of the requirements of drinking water and for the watering of the animals. That gave place to Community sumps which did not exist before the installation of the VDC. One finds in 2nd position the public health which is done now in a spontaneous way. Concerning the land recovery , one notes a reduction of the surfaces this year because of the requirements met through the activities undertaken in the field the previous year. Also, this year, the villages have address requests to certain organizations for the financing of the activities which they are not able to carry out. It is about: well (Dindi and Akankar), food for children (Edouk I). In addition, following the performances noted on the level of the VDC, certain villages profited from support in particular: Integrated Health Center (IHC) in Roukouzoum, Literacy centers in Bourdi Liman and Roukouzoum.</p>

**Table 3.1(10) Monitoring sheet of the Project of improvement of the agricultural techniques - 1. Basic notions on the crops, plant health prevention**

Heading		Contents	
Name of Action		Actions of improvements of the incomes	
Name of Project		Project of improvement of the agricultural techniques -1. basic notions on the crops, plant health prevention	
Context		In Niger, the harmful insects that inflict sometimes significant damage to crops. To fight against them, one notes the use of plant health products, but the effect of these measurements remains insufficient. The distribution of the plant health products in rural area is problematic because the peasants make enormous efforts to acquire them while thinking of thus increasing their productivity by using them. However, because of the insufficiency of knowledge on the basic concepts for the crops and on the suitable way to use the plant health products, satisfactory results are not obtained by the farmers. It is urgent to diffuse knowledge on the basic concepts on the crops and at the same time on the main harmful insects and also on the suitable techniques making it possible to use the plant health products effectively to fight against the diseases and other enemies of the crops. The basic extension agents are in theory charged of the supervision of the producers in this field. But, they currently have little knowledge on the matter. This is why, it is significant to reinforce their capacity on the basic notions of the crops and the plant health prevention so that they can supervise the rural producers well.	
Objective		To reinforce the capacities of the basic extension agents for the support/advise to farmers of the sites on the basic notions of the crops and the plant health prevention.	
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>● <u>Value targets of indicator 1:</u> at least 80 % of the extension agents having taken part in the training acquired new knowledge on the basic notions of the crops and the plant health prevention</li> <li>● <u>Data acquisition mode:</u> interviews of the basic extension agents by SSOD</li> <li>● <u>Data acquisition period:</u> April 2008 (after the training)</li>   <li>● <u>Value targets of indicator 2:</u> at least 80 % of the extension agents having taken part in the training trained the farmers of the sites which they supervise on the basic notions of the crops and the plant health prevention</li> <li>● <u>Data acquisition mode:</u> interviews of the basic extension agents by SSOD</li> <li>● <u>Data acquisition period:</u> November 2008</li>   <li>● <u>Value targets of indicator 3:</u> at least 50 % of the farmers trained by the basic extension agents having taken part in the Training applied in their fields new knowledge on the basis of the crops and the plant health prevention</li> <li>● <u>Data acquisition mode:</u> investigation by the basic extension agents near the farmers of the sites</li> <li>● <u>Data acquisition period:</u> January 2009</li> </ul>	
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1, 2) or for livestock raising (category 3)</li> <li>● Existence of cooperatives of the reservoirs users</li> </ul>	
	State of the request	Checking of the requirements in support/advise for the 4 organizations of the reservoirs users (Bourdi I, Edouk, Guidan Bado, Jaja)	
	Decision of adoption	Execution of the training for the supervisors of the 4 sites	
	Project cost	2007	4,973,870 CFA (1,243,468 CFA per site)
		2008	3,977,590 CFA (1,325,863 CFA per site)
	Content of the project	2007	<ul style="list-style-type: none"> <li>● Training on the basic notions of the crops</li> <li>● Training on the plant health prevention</li> <li>● Making of training guides and supports</li> <li>● Followed up of activities</li> <li>● Evaluation of the activities</li> </ul>
		2008	<ul style="list-style-type: none"> <li>● Training of the farmers by the CDA and the DDDA</li> </ul>
Actors	<ul style="list-style-type: none"> <li>● SSOD: responsible for the execution of the training with the technical collaboration of the ICRISAT (2007)</li> <li>● CDA: participation in the training of the ICRISAT, sensitizing and followed process near the farmers of the sites (2007)</li> <li>● DDDA: participation in the training (2007)</li> <li>● CDA, DDDA: responsible for the execution of the training on the gardening (2008)</li> <li>● SSOD: evaluation</li> </ul>		

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	Contributions of the State services	<ul style="list-style-type: none"> <li>• Provision of the DDDA and CDA of the concerned zones</li> <li>• Placed at the disposal of the homologous by the concerned regional services</li> </ul>																														
	Contribution of the populations	20% of the amount of the equipment (20,000 CFA per site)																														
Process of the Activities and their effectiveness		<ul style="list-style-type: none"> <li>•December 2005-October 2006: study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>•October 2006:basic data collection</li> <li>•May-June 2007:dialogues with partner ICRISAT for the execution of the project</li> <li>•September 2007:making of training guides and supports checking of the needs for the villagers</li> <li>•October 2007: training on the basic notions of the crops</li> </ul>																														
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Evaluation the study mission	<ul style="list-style-type: none"> <li>At the beginning, it was envisaged to introduce the techniques near the villagers directly, but it is noted through the practical training that for a future propagation, it was significant that these techniques are firmly acquired on the level of the basic extension agents of the DRDA.</li> <li>It is significant to introduce these techniques by making sure that the peasants or the agents charged to popularize agriculture know well the basic technics and knowledge which one regards as already acquired.</li> <li>The ICRISAT to which this formation was entrusted is an institute of research of a high level of technics and knowledge, but does not control all the aspects related to extension. This is why, it should be taken care that this new technics is transferred to the farmers under good conditions.</li> <li><b>Level of indicator 1 in April 2008:</b> The training made it possible to reinforce their knowledge in the field of gardening and the discovery of device ECOFARM integrating this activity. For the majority of the agents, these technics are already known.</li> <li><b>Level of indicator 2 in November 2008:</b>the basic extension agents (DDDA and CDA) of the concerned sites trained the farmers of their respective sites: Bourdi I, Edouk and Guidan Bado, that is a rate of 75% of the formed agents which gave the training near the farmers. The training of the extension agents was carried out by ICRISAT to prevent the fact that the farmers are directly trained by the specialized research center. This will have the advantage of avoiding the problem of popularization of the techniques in rural area. This strategy also makes it possible to reinforce the system of support/advise brought by the extension agents to the farmers and to create the conditions of its durability.</li> <li><b>Level of indicator 3 in January 2009:</b>all the technics having been the subject of training on the gardening were practically applied except for the plant health prevention, weeding and mulching. That is due to the fact that it is difficult to identify the enemies of crops (insects, birds, nematodes...) as a preliminary, with the result that the curative control is more applied. Concerning weeding and mulching, it plays the same role (that to bring organic matter to soil) as that for the manure application. This is why this technic is seldom applied by the farmers.</li> </ul>																																				

**Table 3.1(11) Monitoring sheet of the Project of improvement of the agricultural techniques -2.Introduction of the ecofarms**


Heading		Contents	
Name of Action		Actions of improvements of the incomes	
Name of Project		Project of improvement of the agricultural techniques -2.Introduction of the ecofarms	
Context		In the targeted sites, there are some reservoirs but their capacity as regards to the retention of water has limits and very little reservoirs keep water all the year (1 pilote site only out of 4). Thus, in the majority of the sites water remains like before an invaluable resource. There is thus the necessity to set up a system of water economy in order to be able to diffuse it near the farmers of the sites.	
Objective		To improve the efficient utilisation of the water resources of the sites.	
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>● <u>Value targets of indicator 1</u>: at least 80% of the farmers of the sites became aware of the need for water economy.</li> <li>● <u>Data acquisition mode</u>: Interviews by SSOD near the farmers of the sites</li> <li>● <u>Data acquisition period</u>: April 2008 (After the training)</li> <li>● <u>Value targets of indicator 2</u>: at least the half of the farmers of the targeted sites practice the agricultural technics taking into account the economy of water</li> <li>● <u>Data acquisition mode</u>: interviews by SSOD near the farmers of the sites.</li> <li>● <u>Data acquisition period</u>: December 2008</li> </ul>	
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1,2)</li> <li>● Availability of approximately 1 hectare of arable land</li> <li>● Availability of water for watering all the year (in theory no contribution of water, but the need for watering at the beginning of the plantations)</li> <li>● Existence of organizations of the users of the reservoirs</li> </ul>	
	State of the request	Checking of the needs of the 3 organizations of the reservoirs users (Bourdi I, Edouk, Guidan Bado)	
	Decision of adoption	Execution on the 3 sites	
	Project cost	2007	15,605,840 CFA (5,201,947 CFA per site)
		2008	6,529 850 CFA (2,176,617 CFA per site)
	Content of the project	2007	<ul style="list-style-type: none"> <li>● Training on farming technics with water economy (introduction of ecofarm)</li> <li>● Supply of a number of material (equipment for fields of one hectare, 300 seedlings of apple trees of the Sahel, 600 seedlings of hedges, wind break forest)</li> <li>● Making of training guides and supports</li> <li>● Monitoring of activities</li> <li>● The Evaluation of the activities</li> </ul>
		2008	<ul style="list-style-type: none"> <li>● The establishment of guides and support on fruit growing</li> <li>● Purchase of materials and plant materials (for plantation and refilled)</li> <li>● Information/sensitizing of farmers</li> <li>● Training farmers on the technics of fruit growing for 15 participants per site during 2 days at the end of August</li> <li>● Training on pruning and weaning of the grafted seedlings in mid-October, one day per site</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>● SDSO: responsible for the execution of the training with the technical collaboration of ICRISAT (2007)</li> <li>● Mr. ZANGUI specialist in fruit growing for the training on the technics of arboriculture (2008)</li> <li>● Farmers of the sites: participation in the training</li> <li>● CDA: follow-up of the process near the farmers on the sites</li> <li>● SSOD: evaluation</li> </ul>	
	Contributions of the populations	2007	5 % of the cost of the materials and plant materials (300,000 CFA per site)
		2008	20% of the amount of the equipments (132, 200 CFA per site)

Heading	Contents																																																																																																																											
<p>Process of the activities and their effectiveness</p>	<ul style="list-style-type: none"> <li>●December 2005-October 2006:study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>●October 2006:basic data acquisition</li> <li>●May 2007:dialogue with ICRISAT for the execution of the project</li> <li>●May 2007: field survey by ICRISAT.</li> <li>●December 2007:making of training guides and supports, checking out of the needs for the villagers</li> <li>●February 2008:installation of the demonstration fields of Ecofarm</li> <li>●April 2008:interviews by SSOD near the farmers of the sites to inform indicator 1</li> </ul> <table border="1"> <thead> <tr> <th></th> <th>Bourdi I</th> <th>Edouk</th> <th>Guidan Bado</th> </tr> </thead> <tbody> <tr> <td>Participants in the formation</td> <td>15</td> <td>19</td> <td>25</td> </tr> <tr> <td>Comprehension of demonstration content</td> <td>60%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>1. Techniques of water economy</td> <td>0%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>2. Hedge</td> <td>60%</td> <td>100%</td> <td>100%</td> </tr> <tr> <td>3. Apple tree of the Sahel</td> <td>60%</td> <td>100%</td> <td>100%</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>●August 2008:training of the farmers on the technics of fruit growing</li> </ul> <p>Participants in the training on the grafting</p> <table border="1"> <thead> <tr> <th rowspan="2">Site</th> <th colspan="3">number of trained people</th> </tr> <tr> <th>Total</th> <th>Men</th> <th>Women</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>16</td> <td>16</td> <td>0</td> </tr> <tr> <td>Edouk</td> <td>16</td> <td>14</td> <td>2</td> </tr> <tr> <td>Guidan Bado</td> <td>16</td> <td>13</td> <td>3</td> </tr> <tr> <td>Total</td> <td>48</td> <td>43</td> <td>5</td> </tr> </tbody> </table> <p>NB: including 1 CDA trained on the level of each site</p> <table border="1"> <thead> <tr> <th rowspan="2">Designation</th> <th colspan="2">Bourdi</th> <th colspan="2">Edouk</th> <th colspan="2">Guidan Bado</th> <th colspan="2">Total Seedlings</th> </tr> <tr> <th>Provided</th> <th>Grafted succeeded</th> <th>Provided</th> <th>Grafted succeeded</th> <th>Provided</th> <th>Grafted succeeded</th> <th>Provided</th> <th>Grafted succeeded</th> </tr> </thead> <tbody> <tr> <td>Ordinary mango tree</td> <td>50</td> <td>24</td> <td>150</td> <td>0</td> <td>150</td> <td>47</td> <td>450</td> <td>71</td> </tr> <tr> <td>Stock volka</td> <td>150</td> <td>114</td> <td>150</td> <td>0</td> <td>150</td> <td>64</td> <td>450</td> <td>178</td> </tr> <tr> <td>Jujube tree</td> <td>75</td> <td>0</td> <td>75</td> <td>0</td> <td>75</td> <td>0</td> <td>225</td> <td>0</td> </tr> <tr> <td><b>TOTAL</b></td> <td><b>375</b></td> <td><b>138</b></td> <td><b>375</b></td> <td><b>0</b></td> <td><b>375</b></td> <td><b>111</b></td> <td><b>1,125</b></td> <td><b>249</b></td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>● October 2008: Training on pruning and weaning of the grafted seedlings</li> </ul> <table border="1"> <thead> <tr> <th rowspan="2">Site</th> <th colspan="3">number of trained people</th> </tr> <tr> <th>Total</th> <th>Men</th> <th>Women</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>6</td> <td>6</td> <td>0</td> </tr> <tr> <td>Edouk</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Guidan Bado</td> <td>7</td> <td>6</td> <td>1</td> </tr> <tr> <td>Total</td> <td>13</td> <td>12</td> <td>1</td> </tr> </tbody> </table> <p><b>NB:</b> including the CDA of Bouza</p> <p>The training was not carried out in Edouk because the seedlings died</p> <ul style="list-style-type: none"> <li>●December 2008:interviews by the SSOD near the owners of the sites to inform indicator 2</li> </ul>		Bourdi I	Edouk	Guidan Bado	Participants in the formation	15	19	25	Comprehension of demonstration content	60%	100%	100%	1. Techniques of water economy	0%	100%	100%	2. Hedge	60%	100%	100%	3. Apple tree of the Sahel	60%	100%	100%	Site	number of trained people			Total	Men	Women	Bourdi I	16	16	0	Edouk	16	14	2	Guidan Bado	16	13	3	Total	48	43	5	Designation	Bourdi		Edouk		Guidan Bado		Total Seedlings		Provided	Grafted succeeded	Provided	Grafted succeeded	Provided	Grafted succeeded	Provided	Grafted succeeded	Ordinary mango tree	50	24	150	0	150	47	450	71	Stock volka	150	114	150	0	150	64	450	178	Jujube tree	75	0	75	0	75	0	225	0	<b>TOTAL</b>	<b>375</b>	<b>138</b>	<b>375</b>	<b>0</b>	<b>375</b>	<b>111</b>	<b>1,125</b>	<b>249</b>	Site	number of trained people			Total	Men	Women	Bourdi I	6	6	0	Edouk	0	0	0	Guidan Bado	7	6	1	Total	13	12	1
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<p>Evaluation by the populations</p>	<ul style="list-style-type: none"> <li>● <b>Level of the indicator 1 in april 2008:</b> According to farmers of the site of Bourdi I, the technic of water economy propose is not adapted to their field that is clayey, and this lowers the infiltration rate..</li> </ul>																																																																																																																											



<p>Evaluation by the mission of study</p>	<ul style="list-style-type: none"> <li>● In the ecofarms, the training on the agricultural technics, the plant health prevention and the training on the adjustment of the infrastructures of irrigation are carried out simultaneously, thus there is the needs of a planning. This time, the execution occurred earlier than envisaged and the wells were not completed at the time of the plantation of the trees so that part of the seedlings died.</li> <li>● The apples of the Sahel have a significant impact on the populations. According to a study carried out by the study, there are possibilities of flow of this product on the local markets especially like fresh food.</li> <li>● The seedlings which were distributed in 2007 were not well maintained so that a good part of them perished. In addition, the forest agents indicated that, for a durable production of the fruit trees, it was essential to carry out a technical training on grafting. So a technical training in fruit growing (production of seedlings, grafts, maintenance of the seedlings, after-culture) is added for 2008.</li> <li>● <b>Level of indicator 1 in April 2008:</b>the technic of water economy was not adopted by the farmers of the site of Bourdi I while it was on the level of the sites of Edouk and Guidan Bado. The farmers of these two sites understood the contents of the technique of water economy proposed. In this case it is necessary to follow the evolution of the application of this technic to the level of these two sites to ensure its comprehension.</li> <li>● In ECOFARM plots, it was planted apple trees of the Sahel which farmers do not master the technics of production and maintenance. This is why it was organized the training on fruit growing to reinforce the capacities of the farmers in the field of fruit growing not only for the apple tree of the Sahel but also for other fruit-bearing species like mango trees, citrus fruits. The training on fruit growing begin initially with the technics from direct planting and grafting. This session related to three sites witch are Bourdi I, Edouk and Guidan Bado. It led to the participation of 16 persons from each site. During this training, it was provided 375 seedlings but the number of seedlings which were grafted varies from one site to another. On the level of the site of Edouk, the grafting was not possible because of the mortality of the seedlings provided before the training.</li> <li>● <b>Level of indicator 2 in the month December 2008:</b>the technic of water economy proposed by the study is not applied to the level of the sites. The reason which should be evoked here it is that for the moment, the sites aimed by this technic do not present a serious problem of availability of water for the irrigation and the soils are in majority clayey or sandy loam. This is why, the farmers do not feel the need for applying technics of water economy and prefer to continue to make the irrigation with the earth channels.</li> </ul>
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**Table 3.1(12) Monitoring sheet of the Project of improvement of the agricultural techniques -3.Introduction of improved varieties**

Heading		Contents
<b>Name of Action</b>		<b>Actions of improvements of the incomes</b>
<b>Name of Project</b>		<b>Project of improvement of the agricultural techniques -3.Introduction of improved varieties</b>
Context		Generally, the peasants are conservatives and tend not to upset the methods or traditional modes of cropping. The existence of the improved varieties is not well known by the producers or even if they know it, it is rare that they really introduce them. Thus, in spite of the efforts of the research institutes to select new varieties, they are not sufficiently diffused.
Objective		To increase the agricultural productions of millet and sorghum by the introduction of new improved varieties more adapted to the area through demonstration cropping.
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>● <u>Values target of indicators 1</u>: selection of the improved varieties which adapt best to the sites</li> <li>● <u>Data acquisition mode</u>: interviews of the participants by the service provider</li> <li>● <u>Data acquisition period</u>: November 2007</li>   <li>● <u>Value targets indicator 2</u>: the number of targeted villagers who use the improved varieties increases by 50 % each year</li> <li>● <u>Data acquisition mode</u>: study by the SSOD on the level of the concerned villages</li> <li>● <u>Data acquisition period</u>: November 2008</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1,2) or the livestock raising (category 3)</li> <li>● Existence of an organization of the reservoir users</li> </ul>
	State of the request	Checking of the needs for the 4 cooperatives of the reservoirs users (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution on 4 sites
	Project cost	9,500,700 CFA (2,375,175 CFA per site)
	Contents of the project	<ul style="list-style-type: none"> <li>● Training on the introduction of new varieties of seeds (millet and sorghum)</li> <li>● Making of training guides and supports</li> <li>● Follow up of activities</li> <li>● Evaluation of the activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>● Service Provider (the NIARN/CERRA of Tahoua): responsible for the execution of the training</li> <li>● Village delegates of the organizations of the reservoirs users : participation in the training</li> <li>● CDA: follow-up of process</li> <li>● SSOD: evaluation</li> </ul>
	Contributions of the populations	<ul style="list-style-type: none"> <li>● Supply of seeds to the organization of the reservoirs users after harvest in the event of success (1 kg per person)</li> <li>● Supply of a room for the storage of the inputs (seeds, fertilizers, etc.)</li> <li>● Sale of the chemical fertilisers by the organization which keeps the funds to renew the stock of inputs continuously</li> </ul>
Process of the activities and their effectiveness		<ul style="list-style-type: none"> <li>● December 2005-october 2006 : study of the actual state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>● October 2006 : basic data collection</li> <li>● May - june 2007 : dialogues with service providers on the execution the service</li> <li>● June 2007 : establishment of training guides and support, check out of the villagers needs</li> <li>● June 2007 : study on field by NIARN Tahoua</li> <li>● June 2007 : training (for the villagers)</li> </ul> <div style="text-align: right;">  <p>Analysis of the actual situation for the introduction of improved varieties and sensitization carried out by NIARN</p> </div>

### Numbers of participants

	Bourdi I	Edouk	Guidan Bado	Jaja
Date of training	June 23	June 21	June 24	June 22
Participants	62 person	26 person	23persons	50 persons
Choice of the producers for the demonstration	For each site: 8 persons for millet + 8 persons for sorghum = 16 persons			

### Characteristics of the 3 varieties of millet

Characteristics	HKP: HAINKIRE PRECOCE	SOSAT - C88	H-80-10 HATIVE GUERGUERA	GR.:
Preference Area for the crop (annual rainfall)	350 - 500 mm	350 - 600 mm	300 - 400 mm	
Cycle sowing - maturity (days)	80 - 90		75 - 85	
Potential output (T/ha)	2	1,5 - 2,0	2, 3	
Resistance to cultural enemies	Sensitive to smut and the mildew	Sensitive to the stem borer , tolerant to rust; resistant to the mildew	Tolerant to smut and mildew	
Height of the stem (m)	1.90 – 2.00 m		2 – 2.3 m	
Panicle	Length: 50 - 70 cm Form cylindrical		Length: 52 - 55 cm Diameter: 2 – 2.5 cm	
Seed (form and color)	Ob oval Brown - yellow	Ob oval Yellowish	Ob oval has pyriform yellow	

### Characteristics of the 3 varieties of sorghum

	90 SN7	SSD 35	IRAT 204
Cycle sowing - maturity (days)	75 - 85	75 - 85	70 - 75
Height of the stem	average	average	short
Potential yield (T/ha)	2,0 – 2,5	1.5 – 2,0	3,0
Resistance to cultural enemies	-	Resistant pod sucking insect sorghum	-

- June 2007: training of the 4 basic extension agents
- June - July 2007: starting of sowings in the fields of demonstration by the villagers and the basic extension agents (N.B. As sowings occurs just after the rain, the sowing date will be different according to the sites and individuals')
- October 2007 harvesting

Comparisons between the varieties

#### Average yield of the varieties of millet (kg/ha)

	HKP	H80-10gr	SOSAT C88
Bourdi I	1,200	1,320	1,000
Edouk	278	186	192
Guidan Bado	1,150	840	1,130
Jaja	336	186	192

#### Average yield of the varieties of sorghum (kg/ha)

	90 SN7	IRAT204	SSD35
Bourdi I	780	800	1,100
Edouk	53	141	70
Guidan Bado	560	730	884
Jaja	53	141	70

	<ul style="list-style-type: none"> <li>November 2007: interviews of the participants by the service provider to inform indicator 1</li> </ul> <p style="text-align: center;"><b>Choice of the varieties of millet</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sites</th> <th>HKP</th> <th>H80-10gr</th> <th>SOSAT C88</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td style="text-align: center;">57%</td> <td style="text-align: center;">43%</td> <td style="text-align: center;">0 %</td> </tr> <tr> <td>Edouk</td> <td style="text-align: center;">100 %</td> <td style="text-align: center;">0 %</td> <td style="text-align: center;">0 %</td> </tr> <tr> <td>Guidan Bado</td> <td style="text-align: center;">29%</td> <td style="text-align: center;">0 %</td> <td style="text-align: center;">71%</td> </tr> <tr> <td>Jaja</td> <td style="text-align: center;">100 %</td> <td style="text-align: center;">0 %</td> <td style="text-align: center;">0 %</td> </tr> </tbody> </table> <p style="text-align: center;"><b>Choice of the varieties of sorghum</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Sites</th> <th>IRAT204</th> <th>90 SN7</th> <th>SSD35</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Edouk</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> <td style="text-align: center;">-</td> </tr> <tr> <td>Guidan Bado</td> <td style="text-align: center;">50%</td> <td style="text-align: center;">0 %</td> <td style="text-align: center;">50%</td> </tr> <tr> <td>Jaja</td> <td style="text-align: center;">100 %</td> <td style="text-align: center;">0 %</td> <td style="text-align: center;">0 %</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>November 2008: study by the SSOD on the level of the concerned villages to inform indicator 2:</li> </ul> <table border="1" style="width: 100%; border-collapse: collapse; margin-left: 40px;"> <thead> <tr> <th>Sites</th> <th>Old</th> <th>New</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td style="text-align: center;">16</td> <td style="text-align: center;">11</td> <td style="text-align: center;">68,8</td> </tr> <tr> <td>Edouk</td> <td style="text-align: center;">16</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Guidan Bado</td> <td style="text-align: center;">16</td> <td style="text-align: center;">8</td> <td style="text-align: center;">50,0</td> </tr> <tr> <td>Jaja</td> <td style="text-align: center;">6</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> </tbody> </table>	Sites	HKP	H80-10gr	SOSAT C88	Bourdi I	57%	43%	0 %	Edouk	100 %	0 %	0 %	Guidan Bado	29%	0 %	71%	Jaja	100 %	0 %	0 %	Sites	IRAT204	90 SN7	SSD35	Bourdi I	-	-	-	Edouk	-	-	-	Guidan Bado	50%	0 %	50%	Jaja	100 %	0 %	0 %	Sites	Old	New	%	Bourdi I	16	11	68,8	Edouk	16	0	0	Guidan Bado	16	8	50,0	Jaja	6	0	0
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Evaluation by the populations	<p>According to populations' during the 3rd interim evaluation in February 2008, the introduction of new varieties of millet and sorghum allowed an acquisition of new knowledge on these varieties (especially precocity and yield). However, the populations noted that these new varieties are very sensitive to the cultural enemies and were introduced without opinion of the producers themselves. It is thus necessary, the next time, to diversify the new varieties to be introduced in order to reduce the risks and to more reinforce the training on production technics.</p>																																																												
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>In Bourdi I and Guidan Bado the new varieties gave some good yields (840 to 1, 320 kg/ha for millet, 560 to 1, 100 kg/ha for sorghum). On the other hand, in Edouk and Jaja the new varieties gave poor yield (186 to 278 kg/ha for millet, 53 to 141 kg/ha for sorghum) because it act of a zone of low rainfall (pastoral zone for Edouk and insufficient rains for Jaja) and insects attack (in Jaja and Edouk) and that the crops were attacked in Jaja.</li> <li>In the pilot projects, the introduction of new varieties of millet and sorghum is not tested into the zones where rainfall is 600 mm and above; however, according to the interviewed personnel of NIARN, the beneficial effects are practically not higher than for an annual rainfall located between 350mm and 600mm.</li> <li><b>Level of indicator 1 in November 2007:</b> on the level of the 4 sites, 115 persons took part in the evaluation for the choice of the improved varieties of millet and sorghum (of which 41 persons carried out the test of demonstration). The choice is directed mainly towards the varieties of millet HKP and sorghum IRAT204 and SSD35 because of the high yield and the precocity of these varieties. On the level of the sites of Bourdi I and Edouk, there is no difference in choice between the introduced varieties of sorghum. On the site of Edouk, variety IRAT204 was attacked before harvest, with the result that one cannot compare the results between the 3 introduced varieties.</li> <li><b>Level of indicator 2 in November 2008:</b> on the level of the two sites (Bourdi I and Guidan Bado) where the test of introduction of the new varieties succeeded, the rate of increase varies from 50.0 to 68.8%. The low rates noted on the level of the two other sites (Edouk and Jaja) are related to the bad results of the preceding agricultural campaign which knew a very bad rainfall distribution in time. Thus there was no diffusion of seeds because of the insufficient quantities of seeds.</li> </ul>																																																												

**Table 3.1(13) Monitoring sheet of the Project of reinforcement of the agricultural management techniques**

Heading		Contents
<b>Name of Action</b>		<b>Actions of improvements of the incomes</b>
<b>Name of Project</b>		<b>Project of the reinforcement of the agricultural management techniques</b>
Context		<p>1- In Niger, the self production of seeds is the rule as regards cereals, but also for the gardening. That makes it possible to contain the production costs but the diseases of viral origin being largely spread, that involves also losses for the whole of the production. One will not be able to improve the productivity without applying methods of self production of seeds and their adequate conservation .</p> <p>2- In the rural zones the requirements for agricultural inputs are very high. However, as the marketing network is not yet developed , the acquisition of these inputs is difficult. In addition, the products are not sold at high prices at once after harvests because of the conservation which is not developed enough. Consequently, the system of inputs shops and the conservation of the products are essential elements for the effectiveness of the production and the sale in the rural zones.</p> <p>3- The sale of the productions in rural zones depends largely on the tradesmen who come to buy them at harvest and the peasants who do not have adequate information on the prices, sell their production at the prices which are proposed to them at this time . To correct this disadvantage and to allow a more profitable sale, it is necessary to promote the accumulation of information by the constitution of files and the installation of a collecting system of information.</p>
Objectives		To improve the productivity by the diffusion of the self production technics of seeds, the technics of grouped purchases and storage of the agricultural inputs while ensuring a regular provisioning of agricultural inputs.
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>● <u>Value targets of indicator 1-1:</u> at least 60 % of the participants acquire new knowledge on the self production of seeds.</li> <li>● <u>Data acquisition mode:</u> interviews of the participants by the service provider</li> <li>● <u>Data acquisition period:</u> April 2008 (after the training)</li>   <li>● <u>Value targets of indicator 1-2:</u> at least 60 % of the participants put into practice the technics of self production of seeds</li> <li>● <u>Data acquisition mode:</u> Field survey and interviews of the participants by SSOD</li> <li>● <u>Data acquisition period:</u> November 2008</li>   <li>● <u>Value targets of indicator 2-1:</u> at least 60 % of the participants acquired new knowledge on the grouped purchases and the conservation of the productions.</li> <li>● <u>Data acquisition mode:</u> interviews of the participants by the service provider</li> <li>● <u>Data acquisition period:</u> April 2008 (after the training)</li>   <li>● <u>Values target of indicator 2-2:</u> a system of grouped purchases of the agricultural inputs set up at the level of each organization</li> <li>● <u>Data acquisition mode:</u> field survey and interviews of the participants by SSOD</li> <li>● <u>Data acquisition period:</u> November 2008</li>   <li>● <u>Value targets of indicateur 3-1:</u> at least 60 % of the participants in the training understand the need and the methods of collection and commercial information management related to the agricultural productions.</li> <li>● <u>Data acquisition mode:</u> interviews by the service provider near the participants</li> <li>● <u>Data acquisition period:</u> April 2008 (after the training)</li>   <li>● <u>Value targets of indicator 3-2:</u> a system of collection, management and information circulation on the inputs and the agricultural productions set up at the level of each organisation</li> <li>● <u>Data acquisition mode</u> investigation carried out by the basic extension agents near the villagers</li> <li>● <u>Data acquisition period:</u> January 2009</li> </ul>
	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1,2) or for livestock raising (category 3)</li> <li>● Existence of organizations of the reservoirs users</li> </ul>
	State of the request	Checking of the needs for the 4 cooperatives of the reservoirs users (Bourdi I, Edouk, Guidan Bado, Jaja)

Heading		Contents																																				
	Decision adoption	of	Execution on the 4 sites																																			
	Project cost	2007	4,973,870 CFA (1,243,468 CFA per site)																																			
2008		3,237,400 CFA (809,350 CFA per site)																																				
Establishment of the plan Project content	Content of the project	2007	<ul style="list-style-type: none"> <li>• Training on the self production of seeds, self provisioning of agricultural inputs, on the methods relating to the grouped purchase of material and inputs, and on the storage of the agricultural produce</li> <li>• Training on the accountancy and the methods of collection, recording, diffusion and use of the information (documents where the data on the crops are consigned, the sales, the markets)</li> <li>• Making of training guides and supports</li> <li>• Follow up of activities</li> <li>• Evaluation of the activities</li> </ul>																																			
		2008	<ul style="list-style-type: none"> <li>• Missions of evaluation and diagnostic of the operation of the four inputs shops ,</li> <li>• The organization of a trip for experience exchange on the level of an advanced site to motivate more the farmers in Tahoua region,</li> <li>• Mission of evaluation, 1 day per site for 4 sites</li> </ul>																																			
	Actors	<ul style="list-style-type: none"> <li>•Service provider (the NGO Gie-eco21): responsible for the execution of the training</li> <li>•Villages delegates of the organizations of the reservoir users : participation in the training</li> <li>•CDA: follow-up of process</li> <li>•SSOD: evaluation</li> </ul>																																				
	Contributions of the populations	2007	For this training it is not asked populations for contribution.																																			
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Process of the activities and their results			<ul style="list-style-type: none"> <li>•December 2005 - October 2006:study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>•October 2006:basic data collection</li> <li>•May -June , 2007:formalities for the contract of service for the training</li> <li>•June 2007:field survey by the service provider</li> <li>•July 2007:making of training guides and supports , checking of the needs for the villagers</li> <li>•August 2007: first part of the training (importance and the use of fertilizers and plant health products, system of inputs shops )</li> <li>•September 2007: establishment of a program of input shops</li> </ul>																																			
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Evaluation by the populations	<p>According to populations' during the 3rd interim evaluation in February 2008, this training allowed the acquisition of knowledge on the use and the management of the agricultural inputs in particular fertilizers, pesticides. It also made it possible to create the agricultural conditions for self provisioning of inputs through the inputs shops set up. In spite of these advantages, the populations noted that the training was given before even the installation of the boards of management of the input shops of .What shows that the managers of these shops are not sufficiently equipped in terms of management of the input shop.</p>																									
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>The cereal seed are in theory self produced by the farmers. To reduce the losses at harvests of their seeds, it to was given to them a training on the technics of production and the modes of conservation of the seeds. Moreover during this training it was also talked of the self supply of others agricultural inputs (fertilizer, pesticides, materials of agricultural equipment etc...) through the installation of the inputs shops and their operation ,it is after the restitution of this training by the participants that the populations understood the need for creating the inputs shops. That led consequently in the first place to the use of the temporary buildings, then thereafter with the acquisition of the grounds and the construction of the buildings having to be used as stores by the cooperatives. However, the unit set up needs a reinforcement of capacity in the management of these inputs shops. This is why, a follow-up of the operation of these inputs shops will be carried out during the year 2008.</li> <li>75 bags of fertilizer (urea and NPK of 50kg bag) were provided per site to each inputs shop. In September 2007, the center of provisioning of Tahoua region by the Ministry of Agriculture of the management of the agricultural inputs had not been able to provide the totality of the 300 bags of fertilizer to the 4 sites. Consequently, we bought the fertilizers in Nigeria to form the second complementary stock for the site of jaja in nobember 2007 and that of Edouk in February 2008.The great difference of the purchase prices between the 1st stock and the 2nd stock is related to the transport charges of fertilizer from Nigeria until the sites.</li> <li><b>Level of indicator 1.1., 2.1., and 3.1.in April 2008:</b> the level of comprehension of the new technics is low on the level of the whole of the sites because of very little training time which did not make it possible to detail at the maximum the topics discussed.</li> <li>Following that, the situation in August 2008 of the inputs shops of each site arises as follows. <b>Bourdi I</b> : After the sale of the 75 bags, the cooperative bought 40 bags of fertilizer for 14,000 CFA and to order pesticides on behalf of the inputs shop. This quantity was also sold, but up to now stock was not renewed due to the unavailability of fertilizer at the center of provisioning of Tahoua region. The money is currently</li> </ul>																									



Heading	Contents
	<p>deposited in an account opened by the cooperative in a bank of the town of Tahoua</p> <p><b>Edouk:</b> After the whole sale of the first stock (60 bags of NPK) considering the farmers needs in rainy season the cooperative wanted to buy fertilizer but because of the unavailability on the level of the center of provisioning of the Tahoua region that was not carried out. The greater cropping period being finished the farmers cancelled their requests. In February 2008 it was provided to the cooperative the second stock (15 bags of NPK). The co-operative opened an account in a Mutual insurance company of saving and credit of the town of Tahoua.</p> <p><b>Guidan Bado:</b> After the sale of the 75 bags, the cooperative currently has 20 bags of fertilizer which it bought with the money of the sale of the initial stock (10 bags of 15-15-15 to 13,000 CFA and 10 urea bags to 12,000 CFA). This quantity is not yet entirely sold and up to now the stock was not renewed due to fertilizer unavailability in center of provisioning of Tahoua region. The cooperative opened an account in a Mutual insurance company of saving and credit of the town of Bouza.</p> <p><b>Jaja:</b> After the sale of the 75 bags, stock was not renewed yet due to fertilizer unavailability on the level of the center of provisioning of Tahoua region. The money is currently kept by the treasurer of the cooperative.</p> <ul style="list-style-type: none"> <li>• <b>Level of indicators 1.2 in November 2008:</b> in general the farmers practice the subsistence agriculture because of insufficient rainfall and low exploitable surfaces. However the production of seeds calls for other additional means of production (land, water, agricultural inputs, isolation of the pieces of land) which are not available to for the majority of the farmers. It is what explains the weak rate of adoption of new techniques of production of seeds.</li> </ul>

Heading	Contents
	<ul style="list-style-type: none"> <li>• <b>Level of indicators 2.2 in November 2008:</b>The inputs shop of the cooperative of Bourdi I initiated a system which makes it possible to decentralize the availability of the inputs to the villages. Thus it was installed stores on the level of the benefiting villages to make more available the inputs to the producers. The persons in charge for the management of the inputs shop are in charge of the collection of the amounts of the sales of products in the villages. Even if this system is against the principle of the inputs shop, it however facilitates the access to larger numbers farmers of the agricultural inputs. The cooperative must take care that the totality of the amounts of the sales in the villages is indeed versed at the management committee of the inputs shop. To face the problem of fertilizer availability and to ensure the provisioning at convenient time, the cooperative of the site of Edouk had written a letter to the manager of the center of provisioning of Tahoua to reserve a quantity of fertilizer. It should be recalled here that the organizations have priority at the center of provisioning. However, they must officially express their need to the manager of the center to profit from this privilege.</li> <li>• <b>Level of indicators 3.2 in November 2008:</b>more and more, the co-operatives seek to know as well the prices of the inputs as those of the agricultural produce on the various markets. The cooperative of Bourdi is interested since year 2007 in the selling prices of the products even abroad. The cooperative of Edouk informed all its members to seek during their voyage the prices of the inputs and agricultural produce. It uses also a Community radio for the diffusion of commercial information to its members.</li> <li>• The funds of input shop on each site checked by the study of follow-up in December 2008 are as follows. On all the sites, the situation of the inputs shops was checked as from December 2008 and was compared with that of February 2008. It was noted an increase in the funds (cash in hand, amount in bank account and value of stocks in the store), that revealed that the cooperatives know to manage the shops.</li> <li>• Each inputs shop in particular that of the sites of agricultural vocation diversified stocks because in addition to fertilizers there are also others agricultural inputs, such as the pesticides and seeds. Following that the situation in December 2008 of these shops is as follows: <b>Bourdi I:</b> In addition to sale of fertilizer, the inputs shop is in charge of the hiring of the farm equipment (motor pump, manual pump and sprayer). It also received from FAO and DDDA a support in seeds and fertilizers which are to be sold to the farmers to reinforce the funds of the inputs shop. <b>Edouk:</b> The second stock provided by SSOD (15 bags of NPK) is not entirely finished because it was sold 8 bags for the gardening in dry season and there still remain 7 bags of 50kg of NPK which are always in stock <b>Guidan Bado :</b> In addition to sale of fertilizers, the inputs shop is in charge of the hiring of the farm equipment (sprayer). It also received from the DDDA a support in gardening seeds for the sale. <b>Jaja:</b> After the sale of the 75 bags, the money kept by the treasurer was placed in a bank of the Tahoua city. On this site compared to the 3 others, it is not practiced the gardening in dry season and it is that, that currently explains the non renewal of stock.</li> <li>• <b>Level of indicators 3.2 in January 2009:</b> it was set up at the level of each cooperative a system of information flow on the agricultural inputs and which is well functioning. The system is managed by the members of the cooperative. The most required information's related to the price and the places of provisioning of fertilizers, fungicides, seeds, pesticides and farm equipments. The persons in charge of the management seek these information's either on from the services of the state, or from other cooperatives or the tradesmen. Information collected are disseminated for the majority at the time of the general assemblies of the cooperatives.</li> </ul>

**Table 3.1(14) Monitoring sheet of the Project of experimentation of the introduction of rice NERICA**

Heading		Contents	
<b>Name of Action</b>		<b>Actions of improvements of the incomes</b>	
<b>Name of Project</b>		<b>Project of experimentation of the introduction of rice NERICA</b>	
Context		Rice growing is almost not practised in the northern part of Tahoua region. Land around the reservoir meet the conditions necessary for rice crop, but there is up to now little case of introduction of rice growing. It is also necessary to study the preferences of the populations for the tastes, the conditions of marketing, etc in order to prepare a real future introduction of rice growing.	
Objective		To check the possibilities of rice production in the concerned zone to develop the reservoirs through rice growing	
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>● <u>Value targets of indicator 1:</u> 80 % at least of the participants in the training are volunteer for the experimentation of rice growing</li> <li>● <u>Data acquisition mode:</u> interviews of the participants by the service provider</li> <li>● <u>Data acquisition period:</u> July 2007 (after the training)</li>   <li>● <u>Value targets of indicator 2:</u> selection of the varieties of rice which adapt best to the sites</li> <li>● <u>Data acquisition mode:</u> investigation near the participants by the service provider</li> <li>● <u>Data acquisition period:</u> October 2007, October 2008</li>   <li>● <u>Value targets of indicator 3:</u> it is shown that the results of rice growing have an economic effect more significant than those of the millet or sorghum.</li> <li>● <u>Data acquisition mode:</u> field survey by the service provider.</li> <li>● <u>Data acquisition period:</u> December 2008</li>   <li>● <u>Value targets indicator 4:</u> the number of rice growers increases by 50 % each year</li> <li>● <u>Data acquisition period:</u> field survey by SSOD</li> <li>● <u>Data acquisition period:</u> January 2009</li> </ul>	
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1,2)</li> <li>● Environment favourable for rice growing</li> <li>● Existence of an organization of the reservoir users</li> </ul>	
	State of the request	Checking of the needs for the 3 organizations of the reservoirs users (Bourdi I, Edouk, Guidan Bado)	
	Decision of adoption	Looking at the results of a preliminary study of the relevance of rice growing on the fields around the reservoirs, it was decided to carry out the project on two sites, those of Bourdi I and Edouk. The sandy nature of the fields in Guidan Bado made this site unsuitable for rice growing.	
	Project cost	2007	13,198,274 CFA (6,599,137 CFA per site)
		2008	11,216,700 CFA for extension of rice growing (5,608,350 CFA per site) 4,080,000 CFA for the adjustment of one hectare on the site of Edouk 4,655,750 CFA for the comparative study rice-millet
Contents of the project	2007	<ul style="list-style-type: none"> <li>● Collection of information and the establishment of the experimental design</li> <li>● Investigation near the farmers</li> <li>● Mission of prospecting</li> <li>● Field survey</li> <li>● Adjustment of paddy fields</li> <li>● Training on rice cultivation (including varieties NERICA)</li> <li>● Regular Follow-up of the test</li> <li>● Participative evaluation of the test</li> <li>● Establishment training guide and supports</li> <li>● Monitoring of activities</li> <li>● Evaluation of the activities</li> </ul>	

Heading		Contents
	2008	<p><b>(Formation on rice growing)</b></p> <ul style="list-style-type: none"> <li>• Development of the questionnaires being used as investigation forms for data collection</li> <li>• Definition of the contents and methodology for information/Sensitization and other work preparations for the starting of the activities,</li> <li>• Selection of six farmers per site (3 men and 3 women) to take part in the training. However, the training is also opened to the other voluntary farmers without exceeding 30 participants; the voluntary participants will take responsibility for the whole inputs related to the production,</li> <li>• Supervision</li> <li>• Followed up: 2 investigators with residence in the site followed for 5 months; mission of follow-up once per month.</li> <li>• Participative evaluations: the end of October and August,</li> <li>• Mission for harvest and data collection:</li> </ul> <p><b>(comparative Study on the profitability of the culture of rice and the millet)</b></p> <ul style="list-style-type: none"> <li>• It will be placed two investigators (trained before for this study) who will remain each one on the level of a site for 5 months. They will collect data on the investments, harvests and sales etc...The information collected by these investigators will be analyzed at the end of the campaign.</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>•Service provider (NIARN Niamey): responsible for the execution of the training, analyzes of test results</li> <li>•Villages delegates of the organizations of the reservoirs users :participation in the training, control of the tests of demonstration</li> <li>•CDA: follow-up of process</li> <li>•SSOD: evaluation</li> </ul>
Contributions of the populations	2007	The experimental character of the project in this zone made that no contribution was requested from the farmers.
	2008	20% of the equipment (101,000 CFA for the site of Bourdi and 181,000 CFA for the site of Edouk), the farmers near whom will be led the tests will provide all the labour necessary and will be supported by the agents of follow-up to record all times the works and other data.

Heading	Contents
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- December 2005 - October 2006: study of the actual state of the reservoirs, socio-economic study, analysis of potentialities
- October 2006: basic data collection
- January 2007:mission of prospection
- May 2007:field survey
- May - June 2007:dialogue with the service provider on the execution of the service
- July 2007: making of training guide and supports, checking out of the villagers needs
- July 2007:formal training on the technics of rice growing (Edouk participants:3, Bourdi:3)

**Characteristics of the 5 varieties of rice**

Characteristics	NERICA L-49	NERICA L-39	TGR48	D52-37	S.Diofor
	Irrigated rice	Irrigated rice	Irrigated rice	Flooded rice	Flooded rice
Year of introduction	2003	2003	2003	1952	1954
Cultural vocation	Irrigated/hollow	Irrigated/hollow	Irrigated/hollow	Deep Roots/irrigated	Irrigated pond
Cycle (days) DS : Dry season RS : Rainy season	DS:140d RS:120d	DS:135d RS:115d	DS:140d RS:115d	DS:110d RS:130d	DS:110d RS:130d
Potential yield (T/ha)	8	7	7	6,5	5
National average yield (T/ha)	4	4	4	4	4
Parasitism	Resistant to the diseases and insects	Resistant to the diseases and insects	Resistant to the diseases and insects	Resistant to the diseases and insects	Sensitive to the borers, pyriculariose
Height in stem (cm)	110	110	115	130	120

- July 2007:interview of the participants by the service provider to inform the indicator 1
- July 2007:adjustment of the experimental field, practical training, sowing
- August 2007: transplanting

Process of the activities and their effectiveness



Installation of rice nursery (Edouk)



Nursery for rice (Bourdi I)



The part attacked by the Wild docks (Edouk)

- October 2007:inquire near the participants by the person receiving benefits to inform indicator 2

**Choice and classification of the varieties tested (a Number of peasants of Edouk investigated:21)**

Characteristics	NERICA L-49	NERICA L-39	TGR 48	D52-37	S.Diofor
Frequency of first choice place	10	5	1	4	1
Percentage of choice (%)	47.6	23.8	4.8	19.0	4.8
Reason for the classification	•Require little water •Resistant to diseases, • Good yield	•Good yield •short •Resistant to insects	•Poor yield	•Good yield •early Variety •Good quality of seeds •Good tillering	• early • poor yield •Size with cooking (assumption of the peasant before even tasting)

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	<p>●November 2007: harvest  <b>Recorded yields in Edouk (winter Season 2007)</b></p> <table border="1"> <thead> <tr> <th>Characteristics</th> <th>NERICA L-49</th> <th>NERICA L-39</th> <th>TGR48</th> <th>D52-37</th> <th>S.Diofor</th> </tr> </thead> <tbody> <tr> <td>Cycle (days)</td> <td>135</td> <td>132</td> <td>135</td> <td>127</td> <td>120</td> </tr> <tr> <td>Potential yield (T/ha)</td> <td>5.3</td> <td>6.3</td> <td>5.9</td> <td>9.6</td> <td>7.5</td> </tr> <tr> <td>Height in stem (cm)</td> <td>87</td> <td>87</td> <td>89</td> <td>127</td> <td>105</td> </tr> </tbody> </table> <p>●June 2008: Training on rice growing  (situation of the peasants for the tests)</p> <table border="1"> <thead> <tr> <th rowspan="2">Sites</th> <th colspan="3">Number of participants</th> </tr> <tr> <th>Total</th> <th>Men</th> <th>Women</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>20</td> <td>17</td> <td>3</td> </tr> <tr> <td>Edouk</td> <td>20</td> <td>17</td> <td>3</td> </tr> <tr> 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2	83,333	743,375	9																																																																																			
3	60,214	854,519	14																																																																																			
4	37,211	888,568	24																																																																																			
5	11,194	987,738	88																																																																																			
average	50,967	869,798	17																																																																																			
site	Peasants test																																																																																					
	Total	men	women																																																																																			
Bourdi 1	6	3	3																																																																																			
Edouk	6	4	2																																																																																			
<b>Total</b>	<b>12</b>	<b>7</b>	<b>5</b>																																																																																			
Sites	Number of farmers in 2007			Number of farmers in 2008																																																																																		
	Total	Men	Women	Total	Men	Women																																																																																
Bourdi	1	1	0	26	22	4																																																																																
Edouk	25	0	25	100	55	45																																																																																
<b>Total</b>	<b>26</b>	<b>1</b>	<b>25</b>	<b>126</b>	<b>77</b>	<b>49</b>																																																																																
Evaluation by the populations	<ul style="list-style-type: none"> <li>According to populations' during the 3rd interim evaluation in February 2008, the process of introduction of rice growing allowed the acquisition of knowledge and created the conditions of a rational exploitation of spaces with the diversification of the productions. It should however be noted that the delay in the installation of the test contributed to the failure observed on the site of Bourdi. The farmers also noted not taken into account of the women in the experimental unit and wish also the continuation of the process with the organization of the tests of tasting so that they can choose the varieties best adapted to their respective contexts.</li> <li>The producers of the demonstrations fields expressed their requirements in equipments necessary for the preliminary works of ploughing, transplanting and the animal haulage.</li> </ul>																																																																																					












Heading	Contents
Evaluation by the study mission	<ul style="list-style-type: none"> <li>● <b>Level of indicator 1 in July 2007:</b> all the 6 trained farmers agreed to be voluntary and began rice growing on the level of the two sites selected. The survey carried out near the producers showed that the pilotes peasants and even the other farmers of the concerned sites keep much of hopes as for the continuation of rice growing in their zones.</li> <li>● On the level of the nursery of Edouk, part of floating rice was attacked by wild ducks in the nights of July 29 and 30. This is why it is necessary to continue the thinking on the protection of the sites against this kind of damage.</li> <li>● On the site of Edouk, 5 associations of women started rice growing by using the rest of the nurseries. That shows the effectiveness of the sites for demonstration.</li> <li>● <b>Level of indicator 2 in October 2007:</b> Three varieties were voted by the farmers of Edouk. It is about L-49 placed in first position (47,9% of choice), L-39 in second position (23,8%) and D52-37 in third position (19% of choice). The agronomic characteristics which is the base of the peasants choices are essentially: variety which does not need much water, resistant to the diseases, good yield, resistant to the hydrous deficit, charged panicle, good yield.</li> <li>● The level of the site of Bourdi I, the early insufficiency of water during the year 2007 campaign did not make it possible to obtain a yield. In Edouk, the variety D 52-37 gave more yield (9,6 tonnes/ha) than other varieties tested. yields of the varieties of NERICA (L-49 L-39) which are about 5,3 tonnes/ha and 6,3 tonnes/ha exceed the national average output which is 4 tonnes/ha. The association of women who are not pilot farmers having tested rice growing beside the site of test also obtained good yield. The satisfaction created by this result obtained can make it possible to these women to continue rice growing during the year 2008. The test will be renewed during the year 2008 to compare the profitability of millet, sorghum and rice.</li> <li>● The farmers did not appreciate the variety TGR 48 which gave poor yield besides, the renewal of the test during the year 2008 will not concern this variety</li> <li>● <b>Level of indicator 2 in October 2008:</b> The results for the choice of the varieties by the farmers of Edouk is as follows: 83% for Sintane Diofor then 61% for D52-37 and the NERICA L39 then 50% for the NERICA L49. On the site of Bourdi I, the results for the choice of the varieties by the farmers of Bourdi I is as follows: 92% for D52-37, 71% for the NERICA L49, 67% for Sintane Diofor, 58% for the NERICA L39. One note that the choices of the peasants are related to D52-37 and SINTANE DIOFOR, that is due on the one hand to the fact that these varieties require very few care, which gives more time to the peasants to go in their fields of rainy season and on the other hand these varieties give good yield. As well on the site of Edouk and that of Bourdi I, the variety D 52-37 gave higher yield (7,31 tonnes/ha in Bourdi and 6,50 tonnes/ha in Edouk) compared to the other varieties tested. The yield of the other varieties exceed the national average yield which is 4 tonnes/ha. One also counts on the level of the 2 sites a significant number of voluntary peasants who tested rice growing on their pieces of land in the sites and which also obtained good yield. The satisfaction created by this result obtained can allow these voluntary peasants and those having led the tests to continue rice growing during next years.</li> <li>● <b>Level of indicator 3 in December 2008:</b> the crops of rice and millet are all profitable for all the investigated producers except for one of the site of Bourdi I (that one put a significant quantity of organic manure more than all the others). But, compared to the two gross margin per hectare on the site of Edouk, that of rice is 49 times that of the millet. However, the rice crop requires more significant investments than that of millet (5 times), which exposes the producer to risk and more possibility of earning much money if he chooses to grow rice. With regard to the work charge, that of rice is equivalent to 23 times that of millet in Edouk and 17 times in Bourdi I. This difference between the two sites are related to the management of the water which is more difficult in Edouk (being in a zone of low quantity rainfall). It should be specified that there is many types of work which not having the same value. To understand the value of the physical force, it was substituted the force of work by its value. Rice growing requires more work than millet growing. Ultimately, rice cropping is more profitable than that millet with however much more risks (force of work, funds) in the production process.</li> </ul>

Heading	Contents
	<ul style="list-style-type: none"> <li>• <b>Level of indicator 4 in January 2009:</b> the number of voluntary rice growers passed from one person (man) in 2007 to 26 persons (22 men and 4 women) this year. On the site of Edouk this number passed from 25 persons (organized in 5 groupings of women) in 2007 to 100 persons (55 men and 45 women) this year. By comparing the number between 2007 and 2008, the number of voluntary rice growers in 2008 is of 26 times that of 2007 on the site of Bourdi and 4 times that of 2007 on the site of Edouk. Rice growing interests women as well as men.</li> <li>• Since the harvesting of cereals in rainy season is mainly the work of men, only men participated to the training on “the introduction of rice NERICA” in 2007. After this training, the female group of the site of Edouk which spontaneously cultivated rice abandoned around the experimental farm expressed their desire to participate to the coming training. Consequently, women received training in 2008 and were monitored. There were 5 women among 12 farmers having carried out the introduction test of NERICA</li> </ul>

**Table 3.1(15) Monitoring sheet of the Project of introduction of fish farming**

Heading		Contents				
<b>Name of Action</b>		<b>Actions of improvements of the incomes</b>				
<b>Name of Project</b>		<b>Project of introduction of fish farming</b>				
Context		There are several permanent reservoirs of water, among which certain sites of the action plan having the possibility of fish farming. The introduction of fish farming in these reservoirs will make it possible to develop these sites and to increase the incomes of the benefiting populations.				
Objective		To contribute to the increase in the incomes of the farmers by the diversification of the activities through the fish farming in the reservoir				
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>• <u>Value targets of indicator 1</u>: one specialised committee in charge of fishing is set up and functional</li> <li>• <u>Data acquisition mode</u>: interviews of the participants by the service provider</li> <li>• <u>Data acquisition period</u>: November 2007 (the first fishing of control)</li>   <li>• <u>Value targets of indicator 2</u>: Alevins grows, and its changes generation.</li> <li>• <u>Data acquisition mode</u>: study by the service provider</li> <li>• <u>Data acquisition period</u>: November 2007 (the First fishing of control), April 2008 (the 2nd fishing of control)</li>   <li>• <u>Value targets of indicator 3</u>: management of the fish farming process, durability guaranty by the committee specialized in charge of pisciculture after training</li> <li>• <u>Data acquisition mode</u>: study by SSOD</li> <li>• <u>Data acquisition period</u>: August 2008</li>   <li>• <u>Value targets of indicator 4</u>: A fishing is started, one year after since alevins are released</li> <li>• <u>Data acquisition mode</u>: analysis by SSOD</li> <li>• <u>Data acquisition period</u>: January 2009 (At the moment of the 5th intermediate evaluation)</li> </ul>				
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>• Presence of a reservoir of category 1</li> <li>• Possibility of retaining water all the year</li> <li>• Existence of an organization of the reservoirs users</li> </ul>				
	State of the request	One site only (that of Guidan Bado) retains water all the year; checking out of the needs for the organization of the reservoirs users				
	Decision of adoption	Execution on the site of Guidan Bado				
	Project cost	<table border="1"> <tr> <td>2007</td> <td>7,608,590 CFA (7,608,590 CFA per site)</td> </tr> <tr> <td>2008</td> <td>5,603,850 CFA (5,603,850 CFA per site)</td> </tr> </table>	2007	7,608,590 CFA (7,608,590 CFA per site)	2008	5,603,850 CFA (5,603,850 CFA per site)
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	Contents of the project	<table border="1"> <tr> <td>2007</td> <td> <ul style="list-style-type: none"> <li>• Feasibility study</li> <li>• Sensitizing of the farmers on fish farming</li> <li>• Introduction of fish into reservoirs</li> <li>• Training to the technics of fish farming and fishing</li> <li>• Training to the technics of conservation of fish.</li> <li>• Training on the maintenance of fishing equipment</li> <li>• Supply of the material for fish farming and fishing (approximately 17,000 individuals in 3 fish species: <i>Oreochromis niloticus</i>, <i>Auchenauglanis occidentalis</i> and <i>Heterobranchus bidorsalis</i>, 1 oxygen bottle used during the transport of alevins from the station to the site, 70 plastic bags, 1 set of fishing materials)</li> <li>• Making of training guide and supports</li> <li>• Follow up of activities</li> <li>• Evaluation of the activities</li> </ul> </td> </tr> <tr> <td>2008</td> <td> <ul style="list-style-type: none"> <li>• Follow-up of fishing at the time of the opening,</li> <li>• Practical training of 12 fishermen on the use and the maintenance of the fishing materials,</li> <li>• Training on the conservation of fish and marketing,</li> <li>• Organisation of a study trip</li> <li>• Establishment of training guide and supports,</li> <li>• Follow up of the activities,</li> <li>• Evaluation of the activities.</li> </ul> </td> </tr> </table>	2007	<ul style="list-style-type: none"> <li>• Feasibility study</li> <li>• Sensitizing of the farmers on fish farming</li> <li>• Introduction of fish into reservoirs</li> <li>• Training to the technics of fish farming and fishing</li> <li>• Training to the technics of conservation of fish.</li> <li>• Training on the maintenance of fishing equipment</li> <li>• Supply of the material for fish farming and fishing (approximately 17,000 individuals in 3 fish species: <i>Oreochromis niloticus</i>, <i>Auchenauglanis occidentalis</i> and <i>Heterobranchus bidorsalis</i>, 1 oxygen bottle used during the transport of alevins from the station to the site, 70 plastic bags, 1 set of fishing materials)</li> <li>• Making of training guide and supports</li> <li>• Follow up of activities</li> <li>• Evaluation of the activities</li> </ul>	2008	<ul style="list-style-type: none"> <li>• Follow-up of fishing at the time of the opening,</li> <li>• Practical training of 12 fishermen on the use and the maintenance of the fishing materials,</li> <li>• Training on the conservation of fish and marketing,</li> <li>• Organisation of a study trip</li> <li>• Establishment of training guide and supports,</li> <li>• Follow up of the activities,</li> <li>• Evaluation of the activities.</li> </ul>
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Actors	<ul style="list-style-type: none"> <li>• Service provider (NGO ADA): responsible for the execution of the training</li> <li>• Delegates of the organization of the reservoirs users: participation in the training</li> <li>• Specialised fishing committee: management of the equipment and fishing</li> <li>• CDA: follow-up of process</li> <li>• SSOD: evaluation</li> </ul>					

Heading		Contents	
Contributions of the populations	2007	Physical contributions and of materials and materials were requested from the recipients such as: supply of certain materials and manufacture of the oven for fish smoking.	
	2008	acquisition of the fishing material and the funds of marketing to the load of the recipients	
Process of the activities and their effectiveness		<ul style="list-style-type: none"> <li>December 2005-October 2006: study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>October 2006:basic data collection</li> <li>May - June 2007:formalities for the contract of provision of services for this project</li> <li>July 2007:making of training guide and supports , checking of the needs for the villagers</li> <li>August 2007:feasibility study of fish stocking on the level of reservoirs</li> <li>August 2007:training in technics of pisciculture (25 participants including 8 women)</li> <li>August 2007:training in technics of conservation and transformation of the fish (25 participants including 8 women)</li> </ul>	
			
		Fish farming	Training on maintenance of fishing materials
			
		Practical training on the provided pirogue driving	Construction of an oven made of earth by farmers for fish smoking
		<ul style="list-style-type: none"> <li>November 2007 : Study on the site by the service provider (first fishing control) to inform the indicator 1 and 2</li> </ul>	
			
The six generations of the specy oreochromis niloticus trapped during the first fishing control	An Auchenauqlanis occidentalis 60 cm lenght trapped during the first fishing control		

Heading	Contents												
	<p>An heterobranchus bidorsalis trapped during the control fishing</p>  <ul style="list-style-type: none"> <li>• April 2008 : study on the site by the service provider (second fishing control) to inform the indicator 2 :</li> </ul>  <p>Preparation for the second fishing control on the site with the farmers</p>  <p>Oreochromis niloticus trapped during the 2nd fishing control</p> <table border="1"> <thead> <tr> <th>Species</th> <th>Average weight by troop (generation)</th> <th>Observations</th> </tr> </thead> <tbody> <tr> <td>Oreochromis niloticus</td> <td>Band 1: 136.36 g Band 2: 133.33 g Band 3: 25 g Band 4: 11 g Band 5: 3 g Band 6: 2 g Band 7: 1 g</td> <td></td> </tr> <tr> <td>Auchenauglanis occidentalis</td> <td>Band 1: 700 g Band 2: 200 g</td> <td>During the present sampling, it was captured a young Auchenauglanis occidentalis who brings the proof that the species did not reproduce</td> </tr> <tr> <td>Heterobranchus bidorsalis</td> <td></td> <td>This species was not taken with the tended net. Its reproduction will only be possible with the rainy season.</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>• August 2008: study on the site by SSOD to inform indicator 3</li> <li>• August 2008: opening of the first fishing year</li> <li>• August 2008: training on the use and the maintenance of the fishing equipment</li> <li>• August 2008: Training on the handling and the marketing of fish</li> <li>• August 2008: Organization of a study trip</li> <li>• January 2009: study on the site by SSOD to inform indicator 4 (At the moment of the 5th interim evaluation)</li> </ul>	Species	Average weight by troop (generation)	Observations	Oreochromis niloticus	Band 1: 136.36 g Band 2: 133.33 g Band 3: 25 g Band 4: 11 g Band 5: 3 g Band 6: 2 g Band 7: 1 g		Auchenauglanis occidentalis	Band 1: 700 g Band 2: 200 g	During the present sampling, it was captured a young Auchenauglanis occidentalis who brings the proof that the species did not reproduce	Heterobranchus bidorsalis		This species was not taken with the tended net. Its reproduction will only be possible with the rainy season.
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Oreochromis niloticus	Band 1: 136.36 g Band 2: 133.33 g Band 3: 25 g Band 4: 11 g Band 5: 3 g Band 6: 2 g Band 7: 1 g												
Auchenauglanis occidentalis	Band 1: 700 g Band 2: 200 g	During the present sampling, it was captured a young Auchenauglanis occidentalis who brings the proof that the species did not reproduce											
Heterobranchus bidorsalis		This species was not taken with the tended net. Its reproduction will only be possible with the rainy season.											
Evaluation by the populations	<p><b>Level of indicator 1 in November 2007:</b> practical training on the use and the maintenance of the materials and fishing equipment insufficient; the equipment and fishing materials placed at the disposal of the farmers are insufficient</p> <p>The first fishing year is not opened yet at the time of the 3rd interim evaluation in February 2008 to make it possible for the farmers to be sufficiently expressed on the advantages and disadvantages of fish stocking. They noted however an insufficient time of training which does not enable them to master well the use of the fishing materials.</p> <p>Fish is very important as source of incomes and the improvement of nutritional conditions. It joins the strategy of food security, poverty reduction and reduction of the migration for the large cities or other countries.</p>												

Heading	Contents
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>• <b>Level of indicator 1 in November 2007:</b> a specialised committee of fishing was created and functional because having appreciate the quantity of fishing materials set up and the duration of the training on the maintenance of the equipment. Also, the members of this committee fully took part in the first control fishing. It is thus necessary to take into account the follow-up of the opening of the first fishing year to support the practice of the handling of the fishing material and the fish.</li> <li>• <b>Level of indicator 2 in November 2007:</b> The introduced fish species are well adapted to the medium of the water in the reservoir. Six generations of <i>Oreochromis niloticus</i>, one <i>Auchenauglanis occidentalis</i> and <i>Heterobranchus bidorsalis</i> were fished.</li> <li>• Although fish farming was made around 11 pm on August13,2007, the population came out this night massively to assist</li> <li>• It was expressed much of interest on behalf of the population and the town hall for this project. One of the reasons is the fact that that makes it possible to increase the income of the population as well as of the commune if the activities of pisciculture manage to go normally.</li> <li>• Supervision and a follow-up are also necessary for the technics of pisciculture, methods of fishing and transformation, but also the aspect of management such as the sale and the damping of the equipment. The departmental service of the environment must take care of the activity to assist to the whole of the process regularly.</li> <li>• Need for reinforcing the practical training on the use and the maintenance of the equipment and fishing material;</li> <li>• Need for thinking on the insufficiency of the fishing equipment of the fishermen.</li> <li>• <b>Level of indicator 2 in April 2008:</b>The 2<sup>nd</sup> control fishing took place in April 2008.It made it possible also to check the adaptation of the fish species introduced in the medium of reservoir. Thus only two (2) of the three introduced species could be fished and controlled: <i>Oreochromis niloticus</i> and <i>Auchenauglanis occidentalis</i>. These two species reproduce normally as the average size of the various fished fish classes shows it. The third species <i>Heterobranchus bidorsalis</i> was not captured during this control fishing undoubtedly because it reached a stage where it can reproduce. Its reproduction is planned for the season of rains before the opening of the first fishing year.</li> </ul>




Heading	Contents
	<ul style="list-style-type: none"> <li>• With the occasion of the second control fishing a meeting gathered the members of the cooperative, SSOD, the concerned departments technical services (agriculture, environment) and the representative of the town hall of Bouza. During this meeting, a certain number of point were approached in particular: <ul style="list-style-type: none"> <li>- the official opening of the first fishing year for the next 03 August 2008 coinciding with the national festival for independence; a sub-committee was set up for the organization of the event,</li> <li>- guarantee of the right to fish to all member of the cooperative to each one to get the materials for it,</li> <li>- fishing will be carried out only at one time, the day to avoid the stealing of the captures and to also allow the follow-up of the statistics by the service of the environment,</li> <li>- the captured fish can be sold only to the wholesalers members of the cooperative, it is for them to sell it to thirds, which thus makes it possible to everyone to profit; the cooperative must fixe the list of the wholesalers before the opening of the first fishing year,</li> <li>- the selling price of fish must be fixed by the farmers themselves before the opening of fishing by considering any time the prices on the surrounding markets; a sub-committee was set up for the circumstance.</li> </ul> </li> <li>• <b>Level of indicator 3 in August 2008:</b>The selling price of kg for all the fish species was fixed at 750 CFA at this beginning of fishing and this price can be modified thereafter according to the species. The members of the cooperative wishing to fish must pay 10% and non members must pay 25% of the amount of the quantity of fish captured to the cooperative. With regard the tax to be paid by per year to town hall, after the discussions between the cooperative, the town hall and the service of the Environment this one was fixed at 5,000 CFA for the members of the cooperative and 10,000 CFA for non members of the cooperative and in the event of non respect of all that was fixed a fine of 25,000 CFA will be inflicted to the contraveners.</li> <li>• <b>Level of indicator 4 in February 2009:</b>according to NGO ADA in charge of the training, the total production of fish is estimated at 4 ton per annum for a surface area of 13 ha .</li> <li>• February 2009; The "project of introduction of fish farming" aims on the sites of permanent water reservoir and does not have a relationship with the water consumption. Consequently, it is thought that the "project of introduction of fish farming" does not have an influence on the use related to water consumption as for agriculture and watering of the animals.</li> </ul>

**Table 3.1(16) Monitoring sheet of the Project of reinforcement of the capacities in maintenance of the irrigation equipments**

Heading		Contents	
Name of Action		Actions of improvements of the incomes	
Name of Project		Project of reinforcement of the capacities in maintenance of the irrigation equipment	
Context		There exists many farmers of the sites which practise gardening. They are often done in the form of fall cropping at the beginning of dry season. But, these fall cropping often do not manage to complete their cycle. To solve these insufficiencies, the farmers dig sumps which generally break down, their maintenance thus asking many efforts. They are sometimes at the origin of accidents endangering human lives. The pumping out is done almost only with the hand, which limits the possibilities of extension of the arable lands. For that, it will be introduced technics of construction of concreted well for gardening, technics that the peasants will be able to implement themselves and technics of pumping out of higher output.	
Objective		To improve the quantity of the irrigation equipment of the farmers of the sites	
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>• <u>Value targets of indicator 1:</u> 80 % at least of the participants understand and practise the technics of digging concrete wells</li> <li>• <u>Data acquisition mode:</u> interviews of the participants by the service provider</li> <li>• <u>Data acquisition period:</u> April 2008 (after the training)</li>   <li>• <u>Value targets of indicator 2:</u> 80 % at least of the participants understand the technics of use of the system of pumping out with animal haulage and maintenance of the motor pumps by farmers</li> <li>• <u>Data acquisition mode:</u> interviews of the participants by the service provider</li> <li>• <u>Data acquisition period:</u> February 2009 (after the training)</li>   <li>• <u>Value targets of indicator 3:</u> on each of the 3 sites at least one of these three actions is carried out: Concrete wells, system of pumping out and networks of irrigation.</li> <li>• <u>Data acquisition mode:</u> interviews of the participants in the training and the villagers by the basic extension agents after installation of the system.</li> <li>• <u>Data acquisition period:</u> February 2009</li> </ul>	
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>• Presence of a reservoir usable (category 1,2)</li> <li>• Existence of organization of the users of the work</li> </ul>	
	State of the request	Checking out of the needs for the 3 organizations of the reservoirs users (Bourdi I, Edouk, Guidan Bado)	
	Decision of adoption	Execution on the 3 sites	
	Project cost	2007	12,013,000 CFA (4,004,333 CFA per site)
		2008	7,220,000 CFA (2,406,666 CFA per site)
	Contents of the project	2007	<ul style="list-style-type: none"> <li>• Formal training and practical on the built concreted wells</li> <li>• Supply of the equipment for digging concrete wells of 10 m depth</li> <li>• Training on the use of a system of pumping out by animal haulage</li> <li>• Demonstration of the use of a system of pumping out by animal haulage</li> <li>• Training on the maintenance of a motor pump</li> <li>• Making of training guide and supports</li> <li>• Follow up of activities</li> <li>• Evaluation of the activities</li> </ul>
2008		<ul style="list-style-type: none"> <li>• Training on the use of a system of pumping out and the irrigation networks</li> <li>• Installation and demonstration of the use of a system of pumping out by animal haulage</li> <li>• Supply of motor pump and manual pump for the pumping out</li> <li>• Training on maintenance of a motor pump and manual pump</li> <li>• Development of training guide and supports</li> <li>• Monitoring</li> <li>• Evaluation of the activities</li> </ul>	



Heading		Contents																	
Actors			<ul style="list-style-type: none"> <li>• Service provider (Center of Support to the Rural Developments (CSRD) of Keita):responsible for the execution of the training (2007)</li> <li>• Mr. ABOUBACAR: responsible for the execution of the practical training on the means of pumping out and the networks of irrigation (2008)</li> <li>• Delegates of organizations of the reservoirs users: participation in the training, management and use of the material provided</li> <li>• CDA: follow-up of process</li> <li>• SSOD: evaluation</li> </ul>																
	Contributions of the populations	2007	5 % of the cost of the tools and materials (101,889 CFA by a site)																
		2008	20% of the cost of the tools and materials (42,100 CFA for the sites of Bourdi I and Edouk and 76 ,100 CFA for the site of Guidan Bado) <b>Note:</b> the sites of Bourdi I and Edouk profited of two motor pumps each within the framework of rice growing; thus within the framework of this project the site of Guidan Bado will only profit of a support of motor pump; this is why the contribution of the farmers of this site is higher than that of the two other sites.																
Process of the activities and their effectiveness			<ul style="list-style-type: none"> <li>•December 2005-October 2006:study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>•October 2006:basic data collection,</li> <li>•May-June 2007: formalities for the contract of provision of services of this project</li> <li>•June-July 2007:making of training guides and supports , checking out of the needs for the villagers</li> <li>•January Mars 2008: execution of the training on digging of concrete well for gardening</li> </ul> <table border="1"> <thead> <tr> <th>Sites</th> <th>Bourdi I</th> <th>Edouk</th> <th>Guidan Bado</th> </tr> </thead> <tbody> <tr> <td>Date of training</td> <td>March 1, 2008</td> <td>February 29, 2008</td> <td>January 15, 2008</td> </tr> <tr> <td>Dates of practical training</td> <td>March 02 to 31, 2008</td> <td>March 1 to April 07, 2008</td> <td>January 25 to February 27, 2008</td> </tr> <tr> <td>Number of participants</td> <td>4</td> <td>5</td> <td>5</td> </tr> </tbody> </table> <p>The formal training consisted with:</p> <ul style="list-style-type: none"> <li>- Presentation of an outline on the gardening wells in Niger</li> <li>- type of gardening wells to realize</li> <li>- equipment for sinking</li> <li>- tools to be used</li> <li>- materials and their proportioning entering the construction of the well</li> <li>- technics of sinking of the well</li> <li>- maintenance and repair</li> </ul> <p>The practical training consisted with:</p> <ul style="list-style-type: none"> <li>- cut of concrete-reinforcing steel;</li> <li>- the realization of reinforcement;</li> <li>- adjustment of the moulds;</li> <li>- the casting of the concrete;</li> <li>- vibrating;</li> <li>- the verticality of the walls</li> </ul>	Sites	Bourdi I	Edouk	Guidan Bado	Date of training	March 1, 2008	February 29, 2008	January 15, 2008	Dates of practical training	March 02 to 31, 2008	March 1 to April 07, 2008	January 25 to February 27, 2008	Number of participants	4	5	5
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Evaluation by the populations	All the participants in the training estimate that they understood the contents of the training and can build themselves some gardening wells (see the table of indicator 1)																																																

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<p>Evaluation by the mission of study</p>	<ul style="list-style-type: none"> <li>• The trainings on the system of pumping out by animal haulage and on the maintenance of the motor pump realized in 2007 related to basic knowledge; for this reason, an additional practical training is being studied for 2008, which will take account of the equipment of irrigation met on the sites of reservoirs.</li>   <li>• <b>Level of indicator 1 in April 2008:</b> Although the participants in the training stated to have understood the contents of the training, the trainer estimates that it is only those of the site of Edouk which are really able to sink a garden well. Indeed, there exists on the level of this site a person who has a great experiment in the well sinking. During the training on the site of Bourdi, one of the participants is very old. This is why, since the sinking of the wells is a very difficult work requiring much effort, it is necessary to privilege the young people in the choice of the participants in the training in order to guarantee the continuity of the transmission of the acquired techniques.</li>   <li>• In addition, during a monthly meeting of monitoring, the Departmental Director of the Agricultural Development of Illéla informed the participants of a support of a project of 50 garden wells in the profit of the cooperative of Bourdi I. To this end, part of the material and the persons trained by the study were solicited for the sinking of these wells. The material is rented at a rate of 2,000 CFA per well. Thus, the well makers trained on this site acquired other experiments in the field of the garden well sinking. Therefore, it is necessary to reinforce the capacities of the well makers only on the site of Guidan Bado.</li>   <li>• The materials placed at the disposal of the cooperative can be put in hiring. This is why, where the management committee was not set up, it is necessary to continue the sensitizing of the members of the cooperative to do it and lay down rules of management and use of this material (hiring, use by the well makers...) on the level of all the three sites.</li>   <li>• The training on the means of pumping out and the networks of irrigation was carried out during December 2008 on three sites of agricultural vocation. It recorded a weak participation of the women (2 women only on the site of Edouk) because the use of certain equipment as the manual pump, the TEKARKART and the animal haulage require a significant physical force and that work related to the handling of these equipment is traditionally reserved to the men. On all the sites, the women are interested by the training on the use of the motor pumps and the construction of the irrigation networks. This is why, it is necessary to organize two separate training courses: a training course on the manual pump, the TEKARKART and the animal haulage for the men only and another training course on the use of the motor pumps and the construction of the irrigation networks for the men and the women.</li>   <li>• <b>Level of indicator 2 in February 2009:</b>The level of comprehension of the topics developed during the training is for the majority excellent on all the sites.</li>   <li>• <b>Level of indicator 3 in February 2009:</b>After the training, it was carried out or was improved of the irrigation networks or to buy motor pumps or adopted the system of animal haulage on the three sites. As for the manual pump, it was used only on the level of the site of Guidan Bado. On the site of Bourdi I, the farmers evoke like reasons of its non use, the late diffusion, whereas on the site of Edouk, the farmers evoke especially the non adaptation of the manual pump because of the very deeper level of the ground water. Concerning the gardening wells, it was built 5 only in Edouk. No well was built by the well sinkers on the two other sites. The farmers evoke the lack of means.</li> </ul>

**Table 3.1(17) Monitoring sheet of the Project of conservation of the arable lands**

Heading		Contents
Name of Action		Actions of improvements of the incomes
Name of Project		Project of conservation of the arable lands
Context		The clearings for the acquisition of new arable lands cause cuts of trees which involve in their turn a significant hydrous and wind erosion. What causes the sand accumulation in the reservoirs. To protect the sites from the sand accumulation, it is necessary to limit this erosion by promoting the agroforestry, of the techniques and methods of conservation of surface water, protection and restoration of soils (CSW/PRS).
Objective		To contribute to reduce the losses in soil of the arable lands around the reservoirs
Awaited results and their indicators		<ul style="list-style-type: none"> <li>● <u>Value targets of indicator 1:</u> the populations practise techniques of conservation of surface water ,protection and restoration of soil on the level of the sites of the reservoirs, after the training.</li> <li>● <u>Mode of acquisition of the data:</u> investigation carried out by the basic extension agents near the villagers</li> <li>● <u>Period of acquisition of the data:</u> April 2008.</li>   <li>● <u>Value targets of indicator 2:</u> actions of CSW/PRS were planned and carried out by the cooperative on the level of site</li> <li>● <u>Mode of acquisition of the data:</u> investigation carried out by the extension agents near the executive members of the cooperative</li> <li>● <u>Period of acquisition of the data:</u> anuary 2009</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of a reservoir usable for agriculture (category 1,2) or the breeding (category 3)</li> <li>● Existence of organization of the reservoirs users</li> </ul>
	State of the request	Checking out of the needs for the 4 organizations of the reservoirs users (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution on the 4 sites
	Project cost	7,609,509 CFA (1,902,377 CFA per site)
	Contents of the project	<ul style="list-style-type: none"> <li>● Training on the conservation of surface water /protection and restoration of soils (CSW/PRS) (theory and practical)</li> <li>● Training on the agroforestry (theory and practical)</li> <li>● Supply of a whole of material for plantation</li> <li>● Making of training guide and supports</li> <li>● Follow up of activities</li> <li>● Evaluation of the activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>● Service provider (NGO ADA): responsible for the execution of the training</li> <li>● Delegates of the organizations of the reservoirs users: participation in the training</li> <li>● The organizations of the reservoirs users: management of the provided equipment</li> <li>● CDA: follow-up of process</li> <li>● SSOD: evaluation</li> </ul>
	Contributions of the populations	5 % of the cost of the tools and materials (45,000 CFA per site)

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Evaluation by the populations	<ul style="list-style-type: none"> <li>• According to populations' during the 3rd interim evaluation in February 2008, the organization of the trainings in the techniques of the conservation of the arable lands makes it possible to protect the cropping lands and to regenerate the natural pasture. It should be noted however that other actors already gave trainings in this field, with the result that this training did not bring a notorious change to the level of the farmers.</li> <li>• <b>Level of indicator 1 in April 2008:</b>the reasons which make the farmers practise the activities of CSW/PRS before the training are: increase in yield, scarcity of the rains, insufficiencies of lands for cropping. After the training, other reasons were added: protection of the fields, protection of the reservoir, environmental protection, protection of the village against the koris, ajustement of pasture lands</li> </ul>
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>• As this training was carried out during the rainy season, it was carried out almost at the same time as the installation of the organizations of the reservoirs users. It is significant that the activities of soil conservation around the dam are integrated in the Reservoir Valuing Plan and also to follow so as to know if they are applied to the individual level.</li> <li>• <b>Level of indicator 1 in April 2008:</b>the activities of CSW/PRS are practically made on the fields before the training. But, with the training that they received, the farmers now take into account the environmental protection. This shows a change of mentality in relation to the durable use of the water resources of the reservoir. With regard to the transmission of the techniques, the very weak rate observed in Jaja and Guidan Bado are due to the fact that these techniques are well known by the populations because several trainings in the fields were carried out by several projects before.</li> <li>• With regard to the land protection, taking into account the insufficiency of the seedlings a support was brought by the Italy-ICFDS project for the production of 9,000 seedlings in addition to the 3,000 envisaged by the cooperative of Bourdi I. This shows collaboration between the cooperative and the various actors of the zone.</li> <li>• <b>Level of indicator 2 in February 2009:</b>on three sites (Jaja, Bourdi I and Guidan Bado) it was carried out anti erosive works and trees plantations , the farmers of the site of Edouk did not give priority to these activities this year. It should be recalled that these activities were carried out in 2007 and are programmed in 2009. Therefore, the farmers of the site of Edouk cannot program action of conservation of the arable lands each year. The sites of Jaja and Bourdi I produced themselves the planted seedlings whereas on the site of Guidan Bado, the cooperative used other seedlings while waiting for the production of its own seedlings in the nursery.</li> </ul>

**Table 3.1(18) Monitoring sheet of the Project of prevention of the damage caused by the animals**

Heading		Contents
Name of Action		Actions of improvements of the incomes
Name of Project		Project of prevention of the damage caused by the animals
Context		The water resources of the reservoirs are used for the agriculture and the watering of the animals. But, there is any formal delimitation between agricultural and pastoral spaces. To make safe the use of the sites, it is necessary to take protection measures to fight against the intrusions of the animals in the spaces reserved for agriculture.
Objective		To make safe the exploitation of the sites through the taking of protection measure against the damage caused by the animals.
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>● <u>Values target indicator 1</u>: all the villages exploiting the sites possess a basic land property Commission (BLPC)</li> <li>● <u>Mode of acquisition of the data</u>: study by the service provider</li> <li>● <u>Period of acquisition of the data</u>: February 2008</li>   <li>● <u>Values target indicator 2</u>: 60% of the target sites materialized the corridors for the animal passage, surfaces of watering of the animals, the surfaces for grazing or other uses.</li> <li>● <u>Mode of acquisition of the data</u>: investigation carried out by the basic extension agents near the villagers</li> <li>● <u>Period of acquisition of the data</u>: April 2008</li>   <li>● <u>Values target indicator 3</u>: more than 60% of the farmers acquired new knowledge on the prevention of the damage caused by the animals on the sites after the training.</li> <li>● <u>Mode of acquisition of the data</u>: investigation carried out by the basic extension agents near the villagers</li> <li>● <u>Period of acquisition of the data</u>: April 2008, February 2009</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of a reservoir usable for agriculture (category 1,2) or live stock raising (category 3)</li> <li>● Existence of organizations of the reservoir users</li> </ul>
	State of the request	Checking out of the needs for the 4 organizations of the reservoir users (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution on the 4 sites
	Project cost	9,061,316 CFA (2,265,329 CFA per site)
	Contents of the project	<ul style="list-style-type: none"> <li>● Information/sensitisation of the administrative and local authorities on the process</li> <li>● Installation of the Basic Land Property Commission (BLPC)</li> <li>● Training of the members of the BLPC on the management of natural resources (installation of the pastures in grazing zones, plantations...)</li> <li>● Exchanges between the farmers and the stockbreeders</li> <li>● Exchanges between the farmers, the stockbreeders and the local authorities, the concerned State services</li> <li>● Materialisation of the passing corridors of the animals, the surfaces for grazing and the places of watering.</li> <li>● Supply of a set of materials.</li> <li>● Making of training guide and supports</li> <li>● Follow up of the activities</li> <li>● Evaluation of the activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>● Service provider (NGO ADA): responsible for the execution of the training</li> <li>● departmental Engineering service (agriculture, environment, breeding), Permanent Regions permanent secretariat rural code, DLPC and CLPC: support to the installation of the basic Land Property Commissions (BLPC)</li> <li>● Members of the BLPC installed: participation in the training, conduct of the actions with the collaboration of the farmers of the sites</li> <li>● CDA: follow-up of process</li> <li>● SSOD: evaluation</li> </ul>
	Contributions of the populations	5 % of the cost of the tools and materials (30,000 CFA per site)



Heading	Contents																																																																																				
Process of the activities and their results	<ul style="list-style-type: none"> <li>●December 2005-October 2006:study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>●October 2006:basic data collection</li> <li>●May - June 2007:formalities for the contract of provision of services for this project</li> <li>●November 2007:making of training guide and supports , checking of the needs for the villagers</li> <li>●December 2007:installation of the BLPC in the villages which do not possess</li> <li>●December 2007:training on the management of natural resources of all the BLPC</li> <li>●February 2008:study by the service provider to inform indicator 1</li> </ul> <p style="text-align: center;"><b>Information concerning some BLPC</b></p> <table border="1"> <thead> <tr> <th>No</th> <th>Sit of BLPC</th> <th>Already existing</th> <th>Creation by the SSOD</th> </tr> </thead> <tbody> <tr> <td colspan="4"><b>Bourdi I</b></td> </tr> <tr> <td>1</td> <td>Dindi I</td> <td></td> <td>X</td> </tr> <tr> <td>2</td> <td>Dindi II</td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>Kalaba</td> <td></td> <td>X</td> </tr> <tr> <td>4</td> <td>Katossara</td> <td></td> <td>X</td> </tr> <tr> <td>5</td> <td>Raha</td> <td>X</td> <td></td> </tr> <tr> <td>6</td> <td>Bourdi</td> <td>X</td> <td></td> </tr> <tr> <td>7</td> <td>Roukouzoum</td> <td>X</td> <td></td> </tr> <tr> <td>8</td> <td>Ambaroura</td> <td></td> <td>X</td> </tr> <tr> <td colspan="4"><b>Edouk</b></td> </tr> <tr> <td>1</td> <td>Edouk I</td> <td>X</td> <td></td> </tr> <tr> <td>2</td> <td>Edouk II</td> <td>X</td> <td></td> </tr> <tr> <td colspan="4"><b>Guidan Bado</b></td> </tr> <tr> <td>1</td> <td>Bouza Koaré</td> <td>X</td> <td></td> </tr> <tr> <td>2</td> <td>DaN-Dabi</td> <td>X</td> <td></td> </tr> <tr> <td>3</td> <td>Bouza Gabass</td> <td></td> <td>X</td> </tr> <tr> <td>4</td> <td>Tségoumawa</td> <td></td> <td>X</td> </tr> <tr> <td>5</td> <td>Guidan Bado</td> <td></td> <td>X</td> </tr> <tr> <td colspan="4"><b>Jaja</b></td> </tr> <tr> <td>1</td> <td>Jaja</td> <td></td> <td>X</td> </tr> </tbody> </table>	No	Sit of BLPC	Already existing	Creation by the SSOD	<b>Bourdi I</b>				1	Dindi I		X	2	Dindi II	X		3	Kalaba		X	4	Katossara		X	5	Raha	X		6	Bourdi	X		7	Roukouzoum	X		8	Ambaroura		X	<b>Edouk</b>				1	Edouk I	X		2	Edouk II	X		<b>Guidan Bado</b>				1	Bouza Koaré	X		2	DaN-Dabi	X		3	Bouza Gabass		X	4	Tségoumawa		X	5	Guidan Bado		X	<b>Jaja</b>				1	Jaja		X
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Evaluation by the populations	<p>According to populations' during the 3rd interim evaluation in February 2008, the process of prevention of the damage caused by the cattle allows:</p> <ul style="list-style-type: none"> <li>the prevention of the conflicts between farmers and live stock breeders, the acquisition of new knowledge as regards to land property transactions (purchase, sale, gift, loan of fields...),</li> <li>the securing of the agricultural sites with the creation of the conditions of guarantee of the land property transactions (with the installation of the BLPC). However, some trainings on the Rural Code are necessary to create the conditions of a durability of the unit set up.</li> </ul>																																								

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Evaluation by the mission of study	<ul style="list-style-type: none"> <li>• <b>Level of indicator 1 in February 2008:</b> presently, there is 16 BLPC in the 4 sites of the study (8 existed already, 8 were lately created). It was noted that the 8 BLPC already in place did not function normally, because the services of the State which supported the installation of these BLPC did not ensure the training of their members. Consequently, the existing BLPC followed the same training of reinforcement of the capacities as the new BLPC installed.</li> <li>• Three sites (Jaja, Bourdi I and Guidan Bado) are located in agricultural zone; the 4th site, that of Edouk is located as for it in pastoral zone. Initially, the site of Edouk has agro pastoral vocation. But, with the risk that there is a cohabitation between farmers and live stock breeders at the same place, the vocation of the site was changed into purely agricultural vocation by the Governor of Tahoua region at the request of the farmers of the site. However, being located in a pastoral zone, it remains always difficult to prevent the animals from acceding to the reservoir.</li> <li>• <b>Level of indicator 2 in April 2008:</b> all the programmed actions were entirely carried out. Moreover, the cooperatives have even carried out other actions entering within the framework of the protection of the sites against the damage of the animals.</li> <li>• <b>Level of indicator 3 in April 2008:</b> The farmers of 3 sites (Jaja, Bourdi I and Guidan Bado) on the 4 are convinced of the measures suggested. The site of Edouk being located in a pastoral zone, a unit of protection of the arable lands against the damage of the animals is not completely effective. However, the cooperative of Edouk carried out actions of protection of the site, but the live stock breeders do not respect the measures taken. Consequently, it is necessary to sensitize the live stock breeders of the zone on the importance of the site and the activities which are undertaken.</li> <li>• <b>Level of indicator 3 in February 2009:</b> on the site of Jaja and Guidan Bado, the farmers are convinced of the reduction in the damage caused by the animals due to the BLPC installed with a great improvement on the site of Guidan Bado (13% were not convinced last years and this year 0%). On the site of Edouk, the situation remains unchanged because of the situation of the site in pastoral zone where the cohabitation between agriculture and live stock raising remains always a great concern.</li> <li>• Some spaces were reserved for the watering of the animals on the sites where the direct access to the dams is prohibited. On the sites where the direct access to the dam is accepted, the feeding troughs were limited to the places not exploited for cultivation in dry season and for the other cultivations practised in rainy season. Some sensibilization sessions of the population are carried out with the traditional authorities all the year.</li> </ul>

**Table 3.1(19) Monitoring sheet of the Project of support to the income generating activities**

Heading		Contents	
<b>Name of Action</b>		<b>Actions of improvements of the incomes</b>	
<b>Name of Project</b>		<b>Project of support to income generating activities</b>	
Context		In the target zone, IGA are carried out (at the moment of the basic Study, 19 villages out of 20). However the villagers make more or less similar products by using local raw materials. That causes competition in a small market. This is why one can note that certain IGA do not bring benefit and do not reduce poverty. To improve this situation, the villagers must have basic concepts on management such as "profitability", "the production management" "the quality control", "marketing", "distribution" etc.	
Objective		To reinforce the capacities in management of the villagers to promote the income generating activities (IGA)	
Indicators of the Objectives		<ul style="list-style-type: none"> <li>● <u>Value targets indicator</u>: the participants in the training understood the contents and carry out IGA</li> <li>● <u>Mode of acquisition of the data</u>: investigation carried out by the basic extension agents near the villagers</li> <li>● <u>Period of acquisition of the data</u>: April 2008 and February 2009 (at the moment of the 5th intermediate evaluation)</li> </ul>	
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of a reservoir usable for agriculture (category 1,2) or live stock raising (category 3)</li> <li>● Existence of organization of the reservoir users</li> </ul>	
	State of the request	Checking of the needs for the 4 organizations of the reservoirs users (Bourdi I, Edouk, Guidan Bado, Jaja)	
	Decision of adoption	Execution on the 4 sites (Bourdi I, Edouk, Guidan Bado, Jaja)	
	Project cost	2007	2,517,394 CFA ( 629,349 CFA per site)
		2008	5,638,250 CFA (1,409,563 CFA per site)
	Contents of the project	2007	<ul style="list-style-type: none"> <li>● Training on the management of the income generating activities</li> <li>● Revision of the catalogue of the income generating activities proposed</li> <li>● Making of training guide and supports</li> <li>● Follow up of the activities</li> <li>● Evaluation of the activities</li> </ul>
		2008	<ul style="list-style-type: none"> <li>● Follow-up of persons trained in IGA in January 2008.</li> <li>● The study of the markets to see the possibilities of marketing, conservation and transformation of the agricultural produce and examination of the contents of the trips on the markets, of the target markets suppose beside the sites</li> <li>● Establish a guide and a support following the activities retained to the level of each site</li> <li>● Training on the conservation and the transformation of the agricultural produce during 3 days (20 persons) for each site.</li> <li>● To organize trips on the markets most attended by populations</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>● Service provider (NGO ADA, NGO GOMNI): responsible for the execution of the training</li> <li>● Delegates of the organizations of the reservoirs users : participation in the training</li> <li>● CDA: follow-up of process</li> <li>● SSOD: evaluation</li> </ul>	
Contributions of the populations	2007	For this training it is not asked contributions to the populations.	
	2008	For this training it was asked to populations for a contribution of 20% of the materials.	
Process of the activities and their results		<ul style="list-style-type: none"> <li>● December 2005-October 2006: study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>● May -June 2006: study on the real state of the income generating activities</li> <li>● October 2006: basic data collection</li> <li>● January-February 2007: study on the real state of the income generating activities , development of handbook</li> <li>● May -June 2007: formalities for the contract of provision of services for this project</li> <li>● November 2007: making of training guide and supports, improvement of the catalogue of the IGA and checking out of the needs for the villagers</li> </ul>	

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Evaluation by the populations	<ul style="list-style-type: none"> <li>According to populations' during the 3rd interim evaluation in February 2008, this training allowed the acquisition of new knowledge on conduct, management and the diversification of IGA. However, the process must be reinforced by the creation of the conditions of an access to credits for financing the IGA.</li> <li>According to trained people's followed in June 2008, the training on the IGA allowed a change of behaviour and attitude in the conduct of the IGA in particular the taking into account of all the charges in the fixing of the selling price making it possible to realise a benefit, the development of the strategies of sale and provisioning for the acquisition of a benefit. Due to this training, the populations currently are used to register the commercial transactions. This training reinforced knowledge of the villagers in the choice of the most profitable IGA and led to the exploration of sources of financing such as the tontine groupings.</li> <li>The only insufficiency raised in the training is time judged short by the participants.</li> </ul>																									
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>In 2007, a technology transfer relating to the production of agricultural food products adapted locally was carried out for the peasants of the sites of the reservoirs. In addition, the peasants acquired fundamental know-how in management during the present training. So that the populations undertake IGA adapted for each site, it has been launched in 2008 a campaign entitled "a site (a dam), a product".</li> <li><b>Level of the indicator in April 2008:</b> about 100% of the participants in the training started the IGA on all the sites. The training on the IGA made it possible for the villagers to acquire new knowledge on the conduct of these IGA. The training also made it possible to improve the practice of the old IGA and to start of other new activities. This training contributed to the increase in the incomes and the reduction of poverty. The benefits gained through these IGA for the majority are used for the purchase of animals, to provide for the family needs and to reinforce food security. In addition, there are tontine groupings on the level of the villages which grant credits, but these credits are not enough to finance all the IGA. This is why; the contacts with the institutions of micro finance were taken to have access to other more significant financings.</li> <li>The follow-up of the trained persons made it possible to evaluate the level of assimilation of the techniques of conduct of the IGA, the identification of the activities and the potential markets on the level of each site. The study of the markets was carried out on 6 localities. Generally, the products having been the subject of this study are: cereals, groundnut, vegetable oil, cowpea and animals. Following this market research, the following specific income generating activities were retained: the drying of tomato and marrow in Edouk, couscous of cowpea in Jaja and rice couscous in Bourdi I.</li> <li><b>Level of the indicator in February 2009:</b> all the persons surveyed on the level of all the 4 sites practise IGA after the training. They also noted an improvement in the conduct of the IGA and their income.</li> </ul>																									



**Table 3.1(20)Monitoring sheet of the Project of reinforcement of capacities in reading and writing**





Heading		Contents	
<b>Name of Action</b>		<b>Actions of improvements of the life condition</b>	
<b>Name of Project</b>		<b>Project of reinforcement of capacities in reading and writing</b>	
Context		To arrive to a durable and effective operation of the organizations, it is necessary that the members in charge of the operation of these organizations have at least a certain level in terms of reading/writing and calculation. But currently the rate of literacy of the adults is extremely low. This is why it is necessary to reinforce the capacities of the members of the village organizations as regards to reading, writing and calculation.	
Objective		To reinforce the capacities in terms of reading, writing and calculation of the benefiting populations to promote the good management of the organizations installed.	
Indicators of objective		<ul style="list-style-type: none"> <li>● <u>Value targets of indicator 1</u>: presence of teacher trained in the village</li> <li>● <u>Mode of acquisition of the data</u>: evaluation of the training by an inspector of the regional service of literacy</li> <li>● <u>Period of acquisition of the data</u>: February 2007</li>   <li>● <u>Value targets of indicator 2</u>: 60% of the listeners succeed to the final aptitude test (to obtain the certificate of level three of literacy*)</li> <li>● <u>Mode of acquisition of the data</u>: evaluation of the training by an inspector of the regional service of literacy</li> <li>● <u>Period of acquisition of the data</u>: July 2007</li>   <li>● <u>Value targets of indicator 3</u>: continuation of the literacy lectures in the benefiting villages</li> <li>● <u>Mode of acquisition of the data</u>: investigation carried out by the basic extension agents near the populations</li> <li>● <u>Period of acquisition of the data</u>: December 2008</li> </ul> <p>* Level 3: The teacher spent 160 hours of lectures; he can read and write sentences of 5 words or less, and calculate additions and subtractions with four digits or less</p>	
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1,2) or live stock raising (category 3)</li> <li>● Existence of a Village Development Committee (N.B. : le project of reinforcement of the level of literacy is already carried out in the village. The condition for the adoption of the project was then the installation of the VDC. For the Action plan, the condition will be the installation of a cooperative of the reservoir users .)</li> </ul>	
	State of the request	Checking of the needs for the 4 VDC of the benefiting villages (Bourdi Liman, Edouk II, Guidan Bado, Jaja) around the 4 sites of the reservoirs (Bourdi I, Edouk, Guidan Bado, Jaja)	
	Decision of adoption	Execution in the 4 main benefiting villages	
	Project cost	2007	8,866,112 CFA (2,216,528 CFA per site)
		2008	1,370,000 CFA
	Contents of the project	2007	<ul style="list-style-type: none"> <li>● Training of the literacy instructors</li> <li>● Literacy lectures in the villages (with the method of the Pedagogy of Text PDT *).</li> <li>● Making of training guide and supports</li> <li>● Follow up of the activities</li> <li>● Evaluation of the activities</li> </ul> <p>* <b>PDT</b>: it is a new method of training in literacy promoted and developed by the NGO LIFE different from the traditional method used by the services of literacy of the State. With method PDT, one teaches at the same time the literacy and of the educational topics like the rural development, health, new technologies.... Thus, the contents of the PDT are denser than that of the traditional literacy, this is why it requires much more time.</p>
		2008	Improvement of the guides and supports of literacy
	Actors	<ul style="list-style-type: none"> <li>● Service provider (NGO ADA): responsible for the execution of the training</li> <li>● Villagers recommended by the VDC: participation in the training</li> <li>● Inspector of the regional service of the literacy of Tahoua: follow-up of the process and improvement of the guides and supports</li> <li>● CDA: follow-up of process</li> <li>● SSOD: evaluation</li> </ul>	
Contributions of the populations	The preparation of lectures halls (warehouse), the books, the biros, the lamps, oil for the lamps of the listeners, are the responsibility of the villagers.		

Heading	Contents																																																																	
Process of the activities and their effectiveness	<ul style="list-style-type: none"> <li>December 2005-october 2006 : study of the current state of the reservoirs, socio-economic study, analysis of otentialities</li> <li>October 2006 : basic data collection, check out of the needs for the villagers des villageois</li> <li>October 2006 : formalities for the contract of the provision of the service for this project</li> <li>December 2006 :making of training guides et supports ,</li> <li>December 2006 : sensitization on the necessity of literacy in the villages, selection of candidats for teaching</li> <li>January 2007 : training of 4 literacy teachers (25 days) in the literacy center of Tahoua ; teaching language : Haoussa and Tamasheq</li> <li>February 2007 : evaluation by the region service of literacy to inform the indicator 1</li> </ul>																																																																	
																																																																		
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Evaluation by the populations	The center being set up at the level of the village comprising the reservoir, the populations of the other villages are not able to attend it because of its distance.																																																																
Evaluation by the mission of study	<ul style="list-style-type: none"> <li><b>Level of indicator 1 in February 2007:</b> the training of the 4 literacy teachers was well carried out.</li> <li><b>Level of indicator 2 in July 2007:</b> 149 listeners (44 women and 105 men) attended the lectures until the final examination. The rate of success in reading is 82 % and that of success in mathematics is 72 %. The number of participants in Bourdi I decreased by half because at the beginning of the training the villagers were informed that it will be held for level 3. But, the villagers did not understand what the level 3 means. For reason of curiosity, they were registered for the training. Having understood the direction of level 3 thereafter, the villagers who already received this training suspended their participation in the training. The number of registered and the rate of success are lowest in Jaja because the instructor is a woman and the old people could not agree to be taught by a woman. There is no substantial difference for the rate of success in mathematics because the villagers have already the practice of mental calculation,, they only have this time to learn the writing of the figures. In Edouk II a center of literacy for women was opened by an NGO; this is why the center opened by the study did not have the participation of the women. In Guidan Bado there were lectures only for the men because the latter did not accept that their wives attend the lectures of literacy taught by an instructor man. Then, following a sensitization of the husbands, those accepted that their wife takes part in the lectures of literacy taught by an instructor man. It is thus thought that it will be possible to organize the next time a session for the women.</li> <li>In December 2007, the literacy teacher of Guidan Bado is dead, which makes difficult the continuation of the literacy lectures in this village</li> <li><b>Level of indicator 3 in December 2008:</b> it is noted that only one of the three literacy teachers (that of Bourdi I) trained and available carried out the lectures this year (4th being dead the previous year). The courses of literacy continue on the villages scale : Bourdi Liman, Dindi and Roukouzoum. These villages also benefit of the supports. With regard to the site of Jaja, the center was not open because the trained instructor does not reside in the village. As for the villages of the site of Edouk, the villagers preferred other activities in their VDP. This is why no center was open this year in spite of the sensitization carried out in 2007.</li> </ul>																																																																

**Table 3.1(21) Monitoring sheet of the Project of reinforcement of knowledge in terms of health and hygiene**

Heading		Contents
<b>Name of Action</b>		<b>Actions of improvements of the life condition</b>
<b>Name of Project</b>		<b>Project of reinforcement of knowledge in health and hygiene</b>
Context		<p>The result of the basic study carried out in 2006 revealed that the diseases from which the populations frequently suffer are malaria and diarrhoea. It is the mosquito of the anopheles type which is the cause of malaria. However according to the study, more than 30% do not make any prevention and there were villagers who answered that the prayers serve to prevent malaria. As regards the diarrhoea, one can suppose that it is caused in particular by the bad quality of water. Many villagers do not check the quality of the drinking water. There were only 2 households out of 120 which pretend which controls the quality of water before drinking.</p> <p>The lack of knowledge on health and hygiene is one of the obstacles for the improvement of public health. This is why, it is necessary to improve the living conditions of the populations by the reinforcement of knowledge on health and hygiene in particular concerning water.</p>
Objective		To improve the hygiene and health of the villagers through the reinforcement of knowledge in terms of health and hygiene.
Values target indicators		<ul style="list-style-type: none"> <li>● <u>Values target indicator</u>: rate of application of measures for the improvement of health and hygiene to more than 60 %.</li> <li>● <u>Mode of acquisition of the data</u>: investigation carried out by the basic extension agents near the villagers</li> <li>● <u>Period of acquisition of the data</u>: February 2008 (at the moment of the 3rd interim evaluation) and February 2009 (at the moment of the 5th interim evaluation)</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1,2) or live stock raising (category 3)</li> <li>● Existence of organization of the reservoir users</li> </ul>
	State of the request	Checking of the needs for the 4 cooperatives of the reservoirs users (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution on the 4 sites of the reservoirs (Bourdi I, Edouk, Guidan Bado, Jaja)
	Project cost	3,132,069 CFA (783,017 CFA per site)
	Contents of the project	<ul style="list-style-type: none"> <li>● Training on the improvement of knowledge in health and hygiene</li> <li>● Making of training guide and supports</li> <li>● Followed up of the activities</li> <li>● Evaluation of the activities</li> </ul>
	Actors	<ul style="list-style-type: none"> <li>● Service provider (NGO ADA): responsible for the execution of the training</li> <li>● Villagers recommended by the cooperatives of the reservoirs users: participation in the training</li> <li>● CDA: follow-up of process</li> <li>● SSOD: evaluation</li> </ul>
	Contributions of the populations	For this training, it was not asked populations for the contributions.

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<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Filtration using a net</p> </div> <div style="text-align: center;">  <p>Filtration using a device locally manufactured</p> </div> </div>																															
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Purification using the bleach</p> </div> <div style="text-align: center;">  <p>Container for stocking the purified water</p> </div> </div>																															



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	<p>●February 2008:investigation carried out by the basic extension agents near the villagers to inform the indicator (at the moment of the 3rd interim evaluation)</p> <p style="text-align: center;"><b>Table 3:situation of the prevention of malaria</b></p> <table border="1"> <thead> <tr> <th>Site</th> <th>Participants</th> <th>Application of malaria prevention</th> <th>Rate of application of the prevention (%)</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>101 (35)</td> <td>80 (33)</td> <td>79 (94)</td> </tr> <tr> <td>Edouk</td> <td>78 (19)</td> <td>24 (08)</td> <td>31 (42)</td> </tr> <tr> <td>Guidan Bado</td> <td>57 (29)</td> <td>57 (29)</td> <td>100 (100)</td> </tr> <tr> <td>Jaja</td> <td>33 (10)</td> <td>33 (10)</td> <td>100 (100)</td> </tr> </tbody> </table> <p>( ) for the women</p> <p style="text-align: center;"><b>Table 4:situation of the prevention of diarrhoea</b></p> <table border="1"> <thead> <tr> <th>Site</th> <th>Participants</th> <th>Prevention of diarrhoea</th> 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2009:investigation carried out by the basic extension agents near the villagers to inform indicator (at the moment of the 5th interim evaluation)</p> <p style="text-align: center;"><b>Table 5:rate of prevention of malaria</b></p> <table border="1"> <thead> <tr> <th rowspan="2">Sites</th> <th colspan="2">Jaja</th> <th colspan="2">Edouk</th> <th colspan="2">Guidan Bado</th> <th colspan="2">Bourdi I</th> </tr> <tr> <th>2007</th> <th>2008</th> <th>2007</th> <th>2008</th> <th>2007</th> <th>2008</th> <th>2007</th> <th>2008</th> </tr> </thead> <tbody> <tr> <td>To fill the water pools</td> <td>100 (100)</td> <td>100 (100)</td> <td>21 (32)</td> <td>100 (100)</td> <td>0</td> <td>100 (100)</td> <td>94 (88)</td> <td>83 (100)</td> </tr> <tr> <td>To close the holes of non useful water drainage</td> <td>100 (100)</td> <td>100 (100)</td> <td>31 (42)</td> <td>100 (100)</td> <td>49 (0)</td> <td>100 (100)</td> <td>90 (88)</td> <td>83 (100)</td> </tr> <tr> <td>To bury the objects being used as nests by 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(42)	Guidan Bado	57 (29)	57 (29)	100 (100)	Jaja	53 (21)	53 (21)	100 (100)	Sites	Number of villages of the site	Number of villages executants	Bourdi I	3	3	Edouk	15	3	Jaja	2	2	Guidan Bado	2	2	Total	22	10	Sites	Jaja		Edouk		Guidan Bado		Bourdi I		2007	2008	2007	2008	2007	2008	2007	2008	To fill the water pools	100 (100)	100 (100)	21 (32)	100 (100)	0	100 (100)	94 (88)	83 (100)	To close the holes of non useful water drainage	100 (100)	100 (100)	31 (42)	100 (100)	49 (0)	100 (100)	90 (88)	83 (100)	To bury the objects being used as nests by the mosquitoes	0	0	29 (42)	100 (100)	0	100 (100)	69 (61)	78 (100)	To remove grasses in the concessions and around the village	100 (100)	100 (100)	29 (37)	100 (100)	49 (0)	100 (100)	82 (88)	78 (100)	To sweep the concessions and their neighbourhoods	100 (100)	100 (100)	31 (42)	100 (100)	51 (100)	46 (100)	73 (91)	100 (100)	To burn dirtinesses, to destroy them or bring them far from the village	100 (100)	100 (100)	31 (42)	100 (100)	0	100 (100)	79 (100)	83 (100)	To cover the water containers	100 (100)	100 (100)	31 (42)	100 (100)	51 (100)	46 (100)	82 (97)	83 (100)	To sleep under an impregnated insecticide mosquito net	0	0	31 (42)	100 (100)	100 (100)	100 (100)	69 (79)	83 (100)	To wear clothes which protect the exposed parts of the body the evening	100 (100)	100 (100)	31 (42)	100 (100)	0	100 (100)	62(97)	83 (100)	Mosquito Use	0	0	0	0	0	0	76 (100)	57 (100)
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data-bbox="1315 477 1426 499">65 (100)</td> </tr> <tr> <td>Use of ashes to filter water</td> <td>0</td> <td>0</td> <td>0</td> <td>55 (41)</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Use of the gypsum</td> <td>0</td> <td>0</td> <td>0</td> <td>37 (47)</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Control of access to the wells</td> <td>0</td> <td>0</td> 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To cover the water containers	0	0	0	0	0	0	0	83 (100)																																																																																																					
Evaluation by the populations	<p>According to populations', during the 3rd interim evaluation in February 2008, the training on health and hygiene allowed the improvement of knowledge on the matter, continual sensitizing in the field and the creation of a spirit more attentive to the problems of health. However it is necessary to take into account other fields such as conjunctivitis and measles.</p>																																																																																																												
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>• To obtain drinking water it is necessary to use methods simple and realizable on the level of the village. For example: 1) When water is not turbid: Disinfection with chlorine + Sterilisation by boiling, 2) At the time water is turbid: Filtration + Purification (With Aluminium Sulphate) + Disinfection with chlorine + Sterilization by boiling. By taking account of reality on the field, the applicable method as mean of filtration is 1) Making locally the device of filtering and 2) Use the net. For all the three means, one cannot hope for the elimination of the bacteria. But it is effective to remove dirtiness and the Guinea worm. The use of net is already widespread on the field. These techniques were transmitted to the populations within the framework of the Project of improvement of knowledge on hygiene and health.</li> <li>• <b>Level of the indicator in February 2008:</b> Table 3: one applies measures of prevention of malaria after the training to the level of all the 4 sites without no significant variation between the men and the women. One observes the lowest rate on the level of the site of Edouk because being in a zone with low quantity rainfall; the risk of malaria is very low.</li> <li>• <b>Table 4:</b> one applies also measures of prevention of diarrhoea after the training to the level of all the 4 sites without no significant variation between the men and the women. The lowest rate of the application is observed on the level of the site of Edouk. This low rate is due to socio-cultural reasons. Indeed the site of Edouk is in a zone of nomadic stockbreeders who move permanently, they use for the majority the sumps and not wells. Thus the farmers do not use the methods of purification with aluminium sulphate, bleach and the filter. The purification with chemicals is adopted with difficulty on the level of the villages because these products are not available in place.</li> <li>• <b>Level of the indicator in February 2009:</b> it is noted that generally the rate of application of measurements of prevention of the malaria and of diarrhoea is higher than 60% envisaged. The application of these measures is more significant for women than for men.</li> </ul>																																																																																																												

**Table 3.1(22) Monitoring sheet of the Project of introduction of the improved cooking stoves**

Heading		Contents																																																																														
Name of Action		Actions of improvements of the life condition																																																																														
Name of Project		Project of introduction of the improved cooking stoves																																																																														
Context		The time of fire wood collection increased because of its rarefaction, which reduces the time devoted to other activities. It is necessary to fight against the reduction in the fire wood resources and to reduce the working charge of the populations by the use of improved cooking stoves.																																																																														
Objective		To contribute to the reduction in the abuse forest resources use and to reduce the working time of the women through the extension of the use of the improved cooking stoves .																																																																														
Indicators of objective		<ul style="list-style-type: none"> <li>●Values target indicator: increase in the use of the improved cooking stoves</li> <li>●Mode of acquisition of the data: investigation carried out by the basic extension agents near the villagers</li> <li>●Period of acquisition of the data: February 2008 (at the moment of the 3rd interim evaluation) and February 2009 (at the moment of the 5th interim evaluation)</li> </ul>																																																																														
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>●Presence of an exploitable reservoir for agriculture (category 1,2) or live stock raising (category 3)</li> <li>●Existence of organization of the reservoir users</li> </ul>																																																																														
	State of the request	Checking of the needs for the 4 cooperatives of the reservoirs users (Bourdi I, Edouk, Guidan Bado, Jaja)																																																																														
	Decision of adoption	Execution on the 4 sites																																																																														
	Project cost	2,784,056 CFA ( 696,014 CFA per site)																																																																														
	Contents of the project	<ul style="list-style-type: none"> <li>●Training on the manufacture of the improved cooking stoves</li> <li>● Development of training guide and supports</li> <li>● Follow up of the activities</li> <li>● Evaluation of the activities</li> </ul>																																																																														
	Actors	<ul style="list-style-type: none"> <li>● Service provider (NGO ADA):responsible for the execution of the training</li> <li>● Villagers recommended by the co-operatives of the reservoirs users: participation in the training</li> <li>● CDA: follow-up of process</li> <li>●SSOD: evaluation</li> </ul>																																																																														
	Contributions of the populations	The collection of materials and tools necessary (clay, dung of cow etc.) is the responsibility of the villagers.																																																																														
Process of the activities and their effectiveness		<ul style="list-style-type: none"> <li>●December 2005-October 2006:study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>●October 2006:basic data collection</li> <li>●May - June 2007:formalities for the contract of provision of services for this project</li> <li>●November 2007:making of training guides and supports , checking of the needs for the villagers</li> <li>●December 2007:training on the manufacture of the improved cooking stoves</li> </ul> <p><b>Table 1:Numbers of participants</b></p> <table border="1"> <tr> <td><b>Dates of training</b></td> <td colspan="4">From 19 to November 20, 2007</td> </tr> <tr> <td><b>Place</b></td> <td colspan="4">Village of Mallamawa</td> </tr> <tr> <td><b>Total numbers of participants</b></td> <td colspan="4">16</td> </tr> <tr> <td><b>Name of the site</b></td> <td>Bourdi I</td> <td>Edouk</td> <td>Guidan Bado</td> <td>Jaja</td> </tr> <tr> <td><b>Number of participants per site</b></td> <td>4</td> <td>5</td> <td>5</td> <td>2</td> </tr> <tr> <td><b>Of which men</b></td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> </table> <p><b>Table 2:Session of restitution</b></p> <table border="1"> <tr> <td><b>Name of the site</b></td> <td>Bourdi I</td> <td colspan="2">Edouk</td> <td>Guidan Bado</td> <td>Jaja</td> </tr> <tr> <td><b>Name of village</b></td> <td>Roukouz oum</td> <td>Damayo</td> <td>Edouk1</td> <td>Bouza</td> <td>Jaja</td> </tr> <tr> <td><b>Dates of restitution</b></td> <td>Nov. 26</td> <td>Nov. 28</td> <td>Nov. 28.</td> <td>Nov. 27.</td> <td>Nov. 25.</td> </tr> <tr> <td><b>Number of participants</b></td> <td>34</td> <td>38</td> <td>36</td> <td>14</td> <td>39</td> </tr> <tr> <td><b>Of which men</b></td> <td>2</td> <td>8</td> <td>0s</td> <td>0</td> <td>0</td> </tr> <tr> <td><b>Demonstration numbers</b></td> <td>2</td> <td>1</td> <td>1</td> <td>4</td> <td>3</td> </tr> <tr> <td><b>Already use</b></td> <td>Yes</td> <td>Not</td> <td>Not</td> <td>Yes</td> <td>Yes</td> </tr> <tr> <td><b>Previous training</b></td> <td>PDRT</td> <td>Not</td> <td>Not</td> <td>F Project</td> <td>PDRT</td> </tr> </table>	<b>Dates of training</b>	From 19 to November 20, 2007				<b>Place</b>	Village of Mallamawa				<b>Total numbers of participants</b>	16				<b>Name of the site</b>	Bourdi I	Edouk	Guidan Bado	Jaja	<b>Number of participants per site</b>	4	5	5	2	<b>Of which men</b>	0	0	0	0	<b>Name of the site</b>	Bourdi I	Edouk		Guidan Bado	Jaja	<b>Name of village</b>	Roukouz oum	Damayo	Edouk1	Bouza	Jaja	<b>Dates of restitution</b>	Nov. 26	Nov. 28	Nov. 28.	Nov. 27.	Nov. 25.	<b>Number of participants</b>	34	38	36	14	39	<b>Of which men</b>	2	8	0s	0	0	<b>Demonstration numbers</b>	2	1	1	4	3	<b>Already use</b>	Yes	Not	Not	Yes	Yes	<b>Previous training</b>	PDRT	Not	Not	F Project	PDRT
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Heading	Contents																																										
	<div style="display: flex; justify-content: space-around;">   </div> <p style="text-align: center;">Manufacturing of improved cooking stoves during training      Session of restitution : Damayo</p> <p>●February 2008:investigation carried out by the basic extension agents near the villagers to inform the indicator</p> <p>Reason of use of the improved cooking stoves (Unit: household)</p> <table border="1"> <thead> <tr> <th rowspan="2">Sites</th> <th rowspan="2">umber of households using the improved cooking stoves present at the GA</th> <th colspan="2">Reason for the use of the improved cooking stoves</th> </tr> <tr> <th>To reduce the wood consumption</th> <th>To reduce the cooking time</th> </tr> </thead> <tbody> <tr> <td>Bourdi I</td> <td>30</td> <td>13</td> <td>15</td> </tr> <tr> <td>Edouk</td> <td>68</td> <td>68</td> <td>68</td> </tr> <tr> <td>Guidan Bado</td> <td>18</td> <td>18</td> <td>18</td> </tr> <tr> <td>Jaja</td> <td>4</td> <td>4</td> <td>4</td> </tr> </tbody> </table>	Sites	umber of households using the improved cooking stoves present at the GA	Reason for the use of the improved cooking stoves		To reduce the wood consumption	To reduce the cooking time	Bourdi I	30	13	15	Edouk	68	68	68	Guidan Bado	18	18	18	Jaja	4	4	4																				
Sites	umber of households using the improved cooking stoves present at the GA			Reason for the use of the improved cooking stoves																																							
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	<p>February 2009:investigation carried out by the basic extension agents near the villagers to inform the indicator</p> <p style="text-align: center;">Situation of the use of the improved cooking stoves (December 2008)</p> <table border="1"> <thead> <tr> <th rowspan="2">Sites</th> <th rowspan="2">Name of village</th> <th colspan="2">Number of households using the improved cooking stoves</th> <th colspan="2">Number of improved cooking stoves</th> </tr> <tr> <th>before</th> <th>After</th> <th>before</th> <th>After</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Bourdi I</td> <td>Bourdi Liman</td> <td>170</td> <td>206</td> <td>221</td> <td>273</td> </tr> <tr> <td>Dindi</td> <td>0</td> <td>17</td> <td>0</td> <td>23</td> </tr> <tr> <td>Kalaba</td> <td>43</td> <td>49</td> <td>50</td> <td>76</td> </tr> <tr> <td>Roukouzoum</td> <td>50</td> <td>89</td> <td>66</td> <td>108</td> </tr> <tr> <td rowspan="2">Jaja</td> <td>Jaja</td> <td>121</td> <td>155</td> <td>131</td> <td>149</td> </tr> <tr> <td>Mallamaoua</td> <td>176</td> <td>206</td> <td>145</td> <td>201</td> </tr> </tbody> </table> <p>Notice; Edouk and Gidan Bado sites, the detailed data for comparing was not able to be obtained</p>	Sites	Name of village	Number of households using the improved cooking stoves		Number of improved cooking stoves		before	After	before	After	Bourdi I	Bourdi Liman	170	206	221	273	Dindi	0	17	0	23	Kalaba	43	49	50	76	Roukouzoum	50	89	66	108	Jaja	Jaja	121	155	131	149	Mallamaoua	176	206	145	201
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Jaja	Jaja	121	155	131	149																																						
	Mallamaoua	176	206	145	201																																						
Evaluation by the populations	During the 3rd interim evaluation in February 2008, one notes an awakening and a comprehension of the importance and advantages of the improved cooking stoves.																																										

Heading	Contents
Evaluation by the mission of study	<ul style="list-style-type: none"> <li>• <b>Level of the indicator in February 2008: Table 3 and 4:</b>the highest rate of utilisation of the improved cooking stoves was observed in Edouk (87%).But, the construction of improved hearth cooking stoves was registered in the RVP of the site of Jaja. It is consequently necessary to follow the evolution of this indicator to the level of this site and to reinforce sensitizing for the use of the improved cooking stoves on the level of the sites of Guidan Bado and Bourdi I. The main reason for the non use of the improved cooking stoves is for the majority of the sites the ignorance of the techniques of manufacture of the improved cooking stoves. Being given that stimulating relays were trained on the level of certain villages, these stimulating relays should be sensitized to widen their fields of demonstration for touching to the maximum the concerned populations. In regard to the reasons which underlie the use of the improved cooking stoves by the populations, in particular the reduction in the consumption of wood and the reduction in the working time for women, one has the right to say that the objective fixed through this training could have been achieved.</li> <li>• The village of Mallamawa was selected to host the training because there already exist some experienced women.</li> <li>• The training was carried out for two types of improved cooking stoves: a simple type of stove and another type of stove with chimney. It was trained 16 endogenous trainers which in turn carried out the meetings of demonstration on the construction of the simple stove because the manufacture of the other type of stove is more difficult, especially for the fixing of the chimney</li> <li>• <b>Level of the indicator in February 2009:</b> the number of households as well as the number of improved cooking stove used increased after the training on the level of all the villages of the 4 sites. Thus the training on the improved cooking stove is very practical for the women.</li> </ul>

**Table 3.1(23) Monitoring sheet of the Project of introduction of a system of saving and turning credit (tontine)**

Heading		Contents
<b>Name of Actions</b>		<b>Actions for the improvements of incomes</b>
<b>Name of Project</b>		<b>Project of introduction of a system of saving and turning credit (tontine)</b>
Context		In Niger, in rural area, the populations depend only on the rainfed agriculture and live in an autarkical way. The fact of not relaying solely on rainfed agriculture and of practising other income generating activities constitutes a significant measure to be protected from the various risks: drought, diseases and to fight against poverty. To implement these income generating activities, it is significant to have access to funds, but this access is practically impossible in many rural zones. During the basic data collection in 20 villages around the 4 sites, 16 villages answered that they did not have any access to a specified structure of public micro finance. Even for those which have this access, the structures are extremely distant, closest being to 20 km and most distant to 40 km. As for the informal systems of micro finance, there are still only 6 villages out of 20 which have access there. This is why it is necessary to set up a informal system of micro finance accessible to the villagers.
Objective		To improve the access to the informal credit to develop the income generating activities in the villages
Awaited results and target values of the indicators		<ul style="list-style-type: none"> <li>● <u>Value targets indicator 1</u>: at least 1 tontine grouping is set up at the level of each target village.</li> <li>● <u>Value targets indicator 2</u>: all the tontine groupings set up begin the granting of the credits with their own funds</li> <li>● <u>Mode of acquisition of the data</u>: investigation carried out by the basic extension agents near the villagers</li> <li>● <u>Period of acquisition of the data</u>: July 2007, July 2008 and December 2008 (at the moment of the 5th interim evaluation)</li> </ul>
Establishment of the plan Project content	Conditions for the adoption of the project	<ul style="list-style-type: none"> <li>● Presence of an exploitable reservoir for agriculture (category 1,2) or live stock breeding (category 3)</li> <li>● Existence of a VDC</li> </ul>
	State of the request	Checking of the needs for the VDC of the 22 villages (20 benefiting villages + 2 other villages) around the 4 sites of the reservoirs (Bourdi I, Edouk, Guidan Bado, Jaja)
	Decision of adoption	Execution for the 22 villages (20 benefiting villages + 2 other villages)
	Project cost	4 ,053 ,200 CFA (184 ,236 CFA by a village)
	Contents of the project	<ul style="list-style-type: none"> <li>● Development of training guide and supports</li> <li>● Training on the micro finance of tontine type</li> <li>● Installation of the tontine groupings</li> <li>● Monitoring of activities</li> <li>● Evaluation of the activities</li> </ul> <p>Micro finance of tontine type is an endogenous financial system which allows the villagers organized in groupings to face the daily financial difficulties by the mobilization of the saving and the granting of credit.</p>
	Actors	<ul style="list-style-type: none"> <li>● Service provider (NGO ADA): responsible for the execution of the training</li> <li>● Villagers recommended by the VDC: participation in the training</li> <li>● CDA: follow-up of process</li> <li>● SSOD: evaluation</li> </ul>
	Contributions of the populations	100% of the starting funds are provided by the recipients. Each member of the grouping deposits each week an amount which varies from 100 to 250 CFA.

Heading	Contents												
<p>Process of the activities and their results</p>	<ul style="list-style-type: none"> <li>December 2005-October 2006:study of the current state of the reservoirs, socio-economic study, analysis of potentialities</li> <li>October 2006:basic data collection, checking of the needs for the villagers</li> <li>October 2006:formalities for the contract of provision of services for this project</li> <li>January 2007:making of training guide and supports</li> <li>February 2007:training to the micro finance of tontine type</li> </ul> <p style="text-align: center;"><b>Outline of the training of micro finance tontine type</b></p> <table border="1"> <tr> <td>Dates</td> <td>From the 13 to February 16, 2007 (4 days)</td> </tr> <tr> <td>Place</td> <td>The Chamber of Commerce Tahoua</td> </tr> <tr> <td>Objective</td> <td> <ul style="list-style-type: none"> <li>To acquire knowledge on micro finance tontine type</li> <li>To look further into knowledge in terms of saving and credit</li> <li>Restitution of the knowledge obtained to the villagers</li> </ul> </td> </tr> <tr> <td>Participants</td> <td>44 village Agents: a man and a woman by village (taught know to read and writ in theory), CDA (4) and local authorities of 4 communities</td> </tr> <tr> <td>Organizers</td> <td>Local NGO ADA</td> </tr> <tr> <td>Topic</td> <td> <ul style="list-style-type: none"> <li>Role of motivators (s) the villagers (be) in micro finance</li> <li>Organisation of tontine grouping (including the relation with the VDC), and its operating mode.</li> <li>Composition, roles, installation of the leader of the tontine groupings</li> <li>Statutes and Rules of procedure of the tontine groupings and their recognitions</li> <li>Prevention, management and resolutions of the conflicts</li> <li>Saving -credit – Interest- Fines</li> </ul> </td> </tr> </table> <ul style="list-style-type: none"> <li>March 2007:Installation of the tontine groupings</li> <li>March 2007:Starting of the activities of saving and credit</li> </ul>	Dates	From the 13 to February 16, 2007 (4 days)	Place	The Chamber of Commerce Tahoua	Objective	<ul style="list-style-type: none"> <li>To acquire knowledge on micro finance tontine type</li> <li>To look further into knowledge in terms of saving and credit</li> <li>Restitution of the knowledge obtained to the villagers</li> </ul>	Participants	44 village Agents: a man and a woman by village (taught know to read and writ in theory), CDA (4) and local authorities of 4 communities	Organizers	Local NGO ADA	Topic	<ul style="list-style-type: none"> <li>Role of motivators (s) the villagers (be) in micro finance</li> <li>Organisation of tontine grouping (including the relation with the VDC), and its operating mode.</li> <li>Composition, roles, installation of the leader of the tontine groupings</li> <li>Statutes and Rules of procedure of the tontine groupings and their recognitions</li> <li>Prevention, management and resolutions of the conflicts</li> <li>Saving -credit – Interest- Fines</li> </ul>
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<p>Half the participants to the training are women</p>	<p>Mobilization and granting by a femal grouping (Mallamawa)</p>												
													
<p>Kraft product manufactured using grantings (Edouk 1)</p>	<p>Mobilization and granting by male grouping</p>												

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Evaluation by the populations	<ul style="list-style-type: none"> <li>According to populations', the advantages of the tontine groupings are: social cohesion (for 16 villages), granting of credits (12 villages) and starting of the IGA (6 villages).The initiative is very appreciated by the villagers because it makes it possible to save money (for 6 villages), to solve the social problems such as the medical cares and the ceremonies (for 6 villages).During interview many women appreciated the activities of the tontine. For example one woman said that "I intend to continue until death"</li> <li>Like insufficiencies, it was noted on the level of five (5) villages the lack of training of the members of the tontine groupings, the weakness of the mobilized funds not allowing to meet all the needs on the level of the three (3) villages.</li> </ul>																																																																																																		
Evaluation by the mission of study	<ul style="list-style-type: none"> <li><b>Level of indicator 1 in July 2007:</b> In the 22 target villages, 75 groupings were trained:19 male groupings, 43 female groupings and 13 mixed groupings. After the installation of the tontine groupings , the members of the groupings contribute 100 to 250 CFA per week.</li> <li><b>Level of indicator 2 in July 2007:</b> The granting of the credits to the members started in June 2007 with amounts varying from 5,000 to 20,000 CFA to refund on 1 to 3 months with a maximum interest of 10% according to groupings'. The loans start only when the members of the grouping judge that the collected amount is significant. In the 22 target villages, a total amount of 4,867,375 CFA was saved and of the loans of 2,082,625 CFA were granted. The granted credits are used to finance income generating activities of witch the main ones are the cattle fattening or sheep and goats fattening, the small scale trade, the equipment for the craft industry. The installation of the tontine groupings, the contributions and the granting of the loans were carried out up to now without problems. But with regard to management (book-keeping), a support in advise is necessary.</li> </ul>																																																																																																		

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	<ul style="list-style-type: none"> <li>• <b>Level of indicator 2 in July 2008:</b> The installation of the tontine groupings made it possible to mobilize funds on the level of the villages and to grant credits to the members. That caused a certain passion for this activity near the populations, which led to a raising of the mobilized funds and number of groupings. These tontine groupings also made it possible to reinforce solidarity between the members. They made it possible to improve the living conditions, to increase the incomes of the villagers, to finance and diversify the individual and collective IGA. There exist much of requirements in credits for the financing of the IGA (see monitoring sheet of the IGA).But, these funds mobilized by the tontine groupings of are very weak to support all the requests.</li> <li>• <b>Level of indicator 1 in December 2008:</b> It was counted in the 22 target villages, 78 groupings of which:19 male groupings, 43 female groupings and 16 mixed groupings, that is an average of 4 groupings per village. These tontine groupings gather 2,319 members including 485 men and 1,758 women. This activity mobilizes more the women than the men.</li> <li>• <b>Level of indicator 2 in December 2008:</b> The funds mobilized by the tontine groupings passed from 4,867,375 CFA in August 2007 to 11,717,662 CFA in December 2008, (2.4 times higher).In the same way, the granted credits are 2.6 times higher between August 2007 and December 2008 while passing from 2,082,625 CFA with 5,619,220 CFA in February 2009. The increase in the funds is much more significant for the villages around the site of Bourdi I because of the needs for the IGA whose products are easily past on the markets contrary to the villages of the site of Edouk where the amount of the granted credits decreased by half owing to the fact that the members find insufficient the amounts mobilized on the level of the groupings compared to their needs. The credits are used for the majority in the activities of small scale trade, fattening, social services .In addition there are 9 villages which use the funds of tontine for the valorization of the reservoir and at least 122 persons took the credits for the purchase of seeds, fertilizers, gasoline and hiring motor pump for rice growing. On the other hand 8 out of 9 villages were the villages beside Edouk. The members of tontine grouping whose majority is female around the reservoir of Guidan Bado and Bourdi do not use the funds for the valorization of reservoir. It is to be recalled that initially it was not envisaged to finance the social services. However, taking into account the strong needs expressed by the members, the GA of the groupings decided to do it. However, it was not noted any problem of refunding. The insufficiency of training evoked by the population of 5 villages is due to the fact that the village agents did not play fully their role.That is explained by several reasons among witch: the insufficiency of the received training and weak remuneration. The work of the village agents is completed by the CDA which unfortunately do not have sufficient time to supervise generally many groupings exceeding their capacity (50 groupings in Edouk, 19 in Bourdi I). Despite all this, one notes an improvement in keeping of accountancy document due to the support of the CDA if one compares with the study carried out in July 2007.</li> <li>• In spite of the low starting capital cost (184,236 CFA per village), this action made it possible to mobilize significant funds which were used to finance Income Generator Activities as well as the improvement of the Framework of Life for 2,319 recipients. That proves cost/results effectiveness on the level of the villages. But, only 5,3% of the members use the funds of the groupings in the valorization of the reservoirs. Therefore, this activity does not benefit the valorization of the reservoirs.</li> </ul>

## **Chapter 4 : Process of establishment of the AP**

### **4.1 Reflexions on the contents of monitoring sheets**

In order to check the basic concept and the orientation of the provisional action plan presented in September 2006, some pilots projects were carried out since November 2006 with the objective of establishing the action plan for the implementation of a participative rural development project with the support of government and NGOs. The orientations for the execution of the pilots projects are based on the 4 following points:

- ① To design the targets of the actions in terms of state services, water reservoirs and villages
- ② To promote the participation of the populations in all the levels
- ③ To reinforce the collaboration between the local administrations, the decentralized technical services, the financial backers and the NGO.
- ④ To adopt in the plans some techniques and methods easily understood by the populations and for which a first starting investment is sufficient.

The rural development means, this development is not only for agro-silvo-pastoral ; it includes the development of all sectors including the improvement of life conditions. Consequently, the action plan concerns two areas which are the valorization of reservoirs and the rural development of villages benefiting of the reservoirs. The method of rural development in the AP established in this study could also be adapted to villages not having these reservoirs, these villages constitute the majority of villages in Niger. Moreover, during the implementation of the action plan, a system will be installed for rural development in which the populations play the main role, in which will be implemented not only the infrastructures arranged within the frame work of the SPPR, but also all natural , social and economic resources available in the villages.

Concerning the provisional of the action plan, for the purpose of the valorization of reservoir and rural development, the cooperatives and VDCs will be installed. Thus it was noted that it is very difficult to establish the relation between the VDC and the Cooperative because having different objectives and interests as proposed by the provisional action plan. Moreover, much of people concerned with this study suggested reflecting on the contents of the action plan specific to the valorization of the reservoirs.

Consequently, it was proposed a system of collaboration between the cooperative and the VDC in which the role of the VDC will be limited to the actions of fight against soil degradation in September 2008.

But, following the reflexions on the contents of the provisional action plan proposed in September 2008, it was judged that time and the financings will be more effective if the contents of the action plan are concentrated on actions of agricultural development centered on the valorization of the water reservoirs. The design of the action plan after improvement is detailed in figure 4.1(1) and the result of the discussions between SSOD and the regional government services in Tahoua based on the monitoring of the PP for the reflexion on the AP activities in February 2009 is presented in table 4.1(1).



**Objective of the AP**

To implement and to deploy actions of agricultural development carried out by the populations, centered on the valorization of the water reservoirs by the transmission of farmer to farmer, with the support of the government services

**Basic orientation of the AP**

1. Self development
2. Management of the sites by the peasants
3. Installation of "Peasants Demonstration Fields"
4. Re-definition of the role of the extension agent and collaboration with the local administration

**Method of implementing the AP**

1. Reinforcement of capacities of reservoir users in self development
2. Improvement of incomes and living condition of reservoir users
3. Implementation of the AP stage by stage

Figure 4.1(1) Diagram of the basic design of the action plan

**Table 4.1(1) Result of the discussions SSOD and regional government service of Tahoua based on the monitoring of PP for the reflexion on activities of the AP in February 2009**

Type of action	Target	Action	Project	Projects proposed by SSOD and regional government services	Observation
Minimum package	Level of the official services	Actions of reinforcement of the support system for the populations by the official services	Project of reinforcement of the means of work for basic extension agents	X	To add the principle of the reservoir natural resources management (land, water...) by farmers  • It is very difficult to establish the relation between the VDC and the Cooperative because having different objectives and interests as proposes the provisional action plan. • it was judged that time and the financings will be more effective if the contents of the action plan are concentrated on actions of agricultural development centered on the valorization of the water reservoirs
			Project of reinforcement of the capacities of the basic extension agents	X	
			Project of installation of a system of capitalization and share information	X	
	Level of the sites of the reservoirs	Actions of reinforcement of the capacities of the reservoir users in management of the actions	Project of support to the installation of the reservoir users organization	X	
			Project of support for the reinforcement of the capacities of the executive members of the cooperatives of reservoir users	X	
			Project of reinforcement of the capacities in maintenance of the reservoirs	X	
	Level of the villages	of reinforcement of the capacities of the populations in management of the actions	Project of installation of a system of information flow and share of the techniques between recipients		
Project of support for the organization of the populations					
small scale Integrated projects	Level of the sites of the reservoirs	Actions of improvement of the incomes	Project of improvement of the agricultural techniques		
			1. Basic notions on the crops, plant health prevention	X	
			2. Introduction of the ecofarms	O	
			3. Introduction of improved varieties		
			Project of improvement of the agricultural management techniques	X	

Type of action	Target	Action	Project	Projects proposed by SSOD and regional government services	Observation	
			Project of experimentation of the introduction of rice NERICA	X	In addition to the varieties of rice NERICA, it was added other varieties to obtain the most adapted to the sites	
			Project of introduction of fish farming	X		
			Project of reinforcement of the capacities in maintenance of irrigation equipments	X		
			Project of conservation of the arable lands	X	This project lies within the scope of the activities of natural resources management. Consequently, will be carried out the reinforcement of the capacities of farmers in this field within the framework of the AP.	
			Project of prevention of the damage caused by the animals	X	BLPC is an important organization in charge of the natural resources management. Consequently, will be carried out the reinforcement of the capacities of farmers in this field within the framework of the AP.	
			Project of support to income generating activities	X	The project is composed of the aspects "processing" and "marketing of the agricultural products". Thus, within the framework of the AP, this project will be divided into two: processing and marketing.	
		Actions improvements of the life condition	of	Projet of reinforcement of capacities in reading and writing	O	<ul style="list-style-type: none"> <li>The VDC will not be installed within the framework of the AP, consequently the training on literacy will not be carried out on villages level and the executive members of the VDC.</li> <li>But, literacy is necessary for the executive members of the cooperatives. Consequently, it will be carried out the project of reinforcement capacity of farmers within the framework of the AP.</li> </ul>
				Project of reinforcement of knowledge in health and hygiene	X	This project lies within the scope of the activities of water resources management. Consequently, in the AP, it will be carried out the project of reinforcement of capacity of farmers
				Project of introduction of the improved cooking stoves	X	This project lies within the scope of the activities of water resources management. Consequently, in the AP, it will be carried out the reinforcement of capacity of farmers in this field within the framework of the AP.
		Level of the village s	of	Actions improvements of the incomes	of	Project of introduction of a system of saving and turning credit (tontine)

Note; the project marked in "X" will be carried out in the AP and those marked in "O" will be carried out partly in the AP

## **4.2 Evaluation of the PP by the executive members of Cooperatives**

The final evaluation was carried out mainly with the executive members of the cooperatives. It was carried out on the level of the 4 sites from 20 to May 28, 2009. The topics targeted by the evaluation are:

- A general synthesis of the basic concept of the action plan;
- Activities composing the action plan and the specific aspects.

The basic orientation for the implementation of the plan is based on 4 points: "Self development", "Management of the sites by the peasants", "Installation of 「Peasants-demonstration-field」", "Redefinition of the role of the extension agent and collaboration with the local administration". All the cooperatives well appreciated this orientation and will continue the activities after SSOD. The projects adopted by the cooperatives as well as the comments after the evaluation are presented in table 4.2(1):

**Table 4.2(1) Projects adopted in the AP by the cooperatives**

Type of action	Target	Action	Project	Projects proposed by SSOD and regional government services	Responses of the cooperatives to the proposed projects	Observation		
Minimum package	Level of the official services	Actions of reinforcement of the support system for the populations by the official services	Project of reinforcement of the means of work for basic extension agents	X	X	The cooperative wished a minimum of 4 visits per month by the CDA		
			Project of reinforcement of the capacities of the basic extension agents	X	X			
			Project of installation of a system of capitalization and share information	X	X			
	Level of the sites of the reservoirs	Actions of reinforcement of the capacities of the reservoir users in management of the actions	Project of support to the installation of the reservoir users organization	X	X	It is necessary for the cooperatives to inform the chiefs of villages on their activities to avoid problems		
			Project of support for the reinforcement of the capacities of the executive members of the cooperatives of reservoir users	X	X			
			Project of reinforcement of the capacities in maintenance of the reservoirs	X	X			
			Project of installation of a system of information flow and share of the techniques between recipients			According to cooperatives, the VDC do not have a bond with the reservoir. Thus it is not necessary to install the VDC for the reservoirs valorization.		
	Level of the villages	of reinforcement of the capacities of the populations in management of the actions	Project of support for the organization of the populations					
			Project of support for the reinforcement of the capacities of the executive members of the organizations					
small scale Integrated projects	Level of the sites of the reservoirs	Actions of improvement of the incomes	Project of improvement of the agricultural techniques	1. Basic notions on the crops, plant health prevention	X	X		
				2. Introduction of the ecofarms	O	O		There is not problem of irrigation water on the level of two sites (Bourdi I and Guidan Bado) and the technique of water economy proposed is not adapted to realities of the site of Edouk.
				3. Introduction of improved varieties		X		According to farmers', the intensification of these cultivations enables them to increase their income. This is why they asked for the maintenance of this activity while including cowpea.
			Project of improvement of the agricultural management techniques	X	X			
			Project of experimentation of the introduction of rice NERICA	X	X			

Type of action	Target	Action	Project	Projects proposed by SSOD and regional government services	Responses of the cooperatives to the proposed projects	Observation	
			Project of introduction of fish farming	X	X		
			Project of reinforcement of the capacities in maintenance of irrigation equipments	X	X		
			Project of conservation of the arable lands	X	X		
			Project of prevention of the damage caused by the animals	X	X		
			Project of support to income generating activities	X	X	Farmers wished to have a training in the field of animal feeding and health on the level of the site of Edouk to improve their income through fattening	
		Actions of improvements of the life condition	Project of reinforcement of capacities in reading and writing	O		No cooperative opened a literacy center after the first training carried out by SSOD. What shows that farmers can not continue themselves this activity	
			Project of reinforcement of knowledge in health and hygiene	X	X		
			Project of introduction of the improved cooking stoves	X	X		
		Level of the villages	Actions of improvements of the incomes	Project of introduction of a system of saving and turning credit (tontine)		X	The relationships to the reservoir are very weak, but the farmers propose to install tontine groupings gathering the farmers of the same village as the pilot projects in order for them to have the access to credit for the purchase of the agricultural materials and others inputs.

Note; the project marked in "X" will be carried out in the AP and those marked in "O" will be carried out partly in the AP

### 4.3 Result of the final evaluation of the PP

After the evaluation by the cooperatives, the final projects to retain in the AP are presented in table 4.3(1) below, and when determining, it referred also to environmental and social assessment. The result is indicated to the Appendix PP5.

**Table 4.3(1) Final projects to retain in the AP**

Type of action	Target	Action	Project	Projects proposed by SSOD and regional government services	Responses of the cooperatives to the proposed projects	Final projects to retain in the AP	Observation
Minimum package	Level of the official services	Actions of reinforcement of the support system for the populations by the official services	Project of reinforcement of the means of work for basic extension agents	X	X	X	The number of visits of the CDA on the level of the site is fixed to 4 visits per month
			Project of reinforcement of the capacities of the basic extension agents	X	X	X	
			Project of installation of a system of capitalization and share information	X	X	X	
	Level of the sites of the reservoirs	Actions of reinforcement of the capacities of the reservoir users in management of the actions	Project of support to the installation of the reservoir users organization	X	X	X	<ul style="list-style-type: none"> <li>• Before the installation of the cooperatives, it is necessary to inform the concerned chiefs of villages on the goal and objectives of the cooperatives</li> <li>• Add the principle of the reservoir natural resources management (land, water...) by farmers</li> </ul>
			Project of support for the reinforcement of the capacities of the executive members of the cooperatives of reservoir users	X	X	X	
			Project of reinforcement of the capacities in maintenance of the reservoirs	X	X	X	
			Project of installation of a system of information flow and share of the techniques between recipients				
	Level of the villages	of reinforcement of the capacities of the populations in management of the actions	Project of support for the organization of the populations				<ul style="list-style-type: none"> <li>• It is very difficult to establish the relation between the VDC and the Cooperative because having different objectives and interests as proposes the provisional action plan.</li> <li>• it was judged that time and the financings will be more effective if the contents of the action plan are concentrated on actions of agricultural development centered on the valorization of water reservoirs</li> </ul>
			Project of support for the reinforcement of the capacities of the executive members of the organizations				

Type of action	Target	Action	Project	Projects proposed by SSOD and regional government services	Responses of the cooperatives to the proposed projects	Final projects to retain in the AP	Observation	
small scale Integrated projects	Level of the sites of the reservoirs	Actions of improvement of the incomes	Project of improvement of the agricultural techniques	1. Basic notions on the crops, plant health prevention	X	X	X	
				2. Introduction of the ecofarms	O	O	O	The technique of water economy proposed is not adapted to realities, because it takes time and working. Therefore, it will not be carried out in the AP. The principle of the "peasants-demonstration-field" and arboriculture will be retained in the AP
				3. Introduction of improved varieties		X	X	According to farmers', the intensification of these cultivations enables them to increase their income. This is why they asked for the maintenance of this activity while including cowpea.
			Project of improvement of the agricultural management techniques	X	X	X	The inputs shops and the marketing of the agricultural products by the cooperatives are different activities. Consequently, the two training will be separated in the AP.	
			Project of experimentation of the introduction of rice NERICA	X	X	X	In addition to the varieties of rice NERICA, it will be added other varieties to obtain the most adapted to the sites	
			Project of introduction of fish farming	X	X	X		
			Project of reinforcement of the capacities in maintenance of irrigation equipments	X	X	O	The cooperatives did not realize some wells after the training because requiring much investment. This is why, it will not be carried out the training on sinking of wells. When there is no well for used like an object for garden, sinking of one garden well for the cooperative to reinforce the irrigation facilities on the site.	
			Project of conservation of the arable lands	X	X	X	This project lies within the scope of the activities of natural resources management. Consequently, it will be carried out the reinforcement of the capacities of farmers in this field within the framework of the AP.	
			Project of prevention of the damage caused by the animals	X	X	X	BLPC is an important organization in charge of the natural resources management. Consequently, it will be carried out the reinforcement of the capacities of farmers in this field within the framework of the AP.	



Type of action	Target	Action	Project	Projects proposed by SSOD and regional government services	Responses of the cooperatives to the proposed projects	Final projects to retain in the AP	Observation	
			Project of support to income generating activities	X	X	X	The project is composed of the aspects "processing" and "marketing of the agricultural products". Thus, within the framework of the AP, this project will be divided into two: processing and marketing.	
		Actions of improvements of the life condition		Project of reinforcement of capacities in reading and writing	O			<ul style="list-style-type: none"> <li>The VDC will not be installed within the framework of the AP; consequently the trainings on literacy will not be carried out on villages level and the executive members of the VDC.</li> <li>The literacy is necessary for the management of the cooperatives. But, the cooperatives cannot continue this activity themselves. This is why, the literacy will not be carried out within the framework of the AP. However, at the time of the election of the executive members of the cooperative, farmers will be sensibilised to privilege the literates' persons at least for the posts of the Secretary general and treasurer.</li> </ul>
				Project of reinforcement of knowledge in health and hygiene	X	X	X	
				Project of introduction of the improved cooking stoves	X	X	X	
				Project of introduction of a system of saving and turning credit (tontine)		X	X	The rural economy rests on agriculture and breeding which are the two main activities practiced by the peasants. To improve the incomes of the farmers, this activity was added in the AP.
Level of the official services	Actions of improvement of the incomes of	Project of reinforcement of the means of work for basic extension agents		X	X	Only 5.3% of the members use the funds of the groupings in the valorization of the reservoirs. But, this activity gives possibilities of access to farmers. This is why this activity will be maintained within the framework of the AP with the principle of setting up tontine groupings specific to farmers and not the villagers.		

Note; the project marked in "X" will be carried out in the AP and those marked in "O" will be carried out partly in the AP

#### 4.4 Content of the AP and the effectiveness of actions

Considering the process of establishment of the AP as defined in points 4.1 to 4.3, the content of the AP was subdivided into two broad outlines such as:

- 1) Reinforcement of farmer's capacities on self development
- 2) Improvement of incomes of reservoirs users

The content of the AP and the effectiveness of actions are presented in table 4.4(1) below :

**Table 4.4(1) Content of the AP and effectiveness of actions**

Components	Objectives	Sub-components	Activities	Effectiveness of actions
<b>A. Reinforcement of capacities of reservoirs users in self development</b>	To reinforce farmer's capacities for the valorisation of reservoirs	A1. Reinforcement of capacities of basic extension agents	<ul style="list-style-type: none"> <li>• A1.1. Equipping of basic extension agents</li> <li>• A1.2. Reinforcement of capacities of basic extension agents in organizing reservoirs users</li> <li>• A1.3. Installation of a system of distribution of information</li> </ul>	<ul style="list-style-type: none"> <li>• Currently, the support brought by the basic extension agents as regards animation near the farmers is evaluated on the scale of the year. But if it is carried out with even more intensity (several times per week), it will contribute to better supervise the farmers</li> <li>• The number of year of experiment varies from one extension agent to another. But, the various organized meetings made it possible to put at the same level these agents due to a good capitalization and a good distribution of goods and bad examples, within the frame work of their farmer's supervisor activity</li> <li>• Collaboration between the cooperative and the technical services makes it possible more effectively to carry out the actions of development by the government and the NGO</li> </ul>
		A2. Reinforcement of farmer's capacities in planning, execution, follow-up and evaluation of actions for the valorisation of reservoirs	<ul style="list-style-type: none"> <li>• A2.1 Installation of cooperatives of the reservoirs users</li> <li>• A2.2 Training on the establishment, execution, follow-up and evaluation of reservoir valorisation plan ( RVP)</li> <li>• A2.3 Training on the maintenance of reservoirs</li> <li>• A2.4 Installation of BLPC for the management of natural resources</li> <li>• A2.5 Training on struggling against sand accumulation</li> </ul>	<ul style="list-style-type: none"> <li>• Reinforcement of the activities of the cooperatives for the durable valorization of the reservoirs (for example, on the site of Bourdi, a project of the World Bank wanted to support without a contribution the farmers with digging of 50 dry season cultivation concrete wells. The cooperative asked on its own initiative for a participation of 60,000 FCFA per well to the recipients.</li> <li>• Valorization of the reservoir water use (domestic, watering and irrigation)</li> <li>• Prevention of the problems of damage caused by the animals on the plots on the level of the reservoirs sites.</li> <li>• Maintenance of the functional reservoir</li> </ul>

Components	Objectives	Sub-components	Activities	Effectiveness of actions
<b>B. Improvement of incomes and living condition of reservoirs users</b>	To increase the incomes and improve the living condition of farmers on the reservoirs	B1. Intensification and diversification of dry season cultivation	<ul style="list-style-type: none"> <li>• B1.1 Training on gardening techniques</li> <li>• B1.2 Reinforcement of irrigation system</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in the yields of vegetable production (Cabbage 1.7 times, Lettuce 2.9 times, Tomato 1.6 times, Onion 1.7 times, Carrot 1.9 times)</li> <li>• Increase in the possibilities of productions of vegetables and reduction in the departures in migration</li> </ul>
		B2. Installation of inputs shops		<ul style="list-style-type: none"> <li>• Increasing the availability of agricultural inputs (seed, fertilizers and crop protection products...) at sites level</li> </ul>
		B3. Support to the management of the sale of agricultural products		<ul style="list-style-type: none"> <li>• Possibility for the farmers of negotiating the selling prices with the tradesmen, and increase in the incomes of the farmers.</li> <li>• Increase in the incomes of the farmers through the control of the sale</li> </ul>
		B4. Introduction of rice cultivation		<ul style="list-style-type: none"> <li>• To increase the productivity of the sites with obtaining a yield of 6.5 t/ha for rice production</li> <li>• Diversification of food, sources of income and of farmer's production</li> </ul>
		B5. Introduction of Fish farming		<ul style="list-style-type: none"> <li>• To increase the productivity of the sites: to obtain 4t/year of fish on reservoir of Guidan Bado (water surface 13ha minimum).The selling price of a kg was fixed 750CFA, therefore it can be estimated a benefit of 3 million F CFA per annum.</li> <li>• Diversification of food ,the sources of income and farmer's production</li> </ul>
		B6. Introduction of fruit growing		<ul style="list-style-type: none"> <li>• It can be estimated the selling price of a grafted plant to 750CFA – 1,500CFA and the fruits from 200CFA – 500CFA the kg</li> <li>• Diversification of sources of incomes and of farmer's production</li> </ul>
		B7. Introduction of improved seed varieties for rainfed cultivation		Yields of the improve varieties vary from 840 to 1,320 kg/ha for millet and 560 to 1,100 kg/ha for sorghum on the sites of Bourdi I and Guidan Bado whereas it is of 400 kg/ha for the local varieties.
		B8. Support to the processing and conservation of the agricultural products		<ul style="list-style-type: none"> <li>• The processing of agricultural products facilitates the conservation ,the transport and permits to sell at profitable prices</li> <li>• To make the agricultural productions profitable</li> </ul>
		B9. Support to Micro finance of tontine type		It has been installed 78 tontine groupings which mobilised some 5,619,220 F CFA (in february 2009), this forms the source of credit for the famers at villages level
		B10. Training on animal health and feeding		<ul style="list-style-type: none"> <li>• Improvement and diversification of farmer's incomes through animal production</li> </ul>
		B11. Training on the improvement of knowledge in health and hygiene ( diseases related to water)		<ul style="list-style-type: none"> <li>• Valorization of the reservoir water resources use (domestic, watering and irrigation)</li> <li>• The reserver's water can use sanitarly.</li> </ul>
		B12. Introduction of improved cooking stove		<ul style="list-style-type: none"> <li>• Conservation of the forest resources and reduction in the working time of women</li> </ul>

## 4.5 The activities of the AP verified by the pilot project

The activities of a AP are classified into the following three. (Refer to Table 4.5(1))

(1) During the pilot project, the formation has been executed. Thereafter, farmers practiced and the effect of the activity has been verified. (The content of the detail is indicated in Table 4.4. (1)).

(2) During the pilot project, the formation has been executed. But the effect of the activity has not been verified.

(3) During the pilot project, the formation has not been executed. But, since the effect of the activity has not been verified, the activity was taken in to the AP.

It is desirable to verify the effect of activity of (2) and (3) at the time of action plan enforcement or after that.

**Tableau 4.5 (1) Activities of the AP verified by the pilot project**

Components	Objectives	Activities		(1) the effect of the activity has been verified	(2) the effect of the activity has not been verified	(3) the activity that the effect of the activity has not been verified
<b>A. Reinforcement of capacities of reservoirs users in self development</b>	To reinforce farmer's capacities for the valorisation of reservoirs	A1. Reinforcement of capacities of basic extension agents	A1.1. Equipping of basic extension agents	X		
			A1.2. Reinforcement of capacities of basic extension agents in organizing reservoirs users	X		
			A1.3. Installation of a system of distribution of information	X		
		A2. Reinforcement of farmer's capacities in planning, execution, follow-up and evaluation of actions for the valorisation of reservoirs	A2.1 Installation of cooperatives of the reservoirs users	X		
			A2.2 Training on the establishment, execution, follow-up and evaluation of reservoir valorisation plan ( RVP)	X		
			A2.3 Training on the maintenance of reservoirs	X		
			A2.4 Installation of BLPC for the management of natural resources	X		
	A2.5 Training on struggling against sand accumulation	X				
<b>B. Improvement of incomes and living condition of</b>	To increase the incomes and improve the living condition of	B1. Intensification and diversification of dry season cultivation	B1.1 Training on gardening techniques		X (The check of rendement of increase of the harvest)	
			B1.2 Reinforcement of irrigation system	X		

Components	Objectives	Activities	(1) the effect of the activity has been verified	(2) the effect of the activity has not been verified	(3) the activity that the effect of the activity has not been verified
reservoirs users	farmers on the reservoirs	B2. Installation of inputs shops	X		
		B3. Support to the management of the sale of agricultural products		X (The check of the amount of increase of income )	
		B4. Introduction of rice cultivation	X		
		B5. Introduction of Fish farming	X		
		B6. Introduction of fruit growing		X (The check of rendement of the harvest )	
		B7. Introduction of improved seed varieties for rainfed cultivation	X		X The addition of cowpea (Establishment of guides and supports)
		B8. Support to the processing and conservation of the agricultural products		X (The check of the amount of increase of income)	
		B9. Support to Micro finance of tontine type	X		
		B10. Training on animal health and feeding			X (Establishment of guides and supports)
		B11. Training on the improvement of knowledge in health and hygiene ( diseases related to water)	X		
		B12. Introduction of improved cooking stove	X		

## Chapter 5 : Evaluation of the economic feasibility of the PP

### 5.1 Study for the check out of the current agricultural state

#### 5.1.1 Aims of the study

Three agricultural sites not included the site of the water reserve of Jaja whose main objective is the watering of the animals, for which it exists a difference for each site, such as the type of agriculture, marketing and consequently the consumption, the study for the check out of current agriculture was carried out in June 2008 for the aim of consideration of the economic effect and the agricultural social impact in dry season on the level of the sites.

#### 5.1.2 Methods of the study

The method of study is the interview as investigation of the current agriculture on the level of the site, near 2 or 3 farmers per site. The contents of the investigation are the check out of the situation of the cropping capacity during rainy season and in dry season, the rate of subsistence farming after harvest, the rate of sale and the average prices and a difference between the yield to be reached and yields obtained, the means for insufficiency complementary. The criterion for the selection of the investigation is the random choice on the site.

#### 5.1.3 Results of the study

##### (1) Agriculture during rainy season and dry season

In the frame work of this study, agriculture mainly during rainy season is indicated "rainfed agriculture ".And agriculture in dry season is indicated "irrigated agriculture or fall cropping". Table 5.1(1) shows the occupancy rate of agriculture in dry season and rainy season on the assumption that all the agricultural production is sold. Approximately, the agricultural production rate in rainy season occupies within the total production roughly 60%. For the site of Bourdi1 suited for gardening, there is a farmer who obtained 63% of his whole production from gardening practised in dry season.

The proportion of the agricultural production in dry season compared to the total production varies according to the characteristics of each. The analysis of Table 5.1(1) roughly shows that the production rate of agricultural in dry season exceeds the 30% on the site of Guidan Bado, 40% for the site of Edouk, and more than 50% for the site of Bourdi. Thus, on the level of the site of Bourdi, the agricultural production in dry season is much more significant than the agricultural production in rainy season.

**Table 5.1(1) Distribution of the total agricultural production in rainy season and dry season per individual on the level of the three sites**

Name of Site	Total agricultural production (FCFA)	Agricultural production in rainy season (FCFA)/ (%)	Agricultural production dry season (FCFA)/ (%)
No1 Guidanbado	1,134,500	794,500 (70.0%)	340,000 (30.0%)
No2 Guidanbado	821,500	524,000 (63.8%)	297,500 (36.2%)
No3 Guidanbado	348,000	224,000 (64.4%)	124,000 (35.6%)
No4 Edouk	541,750	318,750 (58.8%)	223,000 (41.2%)
No5 Edouk	707,500	444,500 (63.8%)	263,000 (37.8%)
No6 Bourdi	769,500	285,000 (37.0%)	484,500 (63.0%)
No7 Bourdi	443,000	263,000 (59.4%)	180,000 (40.6%)
<b>Averages</b>	<b>680,821</b>	<b>407,679 (59.9%)</b>	<b>273,142 (40.1%)</b>

The table below presents the proportion of the subsistence farming (on average) of the agricultural production in dry season and rainy season. The rate of subsistence farming is approximately 80% for agriculture in rainy season and approximately 40% for agriculture in dry season.

**Table 5.1 (2) Distribution of the subsistence farming of the agricultural production in rainy season and dry season**

	Total agricultural production (FCFA)	Subsistence farming (FCFA)	Rate of subsistence farming (%)
Agricultural production in rainy season	407,679	318,143	78.0
Agricultural production in dry season	273,143	105,000	38.4

✕each value of the table is an average

### (2) The aim of dry season agriculture

Generally, it should be noted that at the starting of the study, we considered that the agricultural production in dry season is intended for sale. But, actually approximately 40% (average of the 3 sites) of the agricultural production in dry season are consumed by farmers. The reasons can be as follows:

- ① Reduction of the expenditure by consumption of part of its own production
- ② The loss of earnings in term of cereal supplement (carbohydrates) is filled by the consumption of starchy foods like potato.
- ③ Contribution of vitamins through vegetable consumption (for health)
- ④ Improvement of the flavour (taste) of the dishes by the use of vegetables in the preparation

### (3) Others

During this study, it was checked a great difference in total agricultural production according to the farmers. The factor of this great difference is for the majority the "labour force" in priority. The rainy season becomes increasingly short and precipitations less and less significant, this is why, there is a concentration of the labour force at a relatively reduced time for the realization of cultural works (sowing, ploughing, and harvest). This is why it is necessary to employ much labour.

About the problem of the agricultural land, much of farmers estimate that that is due to the decrease in soils fertility. But, on the level of each agricultural site, there exist possibilities of extension if the labour force is acquired.

## 5.2 Awaited results in relation with the activities of income improvement in the framework of the PP

Within the framework of the Pilot Projects, the activities directly related to the increase in the incomes are indicated as follows:

### 5.2.1 Gardening

Among the 4 sites, gardening is practised on the sites of Bourdi I, Edouk and Guidan Bado. Only on the site of Bourdi I gardening is practiced before the construction of the threshold of spreading and the technical level of the gardening is higher than on the other sites. On the sites of Edouk and Guidan Bado, the farmers introduced themselves the gardening after the construction of a water reservoir and more likely without any technical support, consequently the technical level of the gardening is very low. Table 5.2(1) indicates the yields of the main garden crops (Cabbage, Lettuce, Tomato, Onion and Carrot) for the period going from 2000 to 2004. There is always a difference of the level of the farming techniques, we estimate that the average yields of table 5.2(1) are those obtained before the project on the level of the 3 sites.

**Table 5.2(1) Average yields (t/ha) of the main garden crops for the period of 2000 to 2004 of Tahoua region**

Crops	Yields (t/ha)
Cabbage	31.42
Lettuce	15.65
Tomato	20.58
Onion	37.06
Carrot	24.75

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The current yields of gardening production of vegetables in dry season which are indicated in table 5.2(1) could be improved until obtaining those mentioned in table 5.2(2) by the training and the supervision of the producers, the diffusion of the farming techniques such as:

1. The use of the good quality seeds
2. Soil preparation activities (Ploughing, application of the organic manure and field layout)
3. Techniques of nursery (soil preparation, sowing, watering and protection of young seedlings)
4. Techniques of transplanting (dates and spacings)
5. Maintenance work after transplanting (weeding, organic and inorganic fertiliser application, waterings and plant health protection)
6. Harvests (periods and techniques of harvests)

**Table 5.2(2) Yields hoped after the introduction of the project**

Crops	Yields (t/ha)
Cabbage	54.40
Lettuce	45.00
Tomato	33.10
Onion	63.60
Carrot	47.20

Source: For the yields expected with the training and the supervision of the producers we referred to the documentation of the JGRC Vol 6 Guide for agricultural technics - March 2001 (page 46 Table 4.3.1.1 Vegetables cropped in dry season in the Sahel region).

### 5.2.2 Rice growing

The objective is to obtain a yield of 6.5 tonnes/ha for the production of rice on the level of the sites of water reservoirs. That represents the average yield obtained in Edouk and Bourdi for the 4 varieties chosen by the producers.

**Table 5.2(3) Results of the rice harvest in Edouk and Bourdi for the pilot project "Experimentation of the introduction of rice NERICA"**

Varieties	Averages Yields (t/ha)		
	2007	2008	Averages
L-49 (NERICA)	5.3	5.8	5.5
L-39 (NERICA)	6.3	5.2	5.7
D5237	9.6	6.9	8.2
Sintane.Diofor	7.5	5.9	6.7
Averages	7.2	5.9	6.5

### 5.2.3 Fruit growing

To increase and diversify the agricultural production by at least one third (1/3) for the farmers of the agricultural sites to improve their incomes and nutritional quality of the populations by the practice of the fruit growing which is currently non-existent on the sites of water reservoirs

Each species of grafted fruit tree produces fruits of good quality of fruit that the honest i.e. natural tree. Consequently, the grafted fruit tree was to make a deal of high price.



**Table 5.2(4) Data on the species of introduced fruit trees**

Techniques of production of the seedlings	Mango trees		Citrus fruits		Apple trees of the Sahel
	Direct planting	Grafting	Direct planting	Grafting	Grafting
Periods of the first fructifications (years)	5 ~ 6	3 ~ 4	3 ~ 4	4 ~ 6	1
Duration of production (Years)	35	30	25	25	40
Yield per tree (kg/year)	200	250	250	250	75
Selling price (FCFA/kg)	200	250	200	300	500

Source: Mr. Mamane Zangui expert in fruit growing and ICRISAT for the apple tree of the Sahel  
 NB: The price of a kg of apples of the Sahel is very high because of the production very limited compared to that of the fruits of the other species

### 5.2.4 Fish stocking

To obtain 4t/year fish on the level of the reservoir of Guidan Bado, site which did not experience fish stocking before according to estimates' of NGO ADA specialized in pisciculture, fish stocking and having led the operation on the site.

### 5.3 Evaluation of the economic feasibility of the construction of the small scale dams

It was considered the economic feasibility of the construction of the small scale dams on the level of the sites of Bourdi I, Edouk and Guidan Bado by excluding the site of Jaja which is of non agricultural vocation. The evaluation can be made according to the internal rate of return or the analysis of the costs and benefit (B/C ratio) but here it will act of the internal rate of return. The surface area for gardening of each site and the average rate of sale of the total quantity of harvests are indicated below:

**Table 5.3(1) Gardening surface area per site and rate of sale of the vegetables production**

Site	Gardening surface area 1) (ha)	Sale rate 2) (%)
Bourdi I	44.2	60
Edouk	80.0	60
Guidan Bado	10.2	50

Source: 1) real calculation of the mission of study in February 2008  
 2) interview by the mission of study of the executive members of the cooperatives of reservoir users

On the basis of these data, the estimate of the internal rate of return is made as follows:

- ① The expenses of construction of the reservoir only were considered like expenses
- ② The durability of the reservoirs is estimated at 30 years
- ③ The surface area for gardening of February 2008 was examined
- ④ Several vegetables are cultivated but we are based on tomato for calculation
- ⑤ The surface area considered cropped with tomato reaches the surface area of the gardening of February 2008 and 10 years are necessary to cover this surface area as from the first year of cropping
- ⑥ The sale rate of the production is 60% and increases by 10% the first year then each year to reach 60% at the 6th year.
- ⑦ The yield of the first year is estimated on the basis of average for Tahoua region which is 20.58t/ha and is carried to a final objective of 33.1t/ha

- ⑧ After the beginning of the cropping, we estimate achieving the final objective of yield within 5 years
- ⑨ The selling price accounts for 50% of the market price (255 FCFA/Kg) in Tahoua on 10 February 2009

Based on these assumptions, the results of the estimate of the internal rate of return of the 3 sites are indicated as follows:

**Table 5.3 (2) Rate of internal return per site**

Sites	Internal rate of return (%)
Bourdi I	46.98
Edouk	53.71
Guidan Bado	19.59

Note : The basis for calculation appears in the appendixPP6

These values rather strong are compared with the rate of actual reduction of 8.3%<sup>1</sup> of the countries of West Africa and we can judge a strong rate of return of investment. This approximate calculation does not include the expenses of the technical trainings necessary to increase the productivity of the garden crops. The maximum surface area suitable for gardening of the sites of Bourdi I, Edouk and Guidan Bado is still enlarging. Moreover, the yields of rice growing on the sites of Bourdi I and Edouk and those of fish stocking on the site of Guidan Bado were not included. If the calculation of all these yields is added, we can estimate a rate of return for the investment of the reservoirs even higher.

Whereas before the construction of threshold of spreading on the site of Edouk, approximately 70% of the men emigrated during the dry season for job, the executive members of the cooperatives of the reservoirs users declared that this rate had dropped to 15-20% since the construction of the water reservoir. In the same way they declared that on the site of Bourdi I, the emigration during the dry season was approximately 70% but since the construction of the threshold of spreading this rate fell to reach 60-50% and that recently young men had returned to the village to devote themselves to gardening during the dry season.

In addition, the gardening during the dry season is an effective mean to create cash incomes for women. This fact was made clear by the president of the cooperative of the users of the threshold of spreading of Bourdi I "For the moment in addition to onion, pigeon pea is one of the main crops cultures but tomato cropping is easy and can be practised by women. Even in the event of surplus, it is possible to preserve and sell dried tomatoes and from now on we will increase tomato cropping area instead of cropping pigeon pea" he estimated.

All these points prove that the construction of the small scale dams or the thresholds of spreading constituted an "oasis" in the desert while contributing not only to supply out of water the populations and the cattle by meeting the needs for the everyday life and the cattle but also by offering an opportunity to the young emigrants of remaining in the village during the dry season to work and improve their incomes.

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<sup>1</sup> World Bank report (Project appraisal document on a proposed credit in the amount of SDR 26.5 million to the republic of Niger for an agro-sylvo-pastoral exports and markets development project, March 2,2009)

## **Chapter 6 : Collaboration with NGO and rural sector organisations**

### **6.1 Collaboration with the NGO**

#### **6.1.1 Objectives of collaboration with the NGO**

The number of the basic extension agents in Niger tends to lower these last years. The number of the NGO on the other hand tends to increase and the organizations of assistance use them as in charge of the development activities. The present study also judges it that to promote a village development by the populations, the NGO have to play a significant role, just like the state services. However, the range of the NGO goes from international NGO having technical capabilities and financially stable to NGO which pain to ensure their operating expenses and are still on a low level of technical capacities. The following recommendations are thus made in terms of use and formation of NGO:

- ① To call for the NGO which have technical capabilities according to the needs, as services providers of the various actions of the pilot projects and the action plan
- ② To incite the local NGO whose activities are well implanted in the zone of the study, but whose capacities are low, to take part in various trainings, to start with trainings in facilitation.

#### **6.1.2 Selection of the NGO providing the actions**

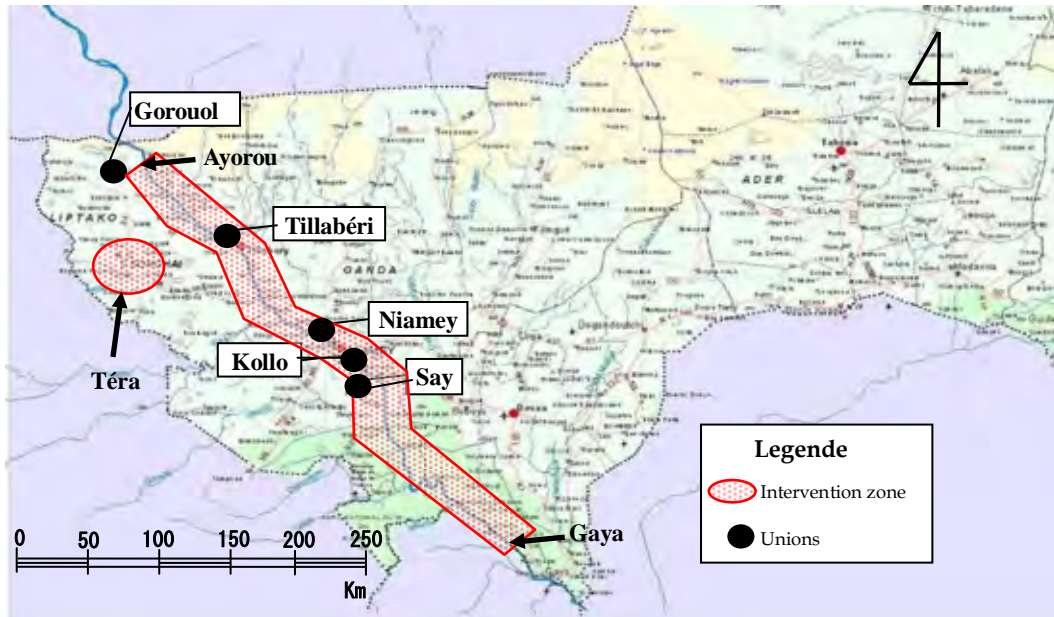
According to the guide of the NGO of Niger (edition 2005), there is 411 NGO in this country. The selection of the NGO services provider was done through the following procedure:

- ① First pre-selection: a first list was drawn up by including the 6 structures quoted in the report of the preliminary basic study of the JICA established in July 2005, the 7 NGO recommended by the homologous structures which are the Ministry of the Agricultural Development and the Ministry of Water Resources Facilities, of Environment and Struggle against Desertification, the 7 structures recommended by the technical and financial partners (FAO, Switzerland cooperation , German, European Union, etc.) the 2 offices of the study presented by the homologous and the partners, which gave a list of 20 structures, 2 of them having been presented 2 times
- ② Second pres-election: more tightened list of five structures was drawn up on the basis of discussion with these 20 structures relating to their fields of intervention, the broad outline of their activities, their main projects in collaboration, their zones of intervention, the number of their technicians, etc.
- ③ Final selection: Following an invitation to tender at least offering near the 5 structures of the second pre-selection, it is the Fish Farmers Association (ADA) which was selected as the services provider.

For part of the services of the second year, from the point of view of durability of the actions, we signed some contracts with ADA without using the tender invitations.

#### **6.1.3 Presentation of NGO ADA**

NGO ADA, created in 1996 (authorization No 019/MI/AT/DAPJ/SA of the Ministry of Interior and the Territory Planning) has it's headquarter in Niamey and its zone of intervention is as such presented in figure 6.1(1) below.



**Figure 6.1(1) Map of the zone of intervention of ADA**

Contact of NGO ADA Addresses : PO Box 11 688 Niamey, Niger  
 Phone:20 37 25 83 or 21 76 03 00  
 electronic Address : ongada @intnet.ne or carpeada@yahoo.fr

The objective of the activities of ADA is to contribute to the reduction in the vulnerability of the populations, which results in particular in the weakness of the level of education, the insufficiency of access to the primary health care, the food insecurity, the lack of funds. It intervenes concretely while supporting, using a method of self development, the integrated and durable village development of the basic communities by the village organizations. It to date organized the groupings and the six unions of groupings below:

- Union "DABARI" of Tillabéri:54 groupings
- Union "GOMNI" of Niamey:27 groupings
- Union "MARGOU" of Kollo:44 groupings
- Union "AYU" of Say:20 groupings
- Union "DOU NOR GOOD" of Say:16 groupings
- Union of Goroual:44 groupings

The ADA already intervened in collaboration with the following technical and financial partners:

- "bread for the world" (Germany) as regards to changes of the social status of the basic communities
- Canadian International Development Agency (CIDA) in terms of informal education
- WWF France

#### **6.1.4 Collaboration with NGO ADA**

The actions of the pilots projects committed by the present study pass by the following cycle: organization → planning → execution of the plans → information feedback towards the planning of the following year.

The approach adopted in terms of organization of the populations which forms the core of this process is that of the "minimum package" developed and implemented within the framework of the project "School for all", also carried out in Tahoua, to which the model of self development of NGO ADA was applied. The services in connection with the organization of the populations by the

installation of village development committees and cooperatives of reservoirs users as of the starting of the pilot projects were entrusted to ADA.

2007 year fiscal presentations for the installation of village development committees (VDC), literacy and the introduction of micro finance of tontine type and those of year 2008 concerning the installation of reservoirs users cooperatives, the support to the establishment of reservoirs valorization plans by the cooperatives, the reinforcement of capacities as regards the maintenance of reservoirs, the protection of arable lands, the prevention of damages caused by animal, fish farming in a reservoir, the improvement of knowledge as regards health and hygiene, the introduction of improved cooking stove and the support to the incomes generating activities were entrusted to the NGO ADA. All these activities were object of establishment of guides and supports. So, the trainings will be entrusted to the technical service a part fish farming since the NGO ADA is practically the only structure possessing a broad experience and the material adapted for the execution of this activity.

## **6.2 Collaboration with the structures in connection with the rural sector**

During the execution of the pilot projects to date, some exchanges of ideas and information were carried out in a regular way with the structures in relation with the rural sector. These are now the results as regards the collaboration with these structures within the framework of the pilot projects, with the view point of the establishment of collaboration relations with these structures during the execution of the action plan:

### **6.2.1 Collaboration with the project "School for all" carried out by JICA**

Within the framework of the pilot projects, the organization of the populations was led by referring to the tools of project JICA of "School for all" in terms of "democratic election of the persons in charge" at the time of the installation for the school management committees (SMC) and of "analysis of the problems and preparation of plans by the populations". That induced the installation on the level of reservoirs and on village level of organizations based on democratic elections, the examination by the populations of their daily problems, and the establishment by these same populations of annual plans of activities to solve these problems.

### **6.2.2 Collaboration with the Inputs Project carried out with the support of Food and Agriculture Organisation of the United Nations (FAO)**

The main activity carried out concerns the installation of inputs shops. It is a system of purchase aiming at ensuring an efficient stocking of agricultural inputs and materials for farmers. The installations, the purchase and the sell are sustainably managed with the shop's own funds.

Within the frame work of this study, as the first phase of the project ended in December 2007, the points below were realized in collaboration with EIG (Economic Interest Grouping) ECO 21, an NGO presented by this project.

- Technical training on the basic crops
- Training on the conservation and production of improved seeds
- Training on the improvement of techniques of agricultural management
- Introduction of inputs shop (primary survey, training on introduction, monitoring)
- Establishment of report

<Advantages>

- ECO 21 has a broad experience in this area, this allowed the realization of the primary survey and the sensibilisation of farmers within the frame work of the introduction of inputs shops.

<Conclusion>

The introduction of the system of inputs shops was a real success with the so project or the NGO notably concerning the methods of consulting the inhabitants, the diffusion and sensibilisation, acquisition of funds or management. It is important to continue the collaboration with the Inputs Projects /EIG ECO 21 since it is at this level that a qualified competency in the field of inputs shops exists.

### **6.2.3 Collaboration with the International Crops Research Institute for the Semi-arid Tropics (ICRISAT)**

Since ICRISAT is an international organization, the following points below were carried out according to a protocol:

- primary survey so as for the introduction of dry season cultivation techniques (report)
- Training on the elimination of harmful insects and diseases
- Furnishment of plants, seeds of tree crops and vegetable improved seeds

<Advantages>

- International research organism where are inducted and implemented the modern techniques by some great researchers.
- Possessing a big autonomous perimeter for research comprising also an experimental farm has a big impact on visitors
- It was particularly known in the introduction of improved species and new species adapted in Niger like figs or the sahel apple tree.

< Disadvantages >

- Since it concerns researchers, the training for the peasants is highly technical and richer in explanation but its efficiency is reduced.

<Conclusion>

As an international research organism, it is an excellent base for new improved seeds, plants, etc. Concerning the training of peasants, it was necessary to change the content highly technical for a training more understood by the peasants. This method obtained some proved results. In addition, a technical analysis was carried out including an analysis of soils within the frame work of the survey of the site before cultivation. The feasibility study on the sites generally gave some good results. Therefore, the collaboration with ICRISAT within the frame work of the action plan can be limited to the furnishment of dry season cultivation seeds and plants of good quality.

### **6.2.4 Collaboration with the National Institute of the Agronomic Research of Niger (NIARN)**

Within the frame work of the present study, it was realized in collaboration with NIARN the “project of introduction of new improved varieties seeds of millet and sorghum” for the year 2007 and the “project introduction of rice cultivation” for years 2007 and 2008. Within the frame work of this collaboration these were the subjects:

① Project of introduction of new improved varieties seeds of millet and sorghum

- Comparative experimental cropping between the 4 improved species of millet and sorghum (3 sites)
- Sensibilisation and diffusion to producers of improved varieties
- Furnishment of the necessary materials for production such as fertilizes and seeds
- Training of peasants on millet and sorghum cultivation
- Explanation to peasants and guided execution of comparative experimentation methods
- Monitoring (including crop), quantitative study, study of the impact on population

- Analysis of the results and the establishment of the report

#### ② Project of introduction of rice cultivation

- Cultivation of 5 species of rice including NERICA (2 sites)
- Sensibilisation and diffusion of rice cultivation to peasants
- Furnishment of necessary inputs such as fertilizers and seeds
- Explanation to peasants and guided execution of comparative experimentation methods
- Monitoring (including the crop), quantitative study, study of impact on population
- Analysis of results and establishment of report

#### <Advantages>

- National agronomic research Organism comprising many competent researchers with abroad study experience.
- The mastering of the techniques etc. carried out during the pilot project was individually assimilated and can be diffused to a large scale.
- As a government organism it has a broad quantity of information

#### <Conclusion>

The present program improves the productivity of cereal crops during rainy season but is not in direct relation with the use of reservoirs. However, the improvement of the productivity of cereal crops contributes more to the increase in the incomes of the farmers. That is why the introduction of new improved varieties will be retained within the frame work of the action plan. On other hand, the experimentation of this program through the pilot projects showed that this activity can be efficient with just the diffusion of improved seeds to the peasants. Therefore, within the frame work of the action plan, this activity will be carried out by the technical services of agriculture possessing a functional extension unit (existence of extension service inside the DRDAs).

But, concerning rice cultivation, the satisfactory results obtained are mostly related to the great experience of the researcher in this activity. This is why; NIARN will be called for the introduction of rice cultivation within the frame work of the action plan.

#### **6.2.5 Center of support to rural arrangements (CSRA) former project Keita**

It was realized with this center the transmission of techniques of sinking dry season cultivation wells to farmers with the aim of having some professional well makers at the level of the sites. But, dry season cultivation well of the concrete is necessary a lot of investment. Also, at the level of all the sites having been objects of this training, any dry season cultivation well was realized by the trained well makers. This is why this activity was not retained in the action plan.

## Appendix PP1 : Project design Matrix (PDM)

Name of the project: Study on Sahel Oasis Development in Republic of Niger

Period of the study including the pilot projects: 4 years as from November 2005

Project targets zone: Sites in Tillabéri, Dosso, Tahoua, Maradi areas and Niamey, in Niger Republic

Updated: August 15, 2007

Target groups: Populations of the zone of study, government officials on national and decentralized levels and agents of the communities, NGO

Outline of the project		Indicators	Mode of acquisition of the data on the indicators	External conditions
<b>General objective</b>				
1.	To contribute to the reduction of poverty and struggle against desertification through the rural development around the dams and weirs built within the framework of the Special Program of the President of the Republic	In 2015 at the latest, the actions contained in the action plan will be developed on at least 60% of the targeted reservoirs.	Government report Interview of financial donors	
<b>Objectives of the project</b>				
1.	An action plan for the rural development around the reservoirs centered on the valorisation of these reservoirs is established with the support of the administration and the NGO.	The draft final report which includes the action plan is accepted by the steering committee envisaged in August 2009.	Minutes of the steering committee	The action plan established is budgeted for.
2.	Capacities of the government officials (central and decentralized levels), and the capacities of the populations (populations organizations) are reinforced through the execution of the pilot projects.	In April 2009 at the latest, at least 80% of the government agents and populations targeted improved their capacities in planning, execution of the projects	Results of the investigations near the populations and Niger counterpart	
<b>Awaited results</b>				
1.1	Plans of valorisation of the reservoirs are established, carried out and evaluated by the populations themselves.	In April 2009 at the latest, at least 80% of the plans of valorisation of the reservoirs are carried out and evaluated	Reports of the monthly monitoring meetings	
1.2	Plans of village development are established, carried out and evaluated by the populations themselves.	In April 2009 at the latest, at least 80% of the plans of development of villages are carried out and evaluated	Reports of the monthly monitoring meetings	
2.	Through the execution of the pilot projects: 1) The capacities of the populations' organizations as regards execution of the activities are reinforced. 2) The capacities of the extension agents as regards facilitation near the populations are reinforced. 3) The capacities of the counterparts as regards management of the projects are reinforced.	1) At least 80% of the plans of use of reservoirs and the plans of village development are carried out and evaluated 2) All the target extension agents are able to implement the methods of organization of the inhabitants. 3) All the counterparts understand the PCM method.	Reports of the monthly monitoring meetings Results of the investigations  Results of the investigations	
<b>Activities</b>		<b>Inputs</b>		<b>Prerequisites</b>
		Japanese side	Native of Niger part	The populations of the zone concerned are not opposed to the project.
1.1	Support to the installation of the co-operatives of reservoir users	[ Experts ]	[ counterparts at central, regional and departmental level]	
1.2	Support to the establishment of the plans of reservoirs use	Head of the Team/rural Development	Assignment of permanent counterparts to the members of Japanese study team	
1.3	Reinforcement of the capacities of the users in maintenance of reservoirs	Assistant Head of Team/ villager organisation (1)/Environment		
1.4	Reinforcement of farmers farming techniques	Improvement of the living condition/Gender		
1.5	Reinforcement of farmers agricultural management techniques	Agricultural Exploitation /Vulgarisation		
1.6	Introduction of rice NERICA	Rural infrastructure /Management of reservoirs		
1.7	Reinforcement of the capacities as regards installation of irrigation equipment	village organization (2)/Manager		
1.8	Introduction of fish farming			
1.9	Promotion of the conservation of arable lands around the reservoirs	[ Supply of equipment ]		
1.10	Promotion of defend measures against the damage due to the animals around the reservoirs	Offices, vehicles		
		Material and materials (for the study, materials for the training)		
2.1	Support to the installation of village development committees			
2.2	Support to the establishment of the plans of village development			
2.3	Support to the introduction of a system of saving and turning credit (tontine)			
2.4	Support to the income generating activities			
2.5	Support to the training on literacy teachers			
2.6	Improvement of knowledge in health and hygiene			
2.7	Introduction of the improved cooking stoves			
3.1	Provision of motor bikes, fuel, computers and handbooks for the extension agents on field			
3.2	Reinforcement of the capacities of the extension agents on field as regards sensitizing populations			
3.3	Holding of Regular monitoring meeting			
3.4	Installation of a frame of information exchanges with the structures and organizations concerned			
3.5	Investigations near the extension agents and Niger counterpart			



## AppendixPP2 : Study on salinization

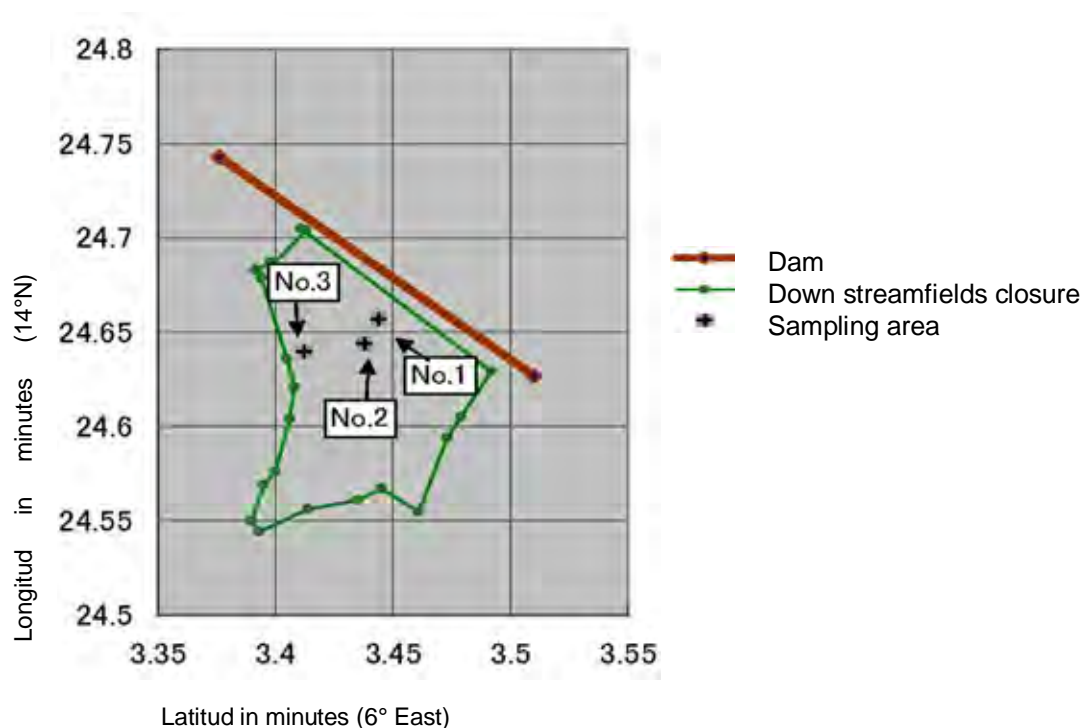
A study was carried out on salt accumulation located downstream side of the reservoir of Guidan Bado. This was the content:

Water in the reservoir: On the immediate upstream side of the dam and at the point more on the upstream side (first 10 days of February 2007)

Down stream water table : 20 existing swamps

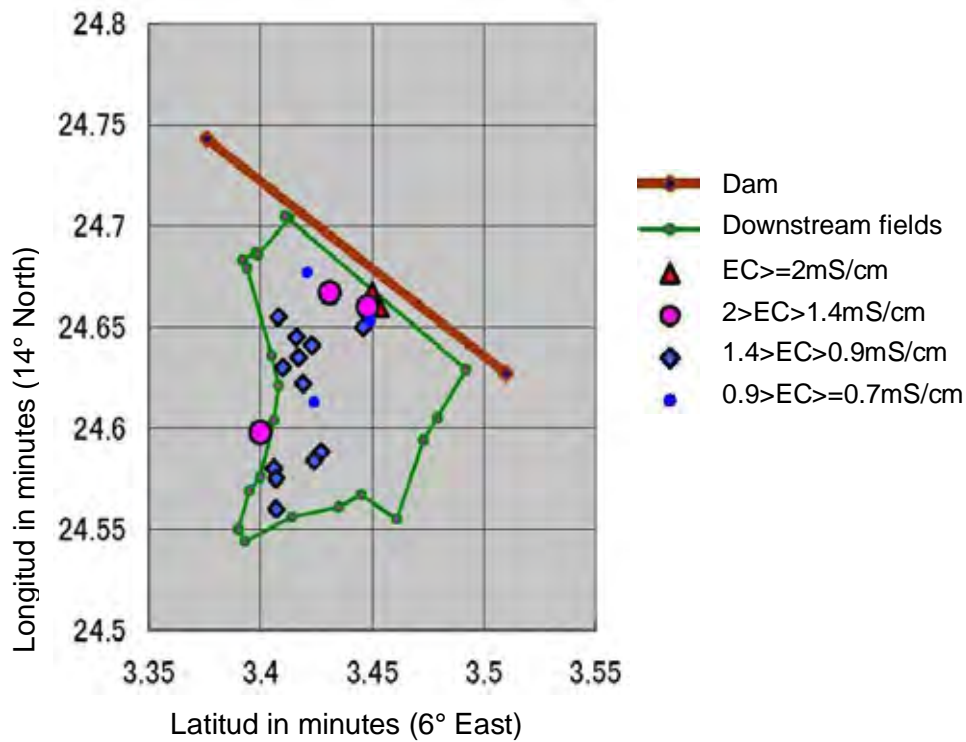
Lixiviats: 3 points in field downstream, soil sampling at depths of -3, -18, and -33 cm, analysis by the lixiviat method at 1 fifth

Figure 1.1 indicate the places for soil sampling.



**Figure 1.1 Soil sampling site down stream the reservoir of Guidan Bado**

The results of measurements are indicated in tables 1.1 and 1.2 , and also in figure 1.2 .



**Figure 1.2 Site and results of the study on the electrical conductivity (EC) in the downstream water table of the reservoir of Guidan Bado**

**Table 1.1 Results of measurements of the electrical conductivity in downstream water table of the reservoir**

No.	Longitud North		Latitud East		Conductivity mS/cm
	Degree	Minutes	Degree	Minutes	
1	14	24,667	6	3,450	2.20
2	14	24,660	6	3,453	2.07
3	14	24,660	6	3,448	1.71
4	14	24,667	6	3,431	1.42
5	14	24,677	6	3,421	0.86
6	14	24,655	6	3,408	1.14
7	14	24,645	6	3,416	1.05
8	14	24,641	6	3,423	0.99
9	14	24,635	6	3,417	1.00
10	14	24,630	6	3,410	0.96
11	14	24,622	6	3,419	0.95
12	14	24,613	6	3,424	0.77
13	14	24,598	6	3,400	1.68
14	14	24,560	6	3,407	0.98
15	14	24,588	6	3,427	1.00
16	14	24,584	6	3,424	1.02
17	14	24,580	6	3,406	0.96
18	14	24,575	6	3,407	0.96
19	14	24,650	6	3,446	0.91
20	14	24,653	6	3,449	0.71

**Table 1.1 Results of the measurements of electrical conductivity of soils downstream the reservoir**

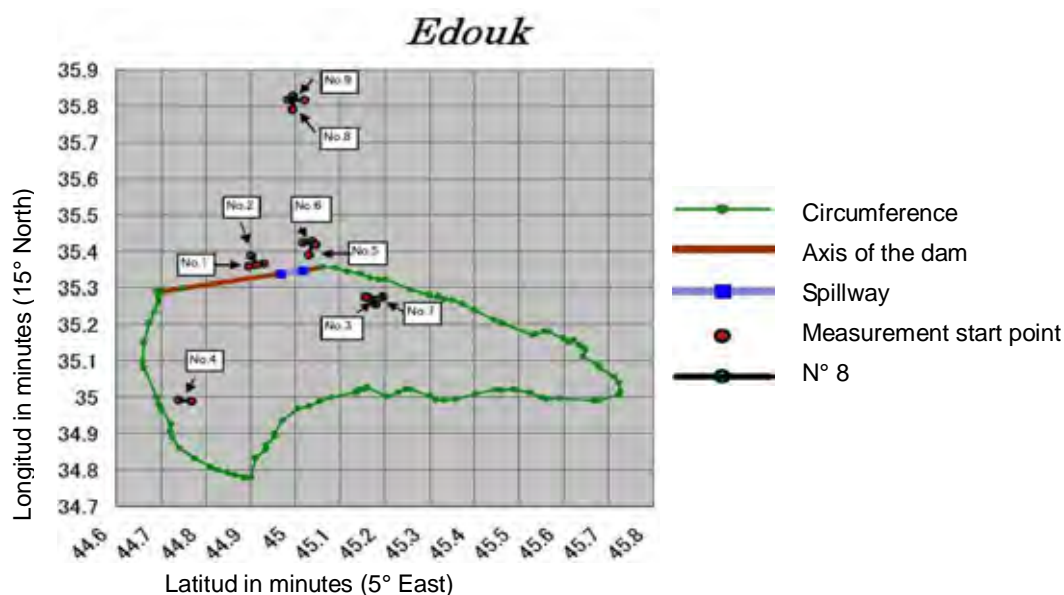
	Depth	First measurement	Second measurement	Third measurement	Average	
No.1	-3cm	0.35	0.36	0.37	0.36	ms/cm
	-18cm	0.39	0.4	0.39	0.39	ms/cm
	-33cm	0.51	0.52	0.5	0.51	ms/cm
No.2	-3cm	0.23	0.24	0.24	0.24	ms/cm
	-18cm	0.33	0.34	0.32	0.33	ms/cm
	-33cm	0.44	0.45	0.45	0.45	ms/cm
No.3	-3cm	23	23	23	23	μs/cm
	-18cm	37	37	37	37	μs/cm
	-33cm	70	68	69	69	μs/cm

## AppendixPP3 : Results of the study by the simplified seismic prospection

A study of prospection by simplified seismic waves was undertaken with the objective of examining the use potential of ground waters on the sites of water reservoirs on which were carried out the pilot projects. This study makes it possible to evaluate the depth of the rock substratum in the circumference of water reservoirs, the thickness of the alluvial layers, and the depth of the water table, and can thus contribute to the decision as for the site of the sinking of a well.

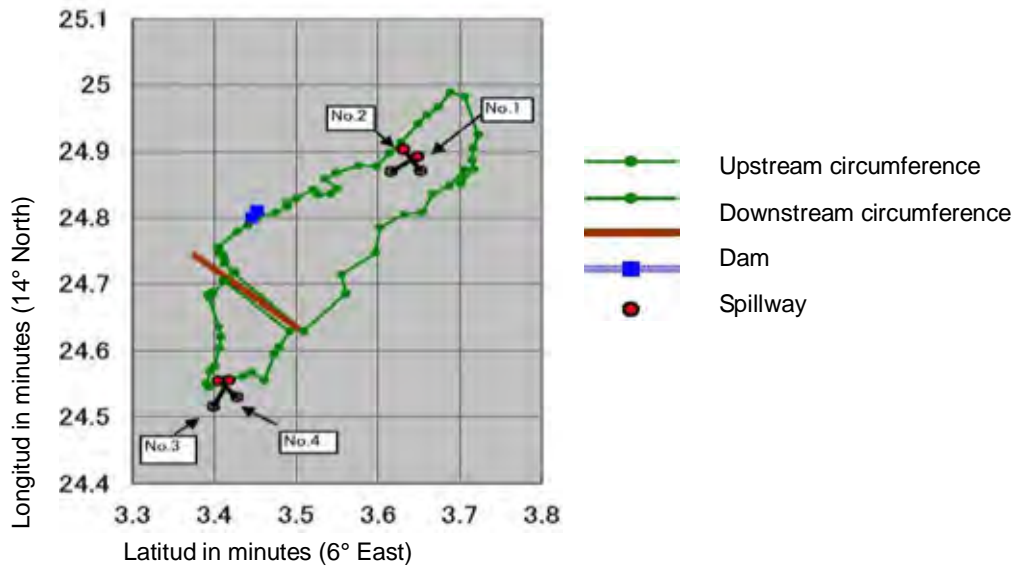
The mode of use of detection by simplified seismic waves was developed at the time of the Study of Development of Techniques of Fight against Desertification carried out from 1996 to 2001 by the Japanese Company of the Green Resources (JGRC), as one of the techniques of development of the ground water resources in the plains of flood of the temporary rivers. It is this method which was used in the present study.

Figures 2.1 and 2.2 present the sites of the measurements taken for these detections by simplified seismic waves



**Figures 2.1 Sites for the measurement of detection by seismic waves (Edouk)**

## Guidan Bado



**Figures 2.2 Site for the measurements of detection by seismic waves  
(Guidan Bado)**

**Table 2.1 Summary of the results of the study of detection by the simplified seismic waves**

Site	Measurement line	Site of the measurement line	Structure of the layers	Depth		Speed of the seismic waves			Analysis
				1st layer	2nd layer	1st layer	2nd layer	3rd layer	
				m		km/sec			
Guidan Bado	No.1	Upstream fall cropping area	2 layers	9.2	-	0.34	1.87	-	Up to 7-10 meters from surface, sandy movable soil layer. The speed of the seismic waves makes to think that the second layer is a layer of sandstone.
	No.2	Upstream fall cropping area	2 layers	6.8	-	0.35	0.93	-	
	No.3	At the limit of downstream irrigated cropping area culture	2 layers	6.9	-	0.36	1.01	-	
	No.4	At the limit of the downstream irrigated cropping area	2 layers	9.6	-	0.42	1.02	-	
Edouk	No.1	At the center of the dam downstream side	2 layers	1.9	-	0.27	0.59	-	Up to 2-4 meters from surface, clayey alluvial layer. The second layer is supposed to be also alluvial but a little firm.
	No.2	At the center of the dam downstream side	2 layers	1.7	-	0.26	0.57	-	
	No.3	Upstream right bank	2 layers	4.3	-	0.32	0.92	-	
	No.4	Upstream left bank	2 layers	1.8	-	0.24	0.66	-	
	No.5	Downstream left bank	2 layers	1.9	-	0.32	0.57	-	
	No.6	Downstream right bank	2 layers	3.3	-	0.36	0.75	-	
	No.7	Upstream right bank	2 layers	3.7	-	0.31	0.86	-	
	No.8	To approximately 800 m downstream, a place exploited as fields by women	3 layers	1.8	15.9	0.29	0.49	1.69	(lines N 8 and 9) Up to 2 meters from surface, sandy movable soil layer Up to 16-17 m, sandy layer a little firmer, and low than 16-17 m, presumption of presence of a layer of sandstone.
	No.9	To approximately 800 m downstream, a place exploited as fields by women	3 layers	2	17	0.37	0.49	1.66	

## AppendixPP4 : List of guides and supports

Type d' action	Cible	Action	Projet	Formation	Année	No.	Documents produits	Langueage			
								F	H	T	
Minimum package	Level of the sites of the reservoirs	Actions of reinforcement of the capacities of the reservoirs users in management of the actions	Project of support to the installation of the reservoirs users organization	Formation sur la mise en place des coopératives	2007	1	Guide de formation des agents vulgarisateurs pour la mise en place des comités de utilisateurs des ouvrages	x			
				Formation des leaders des coopératives	2007	2	Guide de formation des membres des bureaux des coopératives des utilisateurs des ouvrages	x			
			Project of support for the reinforcement of the capacities of the executive members of the cooperatives of reservoirs users	Formation sur la planification	2007	3	Supports de formation des membres des comités de gestion versions française, haoussa et tamasheq	x	x	x	
				Projet de renforcement des capacités en maintenance des ouvrages	Formation sur la planification	2007	4	Guide de formation sur l'élaboration, l'exécution, le suivi et l'évaluation du Plan de Valorisation des Ouvrages(PVO)	x		
					Formation sur les techniques de maintenance des ouvrages	2007	5	Supports de la formation sur l'élaboration, l'exécution, le suivi et l'évaluation du Plan de Valorisation des Ouvrages(PVO) versions française, haoussa et tamasheq	x	x	x
	Level of the villages	Actions of reinforcement of the capacities of the populations in management of the actions	Project of support for the organization of the populations	Atelier d'échngage inter-site	2008	6	Guide de formation des utilisateurs des mini-barrages et seuils d'épandage sur la maintenance et l'entretien des ouvrages	x			
				Formation sur l'élection des membres du bureau du Comité Villageois de Développement	2006	7	Supports de formation des utilisateurs des mini-barrages et seuils d'épandage sur la maintenance et l'entretien des ouvrages versions française, haoussa et tamasheq	x	x	x	
			Project of support for the reinforcement of the capacities of the executive members of the organizations	Formation sur la planification	2006	8	Guide d'animation d'un atelier d'échange interne sur site	x			
				Formation sur les notions de base des cultures	2008	9	Guide de formation sur l'autopromotion et la mise en place démocratique des Comités Villageois de Développement(CVD)	x			
					2006	10	Supports de formation sur l'autopromotion et la mise en place démocratique des Comités Villageois de Développement(CVD) versions française, haoussa et tamasheq	x	x	x	
Actions intégrées de petite envergure	Level of the sites of the reservoirs	Project of improvement of the agricultural techniques	1.Bases notions of the crop, plant health prevention	Formation sur les notions de base des cultures	2008	11	Guide de formation en leadership et en élaboration, exécution, suivi et évaluation du Plan de Développement Villageois(PDV)	x			
				2.Introduction of the ecofarms	Formation sur les techniques de cultures à économie d'eau (introduction des éco-fermes)	2007	12	Supports de la formation en leadership et en élaboration, exécution, suivi et évaluation du Plan de Développement Villageois(PDV) versions française, haoussa et tamasheq	x	x	x
			3.Introduction of improved varieties	Formation des exploitants sur les techniques de l'arboriculture fruitière	2008	13	Guide de formation sur l'arboriculture fruitière	x			
					2008	14	Supports de formation sur les techniques des cultures maraîchage versions française, haoussa et tamasheq	x	x	x	
				Formation sur l'introduction de variétés améliorées de semences (mil et sorgho)	2007	15	Guide de formation sur l'eco verger	x			
					2007	16	Supports de formation sur l'eco verger versions française, haoussa et tamasheq	x	x	x	
					2008	17	Guide de formation sur l'arboriculture fruitière	x			
					2008	18	Supports de formation sur l'arboriculture fruitière versions française, haoussa et tamasheq	x	x	x	
					2007	19	Guide de formation pour l'introduction de nouvelles variétés de mil	x			
					2007	20	Supports de formation pour l'introduction de nouvelles variétés de mil versions française, haoussa et tamasheq	x	x	x	
					2007	21	Guide de formation pour l'introduction de nouvelles variétés de sorgho	x			
					2007	22	Supports de formation pour l'introduction de nouvelles variétés de sorgho versions française, haoussa et tamasheq	x	x	x	
			Project of improvement of the agricultural management techniques	Formation sur l'autoproduction de semences, auto approvisionnement en intrants agricoles, sur les méthodes relatives à l'achat groupé de matériel et intrants, et sur le stockage des produits agricoles	2007	23	Guide de formation des producteurs sur l'auto approvisionnement en intrants et l'amélioration de la commercialisation des produits agricole	x			
				2007	24	Supports de formation des producteurs, a l'organisation de approvisionnement en intrants agricoles et l'amélioration de la commercialisation des produits agricole versions française, haoussa et tamasheq	x	x	x		
			Project of experimentation of the introduction of rice NERICA	Formation sur la conduite de la riziculture	2007	25	Guide de formation sur la conduite de la riziculture	x			
					2007	26	Supports de formation sur la conduite de la riziculture versions française, haoussa et tamasheq	x	x	x	
			Project of introduction of fish farming	Formation aux techniques d'empoissonnement	2007	27	Guide de formation sur l'empoissonnement d'une retenue d'eau	x			
					2008	28	Supports de formation sur l'empoissonnement d'une retenue d'eau versions française, haoussa et tamasheq	x	x	x	
				Formation sur la conservation du poisson et le marketing	2008	29	Guide de formation sur la conservation du poisson et le marketing	x			
					2007	30	Supports de formation sur la conservation du poisson et le marketing versions française, haoussa et tamasheq	x	x	x	
			Project of reinforcement of the capacities in maintenance of the irrigation equipment	Formation théorique et pratique sur le fonçage de puits bétonnés maçonnés	2007	31	Guide sur la technique de fonçage de puits maraichère et d'utilisation de la traction animale	x			
					2008	32	Supports sur la technique de fonçage de puits maraichère et d'utilisation de la traction animale versions française, haoussa et tamasheq	x	x	x	
		Project of conservation of the arable lands	Formation sur l'utilisation d'un système d'exhaure par traction animale et la maintenance d'une motopompe	2008	33	Guide de formation sur les systèmes d'exhaure(pompe, motopompe, traction animale) et les réseaux d'irrigation	x				
				2007	34	Support de formation sur les systèmes d'exhaure(pompe, motopompe, traction animale) versions française, haoussa et tamasheq	x	x	x		
		Project of prevention of the damage caused by the animals	formations dans les techniques de la conservation des terres agricoles	2007	35	Guide pour la formation sur la protection et conservation des terres agricoles	x				
				2007	36	Supports pour la formation des producteurs ruraux sur la protection et conservation des terres agricoles versions française, haoussa et tamasheq	x	x	x		
		Project of support to income generating activities	Formation des membres des COFOB sur la gestion des ressources naturelles	2007	37	Guide de formation sur la prévention des dégâts causés par le bétail	x				
				2006	38	Supports de formation sur le processus de prévention des dégâts causés par le bétail versions française, haoussa et tamasheq	x	x	x		
			Formation sur la gestion des activités génératrices de revenus (AGR)	2006	39	Catalogue des AGR (Etude de l'état réel des activités génératrices de revenu) saison hivernale	x	x	x		
				2007	40	Guide de formation sur les Activités Génératrices de Revenus (AGR)	x				
				2007	41	Supports de formation sur les Activités Génératrices de Revenus (AGR) versions française, haoussa et tamasheq	x	x	x		
				2007	42	Catalogue des AGR (Etude complémentaire de l'état réel des activités génératrices de revenu)saison sèche	x	x	x		
				2008	43	Manuel des AGR (Etude complémentaire de l'état réel des activités génératrices de revenu)saison sèche	x	x	x		
				2008	44	Guide de formation sur les techniques de transformation et conservation des produits agricoles	x				
				2008	45	Supports de formation sur les techniques de transformation et conservation des produits agricoles versions française, haoussa et tamasheq	x	x	x		
				2006	46	Guide d'alphabétisation pour les instructeurs	x				
		Project of reinforcement of capacities in reading and writing	Elaboration des guides et supports de formation en alphabétisation (pour valorisation des ouvrages)	2006	47	Manuel d'alphabétisation pour les habitants versions haoussa et tamasheq			x		
				2008	48	Guide de formation en alphabétisation tamasheq			x		
				2008	49	Support de formation en alphabétisation tamasheq			x		
				2007	50	Guide de formation en alphabétisation haoussa			x		
				2007	51	Support de formation en alphabétisation haoussa			x		
		Project of reinforcement of knowledge in health and hygiene	Formation sur l'amélioration des connaissances en santé et hygiène	2007	52	Guide de formation pour l'amélioration des connaissances en matière de santé et hygiène	x				
				2007	53	Supports de formation sur l'amélioration des connaissances en matière de santé et hygiène versions française, haoussa et tamasheq	x	x	x		
		Project of introduction of the improved cooking stoves	Formation sur la fabrication des foyers améliorés	2007	54	Guide de formation sur les foyers améliorés en banco	x				
				2007	55	Supports de formation sur les foyers améliorés en banco versions française, haoussa et tamasheq	x	x	x		
		Level of the villages	Actions of improvements of the incomes	Project of introduction of a system of saving and turning credit (tontine)	Formation sur la micro finance type tontine	2006	56	Guide de formation en micro finance type tontine	x		
					2006	57	Supports de la formation en micro finance type tontine versions française, haoussa et tamasheq	x	x	x	

# **Appendix PP5 : Environmental and social assessment**

## **1. Aim of the environmental and social assessment**

Water reservoirs built through the special Program of the President of the Republic were not the subject of environmental impact study. It is to check the consequences of these reservoirs that it was carried out an environmental assessment on the level of the sites of Bourdi 1, Edouk, and Guidan Bado. This assessment takes into account not only the impacts of the realization of the reservoirs, but also the consequences of the activities undertaken within the framework of SSOD. They are in particular the positive and negative potential impacts (phase of construction and production phase)

## **2. Fundamental principles of the environmental and social assessment**

The present impact study on the environment takes account of the environmental legal and institutional framework of Niger characterized by the law N0 98-56 of December 29, 1998 relating to the Management of the Environment whose fundamental principles are as follows:

- Prevention;
- Precaution;
- Pollutant payer;
- Responsibility;
- Participation;
- Subsidiary;

This law relating to the Management of Environment globally fixes the general legal framework and the fundamental principles of the management of the environment in Niger raised by other texts: mining, forest, rural codes, code of water, etc.

## **3. Adopted methodology**

The methodology to use to achieve the goals above is articulated around the following activities:

- Collection and exploitation of all existing documentation relating to the construction of the reservoirs;
- collection and exploitation of all existing documentation relating to the actions of valorisation implemented through SSOD;
- Preparation and validation of field survey data-gathering sheet;
- Discussion with the administrative and technical persons in charge of Tahoua and the concerned departments (Bouza, Illéla and Tchintabaraden);
- Dialogue with the populations in the form of village assembly or of focus group for data collection;
- Visit on field and data collection;
- Examination and analysis of data at the office and drafting of the report.

## **4. Results of the assessment**

The potential positive and negative impacts related on the construction and the exploitation of the water reservoirs (dams and weirs) is summarized below:

#### 4.1 Phase construction

<b>Components</b>	<b>Negative impacts</b>	<b>Positive impacts</b>
soil	modification of the physical properties (density, structure) and chemical of soil (fertility) Compaction Risks of water and wind erosion with significant gullyng Contamination by the engine oil	Increase in the cultivable surfaces
Air	Dust	Nothing
Water resources	Early drying up and lost of the ponds Contamination of water by oils and various waste	Increase in the water holding capacity Reloads ground water
Vegetation	Destruction of the vegetation	Nothing
Fauna	Partial destruction of the habitat Reduction in the wild animals	Nothing
Income and employment	Nothing	Recruitment of the local labour Increase in the incomes of the population Development of the commercial activities
Health - safety - populations welfare	Diseases related to dust emission and accidents Friction industrial enters the immigrant workers and autochthones	Nothing

#### 4.2 Phase Exploitation (Without SSOD)

<b>Components</b>	<b>Negative impacts</b>	<b>Positive impacts</b>
Soil	Pollution related to the agrochemical products Risks of water and wind erosion with significant gullyng	Improvement of the quality of soils
Water resources	Contamination of the subsoil and surface water resources by the use of agrochemical (fertilizers and pesticides) the Overexploitation of water	
Vegetation	Nothing	Return of the natural vegetation Increase in the natural vegetable potential
Fauna	Destruction of the habitat of certain animals Dead of certain animals by the use of the agrochemical products	Return to fauna
Income and employment	Nothing	Increase in the number of farmers Increase in the incomes Development of small commercial activities
Health - safety - populations welfare	Risks of tension between the various users (farmers, breeders, fishermen) Proliferation of certain diseases of water origin	Increase in the agricultural production
Gender	Discrimination of women for the religious and cultural reasons	Nothing
Food habit	Nothing	Increase in the food



#### 4.3 Phase Exploitation (with SSOD)

<b>Components</b>	<b>Negative impacts</b>	<b>Positive impacts</b>
soil	Pollution related to waste and agrochemical products Risks of water and wind erosion with significant gulying	Reduction in water and wind erosion through the skills of CSW/PRS Improvement of the quality of soils
Water resources	Contamination of the subsoil and surface water resources by the use of agrochemical (fertilizers and pesticides)	Valorisation of the water use
Vegetation	Nothing	Return of the vegetation Increase in the vegetation potential
Fauna	Destruction of the habitat of certain animals Dead of certain animals by the use of the agrochemical products	Return of fauna
Income and employment	Nothing	Increase in the number of farmers Increase and diversification of the incomes Development of small commercial activities
Health - safety - populations welfare	Risks of tension between the various users (farmers, breeders, fishermen) Proliferation of certain diseases of water origin	Installation of the co-operatives and BLPC for the prevention of the tensions between the various users (farmers, breeders, fishermen) Improvement of the nutritional quality of the populations Dealing with certain medical expenses Reduction in the diseases of water origin
gender	Discrimination of women for religious and cultural reasons	Development of small commercial activities and exploitation of soils to increase the incomes Adhesion of women to the co-operatives of reservoirs users
Food habit	Nothing	Increase and improvement of the food by the diversification of the products

#### 4.4 Total situation

After the construction of the reservoirs, the implementation of project SSOD got many advantages at the national, regional levels and local in particular by:

- improvement of the incomes of farmers of the fall zone;
- improvement of the quality of the soils through the increase in the capacity of infiltration and accumulation of the sediments rich in nutrients due to work of CSW/PRS
- Improvement of the refill of the water tables
- increase in the vegetation potential (woody in the zones)
- improvement of the habitat of fauna
- Improvement of the incomes of the most vulnerable population particularly women through the development of the small commercial activities and the practice of gardening and the tontine.
- improvement of the capacities of the local populations as regards management of the Community works
- improvement of the food repertory and nutritional quality through the diversification of the crops, the introduction of new varieties and the development of pisciculture

## AppendixPP6 : Calculation of rate of internal return per site

### Calculation of the Economic Internal Rate of Return (E.I.R.R) of the site of Guidan Bado

Unit: 1000FCFA

Year	Works cost		Yield		Simple yield	E.I.R.R
	construction fees	Total cost	Dry season cultivation	Total		
2002	93,670	93,670	0	0	-93,670	19.59 %
2003		0	2	2,328	2,328	
2004		0	5,482	5,482	5,482	
2005		0	8,968	8,968	8,968	
2006		0	13,336	13,336	13,336	
2007		0	17,981	17,981	17,981	
2008		0	23,190	23,190	23,190	
2009		0	27,304	27,304	27,304	
2010		0	31,044	31,044	31,044	
2011		0	35,159	35,159	35,159	
2012		0	38,899	38,899	38,899	
2013		0	38,899	38,899	38,899	
2014		0	38,899	38,899	38,899	
2015		0	38,899	38,899	38,899	
2016		0	38,899	38,899	38,899	
2017		0	38,899	38,899	38,899	
2018		0	38,899	38,899	38,899	
2019		0	38,899	38,899	38,899	
2020		0	38,899	38,899	38,899	
2021		0	38,899	38,899	38,899	
2022		0	38,899	38,899	38,899	
2023		0	38,899	38,899	38,899	
2024		0	38,899	38,899	38,899	
2025		0	38,899	38,899	38,899	
2026		0	38,899	38,899	38,899	
2027		0	38,899	38,899	38,899	
2028		0	38,899	38,899	38,899	
2029		0	38,899	38,899	38,899	
2030		0	38,899	38,899	38,899	
2031		0	38,899	38,899	38,899	
Total	93,670	93,670	940,446	942,772	849,102	

Note: the selling price is half that that of the market

**Estimate of the increase in yield of agricultural products on the site of Guidan Bado (indication of the market price)**

Maximum cultivated 10.4 ha

Year	Cultivated area	Selling rate	Unit yield	Selling price	Total yield
	ha	%	t/ha	F/kg	1000FCFA
1	1.0	10	20.6	113	2,328
2	2.1	20	23.1	113	5,482
3	3.1	30	25.6	113	8,968
4	4.2	40	28.1	113	13,336
5	5.2	50	30.6	113	17,981
6	6.2	60	33.1	113	23,190
7	7.3	60	33.1	113	27,304
8	8.3	60	33.1	113	31,044
9	9.4	60	33.1	113	35,159
10	10.4	60	33.1	113	38,899

Note 1 ; the surface area cultivated in dry season are maximized for year 2008

Note 2 ; It is estimated that 10 year are necessary to reach the cultivated surface area of 2008

Note 3 ; It has been maximized to 60% the sell rate by increasing evry time of 10%

Note 4 ; for a unit yield of 20.58t/ha, the maximum yield evaluated to 33.10t/ha will be reached in 5 years

Note 5 ; The unit selling price is evaluated to half that on the market

Note 6 ; the market prices are those of Tahoua market on 2/10/2009

## Calculation of the Economic Internal Rate of return of the site of Edouk

Unit: 1000FCFA

Year	Work cost		Yield		simple yields	E.I.R.R.left
	Frais de constru	total des frais	Dry season cultivation	total		
2004	132,108	132,108	0	0	-132,108	53.71
2005		0	18,622	18,622	18,622	%
2006		0	41,765	41,765	41,765	
2007		0	69,427	69,427	69,427	
2008		0	101,610	101,610	101,610	
2009		0	138,312	138,312	138,312	
2010		0	179,534	179,534	179,534	
2011		0	209,457	209,457	209,457	
2012		0	239,379	239,379	239,379	
2013		0	269,302	269,302	269,302	
2014		0	299,224	299,224	299,224	
2015		0	299,224	299,224	299,224	
2016		0	299,224	299,224	299,224	
2017		0	299,224	299,224	299,224	
2018		0	299,224	299,224	299,224	
2019		0	299,224	299,224	299,224	
2020		0	299,224	299,224	299,224	
2021		0	299,224	299,224	299,224	
2022		0	299,224	299,224	299,224	
2023		0	299,224	299,224	299,224	
2024		0	299,224	299,224	299,224	
2025		0	299,224	299,224	299,224	
2026		0	299,224	299,224	299,224	
2027		0	299,224	299,224	299,224	
2028		0	299,224	299,224	299,224	
2029		0	299,224	299,224	299,224	
2030		0	299,224	299,224	299,224	
2031		0	299,224	299,224	299,224	
2032		0	299,224	299,224	299,224	
2033		0	299,224	299,224	299,224	
Total	132,108	132,108	7,251,888	7,251,888	7,119,780	

Note: the selling price is half that of market price

**Estimate of the increase in yields of agricultural products on the site of Edouk (indication of the market price)**

Maximum cultivated

80 ha

Year	Cultivated surface	Sale rate	Unit yield	sale price	Total yield
	ha	%	t/ha	F/kg	1000FCFA
1	8.0	10	20.6	113	18,622
2	16.0	20	23.1	113	41,765
3	24.0	30	25.6	113	69,427
4	32.0	40	28.1	113	101,610
5	40.0	50	30.6	113	138,312
6	48.0	60	33.1	113	179,534
7	56.0	60	33.1	113	209,457
8	64.0	60	33.1	113	239,379
9	72.0	60	33.1	113	269,302
10	80.0	60	33.1	113	299,224

Note1 ;It has been maximized the dry season cultivation surface area for yera 2008

Note2 ;It is estimated that 10 years are necessary to reach the cultivated surface area of 2008

Note3 ;It has been maximized to 60% the sale rate by increasing every time of 10%

Note4 ;For a unit yield of 20.58t/ha, the maximaum yield evaluated to 33.10t/ha will be reached in 5 years

Note5 ;the unit sale price is evaluated to half the market price

Note6 ;the market prices are those of Tahoua market on2/10/2009

### Calculation of the Economic Internal Rate of Return of the site of Bourdi I

Unit : 1000FCFA

Year	Work cost		Yield		simple yield	E.I.R.R.left
	Dams construction	total cost	dry season cultivation	total		
2004	92,246	92,246	0	0	-92,246	46.98
2005		0	10,242	10,242	10,242	%
2006		0	22,971	22,971	22,971	
2007		0	38,474	38,474	38,474	
2008		0	56,203	56,203	56,203	
2009		0	76,417	76,417	76,417	
2010		0	99,118	99,118	99,118	
2011		0	115,575	115,575	115,575	
2012		0	132,407	132,407	132,407	
2013		0	148,864	148,864	148,864	
2014		0	165,321	165,321	165,321	
2015		0	165,321	165,321	165,321	
2016		0	165,321	165,321	165,321	
2017		0	165,321	165,321	165,321	
2018		0	165,321	165,321	165,321	
2019		0	165,321	165,321	165,321	
2020		0	165,321	165,321	165,321	
2021		0	165,321	165,321	165,321	
2022		0	165,321	165,321	165,321	
2023		0	165,321	165,321	165,321	
2024		0	165,321	165,321	165,321	
2025		0	165,321	165,321	165,321	
2026		0	165,321	165,321	165,321	
2027		0	165,321	165,321	165,321	
2028		0	165,321	165,321	165,321	
2029		0	165,321	165,321	165,321	
2030		0	165,321	165,321	165,321	
2031		0	165,321	165,321	165,321	
2032		0	165,321	165,321	165,321	
2033		0	165,321	165,321	165,321	
Total	92,246	92,246	4,006,691	4,006,691	3,914,445	

Note : The sale price is half that of the market price

**Estimate of the increase in yield of agricultural products of the site of Bourdi I(indication of the market price)**

Maximum cultivated

44.2 ha

Year	cultivatearea	sale rate	Unit yield	sale price	total yield
	ha	%	t/ha	F/kg	1000FCFA
1	4.4	10	20.6	113	10,242
2	8.8	20	23.1	113	22,971
3	13.3	30	25.6	113	38,474
4	17.7	40	28.1	113	56,203
5	22.1	50	30.6	113	76,417
6	26.5	60	33.1	113	99,118
7	30.9	60	33.1	113	115,575
8	35.4	60	33.1	113	132,407
9	39.8	60	33.1	113	148,864
10	44.2	60	33.1	113	165,321

Note1 ; It has been maximized the dry seasoncultivation surface area for 2008

Note2 ; It is estimated that 10 years are necessary to reach the cultivated surface area of 2008

Note3 ; It has been maximized to 60% the sale rate by increasing every time of 10%

Note4;For a nit yield of 20.58t/ha, the maximum yield avaluated to 33.10t/ha will be reached in 5 years

Note5 ; The unit sale price is evaluated to half the market price

Note6;The mrket prices are those of Tahoua market on 2/10/2009