Vol. 2 Technical Guide: Promoting Organization of Local People

Chapter 1 Introduction	2- 1
1.1 Background	2- 1
1.2 Objectives ·····	2-2
Chapter 2 Present situation of social organizations and their pro	blems
	.2- 4
2.1 Present situation of social organizations	2- 4
2.1.1 Village authority structure······	2- 4
2.1.2 Social organization	2- 4
2.1.3 Other organizations	2- 4
2.2 Traditional village society and development organizations	2-4
2.2.1 Organizing problems ······	2-4
2.2.2 Points to note carefully when organizing	2-4
Chapter 3 Perceptions and wants of local people	2- 5
3.1 Understanding consciousness and intentions of local people	2-5
3.1.1 Consciousness and intentions surveys	2-5
3.1.2 Participatory method surveys ······	2-8
Chapter 4 Establishment of a Terroir Management Committee (CG	TV)
	2-21
4.1 Why a Terroir Management Committee is needed	2-21
4.2 Building a <i>Terroir</i> Management Committee	2-21
4.2.1 Finding leaders······	2-22
4.2.2 Educating and training local people	2-22
4.2.3 Selection of committee members	2-26
4.3 Committee establishment procedures	2-25
4.3.1 Legal procedures ······	2-25
4.3.2 Articles of incorporation and by-laws	2-26
Chapter 5 Terroir Management Committee Activities	2-28
5.1 Structure of a <i>Terroir</i> Management Committee	2-28
5.1.1 General meeting	2-28
5.1.2 Business Affairs Bureau (Executive body)	2-29
5.1.3 Specialized sub-committees	2-29
5.1.4 Audit Section ·····	2-29
5.2 Roles of a development plan and Terroir Management Committee	2-30
5.2.1 Drafting a development plan	2-30
5.2.2 Understanding land issues ······	2-33

	5.3 Taking measures to combat desertification	2-36
	5.3.1 Small-scale financing systems	2-36
	5.3.2 Grain banks	2-37
	5.3.3 Gristmills	2-40
	5.3.4 Dry season vegetable cultivation	2-42
	5.3.5 Capital management	2-43
C	hapter 6 Education and training of local people	2-44
	6.1 Dissemination of techniques	2-44
	6.1.1 Methods for dissemination of techniques	2-44
	6.2 Study tour to a prior project area	2-45
	6.2.1 Clarification of the theme	2-45
	6.2.2 Execution of the training	2-46
	6.2.3 Training items wanted by the local people	2-46
	6.2.4 Coordination of questions	2-46
	6.3 Literacy training	2-49
	6.3.1 Examples implemented by <i>Terroir</i> Management Committees	2-49
	6.3.2 Training effectiveness ······	2-50
	6.4 Accounting training	2-50
	6.5 Introduction of improved ovens	2-50
	6.5.1 Holding a training class	2-51
	6.6 Funding	2-53
	6.6.1 Expanding the organization	2-53
	6.6.2 Education and influence of local people's consciousness	2-53
	6.6.3 Implementation system ·····	2-53
A	ppendix materials (Reference)	2-56
	1. Magou village Terroir Management Committee	
	Articles of Incorporation	2-56
	2. Magou village Terroir Management Committee	
	Internal by-laws ·····	2-56
	3. Magou village Terroir Management Committee	
	Accounting training materials (Extract)	2-56
	4. Materials for local people's consciousness survey	2-56

Chapter 1 Introduction

1.1 Background

In addition to exploitive rainfall-based agriculture, activities such as excessive cultivation of farmland to secure food for a growing population, decreasing timber resources because of over-collection of firewood and declining grassland productivity because of an increase in the number of livestock are causing greater environmental deterioration in the Sahel region. This in turn is producing effects that will accelerate the poverty of the local people. The continuation of such exploitive lifestyles by the local people in the Sahel region will both endanger the local people's environment and accelerate desertification.

Given this situation, a variety of measures to combat desertification has been executed in the Sahel region in the past. Because these development efforts have been government administration initiatives, however, which have been biased towards development without adequate consideration of local concerns and have exceeded the local people's management capabilities, the effectiveness of these measures has not been sustainable over the long term. Based upon reflection on such past efforts, there has been a growing trend in recent years to entrust policy decisions to local judgment and promote combat desertification measures based on autonomous, local community planning decisions and independent participation by the local people. For this purpose, a development technique known as "Terroir Management," which encourages participation by the local people, is being adopted in the Sahel region. The emphasis under this approach is on "participation of the local people" in development, centered on Terroir (residential areas) that have strong ties to local community consciousness, through which the local people themselves understand and analyze their current situation and are responsible for all of the development processes, from drafting a development plan through execution and evaluation.

* Terroir Management

The use of *Terroir* Management has spread widely in recent years with the realization that rural development programs conducted by governments are not sustainable. *Terroir* Management is a participatory approach in which local people analyze the natural resources in their *terroir*, formulate a project for their use, and then implement, manage, and evaluate the project. This method is applied to almost all the development projects at the village level in the Sahel.

Terroir Management was adapted as a realistic measure to combat desertification at the "Conference on Strategy to Combat Desertification in the Sahel Region", held in

Nouakchott, Mauritania, in November 1984. It is being used by the Government of Niger as the basis for its desertification countermeasures and rural development.

1.2 Objectives

Rural villages in the Sahel region face a variety of issues that need to addressed. These include not only advancing desertification, but also the lag in construction of social infrastructure such as roads or health and hygiene facilities, and the remarkable delays in education for the local people. Faced with such circumstances, the local people sense that compared to the past their own environment is They are unable to elucidate the causes or implement effective deteriorating. countermeasures, however, because of their low level of awareness due to factors such as insufficient education and delays in dissemination of technology. Moreover, under current circumstances the government as well does not have the capital funding capabilities to aggressively deal with these problems. undertaking development efforts, along with providing physical aid institutions must help the local people recognize the need for combat desertification measures in the Sahel region, and implement measures to combat desertification by focusing on capabilities that are based upon independent participation by the local people, through support for education and dissemination of technology. It is also important for the local people respond in a common manner, in order for the results of such efforts to be sustainable. Otherwise, such measures will disappear naturally as transitory efforts. In order to prevent this outcome, aid organizations are being asked to provide support for enlightenment and education of the local people, and to continue such support until organizations that can manage these programs have been trained.

Using the village of Magou in the Republic of Niger as a base, JGRC has carried out a variety of activities, including conducting basic research and gathering information regarding combat desertification. JGRC has also formally organized *Terroir* Management Committees (CGTV: *Comité du Gestion Terroirs Villageois*) as the entities to take over these activities, and is continuing to nurture these organizations. JGRC is studying techniques for organizing local people through the promotion of such local people's organizations, including identification of problems, solutions and procedures for smooth management. This guidebook describes the results of these studies.

We have assumed the individuals who use this technical guide will be government technicians responsible for project planning and execution, or foreign technicians such as individuals working for international cooperation organizations and NGO. We will be gratified if this information also provides a reference for leaders of local

people's groups and individuals in leadership positions in local agriculture.

Chapter 2 Present situation of social organizations and their problems

- 2.1 Present situation of social organizations
- 2.1.1 Village authority structure

(Omitted)

2.1.2 Social organization

(Omitted)

2.1.3 Other organizations

(Omitted)

- 2.2 Traditional village society and development organizations
- 2.1.1 Organizing problems

(Omitted)

2.2.2 Points to note carefully when organizing

(Omitted)

Chapter 3 Perceptions and wants of local people

3.1 Understanding the consciousness and intentions of local people

When carrying out development efforts, it is important to investigate the consciousness and intentions of the local people in the region and, based upon the results, address local priority issues that the local people consider to be necessary. Development efforts that are removed from the consciousness and intentions of the local people will find it hard to obtain the local people's cooperation, which will greatly influence development sustainability. Therefore, the most basic factor for development is the question of how to understand the local people's consciousness and intentions. In this section, we present as a reference the JGRC survey for understanding the current circumstances concerning the local people's consciousness and intentions.

3.1.1 Consciousness and intentions surveys

1) Survey technique

To understand what awareness the local people have regarding desertification and their intentions towards the introduction of development efforts, JGRC conducted several intention surveys of the local people in Magou village.

We describe the procedure below.



a) Dialogues with the local people

Develop trust and learn about the current problems, wishes and other issues concerning the local people, by discussing development issues with the local people at various locations beforehand (discussions with village groups, community groups, producers groups, family hierarchies, etc.).



b) Create questionnaire

Clarify and summarize the problems and wishes based on the results, decide upon questionnaire items and details for each required sector such as agriculture, animal husbandry and afforestation, and create questionnaire forms.



c) Obtain agreement of the head of the village

Explain the purpose of the survey to the head of the village, and obtain consent to conduct the survey.



d) Obtain agreement of the head of the hamlet

Explain the purpose of the survey to the head of each hamlet, and obtain agreement to conduct the research. Also determine the research dates at the same time.



e) Interview

Carry out a survey for each stratum (elderly men, young men, elderly women, wives, etc.), in order to hear a broad range of local people's opinions. An expert in each sector conducts the questioning based on the questionnaire form, aided by an assistant who understands the local language.

Experts divide the target individuals into

small groups, and question each group in turn.

Determine the number of survey days or dates as follows.

Number of survey days: About two weeks for each village (Be sure to contact the local people in sufficient time beforehand)

Survey dates: Establish the periods or times of day when farmers will have comparatively free time.



Surveys are mainly conducted aurally, because the local people cannot read or write. Even if the team members have prepared the questionnaire forms beforehand,



however, in some instances they may be unable to elicit responses from the local people. In these cases, the teams conducting the survey will have to change the questioning technique to elicit responses effectively. Moreover, in many cases survey teams will receive irrelevant replies and will have to verify the reliability of such replies using the survey responses from multiple individuals. Do not rush the responses, but elicit answers based upon the local respondents' independent judgment while soliciting their interest. Although perseverance is needed when conducting the survey, teams should observe the respondents' reactions as they conduct the survey, because in many cases the local people will not be able to maintain their concentration.

Women in the Sahel region will rarely state their own opinion in the presence of others. Surveys of women must therefore be conducted separately from those for the men. In these cases, it is better and more effective for the investigator to be a woman rather than a man.

Examples of survey content —

JGRC conducted farmer intention surveys in the village of Magou in 1998 and in the village of Yakouta in Burkina Faso in 2000, in order to understand the present circumstances regarding the local people's consciousness (For the results, please refer to the Technical Guide: Project Planning to Combat Desertification).

In order to discern how well the local people understood their present village situation, we asked the local people about the situation ten years ago and today with regard to the following survey items.

(1) Survey items

- a) Water resources b) Fire wood c) Farmland d) Soil erosion e) Millet production
- f) Number of livestock g) Surrounding grasslands h) Farm household economy
- i) Literacy j) Work away from home k) Mutual assistance systems

(The questionnaire form is appended at the end of this chapter as a reference.)

Magou village local people's wants concerning development

As a model activity, when implementing development at Magou village JGRC conducted an aural survey of 108 individuals (23 elderly persons, 48 young men and 37 women) over a 3-4 day period, and collected a list of local people's development wants (1996-1997) during the interim stage of the survey. The details are shown below.

Local people's wants for development (Not shown in any particular order)

- a) Individual and cooperative maintenance of rice fields
- b) Individual and cooperative maintenance of dry season vegetable cultivation fields
- c) Support for machinery and parts needed for agriculture (pumps, carts, fertilizer, stockades, etc.)
- d) Reservoir repairs
- e) Construction of a water supply conduit to village
- f) Easy-to-operate milling machine that women can operate
- g) Emergency medicine kits for villager use
- h) Installation of a watering facility for domesticated livestock
- i) Restoration of land that has deteriorated
- j) Installation of a passageway for domesticated livestock
- k) Creation and maintenance of literacy and health facilities
- I) Place for vaccination of domesticated livestock
- m) Fattening of domesticated livestock
- n) Establishment of a literacy improvement center
- o) Education and training
- p) Excavation of wells
- q) Medicines for domesticated livestock
- r) Lending system for farmers
- s) Improvement of pasturage zones

3.1.2 Participatory method surveys

This section describes a typical local people participatory-type technique (*Méthode Active de Recherche et de Planification Participative*) (referred to below as "MARP") used when conducting a survey.

1) Survey technique

When undertaking development, in addition to having an understanding of the extent to which local people in the region are aware of the present situation concerning desertification, it is also necessary to know the receptiveness of the local people towards development. In recent years, the United Nations Sudan-Sahel Secretariat (UNSO) has been promoting the dissemination of MARP as a technique for analyzing the status of *Terroir* Management, and today MARP is used broadly and generally in the Sahel region. This approach is a technique developed to obtain more substantial and useful information, using tools such as drawings and cumulative group discussions focused on the local people of the region, which enable even local

people who cannot read and write to participate. Through the survey, the technique also enables the local people who will benefit from development to become aware of advancing desertification. Moreover, it is an extremely powerful technique to make the local people aware of the methods and need to halt the advance of desertification, and to help instill a desire to take measures independently.

In the Republic of Niger, the Republic of Niger MARP Network was established as a NGO organization to promote MARP on a nationwide scale. In February 1997, Niger's central government recognized the network by government decree as the formal organization for the dissemination of MARP in that country.

2) Survey points to note

When MARP is executed, the local people should be made aware of the following issues.

- a) Development in their own village will be carried out by the local people themselves.
- b) The local people must be responsible for development decision-making themselves.
- c) The local people will obtain the benefits of local natural resource management. Based on this self-awareness, the local people themselves must recognize the present circumstances in their village and devise the necessary countermeasures. Development efforts must then be implemented based on the local people's priorities. Individuals conducting surveys (moderators) must bear in mind, however, that they will be unable to elicit the local people's frank opinions when moderator participation is greater than necessary, and as a result, the local people will adopt a sense of dependence. Moreover, even for long-term measures moderators must firmly instill in local people's minds a consciousness of the problem and help them recognize the need to take countermeasures.

Naturally, it is generally best for the local people to give priority to measures that will produce results in the short-term, and steer away from measures such as afforestation whose effects will only appear over a long period of time. There will be instances when the local people will not desire these measures because of their low priority, even though in their minds they understand the need. Considering the extent of the local people's poverty, moderators should not be quick to criticize a lack of interest in long-term measures. For long-term measures, lateral cooperation with experts who can elicit greater interest through conversations with the local people is necessary.

3) Survey approach

Initially, a group of specialists skilled in the MAPR survey technique clarifies the themes, and presents these to the local people in the village using the tools shown on the following pages. When discussing the themes, the specialists create small groups consisting of young and old, men and women, farmers, ranchers or mixtures of these, and help lead the group by narrowing down the target themes so the local people discuss the themes amongst themselves.

By providing hints and asking questions during the local people's discussions, the specialists work to improve the discussion in a manner that leads to thorough discussion by the local people and focuses on the current state of the problem. The specialists continue to analyze the information collected sequentially and systematically, flexibly adding problems in response to the local people's reaction.

Through perseverance and repeated use of this process to discuss the themes, the local people will be able to understand their current situation and become aware of the problems and measures to address them.

4) Survey tools

The most important tools used when implementing MARP to enable even local people who cannot read to take an interest and participate are described below.

(1) Maps: The following three types of maps are used

- a) Social map: A map recording information such as the location of the village's main infrastructure and geographical features
- b) Resources map: A map converting the main resources of the village and their location into a diagram
- c) Social land map: A map describing the farmland owned by the various tribes or families in the village, and names of individuals who have influence on farmland or agriculture
- (2) TRANSECT: A drawing showing the condition of various resources in each zone, by sections of the village's topography. Serves to improve the local people's knowledge, and increase their consciousness concerning the environment from the relationships among the various elements. This drawing is created by working with the farmers who are knowledgeable about the resources.
- **(3) Diagrams:** The following three types of illustrations are used to give specific form to the relationships among the parts that will be the subject of the analysis.
 - a) VENN diagram: Illustrates the interrelationships among the local people in the village and the related individuals or organizations, as well as the size.

- This tool provides information on individuals and organizations with relationships inside and outside the village, and allows specialists to confirm interrelationships.
- b) Flow diagram: Creates a diagram of the relationships to the local people with surrounding and distant villages. For example, businesses, marriages, farmland, work away from home, assistance, etc.
- c) System diagram: A diagram for understanding relationships within the same system, and following the flow of a single factor within a single system
- **(4) Classification matrices**: A tool for making comparative evaluations of certain factors and classifying them based upon standards established by the local people. The three types of matrices are shown below.
 - a) Multi-classification matrix: For evaluating the value of resources, etc., based on standards decided by the local people. For instance, by placing a certain type of tree on the horizontal axis, various by-products that can be made from that tree are classified on the vertical axis. These are then evaluated based on a price scale and classified according to the final results.
 - b) Single-classification matrix: For comparing numerous factors on one group list. Classification according to points that are given to each element.
 - c) Classification matrix by wealth and poverty level: A tool for understanding the ratio of rich and poor families. Based on the premise of protecting confidentiality, an individual who will be questioned is selected, and an index that shows individual wealth is determined and the level of that family's affluence is classified.
- (5) Calendar: Divides time according to the local people's sense and shows the activities for each time period.

Enables the user to understand the activities between age, sex and social strata of the local people according to the season and year. Various calendars can be created depending upon the need, such as a seasonal calendar, cultivation calendar, labor calendar, daily life calendar, etc.

(6) Other information gathering tools

- a) History profile: Traces the passage of the history and events of the village. Generally records events that are remembered for times along a line marked by a time and date scale.
- b) Problem trees: The trunk of the tree shows the problem, the root shows the

- causes, and the branches show the results. Fruit can be added to show solution methods.
- c) Interviews: The individuals responding can speak about other matters beside the question topic.
- d) Secondary data: Includes all other existing data, related organizations, project level reports, maps, materials, etc., concerning the survey region.

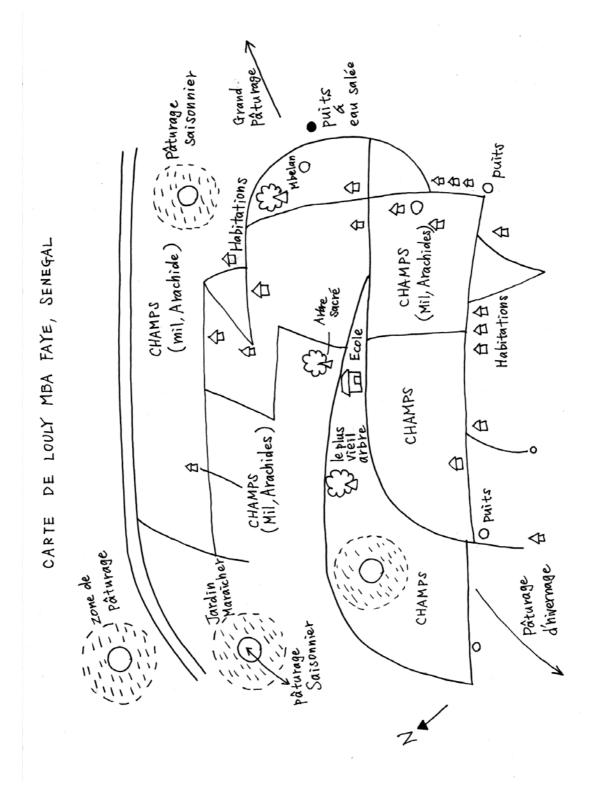
(Reference literature: AFVP/PBVT and IIED MARP training reports)

JGRC reflections —

JGRC set up a base of operations in Magou village and carried out a survey in 1990, but unfortunately, the MARP technique had not yet been established at that time. Accordingly, JGRC conducted its activities with the local people by trial and error. JGRC later became acquainted with the MARP technique, after it had begun to be the main tool in the region, and felt strongly that it should have introduced the MARP technique earlier.

Most of the local people in the Sahel region cannot read or write. Despite the fact that they do not understand numbers, the questionnaires had to be answered by numbers, so most of the questionnaires were not returned. Therefore when conducting a questionnaire survey, moderators are under pressure from the need to observe the farmers' reactions and change the questions depending upon the responses. By changing the way questions are asked, it is possible to solicit responses. This is precisely the fundamental idea behind MARP, and by using a method that practices continuous, irregular listening rather than the traditional approach, researchers can confidently obtain data that is reliable, and linked with increasing the local people's consciousness. Through experience, we were able to learn about MARP as the first step for the local people's participation.

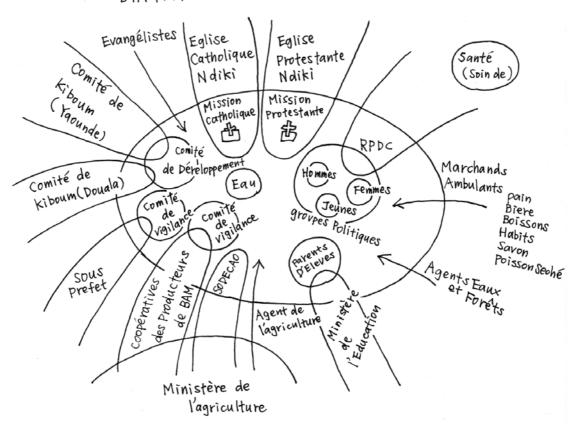
Examples of the tools used with MARP are provided on the following pages.

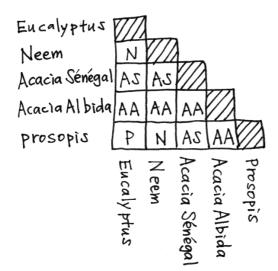


KIBOUM
PE
TRANSECT

	**		7	260		
	The second of the					
ZONE	SAVANE ARBOREE	HABITATIONS	SAVANE ARBOREE	RIVIERE	BOSQUET	FORET
OCCUPATION	Champs des Femmes	Maisons Ecole		Maraîchage Macabo	Sable	Champs de maïs Plantation de café
DE	Jachères	Eglise Sechnirs des		gombo	dans la	dans la chasse
LESPACE	Påturage	produits Marché		arachides	Contraction	plantation ar banane Cueillette bois de construction
APRRES	Arbres	Banane, orange, tek, acacia, manguier,flamboyant			-	Iroko cda Avocadier Avocadier
	Kagaugis	Avocadier, Cocotier, Citronnier, palmier, Sapoutier	7			café, cacao
	Singe	chèvnes		poisson		singe, buffle
XVAMINA	antilope Dove-Poic	moutons		lézards		an tilope Rat
	Buffle Elevage Transhumance	Canalds				porc-epic
	Latéri tique ferrugineux			Sablonneux	Sablonneux	
SOLS	Noir Sablonnevx					
			The second secon			

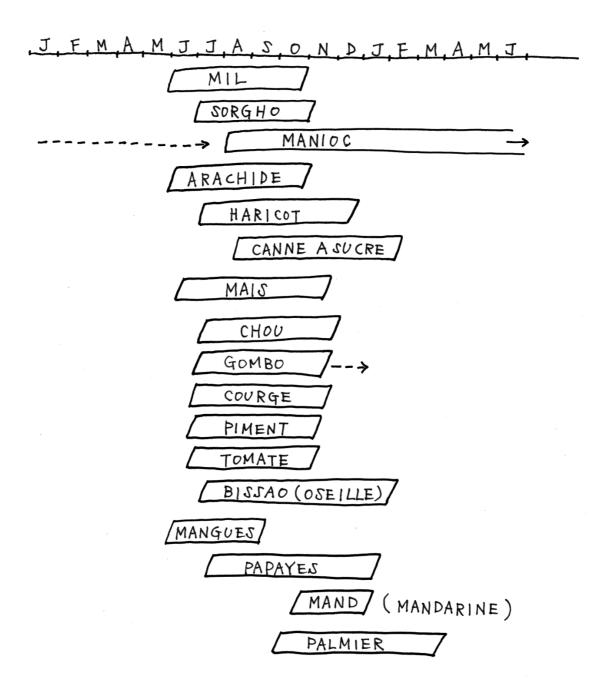
DIAGRAMME DE VENN





L	Ordre de Préfé	rence
	Arbre	Points
Φ	Acacia Albida	(4)
2	Acacia Sénégal	(E)
3	Neem	(2)
(Pro sopis	(1)
(5)	Eucalyptus	_

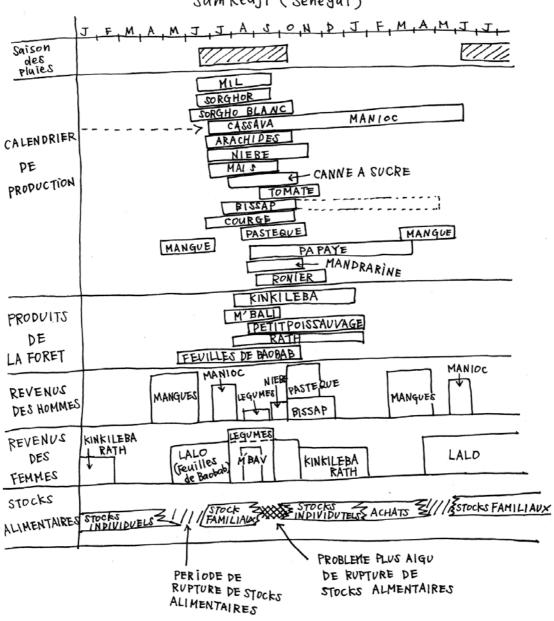
CALENDRIER CULTURAL

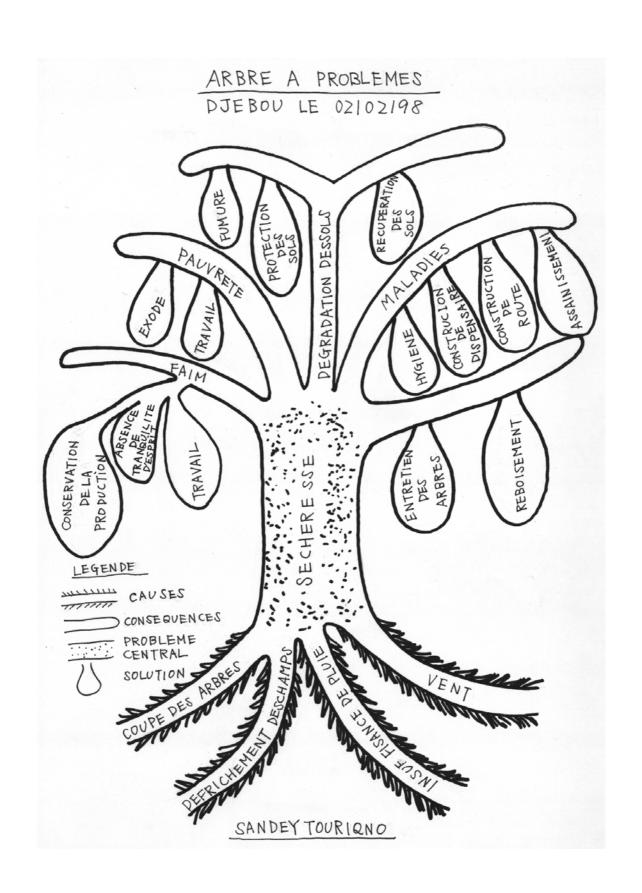


CALENDRIER SAISONNIER COMPOSE Louly Mba Faye (Sénégal)

JF M A M J J A S O N D J F M A M J J	
Pluviomètrie 300-500 mm	
DUREE DE Plus longue 143 jours L'HIVERNAGE Plus Courte 92 jours	
CULTURES NIEBE	= -
LEGUMES	_
FRUITS MANGUE GANG TAMARIN BUL SAN	- -
PERIODE DE MANQUE DE CONDIMENTS	_
PRIX DV MIL 25 cfa/ kg	
PRIX DU 200 cfg/	フ.
SOUDURE	
GROS BETAIL PALUDISME	
MOUVEMENT DE TROUPEAUX PATURAGES COMMUNA CHORS MOVEMENT DE TROUPEAUX	_
PATURAGES NON CONTROLES PATURAGE COMMUN CONTROLÉ PATURAGE NON CONTROLÉ	_
MAIN D'OENRE FÉMININE (A VERIFIER) TRAVAUX DOMESTIQUE TRAITEMENT TRAITEMENT TRAITEMENT TRAITEMENT TRAITEMENT TRAITEMENT TRAITEMENT TRAITEMENT TRAITEMENT	
COLLECTE TRAITEMENT ARACTTIPE MARAICHAGE	

CALENDRIER SAISONNIER COMPOSE Samkedji (Sénégal)





Chapter 4 Establishment of a *Terroir* Management Committee (CGTV)

4.1 Why a Terroir Management Committee is needed

Despite the fact that the problem of desertification originates in local social and economic mechanisms, traditional development by government administration initiative was not linked to sustainable development because it gave priority to technical measures and did not require participation of the local people. From reflection on this fact, in recent years the development technique using CGTV, in which the local people themselves recognize the need for action and independently participate in executing all the processes – from analysis of the present state of natural resources found in the *Terroir*, selection of countermeasures and drafting of plans, implementation, operational management and evaluations – is internationally recognized and has been incorporated into most development at the village level.

Village people independently taking action to draft and execute plans form the basis of *Terroir* Management. To achieve this, the role of the government administration or project organization is to conduct enlightenment and educational activities for the local people and help them create a *Terroir* Management Plan. The development organization side then provides technical and economic support for the plan the people have created.

In recent years, local people in the Sahel region have been aware to a certain extent that their natural resource conditions are deteriorating. In response, they are implementing countermeasures using techniques learned through experience. These measures have been local in nature, however. There has also been a lack of guidance provided to local people in the past. Under current circumstances, the local people themselves are pursuing these mechanisms and have been unable to initiate integrated measures. Thus, it is necessary to cultivate a sense of local control (Ownership) and self-governing capabilities (Empowerment) in the local people concerned, through CGTV development based on the local people's participation.

4.2 Building a Terroir Management Committee

The local people in the Sahel region are groups of individual farmers who value traditional experience. While mutual assistance activities through traditional organizations can be found in some parts of the region, generally the local people possess a character that makes it difficult for them to become acquainted with organized action. It is therefore necessary to establish support systems through the government administration, project organization or experimental research organization, for example, to turn the local people's consciousness towards their

deteriorating environment, and help them recognize the problem and the need for countermeasures, through the promotion of CGTV based on this support.

Below we describe this procedure, focusing mainly on the techniques learned through the building of a CGTV that formed the receptacle for the JGRC's surveys.

4.2.1 Finding leaders

Villages have traditional existing decision-making bodies, which are formed from the village chief and other surrounding senior members who hold absolute authority. In general, they are conservative and do not like rapid changes in their villages. It is thus necessary when attempting development to maintain an excellent relationship with this type of traditional existing system. In addition, a development organization will be needed to promote effective development. This does not necessarily mean the management of such an organization must be entrusted to the traditional individuals of authority. To the extent possible, many individuals from among the local people who have a progressive way of thinking should be included to manage the organization. This means it is necessary to accurately locate and educate among opinion leaders (Islamic imams, learned individuals, persons of influence, etc.) those individuals who should become the key persons in the CGTV.

The role of women is also important. Women in Sahel society have a low position in

their communities, and are subject to unequal treatment in all aspects of social life. They bear an extremely key role in social and economic the however, sectors, and quick to recognize problems because they are deeply concerned about poverty and the deterioration of the region's



resources, and their ability to adjust to development is excellent. Therefore, it is important to actively incorporate the women's capabilities into the CGTV, and make practical use of this power when undertaking development.

4.2.2 Educating and training the local people

Even though we have referred to this process as the "creation of an independent organization by the local people," it is an extremely difficult operation for local people who lack the experience and capability to proceed in organizing a CGTV alone without the support of the government or a project organization. Accordingly, the

most effective approach is to construct a support system that includes entities such as the government, aid organizations and NGO in the region, and educate the local people through their participation in the CGTV after clarifying the roles of the different entities. The procedure for educating the local people is 1) show the local people the effects of development, 2) have them listen to stories from local people in other villages where development has already been implemented, 3) have the local people participate in development discussions, and 4) help the local people to plan, implement and evaluate a development project themselves by using a procedure of gradually leading them through the process. Through this process, the people's consciousness and self-governing capabilities will be awakened for the first time. While it is necessary to implement the education in all of the social strata of the local people, it must first be provided quickly to the leaders who will manage the CGTV.

Case study implemented by JGRC -

In Magou village, absolute authority rests with the village head and the surrounding elder members. Moreover, it is a typical rural village of the Sahel in that the reading and writing abilities of the local people are extremely low, and it has not enjoyed the benefits of development in the past. To organize the local people into a CGTV, JGRC adopted the following process as a proven approach.

- (1) First stage: Turning the existing individuals of authority into antagonists of development will make it difficult to conduct development activities in the village. Moreover, it is necessary to obtain the understanding and support of the existing persons of authority in order to promote the activity in the village smoothly. JGRC believed the most effective approach was to change the consciousness of the existing persons of authority, whose educational level is generally low, by letting them confirm the effects of development with their own eyes by taking them to observe the results in other rural districts.
- (2) Second stage: Regardless of the village, there are always individuals who can read and write some French or Arabic or persons who are respected by the local people. We made such individuals the key persons, and began to organize the local village people who would be necessary for development.
- (3) Third stage: Villagers enthusiastic about the activity gathered around the key persons. From among these individuals, we selected members to become the activity leaders. Along with taking them to other districts to observe each of the activities desired by the local people or thought to be necessary, we provided training concerning activities such as organizing groups, establishing an activity plan, activity practice and accountings.
- (4) Fourth stage: We supported the leaders who had received training, to help them

- independently organize the system (CGTV) to have jurisdiction over each activity, and had them take over the management operations. We also provided additional training when necessary.
- (5) Fifth stage: By the stage at which the goal of independence in each activity was established, JGRC gradually decreased its CGTV support for comprehensively managing these activities, and transferred the CGTV to independent management.

Through the process described above, the CGTV in Magou village was able independently to implement wet-rice cultivation, vegetable farming, a grain bank, a gristmill and small-scale financing activities. As before, however, the influence of the senior members of the village concerning issues such as the management and decisions of the CGTV remained substantial.

4.2.3 Selection of committee members

In order to set up a CGTV, the members who will manage the CGTV must be selected. While it is preferable that the local people democratically elect the members, this is a problem when the number of eligible individuals is limited because the villagers' consciousness is low and there are few individuals with the capabilities. Moreover, to mobilize of all villagers it is also important to select women to be members, and it is therefore necessary during the prior discussions with the local people to have them understand that they should establish some positions for women as members.

Although an ability to read and write or do calculations is needed when the CGTV implements its economic activities, in reality the number of individuals to whom this will apply is limited. Therefore, when establishing the CGTV, training selected members or other human resources in tandem with carrying out the development activity is extremely important.

JGRC experience -

During discussions with JGRC, the Magou village CGTV agreed to select its members democratically through an election of seven men and three women. The procedure agreed upon was to designate several candidates through recommendation by the local people, and elect the members by a show of hands at a general meeting.



Ultimately, however, one person with deep ties to traditional organizations was selected for each post through prior consultations, and the vote at the General Meeting confirmed these choices. While this was partially unavoidable under current circumstances that compelled the GCTV to maintain relations with traditional village society, it was necessary to prevent later difficulties in the management of the CGTV.

4.3 Committee establishment procedures

When establishing a CGTV, in order for the CGTV to conduct its activities effectively and strengthen its foundations, as well as receive the benefits of the government's support and tax systems for its activities, it is necessary to understand adequately beforehand the details and decisions regarding the government's legal position regarding a CGTV.

4.3.1 Legal procedures

In the Republic of Niger, Law NO96-067, "The Law Regulating Rural Cooperatives," exists as the legal statute concerning the establishment of the cooperative associations. The law stipulates all basic matters related to the establishment, organization, and management of rural village cooperative associations (Article 7: All cooperative associations shall be registered and authorized through the prescribed procedure). In addition, in 1993 the Republic of Niger established an Rural Code (Code Rural) as the legal framework for the agriculture, livestock raising and forestry industries. While this law prescribes the basic framework for agricultural organizations (an application to receive approval to establish an agricultural organization must be submitted to the Minister of Agriculture and Livestock Raising), the related legal statutes have not yet been enacted.

Case study in the Republic of Niger

In the Republic of Niger, cooperative associations existed based on a law covering agricultural cooperative associations ("Law Concerning Agricultural Cooperatives for nature of Community or Mutual Assistance," Law NO89-010 dated April 7, 1989). Based upon this law, union organizations such as the *l'Union Nationale des Coopératives* (UNC) or *l'Union Régionale des Coopératives* (URC), l'Union Sous Régionale des Coopératives (USRC), and *l'Union Locale des Coopératives* (ULC) were established, and under these the Groupement Mutualiste (GM) or cooperative associations (COOP) based on the old, traditional villages have been set up. These organizations were deemed to have deviated from their original cooperative society activities, however, and in 1997 the union organizations from the ULC to the UNC were dismantled by Executive Order. Although the lower organizations such as the

GM were not dismantled, most cooperative association activity is not functioning because the higher organizations to provide direction and guidance have been disbanded.

Given these changes, Magou village shifted from a GM with its old, strong traditional character to a CGTV that suits both the main trend in development in recent years and the national government's policies. The Magou village CGTV therefore submitted an application for approval of the CGTV in April 1999, based on the Rural Code that has become the foundation of this new legal system, and received from the local province a provisional authorization dated May 21 of the same year.

* Because it is not an approval based on formal law, the status is provisional authorization at the county level.

4.3.2 Articles of incorporation and by-laws

To establish a CGTV and have it acknowledged externally, the founders must prepare the articles of incorporation and by-laws that will regulate the organization (these can be stipulated even under the existing law). The union members then observe the articles of incorporation and the by-laws to achieve sustained development of the CGTV, and run and manage the activities based upon them.

The Magou village CGTV held discussions concerning its articles of incorporation and the by-laws created with the support of JGRC and approved them at its General Meeting. The local people who cannot read or write, however, cannot adequately understand these regulations based solely on several discussions or explanations. To obtain the local people's understanding, explanations provided using aids such as drawings or sufficient discussions among the local people with the same outlook are needed. Moreover, in the process of managing the CGTV it is occasionally necessary to instruct the local people about the contents of the articles of incorporation and the by-laws, and direct their activities in accordance with these documents.

(Refer to the Magou village *Terroir* Management Committee articles of incorporation and internal by-laws in the reference materials section)

Magou village CGTV members' level of awareness of the articles of incorporation and by-laws

When setting up the CGTV in Magou village, the members of the CGTV Executive Committee discussed the articles among themselves with JGRC's support, and then drafted a proposal for the articles of incorporation and by-laws. Members approved the articles and by-laws at the General Meeting of the CGTV after they were

explained to the local people. When the Executive Committee conducted a questionnaire survey concerning the level of awareness of the articles of incorporation and by-laws one year later, however, it learned that most people did not understand the details. Because the local people who cannot read and write are unable to make notes concerning the details or re-read the articles and by-laws, it is extremely difficult for them to memorize the contents accurately. It is therefore necessary for the project organization (i.e., the body responsible for execution of the project) to make the contents easy to understand, and explain the contents repeatedly to the local people. We strongly felt that, if possible, it is necessary to create the articles of incorporation using the local language (characters equivalent to an alphabet) along with a French version of the articles (necessary for procedural purposes), to make it easier for the members to familiarize themselves with the contents. Furthermore, in this case it is also necessary to implement this effort by combining it with education in the local language.

It is important that the members observe the articles of incorporation and the by-laws, in order for the CGTV to execute and manage the various activities. Without efforts to improve the local people's awareness concerning their rights and obligations, however, the CGTV will not obtain the participation of the local people, and will not lead to sustainable development. At a minimum, therefore, the Executive Committee must be well informed of the articles of incorporation and by-laws, in order to provide the CGTV management. At Magou village, we have continued to provide guidance from the JGRC to the Executive Committee, and today the committee members have come to understand the CGTV's importance. Next, we must work to ensure that through the Executive Committee all of the members become familiar with the contents of the articles of incorporation and the by-laws.

Chapter 5 Terroir Management Committee Activities

5.1 Structure of a Terroir Management Committee

Depending upon the orientation of development or implementation measures, a variety of CGTV organizational structures may be considered. In Figure 5.1.1 below, we have illustrated the organization at Magou village, the JGRC survey site as a reference.

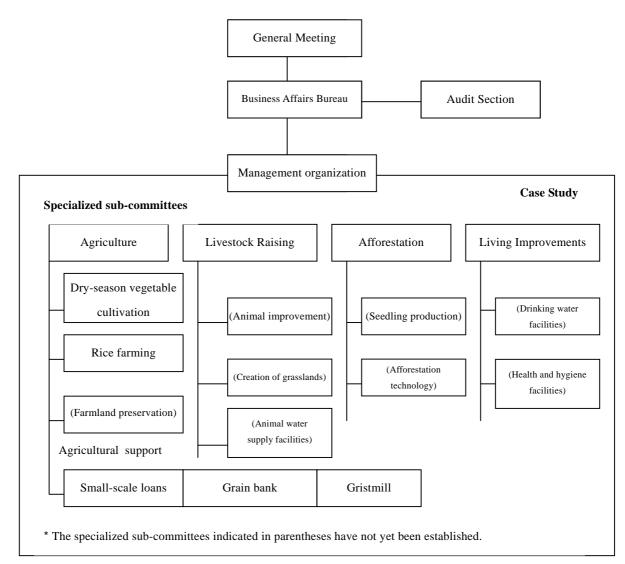


Figure 5.1.1 Structure of a Terroir Management Committee

5.1.1 General Meeting

The CGTV is composed of all of the local people in Magou village who wish to join, without regard to sex. A General Meeting has been set up as the decision-making body for all of the members. Members each have one voting right per person. The Business Affairs Bureau calls the General Meeting to order, and is obligated to hold a

5.1.2 Business Affairs Bureau (Executive body)

The Business Affairs Bureau is the executive body of the General Meeting, and represents the CGTV to third parties. With authority delegated by the General Meeting, a total of ten directors including the chairman, vice-chairman, Business Affairs Bureau manager, Business Affairs Bureau assistants (two



people), public affairs manager, public affairs clerk, accounting manager, and accounting clerks (two people) manage the CGTV. A director's term of office is three years, and a director is permitted to stand one time for re-election. The Business Affairs Bureau directs and supervises the specialized sub-committees that implement each activity.

5.1.3 Specialized sub-committees

Specialized sub-committees are set up as specialized bodies of the CGTV, to implement the activities approved by the General Meeting. The specialized sub-committees are organized according to their activity.

As a case study of how these are set up, as shown in Figure 5.1.1 the specialized sub-committees for areas such as agriculture, livestock raising, afforestation, farmland preservation and living improvement set up internal systems for each of the activities under their jurisdiction, and implement these activities on an integrated basis. It is necessary to broaden these specialized sub-committees as the CGTV matures, and through the CGTV plan the *terroir* development through improvement of sustainable agriculture, livestock and forestry activities and natural resources management.

In the CGTV at Magou village, the members currently have established dry-season vegetable cultivation, rice farming and agricultural support (small-scale loans, a grain bank and a gristmill) as specialized sub-committees approved by the General Meeting, operating directly under the Business Affairs Bureau.

5.1.4 Audit Section

To conduct periodic audits of the Executive Committee and the accounting activities

of the specialized sub-committees, an Audit Section that reports on these matters to the General Meeting has been established.

* Please refer to the attached materials for the detailed articles of incorporation and by-laws of this CGTV.

Organizational and activities of the Magou village directors

Under the by-laws of the CGTV, the General Meeting is held once every month. The main topics of discussion concern money administration and the activities of the grain bank; three members of the Executive Committee's alternatively serve as chairperson and steer the progress of the General Meeting. Under current conditions, however, the actual situation is one in which the JGRC C/P attending the meetings are frequently asked to provide answers or explanations in response to questions from members. We must note that one current problem of the CGTV is that it should manage the monthly meetings of the General Meeting itself, but this is very difficult given the capabilities of the present Executive Committee. The reason is that the Executive Committee requires a great deal of time for General Meeting preparations, in addition to the difficulty of holding meetings during the farming season. Moreover, considerable time is needed to summarize and prepare the minutes of the General Meeting. Finally, the members of the Audit Section are in a situation where their proficiency level is still inadequate for conducting their activities independently. We must assume that under the present situation, the inability of the members of the Executive Committee to read and write or their lack of experience both make management of a regular General Meeting difficult. This in turn requires further guidance from the support organizations. Therefore, it is critically important that support organizations and other entities continue to provide literacy and accounting instruction daily, in order for the CGTV to acquire independent management capabilities quickly. We believe that instruction in reading and writing education in the local language using the Roman alphabet will also be quite effective.

5.2 Roles of a development plan and the *Terroir* Management Committee 5.2.1 Drafting a development plan

Because traditional development was biased towards technical aspects in the form of government initiatives, and did not require participation of the local people, it was not linked to sustainable development. Therefore, when drafting development plans it is necessary to take this into consideration and create a development plan in which the local people have autonomy.

To meet this objective, as shown in Figure 5.2.1 it is indispensable that the project organization seek to enlighten the local people and build trust beforehand, and

systematically address issues through terroir management under this support.

1) Procedure for drafting a development plan

The procedures for efforts by the project support organization and the autonomous efforts by the local people are as follows.

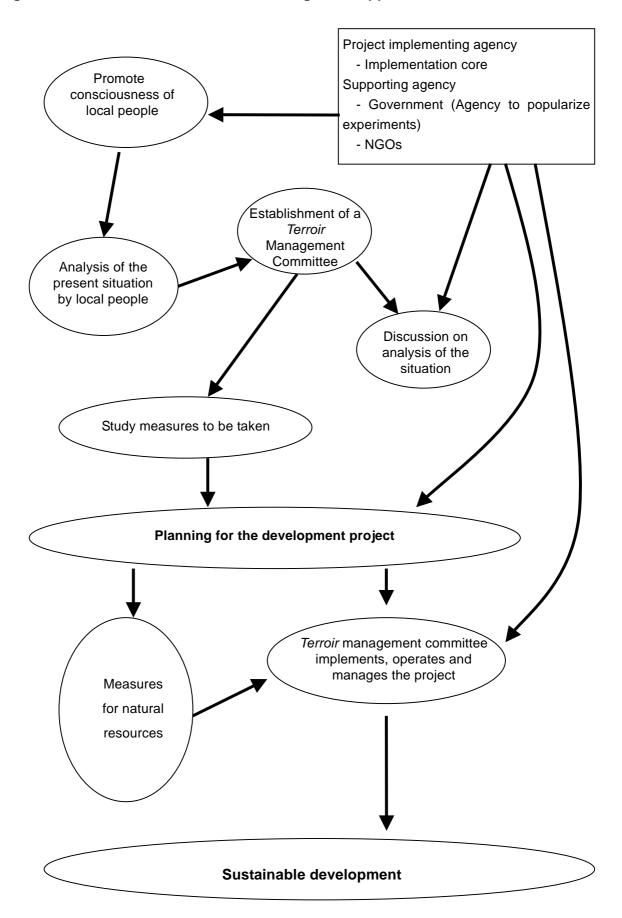
(1) Efforts by project organizations and support organizations (Government administration, NGOs, etc.)

- a) Understand higher-level plan
- b) Understand details of related laws and regulations
- c) Understand the economic and social conditions of villages
- d) Enlighten the local people and earn their trust
- e) Understand the local people's intentions
- f) Understand the existing village organizations
- g) Nurture leaders
- h) Provide support related to the spread of education and technology
- i) Provide economic support

(2) Efforts by local people

- a) Conduct discussions among the local people
- b) Recognize and analyze their current situation
- c) Investigate the measures needed
- d) Establish a CGTV
- e) Create a development plan proposal based on the CGTV
- f) Establish specialized sub-committees as the organization subordinate to the CGTV
- g) Consult and reach agreements with the CGTV and project organization
- h) Prepare development plan
- i) Implement development based on the CGTV
- j) Support, manage and evaluate development based on the CGTV

Figure 5.2.1.1 Process for the *Terroir* management approach



2) Approach to preparation of a development plan

A development plan that the local people draft themselves is the very foundation of *terroir* management. The local people currently living in the Sahel region, however, have fallen behind in the spread of education and technology, and have neither the knowledge nor methods concerning measures to combat desertification. Therefore, without the guidance of government administration or a project organization, it is difficult for the local people themselves to determine the methods to use that will enable them to realize their own demands through their own efforts.

The project organization must always provide the local people with information that is easy for them to understand, and help them understand the problems created by their current situation and development methods and results. Moreover, the organization must execute development plans in conjunction with other programs for the local people, such as education. This is the reason the support organization that forms the core of the project organization must take steps towards inducing the local people to implement measures themselves, while increasing their ability to understand their current situation. It is critically important that the support organization advise while constantly working to give the local people independence.

5.2.2 Understanding land issues

When undertaking development, draft a specific development plan draft centered on the CGTV and based on discussions with the local people. In addition, when moving to the execution phase of the development plan, in some cases new land may be required for the installation of structures such as ponds and weirs, creation of vegetable fields and construction of other facilities.

In recent years, there has been a tendency in the Sahel region for farmland development to expand as the population grows, while the amount of land that can be developed declines. Therefore, with regard to selection of this land the project organization must conduct thorough discussions regarding the possibilities for land use with the current owners of the land intended for use, and others such as individuals with the right to use and benefit from the land, beginning with the head of the village who is the traditional land manager.

Land issues in the Sahel region frequently present a plethora of problems, because the traditional form of land ownership is complex and legal rights concerning land are unclear. Accordingly, when undertaking implementation of a development project, organizers must first clarify the relationships of rights on the land planned for development and then obtain the agreement of the individuals related to those rights. Simultaneously, it is also necessary to go through steps to coordinate the legal land ownership formalities with the government institution that has jurisdiction concerning

Land issues experienced by JGRC

- (1) In rural villages, much land exists where land ownership relationships have become completely uncertain, as land has passed between generations through succession, even as owners have given verbal promises to lend the land to others for free. In addition, there are many instances where disputes concerning land use occur between the individual using the land and the landowner, when development efforts are implemented and increase the value of the land.
- (2) The local people who until now have lived based on traditional customs have completely halted development, and continued to live as they have in the past, because the development efforts caused disputes within the village.
- (3) As desertification advances, people's devotion to the land gradually intensifies because of the decrease in usable land and population increase, and the strengthening of this trend in the future is unavoidable.
- (4) Land problems are considered highly likely to become a major limiting factor when implementing measures to combat desertification.

Because of these problems, JGRC adopted the following procedures when executing measures to combat desertification as a means of solving at the village level the land rights problems that occurred.

< Resolution process >

- (1) Phase 1: Because the respective concerns of the local people will differ even within the same community, we first made contact with the groups that share the same concerns (by age, sex, regional group, etc.). Because the younger generations in particular are more reform-minded than the older, conservative age groups, forming a group of younger persons as a development promotion group and using it as a lever to promote change is effective. As a means of stimulating a development promotion group, and enabling the group members to hear directly through mutual conversations how other local people have enjoyed the benefits of development, conducting study tours of other activity districts that have already executed similar measures is effective.
- (2) Have the development promotion group that is strongly in favor of implementing a development plan investigate ways to persuade the obstructing groups that have expressed disapproval. One important step at this point is to try to

- increase awareness of the fact that the future of the village rests on the younger generation's shoulders.
- (3) Next, urge the development promotion group to persuade the obstructing groups. Initially they should attempt to persuade the other groups through direct negotiation. If this is unsuccessful, the group may ask the canton chief (Chef de Canton) with traditional authority who ranks high among the village leaders to make their case. Finally, if this effort fails, the positive group members should talk individually with the members of the obstructing group.

Using the process described above, we were able to solve the following problem.

< Process application case study >

JGRC decided on construction of a small-scale dam that the village said it needed and requested. When it became obvious that the building site was currently entangled in a land ownership rights dispute between the land user and landowner's descendants, however, all of the villagers at once began leaning in the direction of abandoning the construction. After this occurred, JGRC practiced the process described above and ultimately was able to obtain the consent of all of the villagers and move to construction.

5.3 Taking measures to combat desertification

While measures such as soil conservation, water resource development, and agriculture, livestock raising and afforestation production measures can variously be thought of as policies related to combat desertification, for information on these we would like to ask that readers refer to the separate volume of technical guides for each sector. Here we will describe issues such as the contents or management methods and problem areas, using cases managed by the Magou CGTV, which JGRC helped to establish.

5.3.1 Small-scale financing systems

The small-scale financing implemented by the CGTV includes the following financing systems.

1) Cultivation credits

This was the first type of credit the Magou CGTV provided, which it offered to the dry season vegetable cultivation group (159 members). During the cultivation period, the CGTV loans actual materials such as motor pumps for irrigation, gasoline, fertilizer and insecticide, and records the lending cost of the items. The CGTV then collects its loans, including interest, from each member after the harvest in proportion to the land area cultivated.

2) Loans of agriculture funds

For members who need agriculture funds at the start of the rainy season, the CGTV lends funds on the condition that repayment is made in millet at harvest time. The loan amount is the price per 100kg of millet, set by the CGTV. This price is set higher than the price at which the farmers normally sell their millet (harvest time – around March). The CGTV stores the repaid millet and sells this for a higher price during the off-season (roughly June – September), which enables the CGTV to earn the difference between the sales proceeds and the loan amount as a profit.

3) Loans of funds for fattening small livestock

These are loans the local people in Magou village decided to introduce, based on their findings from inspections of more advanced villages. This is a system in which villages borrow funds from the CGTV prior to Tabaski,* in order to purchase lambs which they



fatten and sell for a high price during Tabaski, when prices more than four times the normal price for sheep enable them to earn a profit. The amount of each such loan is 15,000FCFA/person, and borrowers repay 16,500FCFA to the CGTV at maturity (after they have sold the sheep) by adding 1,500FCFA as interest. Because the price of a lamb is approximately 5,500FCFA, with the loan from the CGTV a borrower can purchase three lambs to fatten and sell, to earn a profit provisionally calculated as roughly 50,000FCFA per person.

< Problems >

Initially, a number of instances occurred where the borrowers become unclear, because loans were made as cash credits and the lenders relied on memory without recording the loans. Because a proposal was made under the guidance of JGRC after these cases to create a model ledger book and register loans, the situation has improved. To improve the Executive Committee members' management and operational capabilities, JGRC contracted with a private consultant and implemented basic accounting training (training period: 12 days) for four individuals. (For training details, please refer to the attached materials at the end of this book).

Moreover, because initially no decisions had been made concerning collateral if a borrower cannot repay a loan, and there were instances where loans could not be collected, for cash credits the members decided to establish collateral before approval of a loan application.

*Tabaski

For *Eid ul-Adha* on December 10 of the Muslim calendar, men and women put on their finest formal dress and gather in front of the mosque to worship. The custom is for Muslims to then kill sheep (woso) at their respective homes as a sacrifice, and mutually greet and present small portions of the meat to relatives and Marabout (masters of Islam) who are deserving of respect.

5.3.2 Grain banks

One purpose for establishing a grain bank is to provide a food safety measure to supply millet to local people who cannot buy grain when the market price soars because of a grain shortage. The droughts that frequently savage the Sahel region can disrupt the ability of local people who depend upon self-sufficiency to secure their foodstuffs and cause great uncertainty. As a result, the local people are forced to buy grain at a high market price. A grain bank is one means by which the local people do not one-sidedly suffer a disadvantage from changes in market prices, but can themselves take advantage of those price fluctuations through the CGTV to

procure grain at below-market prices. This management method is described below.

1) Sales and loans of grain

(1) Sales of grain

This is a method by which the grain bank procures grain when the market price is low, and sells this grain to the local people at below-market prices in the off-season, to avoid disadvantages to the local people such as purchasing grain from the market at high prices when their own grain stores are running low. This helps to reduce the burdens on farmers and enables the grain bank to earn a profit.

(2) Loans of grain

Under this method, the grain bank takes a prescribed amount of interest (cash totaling 1,000-1,500FCFA) and loans a local individual one bag of grain (100kg), which the borrower returns at the following harvest. As a result, the local people can secure their immediate food needs without a great deal of money. At the same time, the CGTV is also able to earn interest.

< Problems >

Because initially the local people's repayment rate was low, the members of the General Meeting at Magou village investigated early repayment methods. As a result, cards urging borrowers to repay loans were sent individually but repayments did not greatly improve. Reasons we can cite for this situation include the local people's low awareness level, and an inability to repay for reasons such as the poverty. The fact that giving alms to the poor is a basic teaching of Islam and that compulsory collection is difficult must be taken into consideration for operating a grain bank.

PGRN (Projet de Gestion des Ressources Naturelles) grain bank —

In the Republic of Niger, the PGRN grain bank supported by the World Bank (International Bank for Reconstruction and Development) initially prepares a 15 ton (or 20 ton) grain support organization, the management and operation of which is left to the CGTV. A storage warehouse is built using capital from the support organization and labor provided by the local people. When the grain bank purchases grain, all matters related to the purchase quantities and sales prices are decided at the General Meeting of the CGTV, and the CGTV audits the lending list. Although the grain bank always sets the sales price of grain higher than the price at which the grain was purchased, the grain bank sets the price below the market price when it sells. Although the leaders of the CGTV receive no remuneration, sellers

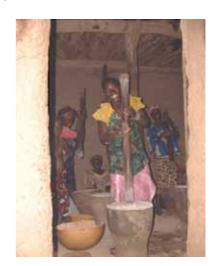
receive a commission of 100FCFA for sale of one bag (100kg) of grain.

WARRANTAGE -

One technique implemented by the Republic of Niger Direction of Agriculture in recent years with the support of the FAO (Food and Agriculture Organization) that is generating a great deal of interest is "warrantage." This is a new type of credit system that changed the shape of the grain banks, and its procedures are described below. In order to earn cash, producers will harvest their grain and sell it immediately, converting the crop to cash. The fluctuations in the price of grain, however, are extreme, and in general, a substantial difference arises between prices at harvest time and those during the off-season. Selling prices that producers will receive during the harvest period are thus extremely low compared to prices in the off-season, creating a distinct disadvantage for producers.

As a means to cancel this disadvantage, the CGTV and other organizations set up a grain storage warehouse in cooperation with a local bank, where the CGTV stores grain collected from producers at harvest time. Producers then borrow from the cooperating financial institution an amount of money equivalent to the sales price immediately after the harvest of the grain. The financial institution follows the fluctuating market price of the grain and sells the grain when the price rises (off-

season). Through this arrangement, the producers can earn as an additional amount < the sales proceeds when the price rises – (fees paid to the financial institution + the amount of money already accepted) >. The money generated through this system enables producers to acquire agricultural materials and acts as an incentive to improve grain productivity.



5.3.3 Gristmills

The women of the Sahel region rise when the earliest chickens cackle at dawn and continue working until late at night, with chores such as threshing millet, preparing meals, drawing water, collecting firewood, caring for the children, helping with farming and creating handicraft goods. They are the last family member to go to bed. The average woman's workday is about ten hours long, of which roughly three hours are required for threshing husks from millet. When a gristmill is introduced, milling time



is reduced by about two hours (according to surveys by JGRC).

The role women play in development is said to be substantial, and the women's participation will have a large influence on the success or failure of development overall. Because women's domestic labor is excessive as described above, in

order to ask for women's participation in development it is vitally important to reduce women's working hours by setting up a gristmill. The installation of a gristmill, moreover, always ranks high among the demands of women in a rural village. Naturally, on the other hand, in order to pay for upkeep user fees are required from individuals who use the gristmill. For the women in a Sahel rural village, however, who are laboring in poverty, the payment of cash is a considerable burden even if when the amount is quite small. Therefore, the most effective approach is to install a gristmill by first opening up a road towards cash earnings from other development activities. That is, the integrated "development" of a village may be said to make possible all other sustainable management.

< Problems >

One problem with a gristmill lies in the form of its management. Male operators must handle the machinery and materials, because of the required labor and technology. The expenses for such employment will put pressure on management, but are not easily linked to management efficiency improvements.

When managing a gristmill, if efficiency is sought through means such as making the gristmill management an individual operation and expanding the targeted area beyond the village, and the cooperation of male volunteer operators is not obtained, stable operation will be difficult to achieve.

In addition, gristmills come in two types: 1) mills where threshing and milling are two separate operations and 2) mills that provide milling only. Type 1) requires high

maintenance expenses and is complex to operate, and will suffer from frequent breakdowns caused by the lack of technical capabilities. Therefore, adequate consideration must be given to all circumstances when introducing a gristmill. Based upon JGRC's experience, for the initial introduction we recommend only a gristmill of Type 2).

Case study of gristmill management in Magou village -

A gristmill in Magou village was set up in August 1995, based on the demands of the women in the village and considerations to promote women's participation in activities such as dry season vegetable cultivation by shortening the working hours for domestic chores. The mill charge was set to 25FCFA for one *tia* (about 2.5kg), a *tia* referring to a container made from a "calabash" (gourd) called a *tia*. The initial volume handled was a monthly average of approximately 1,500 *tia* (50 *tia* per day), earning the CGTV a rough income of about 37,500 FCFA. The operator (male) was paid 7,500 FCFA/month (with three meals per day), and after subtracting expenditures for fuel and other expenses, a monthly profit of only 5,000 FCFA was earned, so the operational results were not large. When one considers the improvement in social position brought about by enabling the woman to participate in development and earn cash income from dry season vegetable cultivation, however, the results can be said to have been effective enough.

Initially the business hours of the gristmill were from morning until evening. Because

of concerns over the conditions of machinery use, however, operations were shortened to 4-6p.m. As a result, the hours for the operator to remain on duty decreased greatly. Moreover, although we initially introduced two processing machines (threshing and milling), frequent breakdowns occurred because the operating technology was difficult, and the user fee was expensive. We therefore took the local people's demands into account, and replaced these



Gristmill and grain warehouse

machines with one easy-to-operate milling machine. Operations and management were begun initially by just the women, but because the bookkeeping and management were inadequately managed, we later shifted the operations and management, through trial and error, to individual operation contingent on management within the village.

5.3.4 Dry season vegetable cultivation

Initially we assumed the main objective to be improving the nutrition of the local people, and we started by holding meetings to solicit willing participants. With JGRC providing the development capital and the farmers providing labor for the fieldwork, we prepared a 1.2ha vegetable field. The CGTV lent plots of land for 500FCFA to villagers who desired some ground, with JGRC initially picking up the administrative and maintenance expenses and the farmers being responsible for seed and fertilizer costs. With time, the farmers gradually learned the vegetable cultivation technology, and when a broker began coming from around 1997 to purchase directly from Magou's vegetable field, the producers obtained cash earnings and, in addition, acquired a keen interest and aggressiveness. With regard to the women participants in particular, we heard that their social position in the village has improved because of their ability to secure cash earnings and that the men also now view the women as partners in development. Under the current situation, the producers are now bearing

The role of the CGTV in the dry season vegetable fiee was to shoulder all of the maintenance and administrative expenses, then collect these from the cultivation farmers after each harvest. When a farmer does not pay his share of the expenses, he cannot take part in the cultivation in the

all of the maintenance expenses.



following year. Because the vegetable field allocation is 100m² per person (actual cultivation area is 60-70m²), cultivators are earning approximately 40-50,000 FCFA in cash earnings. With the development of 1ha, 100 people can grow vegetables. Considering the level of poverty in the region, one can see that dry season vegetable cultivation contributes substantially to an increase in farm household income.

< Problems >

In the beginning the farmers did not provide the appropriate volume of irrigation water. One reason was the use of children to supply irrigating water. The CGTV adjusted its regulations and limited the amount of irrigation water.

The sales method is frequently sale by oral agreement, prior to harvesting the output from a plot unit (pre-harvest sale). To prevent producers from suffering any disadvantages when production increases, a farm household-centered system for selling through the CGTV must be built.

5.3.5 Capital management

The profits created from implementing the various activities of the CGTV – such as the so-called small-scale financing, the grain bank, gristmill, and dry season vegetable cultivation –increase the CGTV's operating capital. Along with assistance aid, grants, and self-development funds, these are used as the CGTV's working capital and become the source of the CGTV's development. The ability to invest and manage this capital also becomes a large factor in the CGTV's development.

Bank creditworthiness

Because its capital will increase when a CGTV engages in economic activity, preserving this capital becomes more difficult. Although JGRC recommended that the individual in charge of the capital deposit the funds in a local bank (*La Caisse TAIMAKO*) based in the local area, the village elders opposed this suggestion for the following reasons, and put off depositing the funds in a bank for a long time. After two years of efforts to persuade the elders, the CGTV was finally able to establish a bank account.

- · Although they understood the concept of money, they had no concept of deposits.
- Although they will entrust something of value to an individual in whom they place their trust, they will not deposit that item with anyone else.
- Banks may go bankrupt. In the past, the largest bank in the country (Bank Development Republic Niger) went bankrupt and depositors lost everything.
- If an acquaintance loses the money, he can repay it with domesticated animals, and no other procedures are necessary.

Chapter 6 Education and training of local people

When managing a CGTV, support of the local people by the project organization or government institution is indispensable. What timeframe to use and what kind of support to provide, however, as well as various techniques for delivering the support, must be considered. We believe these will differ depending upon the respective standpoint or conditions placed on each CGTV. Here we provide a case study that JGRC examined concerning how to provide enlightenment and support to the local people from the project organization side.

6.1 Dissemination of techniques

In general, the local people of the Sahel have little intercourse with other regions, are slow to introduce and spread new technology, and have learned their practices of traditional agriculture through necessity. When undertaking development efforts it is therefore necessary to decide upon technology that farmers can accept, based on local current circumstances, and to provide technical guidance continuously that is aimed at productivity improvements. For this purpose, establishing a system of instruction based upon cooperation with national or local government administrative institutions, experimental research laboratories, local NGO and other such organizations in conjunction with development undertakings, and introducing and disseminating to farm households farm, livestock and forestry production techniques or farmland conservation techniques, are indispensable.

6.1.1 Methods for dissemination of techniques

experimental research laboratories, NGO, etc.

2)	Determine the farming, livestock and forestry production technology and farmland
	conservation techniques that can be transferred to farmers (in cooperation with
	experimental research laboratories)

1) Establish a cooperative relationship with local government institutions,

3) Consult and coordinate with project organizations

4) Position experts specialized in agriculture, livestock raising and forestry (dissemination experts) under the project organization support

5) Provide guidance to farmers through the CGTV

6) Dispatch local people to government institution training facilities

6.2 Study tour to a prior project area

Conducting training in other local areas that are more advanced can be extremely effective for increasing the local people's consciousness and educating human resources. Such training must be implemented, however, after first clarifying the training goals of the local people. Once the training is completed, efforts must be made to transmit the results to the other local people, through activities such as "feedback meeting" in the village.

6.2.1 Clarification of themes

When preparing for training in a more advanced local area, the project organization and other institutions must consider the need to increase the trainees' level of awareness, by clarifying the themes of the training and setting aside sufficient time for the trainees to exchange opinions with the local people of the training area.



Moreover, in order to encourage effective participation by the local people in the development effort, it is also necessary to enlighten the local people by assuming beforehand what kinds of things the local people wish to learn through the training.

- < Objectives of training in advanced local areas >
- 1) Show the need for a CGTV to represent the common benefits of the village community, through visits to active organizations and discussions with local representatives.
- 2) Show the need for mobilization and participation of every member of the village community for measures to combat desertification
- 3) Show that cultivation of human resources is indispensable for solving various problems when executing measures
- 4) Show that credit activities will become an important means of support for the local people, and that the investment of funds will be used as a financial resource for the CGTV's sustainable development

6.2.2 Execution of the training

When executing training trips, organizers must bear in mind the need to understand adequately what the local participants wish to learn, or what they should be apprised of, through prior discussions with the support organizations, and then decide the training destination in accordance with these details. Based on the training, it will then be necessary to consider how the local people can effectively understand the mechanisms studied. At the same time, a feedback meeting should be held with all of the local people in the village once the training is completed, to encourage the trainees to disseminate the training results throughout the village through proposals prepared by the members of the support organization.

6.2.3 Training items wanted by the local people

The training items include the following topics.

- a) Management of working capital
- b) Management of a grain bank
- c) Management of a gristmill
- d) Management of restored land
- e) Management of tree windbreaks and individuals' tree
- f) Management of vegetable cultivation
- g) Other

6.2.4 Coordination of questions

It is important for the training leader of the project organization or other entity to arrange and prepare in advance the following types of questions and problems, through prior meetings with the individuals who will receive the training or in discussions with the local people in the training destinations. This will help the local people to understand the problems adequately.

1) Management of working capital

- a) What methods were used to secure initial working capital?
- b) What steps were taken until working capital was obtained?
- c) Where were the funds placed when first raised? Where are the funds now?
- d) How is the working capital managed?
- e) Has the management method been changed? If so, how? What was the reason and result?
- f) What problems occurred after the working capital was established? What did you do to solve the problems?

Do you have any advice or suggestions for others doing a similar activity? If so, what kind of advice or suggestions?

2) Grain bank

- a) When was it established?
- b) Why did you establish it?
- c) What was your thinking until you established the grain bank?
- d) How did you manage the bank at first?
- e) How much was the initial capital?
- f) Is there a relationship between your village and bank?
- g) Who has benefited from the bank?
- h) How do the functions of a grain bank work?
- i) How is the grain bank managed?
- j) Has the management method been changed? If so, how? What was the reason and result?
- k) What problems occurred after the working capital was established? What did you do to solve the problems?
- Do you have any advice or suggestions for others doing a similar activity? If so, what kind of advice or suggestions?

3) Management of a gristmill

- a) When did you install the machinery?
- b) What kind of machinery (Milling only? Is threshing also possible?)?
- c) Who introduced the machinery?
- d) How is the gristmill managed?
- Is there a management organization?
- Who are the members of the organization (The men? The women?)?
- Is the operator someone from the village?
- What are the operator's working hours?
- How much is the operator's wage?
- Why are payments and expenditures managed?
- Who is in charge of repairs?
- e) Do you have any advice or suggestions for the union that owns the machinery?
- f) Is your profit increasing?
- g) How are the profits used?

4) Vegetable cultivation management

a) What is the management situation of the vegetable cultivation plot?

- What is the procedure to become a member?
- What is the composition of the management organization?
- What are its functions, and what are the members' roles?
- What is the process for selecting members?

b) Irrigation

- What is the pumping method?
- What is the watering method?
- What is the allocation of construction costs or burden for expenses, etc.?
- What is the process for maintaining and repairing facilities?
- Is there a method for regulating the frequency of watering?
- c) Materials procuring procedure
- What about seeds, fertilizer, agricultural chemicals, etc.?
- What preparations are made for tools (pump, farming tools, watering cans)?
- What about fuel and lubricant for the pump?
- d) Cultivation
- What is the method of selecting crops?
- What is the cultivation period?
- What is the necessary technology, and how difficult is it?
- What are the seedling preparations (sowing method, fertilizer, and watering frequency)?
- What about field preparation (size, fertilizer, etc.)?
- What transplant technique do you use (time, interval)?
- What type of additional fertilizer, and how frequently applied?
- How do you calculate and repay the expenses related to cultivation?
- What are the penalties for non-payment, etc.?
- e) Distribution
- Does the methods of distribution differ according to crop?
- What are the marketing channels for your crops?
- f) General questions
- What problems and difficulties did you face with vegetable cultivation? How did you solve them?
- How did you solve land disputes at the vegetable cultivation site? (Items below omitted)

6.3 Literacy training

The school attendance rate in the Sahel region is low, and many of the local people who live there cannot read, write and do simple math. For the operation and management of the CGTV as well, these low ability levels have a negative effect on knowledge, such as how to create account books and regulations, as well as money management and communications with the local people.

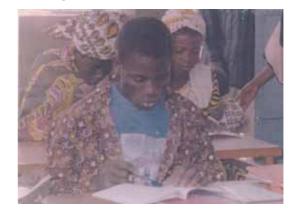
While compulsory education for children who have reached the age for entering school is important to teach future village leaders, literacy education for the adults who compose the CGTV, whose educational opportunities have been scarce until now, is also needed.

Although the capabilities of the CGTV directors have improved as a result of the long-term relationship between JGRC and the local people, even today most of the local people who compose the CGTV in Magou village cannot read and write. Moreover, the school attendance rate of the village is also markedly low. As of 1999, only one of the children of eligible to attend school was going to elementary school.

With regard to the directors of the union as well, when the same individuals continue as the directors, this fosteres a sense of dependency or sense of special privilege and does not produce good results. Accordingly, education is needed that will raise the minimal literacy level of all of the local people.

6.3.1 Examples implemented by *Terroir Management Committees*

JGRC implemented literacy education in the village of Yakouta, the survey site in Burkina Faso, which is aimed at enabling adults to read a local newspaper written in Fulfuldé. The students, who were adults in Yakouta village who wished to receive literacy education, completed 80 days (40 days × two terms) of training in



Fulfuldé, the local language. As a teacher, JGRC employed one woman (approximately 100,000 FCFA for 40 days) from the neighboring town of Dori, who lived in the village during the teaching period. During the first period, there were 32 students, of whom 22 people passed a reading and writing examination after completing their study (including seven women). In addition, those students from the first term who passed their test received an additional 40 days of instruction, with the aim of further improving their skill level. As the third stage, the person considered the best student during the two terms was selected and given the task of

literacy training for the village. As a result, this leads to further improve the literacy capabilities of the village.

6.3.2 Training effectiveness

JGRC contracted with the University of Ouagadougou in Burkina Faso, which conducted a social survey in Yakouta village in 1996 and learned that the majority of the local people had a negative opinions towards making children



go to school. When an opportunity to provide literacy education in the village arose, however, the interest of the local people in attracting an elementary school increased and the government was asked to set up a school. As a result, in 1999 an elementary school (branch school) was founded with support from UNESCO, plus the cooperation of the local people in the school's construction. Today many children attend this elementary school. (36 students in fiscal 1999, including 20 boys and 16 girls)

6.4 Accounting training

For the CGTV to execute its various activities, accounting training is another sorely needed area of education. Because of the delay in literacy training in the Sahel region, in addition to reading and writing the level of computational skills is also inferior. For the CGTV's activities, a certain level of calculating ability is required in addition to money management for activities such as the grain bank or small-scale financing system, and calculation of the administrative and maintenance expenses for vegetable cultivation. Because skills such as the preparation of slips and ledgers and maintenance of revenue and expenditure ledgers are required in addition to basic calculating skills in order to complete the CGTV's economic activities, this created the need to continually provide training in these areas. We have described the accounting training materials implemented by JGRC in Magou village in the attached materials at the end of this volume.

6.5 Introduction of improved ovens

In order to control firewood consumption in the Sahel region, the popularization of improved kitchen ovens is being actively pursued in many locations with support from foreign countries and other sources. Compared to traditional kitchen ovens, the improved ovens are expected to produce fuel savings of about 30%. In fact,

however, the diffusion of such stoves still cannot be said to be adequate because of the low level of environmental awareness among the local people.

The women in the Sahel region are involved in the deterioration of local natural resources through the activities in their daily lives, such as collecting firewood, cooking, drawing water and farming. So as part of its efforts to popularize the improved ovens, JGRC is teaching the women who face gradually increasing pressure from environmental deterioration about the causes. Through education, there is a need to free women from excessively heavy labor, improve the status of women and actively work as a supporter of development.

6.5.1 Holding a training class

We begin by searching among the local people in the village for partners (groups) who build and use the improved ovens. Because these partners are expected to continue the dissemination activities in the future, members who express a desire and will participate on every occasion should be chosen. Because labor is required, it is more effective if the men's cooperation and participation are obtained.

For the dispatch of teachers, the preferred approach is to rely on a group of local women who have received training and are creating the improved ovens in a neighboring area. In this case, the local people should provide some remuneration (For example, cash of 100-500 FCFA or millet, soap, meat, or some other commodity mutually agreed upon beforehand).

We execute the training course as follows (case study).

(Execution period is once every week for a two-month period, with about 15-20 participants per period)

1) Discussion

Explain the advantages of the improved oven, show an educational video, verify the list of required materials.



2) Production demonstration Perform demonstrations by women in the village.



3) Practice

Actually use an improved oven at home, and produce a new one by oneself when the oven is damaged.







Improved oven

6.6 Funding

6.6.1 Expanding the organization

- 1) Foundation of a small-scale financing system
 - Capital for fattening livestock, cultivation credits, and farming funds
- 2) Foundation of a grain bank (Establish as an annex to the gristmill)
 - Construction of a grain warehouse and purchase of grains (millet and sorghum)
- 3) Installation of a gristmill
 - Funds to purchase and install a gristmill and pay training expenses

6.6.2 Education and influence of local people's consciousness

- 1) Technical guidance (Dispatch local people to government and experimental research laboratory training facilities)
- 2) Inspection of advanced areas

Rent a medium-sized car from the nearest town and guide the local people on day trips or 1-2 night stays to observe more advanced areas.

Farmland conservation (Execute twice annually for the first three years)

Forest resource management (Execute twice annually for the first three years)

Gristmill and grain bank activity (Execute twice annually for the first three years)

3) Improved oven training (Execute training sessions twice annually, about one week/session)

Welcome as lecturers a group of women (local people) from a neighborhood that uses the ovens.

(The development organization handless when the group must be welcomed.

The local people pay remuneration)

4) Literacy education

Literacy training twice per year (Execute training sessions twice annually, about two weeks/session)

: Employ teachers from neighboring towns.

Train local instructors (Execute training sessions once annually, about two weeks/session, for the first three years)

: Train teachers from among the local people who have been taught.

6.6.3 Implementation system

The responsibility for the capital needed for development should be decided through consultations between the local people and the project organizations. When executing development, it is more effective to pursue the activities by asking the local people to contribute to the effort as best they can, after giving them part of the

responsibility. The project organization, however, must invest the expenses such as expenditures to teach or enlighten the local people initially, or for observation trips to more advanced local areas.

In consultations with the project organization, the general approach is to ask the local people to pay some of the expenses required for the activities, such as expenses for labor (labor costs) or materials that can be obtained locally. The share of activity expenses must be established while considering the local people's ability to share the burden.

When executing activities that will generate a profit, the project organization can also finance the necessary capital to the CGTV, and be repaid from part of the earnings each year.

Moreover, for the expenses to undertake the dissemination of agriculture, livestock and forestry techniques, during the period until these techniques take root in the local community (Set the objective), it will be necessary to ensure individuals within the local area who will prioritize the disseminate and instruction of agriculture and forestry techniques. Given matters such as a dissemination effect of development into the surrounding areas, this is one approach to utilize existing instructors practically by coordination with the departments at government institutions supporting development that are responsible for disseminating techniques. For this purpose, however, it will be necessary to cover expenditures for transportation such as a motorbike, or costs such as travel and activity expenses.

Activity expense calculation reference (JGRC research case study)

Training: Observation in more advanced areas

Minibus fee: 100,000 FCFA/day (Rental car)

Fuel expense: $(5km/liter \times 380 FCFA \times distance (km))$

Farmer per-diem: 1,000 FCFA/person (Daily allowance payments)

Driver: 5,000 FCFA/person

Improved ovens: Bonus of 500 FCFA (For observation in more advanced areas,

and to welcome project organization instructor)

Literacy education: Teacher (7,500 FCFA x /day), literacy facility, desks, chairs,

blackboard and teaching materials

Gristmill: Machinery and peripheral equipment = 1,685,000 FCFA, and facility materials expenses: Galvanized iron, nails, doors, windows, interior and exterior cement = 150,000-200,000 FCFA (The local people will supply sundried bricks or wooden frames, etc.), training expenses for ten-day period (There will be a large difference in the price of the facility depending upon

whether it is made of concrete or of dried bricks)

Grain bank: Purchases at time of initial harvest (20-30 bags x 6-8,000 FCFA)

Small-scale financing (utilization of repayment funds from the second year)

Livestock fattening capital 15,000 FCFA \times 30 individuals

Cultivation credits 5,000 FCFA x 100 individuals

Support systems

Packing shed (Local people construct with provided materials)

Assignment of dissemination instructors (activity expenses)

Motorbikes (1,250,000FCFA/motorbike)

Appendix materials

1. Magou village *Terroir* Management Committee Articles of Incorporation

(Omitted)

- 2. Magou village *Terroir* Management Committee internal by-laws (Omitted)
- 3. Magou village *Terroir* Management Committee accounting training materials (Extract)

(Omitted)

4. Materials for local people's consciousness survey (Omitted)