

Japan International  
Cooperation Agency (JICA)

No.
-----

Ministry of Agriculture,  
Hydraulics and  
Halieutic Resources  
Burkina Faso

**The Study on the System to Alleviate the Land  
Degradation in Burkina Faso  
Second phase**

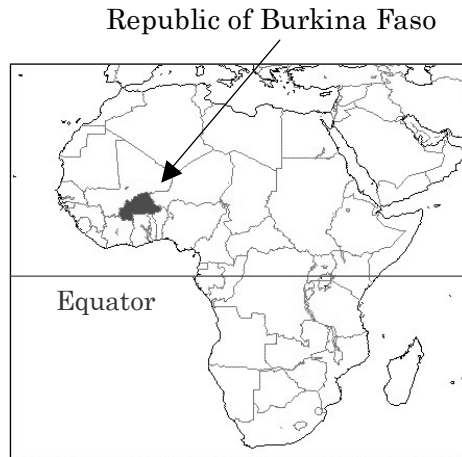
**FINAL MAIN REPORT  
VERIFICATION STUDY**

FEBRUARY 2006

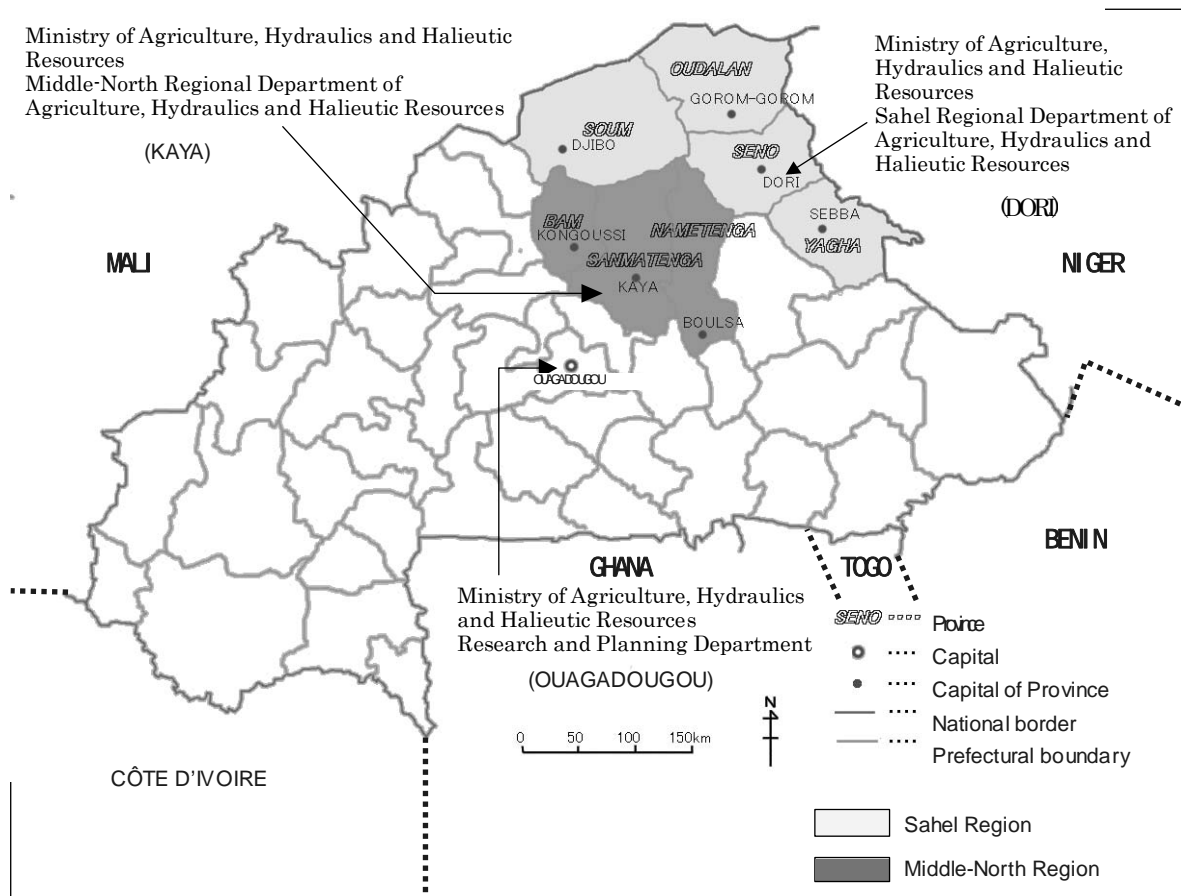
Japan Green Resources Agency (J-Green)



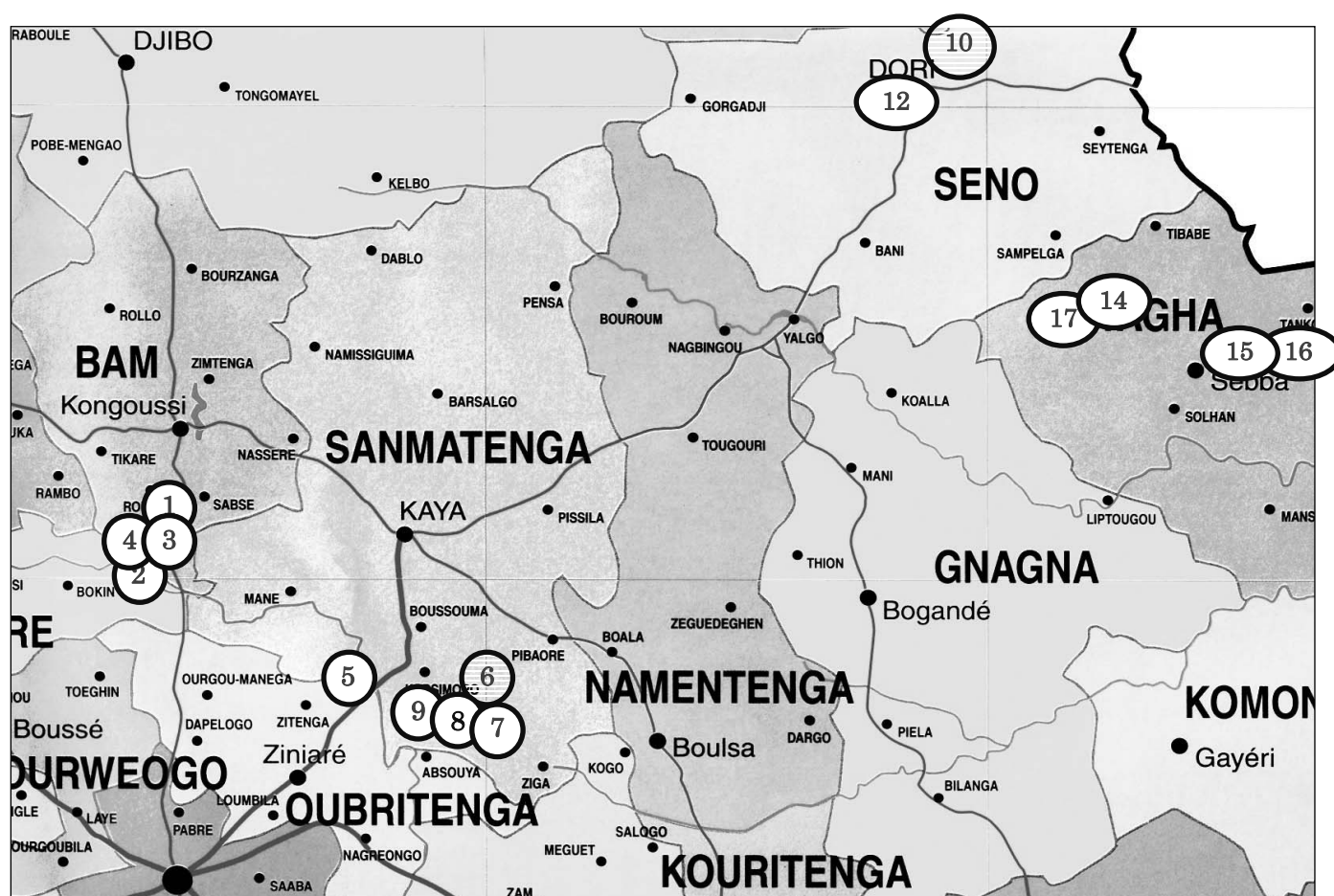

Location Map of Study Area



Location Map of Study Area(Sahel Region, Middle-North Region)



## Detailed Map of Study Area



## THE TARGET VILLAGES TO PILOT PROJECTS

(The acronyms G1, etc., refer to the categories of villages. For more details refer to below page VIII)

PROVINCE (UCADR)	CVGT support establishment villages (G1)		Existing CVGT support villages(G2)	
	First villages(G1-1)	New villages(G1-2)	Additional new villages(G2-1)	Dissemination villages (G2-2)
BAM (Guibaré)	1) Vousnango	2) Sindri	3) Watinoma	4) Nyanguela
SANMATENGA (Korsimoro)	5) Nougou		6) Foulla 7) Bascaudre-Mossi	8) Ouiden 9) Tansin
SENO (Dori)	10) Sèlbo	11) Goudébo	12) Thioumbonga	13) Baféle
YAGHA (Sebba)	14) Diogora		15) Guissindiori 16) Helga	17) Ibbal

Final Main Report of Verification Study  
Contents

Location Map of Study Area .....	i
Location Map of Study Area(Sahel Region, Middle-North Region) .....	i
Detailed Map of Study Area .....	ii
The target villages to pilot projects.....	ii
The promotion system of the study .....	iii
Categorization of target villages of pilot projects.....	iv
Contents.....	v
Figure list .....	vii
Table list .....	viii
Currency Conversion Table .....	xi
Table of Abbreviations .....	xii
SUMMARY (VOLUME DEDICATED TO THE PILOT STUDY) .....	R-i
Chapter 1 Verification Study .....	1
1.1 Overview of Verification Study .....	1
1.1.1 Purpose of Verification Study and Relations with M/P .....	1
1.1.2 Composition of Verification Study .....	2
1.1.3 Flow of Verification Study.....	2
1.1.4 Schedule of Verification Study.....	4
1.2 Verification Study Plan.....	4
1.2.1 Verification Issues subject to Verification Study .....	4
1.2.2 System Establishment Program.....	6
1.2.3 Capacity Improvement Program .....	8
1.2.4 Support Tools Improvement Program .....	12
1.3 Results of Verification Study .....	14
1.3.1 System Establishment Program.....	14
1.3.2 Capacity Improvement Program .....	37
1.3.3 Support Tools Improvement Program .....	45
Chapter 2 Verification project .....	57
2.1 Outline of the verification project .....	57
2.1.1 Objective of the verification project and its significance as regards the Master Program (M/P).....	57
2.1.2 Progress of implementation of the verification projects .....	57
2.2 Verification Project and Resources .....	63
2.2.1 Current Status of Resources in Study Area .....	63

2.2.2	Impeding Factors of Rural Development Promotion and the Countermeasures.....	84
2.2.3	Outline of Villages and Resources .....	86
2.2.4	Study of Resource Volume .....	88
2.3	Plan of the execution of the pilot projects.....	105
2.3.1	Selection of the pilot projects.....	107
2.3.2	Contribution of the populations.....	108
2.3.3	Making of draft-agreement of the projects.....	109
2.3.4	Plan of the execution of the pilot projects.....	109
2.4	Results of the pilot projects.....	109
2.4.1	Situation of the pilot projects undertaken before 2004 and in 2004.....	111
2.4.2	New projects undertaken in 2005.....	115
2.4.3	Evolution of the 5 resources.....	123
2.4.4	Distribution of the roles in the UCADR .....	132
Chapter 3 EVALUATION .....		139
3-1	Monitoring and evaluation of the projects.....	139
3.1.1	Orientation and Plan for the evaluation/monitoring of the projects and the Master Program.....	139
3.1.2	Result of the evaluation of the Master Program .....	142
3.2	Monitoring and evaluation of pilot projects.....	189
3.2.1	Monitoring method / principle and plan for evaluation .....	189
3.2.2	Result of the evaluation of projects .....	192
3.2.3	Evaluation of NGOs /Associations.....	204

## Figure list

Figure 1.1.1	Components of M/P and Relations with Verification Study .....	1
Figure 1.3.1	Comparison of Acquisition and Usage Situation by Degree of Participation in Participatory Type Development Approach Training.....	43
Figure 1.3.2	Changes in Attitudes of Agents that are felt by Residents (as compared to two years ago) .....	44
Figure 1.3.3	Pattern Diagram of Communes.....	49
Figure 1.3.4	Implementation Flow of Rural Development Project by UCADR.....	51
Figure 2.2.1	Positive Influence of Literacy within Village .....	73
Figure 2.2.2	Mechanism for Important Decision-making.....	75
Figure 2.2.3	Residents' Attitude toward Role Sharing between Men and Women (Multiple answers are allowed) .....	76
Figure 2.2.4	Causes of Progression of Soil Degradation/Erosion.....	78
Figure 2.2.5	Soil Conservation Works—Performance per Village.....	78
Figure 2.2.6	Status of Wells at Originally Selected Villages .....	82
Figure 2.2.7	Breakdown of Income.....	84
Figure 2.2.8	Agro-Ecological Zoning in Burkina Faso.....	90
Figure 2.2.9	Field Area per Family.....	93
Figure 2.2.10	Field Area per Person .....	93
Figure 2.2.11	Results of Interview Concerning Productivity of Village Land .....	94
Figure 2.2.12	Causes Perceived by Inhabitants for Decrease in Crop Yield.....	96
Figure 2.2.13	Current Land Utilization Status Diagrams .....	97
Figure 2.2.14	Balance of Supply/Demand of Firewood (Noungou village) .....	98
Figure 2.2.15	Current Land Utilization Status Map (Central Korsimoro Canton) ....	105
Figure 2.2.16	Current Land Utilization Status Map (Northwest part of Sebba Canton).....	105
Figure 3.1.1	Results of the monitoring on the management of the meetings.....	145
Figure 3.1.2	Results of the evaluation survey (UCADR, 1) .....	168
Figure 3.1.3	Results of the evaluation survey (UCADR 2-).....	169
Figure 3.1.4	Results of the evaluation survey (UCADR 3-).....	171
Figure 3.1.5	Results of survey (CVGT) .....	176
Figure 3.1.6	Survey results (outside CVGT) Part-1.....	176
Figure 3.1.7	Survey results (outside CVGT) Part-2.....	177
Figure 3.1.8	Survey results (outside CVGT) Part-3.....	177

## Table list

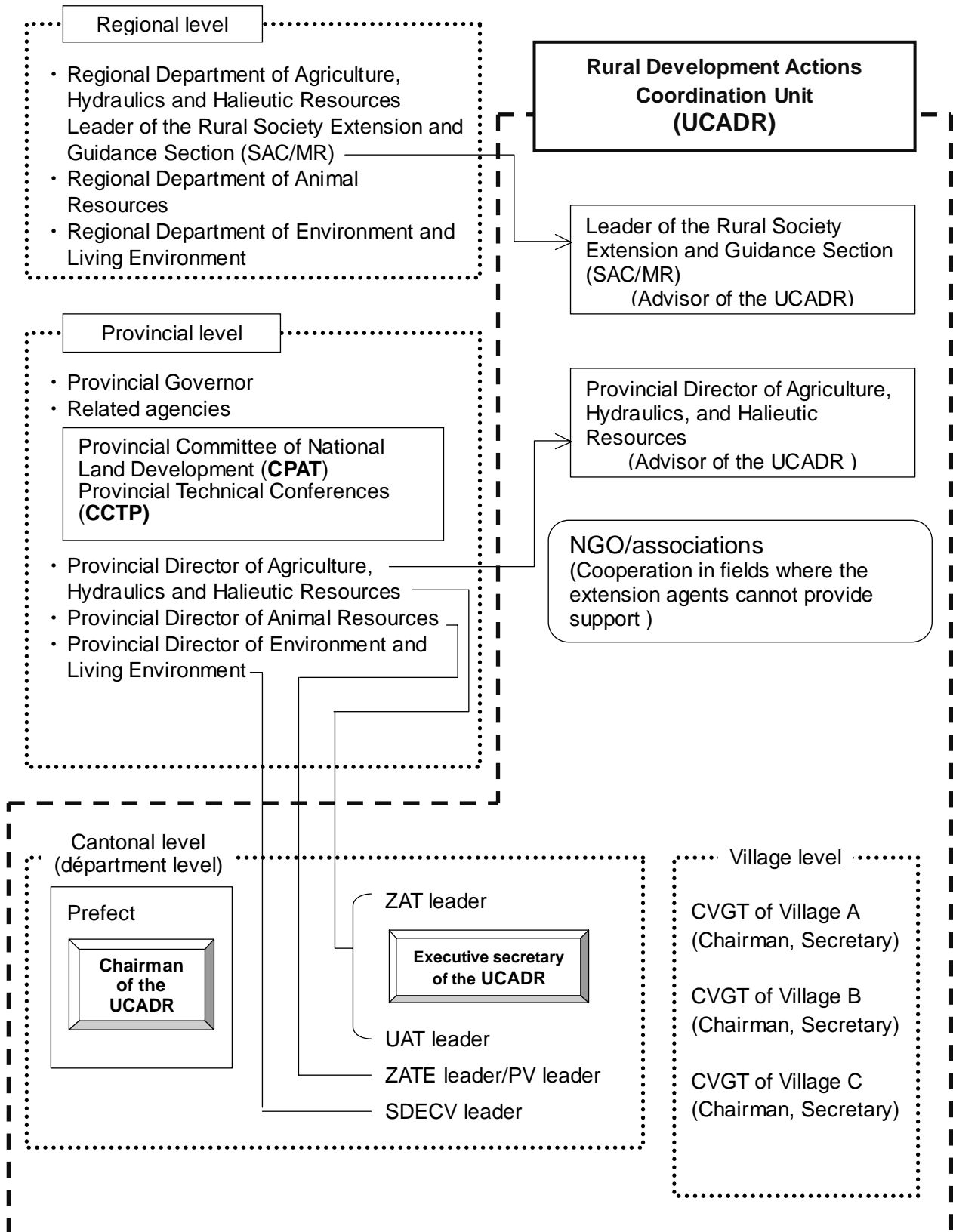
Table 1.1.1	Composition of Verification Study at Phase 2 Study.....	2
Table 1.1.2	Flow chart .....	3
Table 1.1.3	Schedule of Verification Study.....	4
Table 1.2.1	Verification Issues of Verification Study.....	5
Table 1.2.2	Composition of System Establishment Program.....	6
Table 1.2.3	Issues and Verification Method at Participatory Type Development Approach Training .....	11
Table 1.3.1	Agenda and Implementation History of Cooperation Promotion Workshop .....	15
Table 1.3.2	Overview of Implementation of UCADR Facilitation Meeting .....	32
Table 1.3.3	Outline Table of Action Plan of Each UCADR.....	37
Table 1.3.4	Themes of Lectures at Technical Exchange Meeting .....	39
Table 1.3.5	Outcomes and Issues related to Technical Exchange Meeting.....	40
Table 1.3.6	Results of Problem Analysis .....	41
Table 1.3.7	Excerpts from General Law concerning Municipalities.....	48
Table 1.3.8	Table of Contents of Application Version of Instruction Materials and Technical Extension Materials .....	54
Table 2.1.1	Target villages of verification projects .....	58
Table 2.1.2	Classification of villages characterized by the difference in objectives of verification projects.....	59
Table 2.1.3	Criteria and procedures for the selection .....	59
Table 2.1.4	Result of selection of initially selected villages .....	61
Table 2.1.5	Outcome of selection of new villages .....	62
Table 2.1.6	Outcome of selection of additional new villages.....	62
Table 2.2.1	Vegetation of Study Area (1984) .....	68
Table 2.2.2	Average Number of Family Members.....	71
Table 2.2.3	Ownership by Land Classification.....	72
Table 2.2.4	Literacy .....	74
Table 2.2.5	Status of Facility Development in Study Area .....	79
Table 2.2.6	Access to Water Resources for Daily Use.....	81
Table 2.2.7	Impeding Factors of Rural Development Promotion and the Countermeasures.....	85
Table 2.2.8	Features of Villages in Middle North and Sahel Regions .....	86
Table 2.2.9	Status of Five Resources in Each Region .....	87
Table 2.2.10	Estimated Timber Volume by Region Class .....	90
Table 2.2.11	Grazing Capacity for Each Region Class.....	91



Table 2.2.12	Outline of People Interviewed .....	92
Table 2.2.13	Results of Interview Concerning Productivity of Land.....	94
Table 2.2.14	Results of Resource Volume Study (Village Land Resources).....	96
Table 2.2.15	Crop Yield due to Improvement in Rainy Season Growing (Niébe, Millet) .....	99
Table 2.2.16	Balance of Supply and Demand of Livestock Fodder.....	101
Table 2.2.17	Activities to Increase Female Income.....	103
Table 2.3.1	Orientations for the establishment of the plan of the execution of the pilot projects of the first phase and the second phase.....	106
Table 2.3.2	Lists of pilot projects.....	107
Table 2.3.3	Rate of the village contributions.....	108
Table 2.3.4	Main contents of the agreement of the pilot projects.....	109
Table 2.4.1	General situation of the monitoring the pilot projects.....	112
Table 2.4.2	Recapitulation of the results of the pilot projects undertaken in 2005.....	116
Table 2.4.3	Evolutions of the resources of the first villages of the area of the Middle-North .....	125
Table 2.4.4	Evolutions of the resources of the first villages of the Sahel region.....	127
Table 2.4.5	Evolutions of the resources of the new villages.....	129
Table 2.4.6	Modifications in the resources of the new additional villages (projects implemented in 2004) .....	131
Table 2.4.7	Distribution of the roles decided by the UCADR and results of monitoring (projects carried out before Year 2004) .....	131
Table 3.1.1	Items of the follow-up (monitoring) and the evaluation of the master program.....	139
Table 3.1.2	Indicators of evaluation of the activities of the Units of Coordination of the Actions of Rural Development (UCADR).....	141
Table 3.1.3	Rate of participation of the members for Year 2005 (in %) .....	144
Table 3.1.4	Evaluation of UCADR based on the execution of pilot projects .....	151
Table 3.1.5	Workshop to promote collaboration: Attendance rate .....	161
Table 3.1.6	Exchange meetings between the UCADR : attendance rate.....	162
Table 3.1.7	Proportion acquired during training .....	165
Table 3.1.8	Number of survey files collected.....	166
Table 3.1.9	Indicators and criteria for giving notes in the evaluation survey.....	167
Table 3.1.10	Number of survey files collected.....	172
Table 3.1.11	Questions posed to members .....	173
Table 3.1.12	Results of the overall evaluation and problems to be settled.....	182
Table 3.2.1	Relation between the monitoring of pilot projects and evaluation .....	190
Table 3.2.2	Details of the survey on the development of the awareness of populations	

	(Surveys A and B for the populations).....	191
Table 3.2.3	Output evaluation through the survey on the development of awareness of the populations.....	192
Table 3.2.4	Output evaluation the study mission.....	195
Table 3.2.5	Participants covered by the study .....	197
Table 3.2.6	External evaluation of UCADR for pilot projects.....	198
Table 3.2.7	Outcome evaluation with the survey on the development of awareness of the population .....	200
Table 3.2.8	Outcome evaluation by the study mission.....	202
Table 3.2.9	Evaluation of indicators for NGOs and associations.....	204
Table 3.2.10	Evaluation of NGOs and associations by the study mission.....	207
Table 3.2.11	Comparative table for the evaluation of NGOs and associations with UCADR .....	209

## The promotion system of the study



## Categorization of target villages of pilot projects

According to the purpose and ways of implementation of pilot projects, we have classified the target villages into five categories. We have assigned an acronym to each of these categories that we will use in the body of the report.

Villages of Supporting CVGT- Establishment	(G1)	<ul style="list-style-type: none"> <li>— First villages (G1-1) 4 villages</li> <li>— New villages (G1-2) 2 villages</li> </ul>
Villages with Existing CVGT support	(G2)	<ul style="list-style-type: none"> <li>— Additional villages <span style="float: right;">New</span> (G2-1) 6 villages</li> <li>— Dissemination villages (G2-2) 5 villages</li> </ul>
Villages for the Verification of Dissemination	(G3)	6 villages

### 1. The first villages (G1-1)

- 1) They have the target to verify which is the appropriate framework for a residents' support by the basic governmental departments.
- 2) The pilot projects are still carrying on in these villages from the first phase (December 2000-march 2004).

### 2. The new villages (G1-2)

- 1) They have the target to verify the effectiveness of the UCADR (execution of villages diagnosis, drawing up of the village development plans)
- 2) Villages selected during the second phase (April 2004-March 2006), without existence of CVGT or with a non-operational CVGT.
- 3) Neighboring villages of the first villages selected during the first phase, and covered by the same extension agents.

### 3. The additional new villages (G2-1)

- 1) The target to verify with these villages is if the UCADR can manage the project implementation in several villages.
- 2) Villages with operational CVGTs.
- 3) Selection of villages with easy access, then allowing a good <exhibit> effect.

### 4. The dissemination villages (G2-2)

Villages located near to the above-mentioned villages, and selected with the target to develop autonomy of the UCADR and to verify their operational and capability reinforcement.

### 5. The villages for the verification of dissemination (G3)

- 1) Villages subject to the activities of the UCADR which are set up in the provinces of Namentenga, Soum, and Oudalan, as part of the task of the verification of dissemination.

## Currency Conversion Table

---

### Currency Unit

FCFA	CFA Franc (1 FCFA= 655.957 FCFA/ EUR)
EUR	Euro (1 EUR=¥139.421) As of 4 January 2006
¥	Japanese Yen
\$	US Dollar (\$1=¥115.750) As of 4 January 2006

---

## Table of Abbreviations

(Abréviation /Abbreviation)	(Anglaise ou Française etc. / English or French etc.)
ACORD	Association de Coopération et de Recherche pour le Développement
ADRA	Adventist Development and Relief Agency
ADRK	Association pour le Développement de la Région de Kaya
AED	Association Ecclésiastique de Développement
AGS	Action for Greening Sahel
AI	Alphabétisation Initiale
AJACS	Association de Jeunesse d'Action de Coopération et de Solidarité
AMRT	Ateliers Mensuels de Revue Technique
AMURT	Ananda Marga Universal Relief Team
ANAR	Association Nationale d'Action Rurale
APESS	Association pour la Promotion de l'Elevage au Sahel et en Savane
ARSF	Antennes Régionales de Semences Forestières
AVD	Association des Volontaire pour le développement Environnement Auto promotion et Solidarité
AZAP	Agent de Zone d'Aménagement Pastoral
BAD	Banque Africaine de Développement
BHN	Basic Human Needs
BOAD	Banque Ouest Africaine de Développement
BSONG	Bureau de Suivi de ONG
BUNASOLS	Bureau National des Sols
CAF	Comité de Assignation du Fonds
CAP	Conseiller Agricole Polyvalent
CC	Cadre de Concertation
CCD	Convention des Nations Unies sur la lutte contre la Désertification
CCG	Commission de Commune des Gestion
CCR	Cellules de Concertation Régionales
CCTP	Cadre de Concentration Technique Provincial
CDC	Comité Départementale de Concertation
CDG	Comité Départementale de Gestion
CDH	Centre pour le Développement de l'Horticulture Cambreme au SENEGAL
CEBNF	Centre de l'Enseignement de Base et non formule
CECI	Centre Canadien d'Etude et de Coopération Internationale
CESAO	Centre d'Etude Economiques et Sociales d'Afrique Occidentale
CGT	Centre de Gestion et Technique
CIGVT	Commission Intre-Villageoise de Gestion des Terroirs
CLC	Comité Locaux de Concertation
CNSF	Centre National des Semences Forestières
CONAGESE	Counsil National pour la Gestion de l'Environnement
CONEDD	Conseil National pour l'Environnement et le Développement durable
COOPEC	Coopérative d'Epargne et de Crédit
COPOD	Comité de Pilotage des ONG sur la lutte contre la Désertification
CP	Comité de Pilotage
CPAF	Centre Permanent d'Alphabetisation Formation
CPAT	Commission Provinciale d'Amenagement duTerritoire
CPCE/OP	Cadres Provinciaux de Concertation et d'Echange de Organisations Paysannes
CPG	Comité Provincial de Gestion
CPVP	Comité Provincial de Validation des Projets
CR	Commune rurale
CRA	Chambre Régionale d'Agriculture
CRC	Cellule Régionale de Concertation
CRVP	Comité Régional de Validation des Projets
CRREA	Centre Régionaux de Recherche Environnementale et Agricole

(Abréviation /Abbreviation)	(Anglaise ou Française etc. / English or French etc.)
CTI	Comité Technique Interministériel
CVD	Commissions Villageoises du Développement
CVGS	Comité Villageois de la Gestion de Site récupéré
CVGT	Commissions Villageoises de Gestion des Terroirs
DAEP	Direction de l'Approvisionnement en Eau Potable
DAF	Direction de l'administration et des Finances
DANIDA	Danish International Development Agency
DEP	Direction des Etudes et de la Planification
DFR	Direction de la Forestière Rurale
DGEF	Direction Générale des Eaux et des Forêts
DGEP	Direction Générale de l'Economie et de la Planification
DGH	Direction Générale de l'Hydraulique
DHA	Direction de l'Hydraulique Agricole
DIRH	Direction de l'Inventaire des Ressources Hydrauliques
DOPAIR	Direction de l'Organisation des Producteurs et de l'Appuiaux Institutions Rurales
DOS	Document d'Orientations Stratégiques
DPA	Direction Provinciale Agricole
DPAHRH	Direction Provinciale de l'Agriculture, de l'Hydraulique et des Ressources Halieutiques
DPCLR	Direction de la Promotion Coopération et de la Législation Rurale
DPEBA	Direction Provinciale de l'Enseignement de Base et de l'Alphabétisation
DPEEF	Direction Provinciale de l'Environnement et des Eaux et Forêts
DPIA	Direction de la Production et des Industries Animales
DPRA	Direction Provinciale des Rescoutes Animales
DPV	Direction des Productions Végétales
DRA	Direction Régionale de l'Agriculture
DRAHRH	Direction Régionale de l'Agriculture de l'Hydraulique et des Ressources Halieutiques
DRECV	Direction Régionale de l'Environnement et du Cadre de Vie
DREEF	Direction Régionale de l'Environnement et des Eaux et Forêt
DRED	Direction Régionale de l'Economie et du Développement
DREP	Direction Régionale de l'Economie et de la Planification
DRH	Direction des Ressources Humaines
DRRA	Direction Régionale des Ressources Animales
DVA	Direction de la Vulgarisation Agricole
DVTT	Direction de la Vulgarisation et des Transferts et Technologie
EMA	Equipe Mobile Appui
E/N	Exchange of Note
EP	Equipe Pluridisciplinaire
EU	Européen Union
EWV	Entreprise Works World wide
FAO	Food and Agriculture Organization
FCB	Formation Complémentaire de Base
FEER	Fonds de l'Eau et de l'Equipement Rural
FENU	Fonds l'Equipement de Nations-Unies
FIDA	Fonds International de Développement Agricole
FND	Fonds National de lutte contre la Désertification
FNGN	Fédération Nationale des Groupe NAAM
FT	Projet Front de Terre / Ceinture Végétale
FTS	Formation Technique Spécifique
GPS	Geographical Positioning System
GRN/SP	Gestion des Ressource Naturelles /Secrétariat Permanent
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit
IBRD	International Bank for Reconstruction and Development
IDA	International Développement Association
IFAD	International Fund for Agricultural Development
IGB	Institut Géographe au Burkina Faso

(Abréviation /Abbreviation)	(Anglaise ou Française etc. / English or French etc.)
INERA	Institut de l'Environnement et de Recherches Agricoles
INRAN	Institut National de Recherches Agronomiques du NIGER
IRSAT	Institut de Recherche en Science Appliquées et Technologies
J-Green(JGRC)	Japan Green Resources Agency (Corporation)
JICA	Japan International Cooperation Agency
JOCV	Japan Overseas Cooperation Volunteers
LPDA	Lettre de Politique de Développement Agricole
LPDRD	Lettre de Politique de Développement Rural Décentralisé
M/M	Minutes of the Meeting
MA	Ministère de l'Agriculture
MAHRH	Ministère de l'Agriculture de l'Hydraulique et des Ressources Halieutiques
MARP	Méthode Active de Recherche et de Planification Participative
MATD	Ministère d'Administration Territoriale et de la Décentralisation
MEBA	Ministère de l'Enseignement de Base et de l'Alphabétisation
MECV	Ministère de l'Environnement et du Cadre de Vie
MED	Ministère de l'Economie et du Développement
MEE	Ministère de l'Environnement et de l'Eau
M/P	Master Program
MRA	Ministère des Ressources Animales
NGO	Non Governmental Organizations
OCADES	Organisation Catholique pour le Développement et la Solidarité
ODE	Office de Développement des Églises Evangéliques
OJT	On the job training
OP	Organisation Paysanne
PAM	Programme Alimentaire Mondial
PAN	Programme d'Action National
PANE	Programme d'Action National de l'Environnement
PANLCD	Programme d'Action Nationale de Lutte Contre Désertification
PAPEM	Point d'Appui des Essais Multi-locaux
PAPISE	Plan d'Actions et Programme d'Investissement du Secteur de l'Elevage
PAPNA	Projet de développement des Ressources Agro-pasatrales de la Province de Namentenga
PASA	Programme d'Ajustement Sectoriel Agricole
PATECORE	Projet d'Aménagement de Terroirs et de Conservation des Ressources dans le Plateau Central
P-EA/PFNL	Service Promotion des énergie alternatives et des Produits Forestiers Non Ligneux
PCM	Project Cycle Management
PDES	Programme de Développement de l'Elevage du Soum
PDL/S	Programme de Développement Local du Sanmatenga
PDM	Project Design Matrix
PGFMR	Projet Gestion des Feux en Milieu Rural
PGRN	Programme Gestion Ressource Naturel
PISA	Programme d'Investissement du Secteur Agricole
PISE	Programme d'Investissement du Secteur de l'Elevage
PLA	Participatory Learning and Action
PLE/BN	Projet de Lutte contre l'Ensablement/ Bassin du fleuve Niger
PNAF	Programme National d'Aménagement des Forêts
PNDSA	Programme National de Développement des Service Agricoles
PNFV	Programme National de Foresterie Villageoise
PNGT	Programme National de Gestion des Terroirs
PNLCD	Programme National de lutte contre la Désertification
PRA	Participatory Rural Appraisal
PRPR	Projet Réhabilitation des Pépinières Régionales
PS-CES/AGF	Programme Spécial de Conservation des Eaux et des Sols et d'Agroforesterie dans le Plateau Central
PSB	Programme Sahel Burkinabé



(Abréviation /Abbreviation)	(Anglaise ou Française etc. / English or French etc.)
PSO	Plan Stratégique Opérationnel
PSSA	Programme Spécial pour la Sécurité Alimentaire
R/D	Record of Discussion
RAF	La loi portant Réorganisation Agraire et Foncière
RAV	Responsable Administratif Villageois
RECIF	Le Réseau de Communication d'Information et de Formation de Femmes
RNA	Régénération Naturelle Assistée
SAC/MR	Service d'Appui-Conseil aux Monde Rural
SAC/POPA	Service d'Appui-Conseil aux Producteurs et aux Organisations Professionnelles Agricoles
SDECV	Service Département aux de l'Environnement et de Cadre de Vie
SDEEF	Service Département aux de l'Environnement et des Eaux et Forêt
SG	Secrétaire Général
SPAI	Sous-Produits Agro Industriels
SP/CONAGESE	Secrétariat Permanent du Council National pour la Gestion de l'Environnement
SPS	Service Planification et Statistique
SPONG	Le Secrétariat Permanent des ONG
SPRA	Service Provincial des Ressources Animales
SRPPN	Service Restauration et Protection des Ressources Naturelles
SVTF	Service Vulgarisation des Techniques Forestières
S/W	Scope of Works
TAA	Taux d'Adaptation Absolu
TS	Technicien Spécialisé
UAA	Unité d'Animation Agricole
UAT	Unité d'Animation Technique
UBT	Unité de Betaie Tropical
UCADR	Unités de Coordination des Actions de Développement Rural
UFC-DORI	Union Fraternelle des Croyants de DORI
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Program
UNSO	United Nations Sudan Sahelian Office
ZAP	Zone d'Aménagement Pastoral
ZAT	Zone d'Appui Technique
ZATA	Zone d'Appui Technique Agricole
ZATE	Zone d'Appui Technique en Elevage

## SUMMARY (Verification Study)

### CHAPTER ONE: THE VERIFICATION STUDY

#### 1.1 The broad outline of the Verification Study

1. The Verification Study is undertaken in order to check the effectiveness of the elaborated draft master programme during the first phase, to take into account the results of the evaluation relating to the relevance and the feasibility of this programme, in order to establish it on reliable bases.
2. The Verification Study is undertaken by a method which consists in applying, through the process of the execution of the pilot projects which will be described in chapter two, the three elements of the master programme, namely the system promotion programme, the capabilities reinforcement programme and the support tools promotion programme, and to check their problems.

#### **The structural organization of the Verification Study**

The system promotion programme	
Program adjustment of the system	
<ul style="list-style-type: none"> <li>• Holding of 4 cooperation promotion workshops</li> <li>• Held of the meetings of the Rural Development Actions Coordination Units (UCADR) (ordinary meetings 1 to 2 times per month + extraordinary meetings)</li> <li>• Holding of 4 exchange meetings between the UCADR</li> </ul>	
Capabilities reinforcement programme	
<ul style="list-style-type: none"> <li>• Holding of 2 meetings of technical exchanges</li> <li>• Execution of participatory type development methods trainings (1 training, 1 workshop)</li> </ul>	
Programme d'aménagement des outils de soutien	
<ul style="list-style-type: none"> <li>• Test du manuel d'opération (version provisoire) et révision (en vue de la version révisée)</li> <li>• Test des cahiers d'encadrement (version provisoire) et révision (en vue de la version révisée)</li> </ul>	
Support tools promotion programme	
<ul style="list-style-type: none"> <li>• Test of the operational manual (draft version) and revision (for the revised version)</li> <li>• Test of the guidance books(draft version) and revision (for the revised version)</li> </ul>	
Execution of the pilot projects	
• With installation of CVGT:	the first 4 villages (G1-1) 2 new villages (G1-2)
• Already existing CVGT	6 new additional villages (G2-1) 5 villages for the diffusion (G2-2)
Checking of the diffusability in the other provinces	
• Checking of the diffusability: 6 villages of checking of the diffusability: 3 provinces, 6 departments	

## 1.2 The Verification Study plan

3. We put in order the Verifications to be carried out of Verification Study as follows and determined points to be checked and evaluation methods

### Verifications to be carried out through the Verification Study

	Verifications to be carried out
Support tools promotion programme	
(1) Cooperation promotion Workshops	① With the Cooperation promotion Workshops, the implementation trends of the study and the results of the study are well communicated to the participants, one could reach a common conscience of the related of the UCADR?
(2) The rural development actions coordination Units (UCADR)	① Are they access doors for the residents' support ? ② Can they cure the lack of synergy between the extension agents? ③ Can they be an additional framework for the activities of the extension agents in the context of reduction of the number of agents? ④ Can they improve the communication between the extension agents and the residents? ⑤ Can they manage the execution of the projects? ⑥ Can they carry out the diffusion towards other villages of the department? ⑦ Can they establish strategies of rural development adapted to the local situations? ⑧ Can they be active in a durable way? ⑨ Can the existing UCADR ensure the diffusion to the other provinces?
Exchanges Meetings between the UCADR	① Can they improve comprehension of the extension agents for the resolution of the problems ?
Capabilities reinforcement programme	
(1) Technical exchanges meetings	① Can they compensate the insufficiencies of the extension agents' technical level?
(2) Participatory type development method trainings	① By implementing them area by area, in the areas where the extension agents carry on really their activities, are the practical trainings adapted to realities and local human resources? ② Did the extension agents acquire the techniques and can apply them in their field activities? ③ Are these trainings in a position to improve the communication between the extension agents and the residents? ④ The fact that agents individually acquire the participative methods and the philosophy which is at their base, does allow a change of mentality moving away from official state intervention and a development of the capacities in the structures turned towards the rural development such as the UCADR??
Support tools promotion programme	
(1) The operational manual	① Can it be applied as a manual for the projects execution? ② Is it in phase with decentralization in progress?
(2) The guidance books	③ Can they solve the insufficiencies of the extension supports?

### 1.3 Results of the Verification Study

The summary of the results of the Verification Study is as follows:

#### 4. Cooperation promotion workshops

<b>Checking to be carried out</b> ①
-------------------------------------

With the cooperation promotion workshops, the orientations of execution of the study and the results of the study are well communicated to the participants, one could arrive to a common conscience of the related parties of the UCADR
--

<b>[Conclusion]</b>
---------------------

The cooperation promotion workshops function as bodies of reflection making it possible to express ideas at the central steering committee. They developed with a point where the members of the UCADR convey to the workshops the results of the activities at the departmental level, and can have exchanges in good position with the regional and provincial managers of agriculture, the animal resources and the environment. The system making it possible to collect the opinions of the ground at the time of the workshops in each of the two areas, and to transmit them to the higher level, is well established. The central level perceived that and during the synthesis of the pilot scheme, endeavoured to put itself at the listening of the voice of the ground. The last year, a mission of collection of opinions went to Ouagadougou in the areas, the expressed opinions were examined at the central level and actions tending to propose them at the time of the workshops were launched on the initiative of the burkinabè part.
--

#### 5. Les unités de coordination des actions de développement rural Units of coordination of the actions of rural development

<b>Checking to be carried out</b> ①
-------------------------------------

Are they access doors for the support to the residents?
---

<b>[Conclusion]</b>
---------------------

The UCADR function now as access doors of the support for the residents, thanks to the fact that the results of the training to the methods of participative development exempted with the extension agents one little by little borne their fruits, and thanks to the rise in the level of proximity enters the extension agents and the residents, through on-the-job training of the work of implementation of the achievements.
---

<b>Checking to be carried out</b> ②
-------------------------------------

The UCADR can cure they the lack of synergy between the extension agents
--

<b>[Conclusion]</b>
---------------------

We could check that, because of the division by the members of the UCADR of the plans of activity of the extension agents, it was possible to carry out the achievements in a more rational way, in particular by reducing the expenses of acquisition of the material which can be shared.
---

Moreover, the extension agents are now able to choose an NGO them a person in charge for the execution for the achievements which, such support for the reinforcement of the CVGT, leave their fields of specialization, and to implement a synergistic distribution of the roles.
--

However, there are also cases in which, because of the problems of communication in local language, work concentrates on certain agents, and, at the time of the shift to a project, it will be necessary to include in the budget the expenses of hiring interpreters in local language.
---

<p><b>Checking to be carried out ③</b> Can the UCADR be to they a framework additional for the activities of the extension agents in the context of reduction of the number of agents?</p>
<p><b>[Conclusion]</b> The use of NGO/associations is essential as regards execution of achievements such as the support for the organization and the operation of the CVGT, but also the generating female activities of incomes, the cereal banks, the elimination of illiteracy, the installation of the wells/drillings, the repair of the tracks, etc like as regards management and maintenance of the buildings and works. However, the extension agents designate a NGO them a person in charge for the execution, and the responsibilities within the UCADR are in the process of be clarified. During the examination of the achievements to be implemented, even in the specialized fields that the extension agents can ensure by themselves, it is possible, in consideration of the volume of work and the degree of availability of the extension agents, to carry out these achievements by calling upon NGO/associations.</p>
<p>Checking to be carried out ④ Can the UCADR improve the communication between the extension agents and the residents? ?</p>
<p><b>[Conclusion]</b> The communication in local language is a major element, it is necessary to integrate trainings in local languages according to the needs within the framework of the reinforcement of the capacities of the extension agents, and a step in this direction was taken voluntarily by the interested parties. Moreover, to promote the expression of the CVGT, it is necessary to reinforce the capacities as regards explanations of the CVGT at the meetings. Several CVGT take part now in the meetings and one could observe a mutual sensitizing between these CVGT</p>
<p><b>Checking to be carried out ⑤</b> The UCADR can manage the execution of the achievements</p>
<p><b>[Conclusion]</b> The number of the target villages of the UCADR increased, and the effects of on-the-job training appeared. It was noted that the UCADR could without problem carry out the selection of the villages, the study of the situation of the surrounding villages, the follow-up of the support for the CVGT, the establishment of the plans of execution of the achievements, as well as the execution of the achievements. It was as noted as they can plan the trainings and the visits of sites etc for the achievements carried out directly by the extension agents. However, the establishment of terms of reference for the achievements leaving their fields of specialization presents an important degree of difficulty, and a framing by the provincial Director of Agriculture, Hydraulics and the Halieutic Resources and Chief SAC/MR is necessary.</p>
<p><b>Checking to be carried out ⑥</b> The UCADR can carry out the diffusion towards other villages of the department</p>
<p><b>[Conclusion]</b> It was checked that they could in problem for organizing the seminars having for objective the diffusion in the surrounding villages, invite the surrounding villages, prepare the panels and the rewards, and manage the debates the day of the seminar.</p>
<p>Checking to be carried out ⑦ Can the UCADR establish strategies of rural development adapted to the local situations?</p>
<p><b>[Conclusion]</b> The need for an evaluation of the pressure on the environment based on the results of the study of the resources was included/understood, but we did not manage to perceive this evaluation how will be made profitable for the preparation of local plans of development and strategies of development.</p>
<p>Checking to be carried out⑧ Can the UCADR be active in a durable way?</p>
<p><b>[Conclusion]</b> Concerning the composition of the UCADR, the fact of having allotted the presidency to the prefects allowed to clarify the hierarchical device compared to the extension agents, and the implication of the</p>

extension agents in was improved.  
 Moreover, 3 UCADR were officially institutionalized by decrees of the High commissioners, and them bases which must allow the continuation of the activities of the UCADR after the end of the study were assured.  
 Each UCADR wrote an action program after the end of the study, but there were differences reflecting in total manner the disparities in the experiment of the extension agents, in their capacities, and their degree of implication. The reduction of the activities of the UCADR in a situation of lack of funds and absence of financial backers is alarming.

**Checking to be carried out** ⑨ Can the existing UCADR ensure the diffusion near the other province?

**[Conclusion]**

In common workshops of checking of the diffusability which were addressed to the three provinces in which there no were pilot achievements, there was sometimes a lack of key people because they were requisitioned for the operations of vote of the presidential elections, but, in a way or of another, the program could be digested. It was checked that the extension agents can be distributed the roles of trainers, to carry out the preparations of the workshops, to prepare the documents, and to carry out the meetings.

However, there were insufficiencies of contents of the explanations or technique of explanation, and one could note cases where these contents were not sufficiently transmitted to the listeners.

The executives and extension agents which were listeners could as envisaged, after their return in their working stations, to set up of the provisional UCADR, and to carry out a practical drive consisting in making the selection of a village, the study of resources, the development of a plan of achievements, and support for the financial backers requires it.

In the province of Soum where the execution of achievements by other financial backers is advanced, of the doubts were expressed on the significance of the installation of the UCADR. One can think that that is so that certain participants did not take into account the function of synergy between the official services of agriculture, the breeding and the environment of the UCADR and took them for simple structures of execution of the achievements. Insufficiencies of the explanations side trainers, and the disparities with the system of achievements in progress in Soum form the background of these negative opinions.

## 6. Meetings of exchanges between the UCADR

**Checking to be carried out** ① Can the meetings of exchanges between the UCADR improve comprehension of the extension agents for the resolution of the problems?

**[Conclusion]**

The extension agents in agriculture, breeding and forestry can now seize and to solve the problems in a transverse way, beyond their own fields, and their consciousness was improved. On the basis of contents of the meetings of exchanges between the UCADR, we take following measurements:

① We will increase and revise the operational manual (revised version) by adding the following points in particular to it: "Required quantitative study of resources and mode of use", for the project of guide of installation of the UCADR: "progressive transformation of the composition and the roles in the UCADR after the installation of the rural communes", and "Mode of management of the UCADR".

② Action programs of each UCADR in answer to the question "How the UCADR they will continue the various pilot achievements in a durable way after the end of the study?" were communicated, but it was asked to them to be more concrete in the talk of the indicators, the related parties, the financing. As for the programme of implementation of decentralization, the positive implication of the members of the UCADR for an institutionalization of the UCADR was checked.

③ Concerning the examination of the 3rd version of the matrix design project, this one was distributed to all the participants, we explained the important points in the way of reading this table, and obtained comprehension from it. The regulator having put in order the charts making double employment or erroneous, nine charts were retained as proposals for the 4th version of the matrix. Through this workshop, all the participants showed a NGO interest for the matrix of design of project. We on several occasions have until now talk the five headings of the evaluation which are the achievement of the objectives, efficiency, the impacts, the relevance and viability, and lately, certain extension agents came

from there to frequently use these five expressions, and at the time of the explanations given this time, comprehension in was reinforced.

④ It was the first time that the meeting of exchanges between the UCADR was organized jointly, we as invited the superiors of the extension agents as are the three provincial directors (agriculture, hydraulics and Halieutic Resources - animal resources - environment and living environmen), of the animated debates and of the exchanges on all the levels (province, department, extension agents) took place, and we could check that these common meetings had a direction. If such meetings must be organized later on, a prerequisite will be the financing of the expenses of organization (approximately 1.100.000 francs CFA), and it will be necessary to consider the selection of the participants, the reductions of the unit costs, the regrouping with other meetings, etc

## 7. Technical meetings of exchanges

### Checking to be carried out ①

Can the technical meetings of exchanges compensate for the insufficiencies of technical level of the extension agents?

### [Conclusion]

Here the lesson which we drew from the 4 meetings of technical exchanges, which contributed to compensate for the insufficiencies of technical level of the extension agents, but which must be continued in a durable way, techniques turning around agriculture, of the breeding and the forestry being of a very wide field.

① Chief SAC/MR directed the selection of the topics, the programming of the procedure, the management of the meetings, the synthesis, etc of the technical meetings of exchanges.

② There were cases of implementation: Class project works towards the residents, of fight against the degradation of grounds and improvement of the productivity based on the combination of agriculture and the breeding (for example, the use of the improved seeds, installation of stony cords, production and the use of the organic manure). Actions of the agrosylvopastoral type, integrating the forestry, are now necessary.

③ The number of topics retained for the 4 meetings is of 24 topics in all, but the topics desired by the sectors concerned were in very 53, and there thus remains a keen demand for the continuation of the technical meetings of exchanges.

④ The investigations underline the need for a financing of these meetings, but approximately 2,000,000 francs CFA should be counted per year, fees of the lecturers included. It is necessary to reduce the costs through the recourse to lecturers of NGO/associations or the use of videos.

## 8. Trainingswith the methods of participative development

### Checking to be carried out ①

By putting the trainings on the methods of participative development in area by area, in the areas where the extension agents carry on really their activities, the practical trainings are they adapted to realities and local human resources

### [Conclusion]

① We checked that by putting the trainings at the methods of participative development in work area by area, and parallel to organizing them the studies of resources in the villages where is carried out to the establishment of a plan of village development, one can instigate the implication of the extension agents in these formations, and that the results of the trainings in the field are made profitable in the councils given by the extension agents at the time of their activities and the meetings of the UCADR.

② There are now UCADR which apply directly in their activities the methods learned in the formations

③ In the zones such as the Northern Center where the activity of associations is sharper than that of NGO, one can plan to call upon an association to ensure the formation. That made it possible to carry out the formation by reducing the costs of 30% compared to NGO. That also makes it possible to use local human resources.

### Checking to be carried out②

Did the extension agents acquire the techniques and can apply them in their activities in the field??

<p><b>[Conclusion]</b></p> <p>① The individual disparities and the disparities due to the contents of the trainings are large as regards acquisition of the techniques and application in the field.</p> <p>② A NGO the methods and the techniques, the acquisition of the “tools” occupied a relatively significant part of the formations, but when one passes to the application, more than the “tools”, they are the modes of interviews, the changes of philosophy and attitude which are made profitable in the field.</p> <p>③ To be able to apply the results in the activities of them in the field, the participation in a certain number of trainings is essential</p>
<p><b>Checking to be carried out</b> ③</p> <p>Are these trainings measures some to improve the communication between the extension agents and the residents?</p>
<p><b>[Conclusion]</b></p> <p>① We noted at the time of the car-evaluation of the extension agents which a number of them can be evaluated as regards to communication with the residents while being placed in the vision of the methods of participative development.</p> <p>② As in echo with that, if one compares the period the moment present and that where the trainings started two years ago, 87% of the villagers note that the capacities in communication of the extension agents increased.</p>
<p><b>Checking to be carried out</b> ④</p> <p>The fact that agents individually acquire the participative methods and the philosophy which is at their base, does allow a change of mentality moving away from official state intervention and a development of the capacities in the structures turned towards the rural development such as the UCADR?</p>
<p><b>[Conclusion]</b></p> <p>① It takes approximately 2 years to pass from an approach interventionist of the support for undertaken activities mainly through the residents</p> <p>② Rather than of individual trainings, it is easier for the extension agents to make profitable knowledge as regards methods of participative within the framework of a formation where the agents go in group in a village.</p> <p>③ When the communication between the extension agents is good, the communication between the residents and the groups of extension agents goes well too. That leads to a good comprehension of the development based on the residents' expectations and the state of the resources, and leads to a development of the capacities of the UCADR as structures.</p>

## 9. The operational manual

<p><b>Checking to be carried out</b> ①</p> <p>Can the operational manual be applied as a manual for the execution of the achievements?</p>
<p><b>[Conclusion]</b></p> <p>It was checked that it is possible to carry out the achievements while being based on the operational manual. The points to be improved of the provisional version were concretely put at light and were taken into account in the development of the revised version.</p>
<p><b>Checking to be carried out</b> ②</p> <p>Is the operational manual in phase with decentralization in progress?</p>
<p><b>[Conclusion]</b></p> <p>There is no problem compared to the positioning by which the UCADR deal with the rural development in the communes. However, as many opinions were expressed on the need for paying attention to the composition of the UCADR and the extreme stages after the launching of the new communes, we integrated them in the revised version.</p>



## 10. Guidance booksl

### Checking to be carried out ①

Can the Guidance books fill the insufficiencies of the extension supports?

#### [Conclusion]

We tested through the achievements control the provisional version established during the 1st phase, and on this occasion, of the extension agents said to us: “It is necessary to write Guidance booksl such as they can be used by people who are not specialists in the field concerned.” The residents have us on their side expressed the following request: “The explanations of the images were considered to be easily comprehensible, but this text of explanations is in French, and it is necessary to look further into comprehension to translate the titles into local languages” .

On the basis of these opinion, we established a revised version of the cards of framing and supports of technical extension more functional than the provisional version. If the supports thus benches are used, the insufficiencies as regards diffusion of the projects of the existing extension supports could be filled.

## CHAPTER TWO: PILOT ACHIEVEMENTS

### 2.1 The broad outline of the pilot achievements

11. We carried out the pilot achievements to give to the members of the UCADR the opportunity to use the knowledge, the techniques acquired in the programme of adjustment of the system and the programme of reinforcement of the capacities, and the tools of support (the operational manual, the technical support) in order to check the effectiveness of the master programme. Moreover, we reinforced the capacities of the members of the UCADR by the formation “on the heap” through the execution of the pilot achievements.

12. Last nine villages in the area of the Northern Center and eight villages in that of the Sahel, is seventeen villages in all were concerned with the pilot achievements.

### Villages object of the pilot achievements

Areas	Department (UCADR)	Year of launching of the pilot achievements			
		Phase-1	Phase-2		
		2002	2004	2005	
Center Northern	Guibaré	Vousnango	Sindori*	Watinoma	Niangouela
	Korsimoro	Noungou	Foulla	Bascoudre-Mossi	Ouidin, Tansin
The Sahel	Dori	Selbo	Goudebo*	Tiounbounga	Bafele
	Sebba	Diogora	Guissindiori	Helga	Ibbal
Positioning of the villages		G1: First selected villages	*G1-2: New villages G2-1: New additional villages	G2-1: New additional villages	G2-2: Surrounding villages object of diffusion

The elements of checking of the pilot achievements vary according to the “positioning of the villages”.

**Categories of the villages and different objective for the execution of the pilot achievements**

Categories of the villages	Points to be checked through the execution of the pilot achievements
First selected villages (G1-1) (4 villages selected at the time of the first phase)	To check which framework is necessary like basic administrative service to give a support for the residents
New villages (G1-2) (2 villages selected at the time of the second phase)	Checking of the effectiveness of the UCADR (to establish a diagnosis of the situation in the villages, as well as a plan of development of the village) Reinforcement of the capacities of their members
New additional villages (G2-1) (6 villages selected at the time of the second phase)	Checking of the execution and the management of achievements in several villages by the UCADR
Surrounding villages being the subject of the diffusion (G2-2) (5 villages selected at the time of the second phase)	Checking of the stimulation of the autonomy of the UCADR, the reinforcement of their operation and their capacities, diffusibility according to the principle of peasant with peasant

2.2 Pilot achievements and resources

1.3 To promote the system of fight against the impoverishment of the soil centered on the UCADR, it is necessary to consider several points of view, the pilot achievements which take account of the resources of the target zone. Moreover, it is necessary to consider the competing relationship or the relationship of interdependence between various resources. We analyzed the state of the resources of the areas of the Northern Center and the Sahel, by classifying them in 5 categories, and identified their problems. The points to be taken into account revealed by the identification of the problems are as follows:

**Points to be taken into account revealed by the analysis of the five resources**

Five resources	Points to be taken into account
Natural resources	The state of the natural resources and the state of the agro-sylvo-paustre production are differed considerably between the two areas. The principal points which must be taken into account are as follows: Agriculture: Difference of the potential of production according to the areas and relationships with the choice of its cultures Breeding: Differences of the cattle and the direct impact of the overgrazing on the flow of the ground. Forestry: Degradation of the diversity of the plants and its environmental impact of the residents, immediate causes of the impoverishment of the soil.
Social resources	To reinforce the organisational structure and to promote the organization of the villages, it is necessary to include/understand how the various related parties collaborate themselves, consults each other or is competed with. Moreover, it should be checked if the policy of State, inter alia decentralization, and the traditional system of the management of the grounds function together or are antithetic. And this information must be taken into account at the time when one undertakes on the level of villages of the activities such as use of the resources limited, introduction of the pilot achievements, selection and planning of the pilot achievements, etc

Human resources	The capacities of the management of the resident is a major element for the selection and the planning of the achievements. It is necessary to identify and analyze the degree of the elimination of illiteracy which has a direct relationship with management, the discriminatory spirit of the kinds which limits the activities of the women of the villages and the perception of the resident on the impoverishment of the soil in order to take them into account in the selection of the achievements or their planning. The capacities of management and administration of the resident are major elements for the selection and the planning of the achievements. It is thus necessary to evaluate the degree of elimination of illiteracy which has a direct relationship with management and the administration, the discriminatory spirit of the kinds which limits activities of the women of the villages, making obstacle with their employment as human resources, or the perception of the residents on the impoverishment of the soil in order to take them into account in the selection of the achievements and their planning.
Material resources	The identification of the infrastructures available existing and their use by the resident is necessary to estimate the resources, the volume of investment of each realization during their selection and planning. Moreover, in the area where the impoverishment of the soil advances, the identification of the state of the water resources available and their use - bases of all the activities are a major element to determine the achievements.
Financial resources	In order to examine the durability and the possibility of development of the achievements after the end of the period of support, it is necessary to collect the most information on the sources of financing accessible to the resident for the level from the villages.

14. Here the synthesis on the state of the 5 resources in 17 selected villages, classified by the areas of the Northern Center and the Sahel:

#### State of the 5 resources classified by areas

Resources		Area of the Northern Center	Area of the Sahel
Natural	Insufficient resources	<ul style="list-style-type: none"> <li>Reduction in the rains</li> <li>Advanced erosion of the grounds</li> </ul>	<ul style="list-style-type: none"> <li>Lack of rain</li> <li>Insufficient pastoral Zones</li> <li>Reduction in the surface of the forests</li> </ul>
	Resources exploitables/re-staurables	<ul style="list-style-type: none"> <li>Apart from the drynesses, in theory possible food self-sufficiency</li> <li>There are subsoil waters</li> <li>Varieties of trees being able to be transformed into forest products; Shea tree, Baobab tree</li> </ul>	<ul style="list-style-type: none"> <li>Subsoil waters</li> </ul>
Social	Insufficient resources	<ul style="list-style-type: none"> <li>Coexistence of the usual land right and the modern land right</li> <li>In the province of Bam, the CVGT do not function even when they exist.</li> </ul>	<ul style="list-style-type: none"> <li>In the provinces of Yagha and Seno, much of villages does not have a CVGT.</li> <li>Management of the grounds by the usual chief of the village</li> </ul>
	Resources exploitables/re-staurables	<ul style="list-style-type: none"> <li>Structures of extension</li> <li>Existing groupings</li> </ul>	<ul style="list-style-type: none"> <li>Structures of extension</li> </ul>

Human	Insufficient resources	Agro • Technical sylvo-pastoral • Miss knowledge on the prevention of the diseases	<ul style="list-style-type: none"> <li>• Weak rate of elimination of illiteracy of the adults</li> <li>• Sylvo-pastoral agro techniques</li> <li>• Miss knowledge on the prevention of the diseases</li> </ul>
	Resources exploitables/re-staurables	<ul style="list-style-type: none"> <li>• Extension agents of agriculture, the breeding and environment</li> <li>• NGO, associations</li> </ul>	<ul style="list-style-type: none"> <li>• NGO, associations</li> <li>• Labor provided by the resident</li> <li>• Extension agents of agriculture, the breeding and environment</li> </ul>
Material	Insufficient resources	<ul style="list-style-type: none"> <li>• Miss drinking water</li> <li>• Insufficient system of irrigation</li> <li>• Instability of the agricultural production</li> </ul>	<ul style="list-style-type: none"> <li>• Miss drinking water</li> <li>• Miss water for the cattle</li> <li>• Infrastructure; conference room, banks of cereals etc</li> <li>• Not introduced improved Seeds.</li> </ul>
	Resources exploitables/re-staurables	• Room conference, mill	• Well
Financial	Insufficient resources	• Access to the organizations of difficult credit	• Access to the organizations of difficult credit
	Resources exploitables/re-staurables	• Financial Contribution partial of the resident	<ul style="list-style-type: none"> <li>• Sending of money of the migrants</li> <li>• Financial Contribution partial of the resident</li> </ul>

15. So that the UCADR henceforth ensure the financing of the actions and promote them, it is necessary that they know in a quantitative way the state of the natural resources, that they seize the state of degradation and its causes, in order to put forward the measures of fight in a more convincing way. For that, we carried out the interviews of the residents as well as a study of the surface using apparatuses GPS in order to check the perception which the residents have on the state of degradation of the natural resources, and in same time, to evaluate the pressure on the environment.

In the area as well that of the Northern Center as that of the Sahel, more than nine tenth of the people interviewed think that the productivity lowered these ten last years for more than 90 % of the grounds because of the reduction of the rains. Whereas in the area of the Northern Center, much also quote as causes the fall of the fertility and the residents take measures to cure it. The residents of the Sahel raise the damage due to the attacks of the birds and the insects and seem more threatened by the projection of degradation due to the natural phenomena. One sees through this investigation, their need for the achievements on a large scale such as installation for retained water or the recovery of the grounds, etc

① The assessment of supply and wood demand of heating will be balanced in the village

of Nounougou if a surface of 6 ha is planted annually, but in the village of Sèlbo, one can await only little effect of the plantation.

- ② There is possible to obtain, by the introduction of the improved seeds and the use of the organic manure, a volume of annual production of cereals more important than that of consumption, if it is no damage caused by the dryness or the insects,
- ③ In the village of Nounougou, it is possible to keep the current number of heads of the cattle by using the resources of the pastoral zone and the residues of the cultures obtained starting from 19 % of the surface of the arable land of the village. In the village of Sèlbo, it is possible to keep the current number of heads of the cattle by using the residues of the cultures obtained starting from 14 % of the arable land.
- ④ With the installation of the stony cords, 30 % of increase in production of the residues of millet are possible, and that can be used as fodder and substitute of wood of heating.
- ⑤ According to results' of the investigations, more than 70 % of people noted to have seen an increase in income thanks to the generating female activities of income, the truck farming or the improvement of the rain cultures.

In addition, the charts of occupation of the grounds carried out by the PNGT II are effective for the identification of the as-used condition of the grounds on the level of each department or the estimate of the potential of production.

### 2.3 Plan of the execution of the pilot achievements

The contents of the achievements control implemented is as follows:

### List pilot achievements

AREAS	UCADR	Realizations pilots Villages		Management natural resources		Agriculture- Re		Breeding		Forest resources		Tion preserved arable lands		Improvement of the living conditions			
				Truck farming	Rain cultures improvement	Fattening sheeps	Poultry farming improvement and production of fodder	Management village seedbeds	Management forest resources	Recovery stripped grounds	Stony cords	Bank of cereals	Elimination of illiteracy	Repair of the roads	Development resources water	Improvement returned women (craft industry.)	
CENTERNORTHERN	Gubare	Vousnango	◇		◇		◇				△		●		△	△	
		Sindri	○			■			●						●	●	●
		Watino ma				■		■									■
	Korsimoro	Noungou	◇		◇		◇		●						△	△	●
		Foullal			●				●								●
		Bascou dre-Mossi				■		■									
THESEL	Dori	Selbo	◇	●		◇				◇	△	●	△			△	
		Goudébo	○													●	●
		Thiounbounga				■											
	Sebba	Diogora	◇			◇	◇		◇	◇		◇		◆		△	
		Guissindiori					●		●			●		○			
		Helga					■					■					

Notice 1: △ means that the realization was carried out in 2003 (avr.) - 2004 (March).

Notice 2: ◇ means that the realization was carried out in 2003 (avr.) - 2004 (March) and in 2004 (avr.) - 2005 (March).

Notice 3: ◆ means that the realization was carried out in 2003 and 2004, and is envisaged in 2005 (avr.) - 2006 (March).

Notice 4: ● means that the realization was carried out in 2004.

Notice 5: ○ means that the realization was carried out in 2004, and in 2005 or envisaged in 2005.

Notice 6: ■ means that the realization was carried out in 2005, or is envisaged

### Principal contenu de l'accord des réalisations pilotes

17. So that the resident tests a feeling of property and so that the durability of the effects of the achievements is well ensured, we asked the residents, in addition to the supply on a purely free basis of labor and the material available on the spot, of the financial contributions. These contributions will be used like melt of the achievements of the CVGT, and also intended for the maintenance and the management of the equipment.

The rate of the village contributions is shown in the following table.

### Rate of the village contributions

Achievements	Rate of contribution
Achievements contributing to the reinforcement of the capacities of the resident (trainings, etc)	No the contribution on behalf of the resident
Achievements in public matter requiring work by specialized companies (well, tracks, etc)	Simple supply of labor on behalf of the resident
Achievements contributing directly to the income of each producing family	50 % for the consumable material such as the seeds and manure 3 % for the durable consumer goods like the farm equipment 100% for fattening animals, etc
Materials of joint use	3 %
Installation of the equipment of the water resources such as the construction or the repair of well	In addition to the supply of simple labor of the residents, 100 000 FCFA by equipment
Construction of buildings (conference room, banks of cereals, etc)	In addition to the simple labor of the residents, free supply of material which can be manufactured by the resident itself with the local matters such as dried brick or be obtained on the spot.

18. Draft-agreements of the achievements control were concluded so that each one confirms in writing its responsibility in the pilot achievements. The principal contents of the agreement are as follows:

### Principal contents of the agreement of the pilot achievements

Designation	Contents	Remarks
Objectives of the agreement	- To make the CVGT autonomous in the execution of the pilot achievements - To clarify the responsibility in the STUDY for the CVGT, the UCADR and the mission of study	
Contribution of the CVGT	- Concerning the execution of the achievements control, to indicate clearly the funds for which the CVGT must contribute, the contents of the supply of materials and the labor	Classification by village in another table
Contribution of the study mission	- For the execution of the pilot achievements, to indicate the contents of the contribution of the mission of study	
Method of use of the contribution of the CVGT	it contribution of the CVGT will be restored in the presence of the UCADR in the funds of the management of the CVGT	
To have of the UCADR	- To coordinate the technical support for the CVGT and its actions	
Maintenance and management of the equipment	-the CVGT has a responsibility to maintain and manage the equipment built within the framework of the pilot achievements.	
Period of validity of the agreement	- To leave the conclusion of the agreement until the end of the realization	

## 2.4 Results of the follow-up of the execution of the piles achievements

### 19. Pilot achievements carried out before 2004 and in 2004

● achievements being able to be managed in a durable way
Organization and reinforcement of the CVGT, improvement of the rain cultures, fattening sheeps, elimination of illiteracy, repair of the tracks, installation of the wells, achievements of the stony cords, forest stock management
● Achievements having problems to solve
① Truck farming; in certain villages, the relationship between the quantity of the water resources and the surface of the fields is not balanced.
② Bank of cereal; because of the dryness, stock envisaged initially which cannot be collected in accordance with the plan, management could not be stabilized.
③ Generating activities of the incomes of the women; the quality of the soap manufactured is poor, the nutritional block for the cattle is not popularized in the zone, and it remains to seek outlets.

### 20. Achievements carried out in 2005

● are the extension agents able to carry out the pilot achievements directly?
Achievements such as the improvement of the rain cultures, the poultry farming production, fattening sheeps, and the production and the forage conservation can be carried out by the agents in their establishment of the plan, the trainings and the management of the achievements. Concerning the production and the forage conservation, a visit of advanced sites was planned and carried out by an agent of extension and the construction of the haylofts was implemented thanks to the effort of the resident.
● are the extension agents able to carry out the achievements which leave their field?
In the UCADR of Guibaré and that of Korsimoro, Chiefs SDECV responsible themselves for the management and the monitoring of the generating activities female of the incomes, which shows that they are able to carry out achievements in another field than theirs. In the case of elimination of illiteracy, the fact of having agents being able to be expressed in local language for the activities should be one of measurements of execution of the plan and monitoring by the agents. However, concerning the support for the reinforcement of the organization of the CVGT, it is more effective to ask a support at NGO/associations which does not miss experiments as an organizer in the field.
● are the UCADR able to carry out the achievements with a support of another project?
We could not collaborate during the STUDY with the project DANIDA to which we had initially envisaged to ask for a support because it was in period transitional for a project from support from another framework. However, on the basis of the example of the village of Nougou which, within the framework of the UCADR of Korsimoro and a financial support of the PDL/S, arranged the drilling, or that of the UCADR of Sebba, which completed work of recovery of the grounds glaciais, or that of the UCADR of Dori which led the village of Goudébo towards the Campaign against the Stranding of the basin of Niger (PLCE) and carried out a realization within this framework of the Program, one can say that the request for support near financial backers and the execution of the achievements can be implemented by the UCADR.
● the UCADR are they able to establish plans of the achievements in the close villages and to give their support to them?
The example of the improvement of the rain cultures of the Bafére village and the realization of the stony cords in the Ibbal village show that the support according to the principle of "peasant for peasant" is



possible.

The UCADR are able to carry out, even in the achievements which leave their field such as the generating activity of the incomes of the women, the quantitative study of the resources, the preparation of plans, the monitoring and the contribution of the support for the provisioning of the material.

## 21. Evolution of the 5 resources in the villages object of the pilot achievements

### ● first selected villages

In Nougou, one observes an important improvement as regards human resources and social resources; the CVGT sought financial backers of its own initiative for the achievements which the villagers cannot implement only. It also made the request for a programme of elimination of illiteracy at an NGO which was carried out thereafter. An improvement on the level of the financial resources was also noted in this village. In Vousnango, one sees an improvement of the material and financial resources. Moreover, the social resources and human resources which were rather insufficient are improved. In Selbo, the villagers included/understood the importance of the natural stock management by the execution of the recovery of the grounds glacia or poses it stony cords and the impact of the improvement of the improved cultures. This allowed an improvement of the natural resources. In Diogora, the villagers started to be autonomous in the operation of the CVGT and thanks also to the results of the elimination of illiteracy, the social and human resources improved much. An improvement of the material resources such as the conference room is added to it.

### ● new villages

In Sindri, the activities of the CVGT stagnated but thanks to the support of the UCADR, in one year space only, the various sub-commissions managed to function actively. The trainings on the management of accountancy and that of organization carried out within the framework of the STUDY are at the origin of this transformation, but one must also note that the program of elimination of illiteracy implemented before the year 2004 on the initiative of the CVGT with a support of a Swiss financial backer contributed also much there.

In Goudébo, as the CVGT is not installation yet and the rate of elimination of illiteracy is weak, the development of resources human and social trails. A programme of elimination of illiteracy started with the framing of the UCADR gives hope for the development of the resources in the future.

### ● New additional villages

For the new additional villages, since the CVGT function, we selected the achievements whose impact could be important with a minimal support. We noted a certain level of results for the elimination of illiteracy and the fattening sheeps, but for other achievements, as they were undertaken recently, the results are not yet visible for the majority.

## 22. Distribution of the roles of the UCADR

### ● the members of the UCADR could manage the achievements carried out until 2004 with the imagined distribution of the roles

- In the year 2004-2005, the agents became able to ensure the following activities: Preparation of plans of the achievements, coordination of the activities, selection of NGO, follow-up-evaluation and technical councils of their field. However, the agents do not control yet work such as the establishment of the terms of reference to require a service at NGO/associations, or the evaluation.
- Until 2003, in the UCADR of the Sahel, one attended a confrontation between NGO and the extension agents, but since 2004, the positioning of the UCADR is included/understood, and the system of work in synergy between NGO and the agents is established. In 2005, of NGO were placed in the UCADR of the Sahel as an adviser, and the achievements were managed in synergy.
- In the establishment of the plans of the execution of the achievements of the year 2004-2005, the relevant councils brought by Chiefs SAC/MR and the Provincial Directors of agriculture showed the cogency of the assumption which justifies the distribution of the roles in the operation of the UCADR.

- Concerning the improvement of the rain cultures, a whole of the activities such as the organic production of manure, the realization of the stony cords and the introduction of improved seeds was carried out (the Sahel)
- Convention on the natural resources is essential for management durable grounds of common use. (The Sahel)
- The microcrédit has a difficult anchoring in the rural society of Burkina Faso. It is to better consider the reinforcement of management of accountancy of the sub-commissions and the access to the popular case. (Northern Center)
- Concerning the achievements which leave the agro-sylvo-pastoral fields such as the support for the CVGT, the generating female activities of income, the elimination of illiteracy, it is effective to ensure the follow-up and management under the relevant direction prefects.

● Comment can one synthesize the roles of the members of the UCADR in the execution of the achievements control of 2005?

- ① The achievements which can be managed by the extension agents alone:
  - Improvement of the rain cultures in the agro-sylvo-pastoral fields, fattening sheeps, improvement of the poultry farming production, improvement of the fodder production, forest stock management, management of the village seedbeds, realization of the stony cords.
- ② The achievements which can be carried out more effectively with the support of NGO/associations;
  - Installation and operation of the CVGT, natural stock management, recovery of the glacies, banks of cereals, elimination of illiteracy, generating female activities of income
- ③ The achievements which must be carried out by the specialized companies
  - Installation of well, repair of the tracks, conference room

## CHAPTER THREE: EVALUATION

### 3.1 Follow-up-evaluation of the Verification Study

23. The follow-up (monitoring) - evaluation of the master programme is composed of two following divisions:

- ① The follow-up-evaluation of the products (outputs) of the various activities of study
- ② The follow-up-evaluation of the effects (outcomes) of the various activities of study.

We used as indicators of evaluation for the follow-up-evaluation of the products the following elements: the participation in the regular meetings, the formations, etc, the management of the minutes of the meetings, the degree of comprehension and acquisition of the contents of the formations, the state of society of the pilot achievements, etc the follow-up-evaluation of the effects has as a target the members of the UCADR and the evaluation is done on five levels of note, with indicators such as the degree of dynamism, the contents, the impacts, the capacities of the members, etc

### Headings of the follow-up (monitoring) and the evaluation of the Verification Study

<b>(Programme of adjustment of the system)</b>	<b>Products (outputs)</b>	<b>Effects (outcomes)</b>
To organize the workshops of promotion of synergy	Presence rate and situation of the participants [register of presence, listens to meetings]	Improvement of the system of support for the residents [Interviews and car-evaluations of the residents, the extension agents, NGO and the prefects]
To organize the meetings of the Units of Coordination of the Actions of rural Development (UCADR)	Presence rate, Situation of the participants [Lists of participants, listens to meetings]	
To organize the meetings of exchanges between the UCADR	Presence rate, control of the meetings [minutes of the meetings, listens to meetings, mission of study]	
To make the follow-up-evaluation of the pilot achievements	Presence rate, Situation of the participants [Lists of participants, listens to meetings, mission of study]	--
<b>(Programme of reinforcement of the capacities)</b>	<b>Products (outputs)</b>	<b>Effects (outcomes)</b>
To organize the technical meetings of exchanges	, Degree presence rate of acquisition, degree of comprehension of the needs in the field [register of the participants, investigations]	Improvement of the system of support for the residents [Interviews and car-evaluations of the residents, the extension agents, NGO and the prefects]
To lead the trainings to the participative development tools	, Degree presence rate of acquisition [register of the participants, investigations, reports/ratios of NGO]	
<b>(Programme of installation of tools of support)</b>	<b>Products (outputs)</b>	<b>Effects (outcomes)</b>
To test the provisional version of the operational manual, and to work out the revised version	Results of the test of the provisional versions, poured revised [Reports/ratios of the extension agents and NGO]	As-used condition in the daily activities of extension [Interviews of the extension agents and NGO]
To test the provisional version of supports for technical extension and to work out the revised version.	Results of the test of the provisional versions, poured revised [Reports/ratios of the extension agents and NGO]	

24. The results of the evaluation of the products are as follows:

(1) UCADR

<p>● Rate of participation</p> <p>For the period of absence of prefect, if there are important operations, the activities stagnate. It is thus necessary to take support measures like dispatching a substitute of the prefecture, for example. The members of the UCADR must take care to fill to the maximum, using official reports of the meetings and of reports of representatives, the information gaps given to the courses of the meetings. It is necessary, to conceive a plan of distribution of work, to take account of certain related parties such as the natural conditions (temperature, rains), the periods of holidays, of Ramadan a NGO Moslem women etc</p>	
<p>● Led meetings</p>	
UCADR of Guibaré	For the year 2005, as the extension agents directly undertook the achievements such as the production of niébé and the improvement of the poultry farming production, the evaluation is favorable as regards technical examination and taking into account of the resident. One cannot say of it as much the evaluation as regards synergy between various sectors of the extension agents, collaboration with NGO and the management of the meetings, because of a centripetal lack of force around chief ZAT.

UCADR of Korsimoro	In this UCADR which gathers the villages whose CVGT are quite functional, the frequency of speech by the villagers is rather high, while the evaluation on the catch of the notes of the villagers is not good. Thanks to the method which consists in entrusting to the agents the execution achievements, they became very active in 2004-2005 compared to 2005. This explains a very good evaluation as regards intersector synergy, of technical and administrative examination, the taking into account of the resident and the management of the meetings.
UCADR of Dori	Compared with the year 2004, the evaluation of the year 2005 is better on the speech and the catch of the notes of the villagers. The participation of several CVGT in the meetings and the reports of the activities presented at the beginning of each meeting exploited this result. On another side, the evaluation is worse as regards intersector synergy. Indeed, for the year 2005, certain extension agents were selected as responsible to carry out a realization which leaves their fields (that of support for the organization of the CVGT), and that involved a concentration of work near those which had a command of the local language, and at the beginning, other agents did not know to support them. All these reasons contributed to the negative effects on the evaluation.
UCADR of Sebba	In this UCADR also, the fact that the extension agents carried out the achievements themselves them made more active and the evaluation as a whole improved. As for the evaluation on the catch of notes, it is as bad as in 2004, and this is due to the weak rate of elimination of illiteracy of the zone. Concerning synergy between various sectors, we asked the UCADR to choose the persons in charge for the activities for sensitizing for the CVGT and those of the formation of the literacy teachers. However, in fact agents understanding the local language were selected and no system of support on behalf of the others was observed. Consequently, the evaluation is rather unfavourable.
● Autonomy in the execution of the achievements	
UCADR of Guibaré	The UCADR is now able to carry out a whole of work such as the selection of the villages, diagnoses by itself of the villages, the preparation of plans of achievements control, the management of the achievements, the organization of seminars of diffusion towards the surrounding villages. For actions such as the follow-up-evaluation and the development of action program, the contents were not satisfactory because of the lack of experiences of the agents. One cannot say either that the establishment of the terms of reference was carried out in an autonomous way. The change of the key person who was the chief ZAT, the harsh environment who did not allow to have the framing of advisers (distance far away from the offices of provincial and regional directions, not-installation of the telephone line, etc) were as many negative elements which influenced the result. On the other hand, compared with the other UCADR, this one being relatively near to the places of employment of the extension agents, the contact between the resident and the extension agents was rather narrow, and that had a positive effect on the activities.
UCADR of Korsimoro	The UCADR undertook in an active way of work such as the selection of the villages, the diagnosis of the state of the villages, the establishment of the plans of achievements control, the management of the achievements, the organization of seminars of diffusion towards the surrounding villages and obtained good results. Moreover, in the work of diffusion towards another province, these are two extension agents which carried out the preparation of the texts and ensured the training courses, and they obtained a satisfactory result. In this UCADR where the post of chief UAT is vacant, the operation of that one is ensured by the three extension agents, in particular both which are implied since the beginning in the Study, and one can allot the good results obtained to their performance.

UCADR of Dori	<p>The UCADR is now able to carry out without problem a whole of work such as the selection of the villages, the diagnosis of the state of the villages, the management of the achievements.</p> <p>As for the support for the CVGT, the beginning, the UCADR was too dependant on the agent of extension in charge of the activity, and that posed problems; it easily did not manage to determine the contents of the support, for example. As the department of Dori includes/understands many villages, and the offices of the Regional and Provincial Directions of various ministries are in Dori, the volume of work for chief ZAT and chief SDECV is important, and consequently they cannot engage entirely in the activities of the UCADR. This exploited the result.</p> <p>Whereas other UCADR deplore the absence of financial backers for the continuity of the activities after the end of the Study, two villages a NGO those covered by this UCADR became target Campaign against the Stranding of the basin of Niger and the activities soon will start in these villages. With this program, it is envisaged the participation of the extension agents of various fields, of the Provincial Director, which lets on a side hope for a durable development of the activities, but on another side, a concern for the weakening of the UCADR.</p>
UCADR of Sebba	<p>The UCADR is now able to conclude a whole of work such as the selection of the villages, the diagnosis of the state of the villages, the preparation of plans of achievements control, the management of the achievements, the organization of seminars of diffusion towards the surrounding villages. The fact that the agents were in charge of the execution by themselves of the pilot achievements promoted the development of autonomy at the agents and the activities became dynamic. In the same way, the management of funds for the execution of the achievements did not pose problem.</p> <p>One saw the extension agents not including/understanding sufficient the actions such as the village contribution of the achievements and the procedure of establishment of the payments of forest stock management, but there was an improvement following the councils brought by the advisers.</p> <p>In addition, the Prefect, by taking the initiative of the institutionalization of the UCADR and the research of the financial backers actions, appeared autonomous.</p>

## (2) Cooperation promotion workshops

<p>● Rate of participation</p>
<p>If one considers the rate of participation per area, that one was rather weak in the Northern Center for its first workshop with a rate of 83 %. The reason is the other meeting of the forest field organized the same day. In the same way, the rate of participation in the fourth workshop which coincided with the seminar on decentralization organized by the Governor of the area of the Northern Center and gathering the administration executives and NGO etc of the area, dropped.</p>
<p>● State of the meetings</p>
<p>A better comprehension of the related parties at the regional, provincial and departmental level improved and the communication from the center to the basic services in the field improved considerably.</p>

## (3) Meetings of exchanges between the UCADR

<p>● Rate of participation</p>
<p>The rate of participation in the Northern Center is weak. One of the causes is the absence of provincial Directors or Prefects and concerning the fourth meeting of the year 2005, the coincidence of the dates with the seminar on decentralization.</p>
<p>● State of the meetings</p>
<p>For the meetings of the year 2004-2005, we accentuated the reports of each UCADR and the analysis of their problems of activity. For the year 2005, we asked the participants to construct a whole of work such as the report of the results of the study of the resources, the exercise on the modes of its use, the</p>

examination of the manual of installation of the UCADR and the project of process of the execution of the achievements of rural development, the establishment of the action programs for the continuation of the end of the Study and the talk, and through that, the participants managed to include/understand the problems more concretely and to exchange their opinions.

#### (4) Technical exchange meetings

● Rate of participation
With share for a meeting, the rate of participation was 100 % for the two areas, this shows the good motivation of the agents. Moreover, in the area of the Sahel, there were participants coming from the Regional and Provincial Directions concerned, and one sees here growing interest of the technical meetings of exchanges in the related parties.
● Degree of comprehension
The degree of comprehension of the participants is still weak with a rate of 60 %, but compared to 45 % and 55 % of the year 2003 and that of 2004, it increased.

#### (5) Trainings with the methods of participative development

● Rate of participation
The rate of participation in the trainings in 2004 was 100 % for the two areas. For the year 2005, we noted that as regards execution of the activities in the field, when the nonlinguistic communication occurred well, the transfer of knowledge and the collection of information etc by the means of the linguistic communication, succeeded also better.
● Degree of training
We noted that knowledge and know-how on the tools were acquired in the majority of case by the formations.

#### (6) Operational manual

We worked out the guide of installation of the UCADR and the project of process of execution of the achievements and proposed them with the Ministry Territorial Administration and Decentralization. In result of that, a mail was addressed to the Governors of the Sahel and the Northern Center requiring of them to institutionalize the UCADR, and the three UCADR of Sebba, Guibaré and Korsimoro managed to be recognized officially by decrees of the High commissioners.

#### (7) Technical support

We asked the related parties concerned to give us their opinions on the technical support, namely about the gaps or the errors which they could contain and make of the proposals for an improvement for the revised version. While basing itself on them, we then worked out the revised version of the technical support.

25. The results of the evaluation of the effects are as follows:

#### (1) Results of the investigation of evaluation of the year 2004

Various headings of the investigation	Results
Dynamism of the meetings of the UCADR	For the UCADR of Guibaré, the frequency of speech of all the members is high. For the UCADR of the Sahel, the frequency of speech of the CVGT is a little low. There one can see an effect of what, at the meetings, they must pass through an interpreter local French-language.
Dialog between villager	The CVGT of Dori put aside, the other CVGT say that the dialog between

	the villagers increased. President etc of a CVGT of Dori (that of the village of Sèlbo) cumulates the same stations in a sub-commission and there are concerns as for the disadvantages that that can have on the operation of the CVGT.
Degree of dialog on a basis of equality between the members	In the two UCADR of the Sahel, the evaluation of the CVGT is rather unfavourable. The meetings of the UCADR of the Sahel are held in French, and certain people translate for the representatives of the CVGT, and one can think that the evaluation was different between those which include/understand the contents of the meeting directly and those of which it is not the case.
Degree of expectations as regards diffusion of the projects towards the surrounding villages	The evaluation of the UCADR of Korsimoro is favorable, and slices clearly compared to those of the other UCADR. This UCADR had several results of which in particular the fact that its Secretary requested the realization of a bouli and well/drillings from other financial backers, but also that the CVGT required of another NGO a support in the field of the breeding. These results returned the evaluation of the degree of expectations as regards more favorable diffusion.
Technical capabilities of the extension agents	One can say that as a whole the evaluation relating to the technical capabilities of the extension agents is favorable.
Capacities of the extension agents as regards to planning, design and management	The CVGT of the area of the Sahel judge them positively, but NGO/associations evaluate them less favorably.
Technical capabilities of NGO/associations	Many people judge that compared with those of the extension agents, the technical capabilities of NGO/associations are a little worse.
Capacities of the CVGT as regards planning, design and management	The evaluation is less favorable than for the extension agents and NGO/associations, and one can understand that the capacities of the only CVGT are still insufficient to ensure the planning or the management of the actions.

## (2) Results of the investigation of evaluation of the year 2005

Various headings of the investigation	Results
Impact on the CVGT	In the UCADR of Guibaré, the evaluation is favorable for the whole of the questionnaire and it is the first followed by Korsimoro, Dori and Sebba. The impact exerted on the CVGT of the Sahel is less important compared to the area of the Northern Center.
Changes operated at those which offer the support	Many answers are positive such as "the residents more often consult me", "When I discuss with the villagers, I respect more their position or take account of their situation.", "We have more occasions to discuss between us, extension agents", "I am interested in the activities which leave my field of competence and collaborates in these fields".
Execution of the pilot achievements	In the UCADR of Korsimoro, setting with share the evaluation of "the establishment of terms of reference" which is rather unfavourable, all the other activities are evaluated favorably. On the other hand, in the UCADR of Dori, the evaluation is not favorable for "the proposal for a plan of the achievements and the dialogs which followed from there", "the selection of person receiving benefits" and "the execution and the management of the achievements".
Development prospect after the end of the STUDY	For are the question "the UCADR they able to find the financing themselves near financial backers and to take care of the rural development?", the UCADR of Korsimoro has a favorable evaluation, and

	what shows the pride of the related parties concerned. On the other hand, the evaluation is unfavourable for the UCADR of Dori.
--	---

(3) External EVALUATION carried out by a third

<b>● principal elements of the results of the evaluation</b>		
	Program compatible with the national policy of Burkina Faso. The activities carried out aim to reduce poverty and to restore the environment of the country.	
<b>Effectiveness of the master programme</b>	The aim of the Study is the promotion of measurements against the impoverishment of the soil and the reinforcement of the capacities of the related parties. The participative character of the program carried out was well adapted to the principle of the Study. However, the size of the activities was limited enough	
<b>Profitability of the master programme</b>	For lack of detailed data concerning the costs of operations, the analysis cannot be made in a precise way. It is necessary to carry out the analysis by concretely dividing the costs for the research and the costs intended for the infrastructure.	
<b>Impact of the master programme</b>	Starting from the first villages where the activities were undertaken within the framework of the STUDY, one observes an effect of diffusion towards nearby villages which began the operations thereafter.	
<b>Development prospects autonomous</b>	Everywhere in the zone of the Study, more and more of villager are conscious of their responsibility in operations in connection with the development for the village.	
<b>Cooperation promotion workshops</b>	The cooperation promotion workshops made it possible to create places of the serious discussions between the members of the two areas.	
<b>UCADR</b>	The UCADR made it possible to create a place of bringing together between the administration CVGT and executives. The CVGT were shown very active, and their dedicated work contributed to give birth to a feeling from responsibility among villagers. The residents are besides proud to be able to assume the responsibility in the development project of their own village. The organization of the regular meetings is the key of the realization of the projects.	
<b>Technical meetings of exchanges</b>	The existence on the local level of the official executives and NGO which followed seminars on the various technical topics constitutes the base of the transfer of the techniques near the residents.	
<b>Transfer of the techniques to the residents</b>	The conscience of the residents waked up thanks to sensitizing near these last contributes to promote the durable development in the villages. It is certain that the villagers adapted new knowledge, and that enormously facilitates the realization of the programmed operations.	
<b>Tupport tools</b>	To reinforce the technical matter using the cards of framing and the technical support contributes largely to the improvement of the quality of various work of the related parties and that of the achievements.	
<b>● insufficient Points</b>		
<b>System of execution of the Study</b>	<b>Counterpart</b>	Absence of counterpart which serves of relay between the administrative persons in charge and the project
	<b>Communication</b>	The communication of information always was not well ensured between the members of the Mission and the executives official. The annual program was not clearly indicated. The members of the Mission do not remain the same ones.



	<b>Difference between the study and the achievements</b>	<p>The classification in priority of the achievements of development defined by the villagers is not always taken into account by the Mission.</p> <p>The residents do not have an official plan of basic development.</p> <p>The budget is insufficient to make start the activities of the CVGT.</p> <p>It there has lack of capacities of the people receiving benefits, and misses also budget for the achievements</p> <p>The slowness of the steps has a negative effect on the achievements</p> <p>Collaboration enters the administration executives and NGO, in certain cases, one gave priority to the problems of budget to the detriment of the relevance or the effectiveness of the operations.</p>
<b>UCADR</b>	<b>Composition</b>	<p>There is non-participation of the provincial Directors of the animal resources and the provincial Directors of the environment and the framework of life.</p> <p>Change of the official executives</p>
	<b>Positioning</b>	The positioning of the UCADR after decentralization is not clearly defined
	<b>Operation</b>	<p>Concern of the insufficiency as regards monitoring after the departure of the people receiving benefits.</p> <p>The travelling expenses and the assumption of responsibility of the extension agents are insufficient.</p>
<b>Technical meetings of exchanges</b>		At the technical meetings of exchanges, the duration of the conferences on each technical topic is not sufficiently NGO.
<b>● Suggestions</b>		
<ul style="list-style-type: none"> <li>▪ <b>System of execution of the achievements</b> To place a counterpart in each area Installation of an effective system of communication for the realization of a project</li> </ul>		
<ul style="list-style-type: none"> <li>▪ <b>UCADR</b> Institutionalization of the UCADR by laws To widen the zone targets to make the results more visible To make take part persons in charge for the technicians of the regional level To make take part the technical section of the administration in the operations of the infrastructures More rigorous selection of people receiving benefits To improve the material and the condition of the assumption of responsibility for better adapting to the current situation of the country. Establishment of the official plans of basic development To take special measures for the improvement of the incomes of the women Renewal of the trainings to the participative methods</li> </ul>		
<ul style="list-style-type: none"> <li>▪ <b>Reinforcement of the capacities</b> To organize serious trainings to better be able to negotiate with the inhabitants, and to improve their capacity of autonomy</li> </ul>		

26. We have the results of the total evaluation below obtained starting from the results of the monitoring and those of the external evaluation.

Concerning the master programme, we had results close to those planned for the unit. However, because of a lack of financial backers, the durability of the activities after the end of the Study is blamed, and to ensure durability remains from now on the major problem to solve.

Category	Article	Results	Evaluation	Problems to be settled / improvements
System development program				
Workshop to promote collaboration	Output monitoring			
	Rate of participation	Problems	Dates coincided with other meetings and the rate of participation was low.	Find a replacement in case of absence, etc. to assure that information is gathered
	Situation of the meeting	No problem	The persons concerned have a high level of awareness at the regional level, the province, and department. Mutual comprehension of intentions is possible from the center to the sites.	
	External evaluation			
		Positive evaluation	The workshop to promote shared collaboration served as a place of discussions for participants in the two regions.	
	Checking of the verification study			
	① The workshop to promote collaboration correctly communicated the orientation for conducting the study and the results of the study to the participants. Nevertheless, can the persons concerned in UCADR reach an agreement?	Verified	Functions as a study group for the expression of its opinions to the central management committee.	
Coordination unit for rural development activities (UCADR)	Output monitoring			
	Rate of participation	Problems	According to the members, the participation rate is slightly low. However, it was verified that the respective participants attended UCADR meetings.	Succession without problems during the regular changes in human resources Participation through a replacement in case a member is absent
	Management of meetings	Problems	According to UCADR, collaboration among different fields was sometimes disorderly. However, the awareness of the inhabitants had increased and the technical/administrative study was started.	Ideas required to promote the spontaneous participation of CVGT. It is indispensable to introduce the local language in the meetings in order to promote the participation of the inhabitants.
	Autonomy in the execution of projects	Some problems remain	An increase in initiative was seen in all UCADR. However, the establishment of TOR for the commissioning contract and the evaluation of the follow-up by UCADR took much time.	The support of the SAC/MR Head and the provincial director for agriculture was necessary to establish the TOR for the commissioning contract with a NGO, etc.
	Outcome evaluation			
Changes in CVGT	Problems	By participating in UCADR activities, the dialogue between the inhabitants increased. Many people have the impression that they now have many occasions to consult with administrative bodies. However, in some villages initially selected, the wishes of the inhabitants were not carried out and problems were not resolved.	The awareness of their own efforts by the inhabitants must be reinforced.	

Changes in the party supporting the inhabitants	No problem	With UCADR activities, requests for advice by the inhabitants have increased. Many responses indicate that big improvements occurred such as the reception provided by the inhabitants, mutual discussion between the extension agents, interest in fields outside their specialty, etc.	
Execution of pilot projects	Problems	Differences appeared among the UCADR. The response rate was generally high in the Korsimoro UCADR. However, it was low for the Dori UCADR.	For weak-point activities, the instructions and support of the provincial director for agriculture and the SAC/MR Head through training at the site, are necessary.
Possibilities for development after the end of the study	Some problems remain	Many people do not know how to respond to funds granted to the UCADR itself and the feasibility of using them for village development.	Follow-up of requests for funds from donors
External evaluation			
	Positive evaluation	Creation of a liaison place between CVGT and the Administration. CVGT activities contribute to giving responsibilities to inhabitants	
	Negative evaluation	Non-participation of provincial directors for animal resources and provincial directors for the environment and the standard of living Change of state service agents (positioning) Imprecise image of the UCADR position after decentralization (management) Follow-up after the departure of appointed persons. Insufficient travel allowances and remuneration for extension agents	Systematizing of UCADR Increased number of state service agents and technicians (provincial directors) Increased number of state service agents in relation to the infrastructure Stricter selection of companies Improvement of conditions for travel expenses and the remuneration of participants Establishment of an official development action program
Checking during the verification study			
① To become the contact for the support of inhabitants?	Verified	Results of the training on the method to develop participation are slowly appearing; the extension agent has become the contact person for the support of the inhabitants from the execution of projects through training at the site.	
② Can the problem of the insufficient collaboration of extension agents be resolved?	Problems	Since the extension agents work jointly for projects between fields, the redundancy of equipment may be reduced. To execute projects outside their field of specialization, the extension agents were able to share tasks. However, problems of communication in the local language remain.	Less concentration of tasks for persons speaking the local language The use of a local interpreter is being studied
③ With the reduction in the number of extension agents, will it be possible to establish a framework where their activities will be completed?	No problem	If a NGO is used to carry out activities outside the specialty of the extension agents, it was possible to provide a person in charge of execution together with the extension agents and to clarify their responsibilities.	
④ Can mutual communication of objectives between the extension agents and inhabitants be improved?	Some problems remain	Efforts to improve the capacity for explanation in CVGT meetings have improved the oral participation of CVGT. However, efforts are necessary to resolve the communication problem in the local language.	Training in the local language, training on the method to develop participation.

	⑤ Is management for the execution of projects possible?	Some problems remain	With the increase in the number of villages implementing projects under UCADR, the management capacity for projects through training at the site, was acquired. However, establishing TOR outside the field of specialization, etc. is very difficult.	The support of the provincial director for agriculture and the SAC/MR Head is necessary to establish TOR outside the field of specialization.
	⑥ Are there effects in the other villages?	No problem	Extension seminars in neighboring village in order to promote the extension of effects in other villages reached the expected results as proposed in the projects, preparations and management of day meetings.	
	⑦ Can analysis of the agricultural development strategy adapted to the local situation be established?	Some problems remain	Extension agents have acquired the capacity to define a village development plan by using results from 5 studies on resources. However, efforts will be necessary from this time since they have practically no experience in the quantitative analysis and evaluation of pressure from the environment.	The regional department, provincial offices, etc. must work together to collect quantitative data, learn tools such as the computer, and techniques.
	⑧ Can UCADR continuously maintain its activities?	No problem (establishment of the system)	The UCADR Head has appointed departmental directors. This clarifies the management system for each extension agent and has improved the attitude of collaboration of extension agents in UCADR activities. An official system with 3 UCADR was established through a provincial decree.	
		Problems remain (funds for activities)	Each UCADR established an action program after the end of the study but obtaining funds remains an important problem.	Collaboration with donors and assurance of funds for UCADR activities
	⑨ Can the present UCADR assure effects on other provinces?	Some problems remain	The joint workshop to promote synergy covers 3 provinces where pilot projects have not yet been implemented, was organized with state service agents and extension agents working as instructors. However, this short-duration workshop did not provide complete explanations.	The program and content of explanations from the workshop to reinforce the comprehension of the participants, must be studied.
Exchange meeting between UCADR	Output monitoring			
	Rate of participation	Problems	There were cases where the participation rate of the provincial directors for agriculture and departmental directors was low.	Participation of replacements in case the members are absent
	Situation of meeting	No problem	Efficient for the mutual development between UCADR and to reinforce the initiative concerning the management of UCADR	
	Checking in the verification study			
	① Can the awareness of extension agents be reinforced in order to resolve problems?	Verified	By raising the awareness of problems by presenting the different fields to the extension agents, it was possible for them to understand the problems beyond their field, and to resolve them. This has increased their responsibilities.	
Program to improve competencies				
Technical exchange meeting	Output monitoring			
	Rate of participation	No problem	Practically 100% participation	
	Degree of comprehension	Some problems remain	The degree of comprehension of the participants is still low, but it is slowly improving.	There must be a clear connection between theory and practice, such as the repercussion of local needs on the conference subject.
	External evaluation			

		Positive evaluation	State service agents who followed the course are at the local level and constitute the base for technical transfer to the inhabitants.	
		Negative evaluation	The conference time per subject was short.	Study of the program
	Checking in the verification study			
	① Can the insufficient technical capacities of extension agents be improved?	Some problems remain	We contributed in improving the insufficient technical capacities of the extension agents. However, since the technical scope of the agro-forestry-pastoral field is wide, technical exchange meetings must take place continuously.	Obtaining the required overhead expenses
Training in methods to develop participation	Output monitoring			
	Rate of participation	No problem	Participation at 100%	
	Degree of comprehension	No problem	Most of the participants affirmatively responded to assure the effectiveness and possibilities of using methods to develop participation. Furthermore, a high percentage acquired tools such as knowledge and competence through training.	
	Checking in the verification study			
	① By providing training per region, is it possible to provide practical training adapted to the local situation and human resources?	Verified	It was possible to stimulate the extension agents participating in training programs. Knowledge acquired through training at the site was used in UCADR meetings and in ordinary activities.	
	② Can the extension agents who learned techniques use them practically in local activities?	Some problems remain	There are big individual differences, including the content of the training program for the acquisition of techniques and activities on the spot. The method and conception of the interview during training and the change in attitudes were studied on the spot.	Participation in several training programs is necessary to actually use the results.
	③ Has major communication between extension agents and the inhabitants improved?	Verified	Most of the inhabitants acknowledged that the communication capacities of the extension agents have improved.	
④ Have the acquisition by individuals of participatory methods and their basic concept led to a change in the administrative management, the reinforcement of capacities for village development, such as UCADR?	Some problems remain	More than two years were needed to shift support for activities by the administrative management to the initiative of the inhabitants. When the extension agents go to the villages in a group for activities, it is easy for them to use knowledge from the training in methods to develop participation	It will be good if the UCADR extension agents can have continuous training and work in a group in the villages.	

Program to develop support tools				
Operation manual	Checking in the verification study			
	① Can it be applied as a manual for the execution of projects?	Some problems remain	It was checked if the verification study was conducted according to the operation manual and if it is applicable to actual projects. However, several points needed improvement.	Necessity of corrections and additions (points to be taken into account) for the execution of projects
	② Will this go towards decentralization?	Some problems remain	There is no problem for the UCADR position as an organization in charge of the rural development. However, many expressed the opinion that the composition of the UCADR and the excessive number of levels after passage to the commune, must be considered.	Need for a description (members etc.) for flexible application
Technical supports	External evaluation			
		Positive evaluation	Reinforce a series of techniques by using technical supports which largely contribute to the activities of all the participants and to improve the quality of the projects.	
	Checking in the verification study			
	① Is it possible to supplement the insufficient ordinary teaching materials?	Verified	Technical supports (basic version) were tested through pilot projects. A survey was conducted with the persons concerned. The applied version was established based on these opinions.	

# Chapter 1 Verification Study

## 1.1 Overview of Verification Study

### 1.1.1 Objective of Verification Study and Relations with M/P

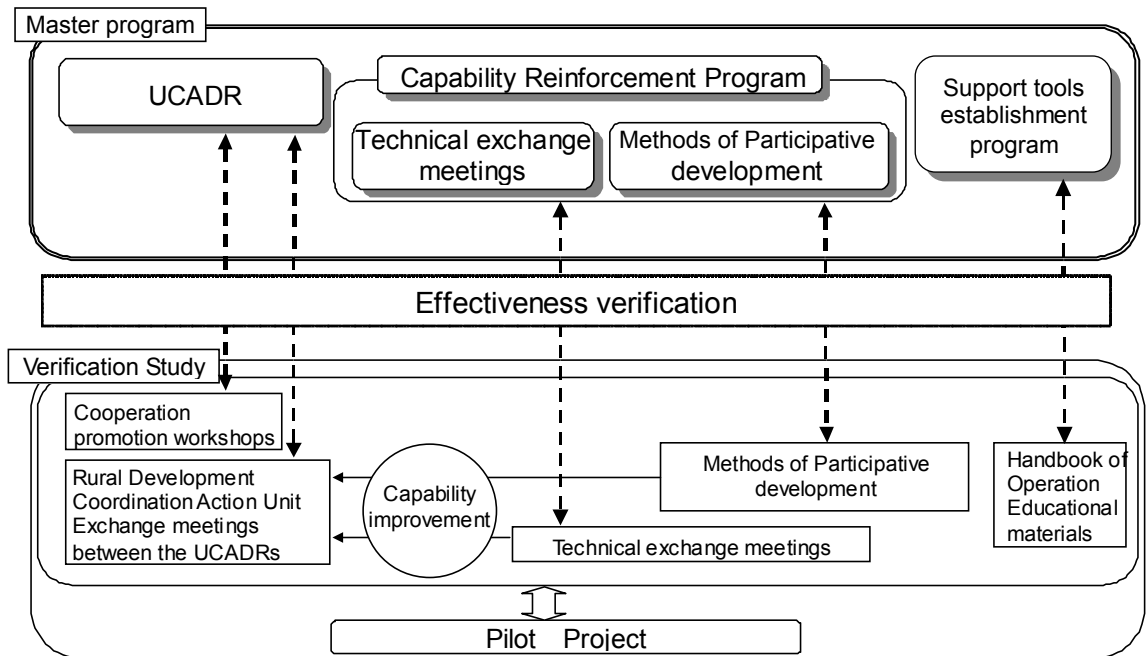
The verification study has been undertaken in order to examine the effectiveness of the draft master program (hereinafter M/P) which was elaborated during Phase 1, then to feed-back the results of the evaluation of validity and feasibility of the draft M/P, and then to establish the M/P.

Residents living on the front line of deteriorating land degradation are directly responsible to alleviate the land degradation. Shifting the production style of residents from exploitative to sustainable is one of the measures against land degradation .

In the study of Phase 1, we proposed the measures for establishing the system to prevent land degradation as “Program for the System to Alleviate the Land Degradation (Draft),” i.e., “Draft M/P”. This Draft M/P is based on the organization of impeding factors in the process of land prevention against degradation in the targeted areas of the study. In Phase 2 study, we aim at proposing Master Program (M/P), modifying and reinforcing this draft M/P.

In the Figure 1.1.1., components of M/P and relations with verification study will be shown.

Figure 1.1.1 Components of M/P and Relations with Verification Study



### 1.1.2 Composition of Verification Study

Composition of verification study at Phase 2 Study will be shown in Table 1.1.1.

Table 1.1.1 Composition of Verification Study at Phase 2 Study

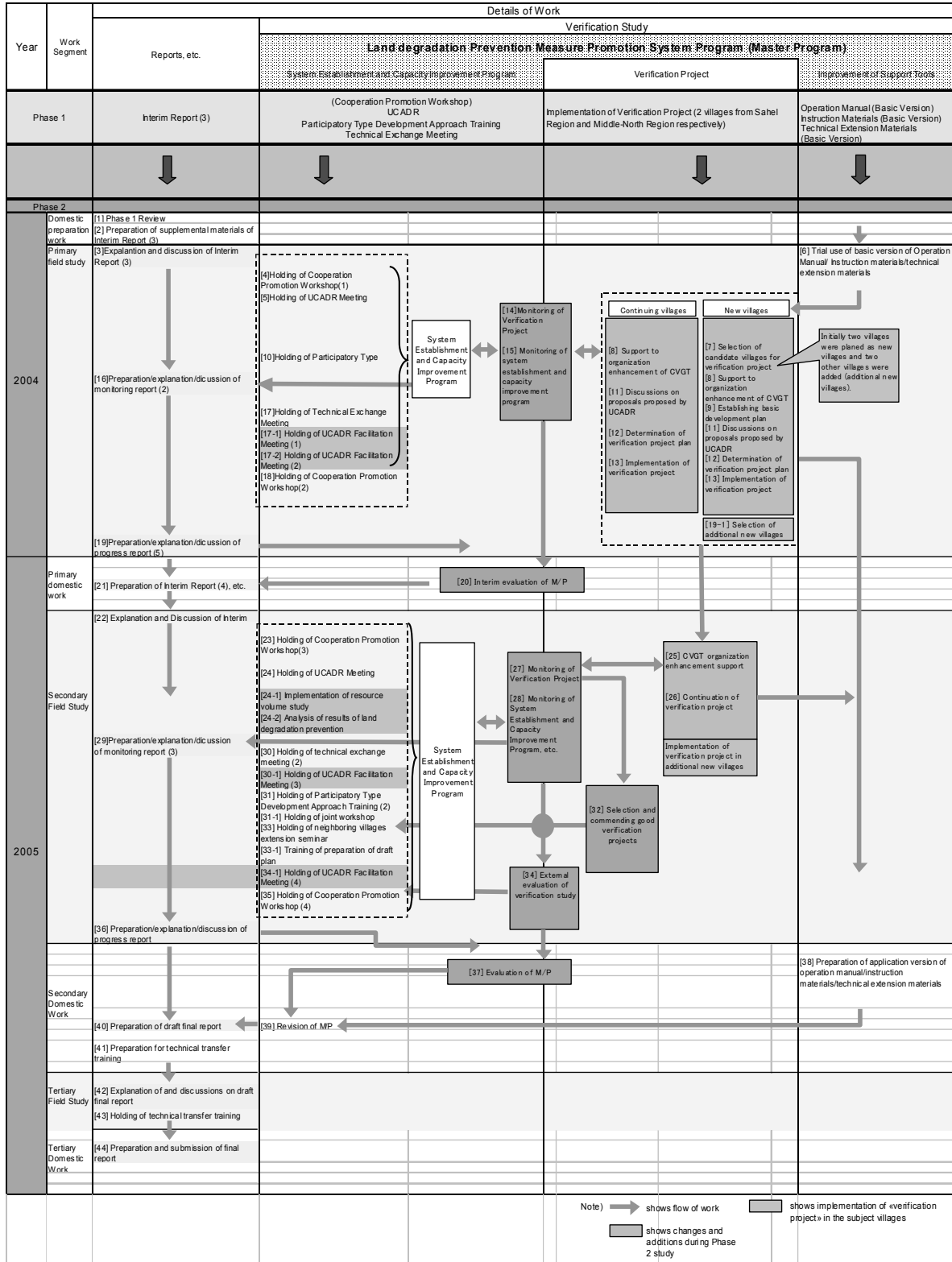
System Establishment Program		
<ul style="list-style-type: none"> <li>• Holding of Cooperation Promotion Workshop(4 times)</li> <li>• Holding of Rural Development Activity Coordination UCADR Meetings(Scheduled Meeting 1~2 times a month + Unscheduled meeting)</li> <li>• Holding of UCADR Cooperation Promotion Workshop(4 times)</li> </ul>		
Capability Reinforcement Program		
<ul style="list-style-type: none"> <li>• Holding of technical exchange meeting(2 times)</li> <li>• Conducting participatory type development approach training(training once, workshop, once)</li> </ul>		
Support Tools Improvement Program		
<ul style="list-style-type: none"> <li>• Trial of operation manual (basic version) and revision to (application version)</li> <li>• Trial use of technical materials (basic version) and revision to (application version)</li> </ul>		
Implementation of Pilot project		
• CVGT establishment support type	initially selected village(G1-1)	4 villages
The same	new villages(G1-2)	2 villages
• Existing CVGT support type	additional new villages(G2-1)	6 villages
The same	neighboring extension villages (G2-2)	5 villages
Verification of diffusability to other provinces		
• Verification of diffusability	Villages to verify diffusability (G3)	
3 Provinces	6 <i>Departments</i>	6 villages

### 1.1.3 Flow of Verification Study

Flow of verification study at Phase 2 is as shown in the Flow chart (Table 1.1.2).



Table 1.1.2 Flow chart



#### 1.1.4 Schedule of Verification Study

In Table 1.1.3, schedule of verification study will be shown.

Table 1.1.3 Schedule of Verification Study

Period Work Segment	Year 2004									Year 2005											
	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12			
<b>System Establishment Program</b>																					
Holding of Cooperation Promotion Workshop		■					■						■					■			
UCADR Activities		■■■■■■■											■■■■■■■								
Holding of UCADR Promotion Meeting					■		■								■			■			
<b>Capability Reinforcement Program</b>																					
Holding of Trainings of Participatory Development Approach						■												■			
Holding of technical exchange meeting					■										■						
<b>Support tools improvement program</b>																					
Trial use of operation manual (basic version)		■■■■■■■											■■■■■■■								
Trial use of instruction materials / technical extension materials (basic version respectively)		■■■■■■■											■■■■■■■								
<b>Implementation of Pilot Project</b>																					
Initially selected villages (in 2005, monitoring)		■■■■■■■											//////								
New villages		■■■■■■■											■■■■■■■								
Additional new villages								■				■■■■■■■									
Neighboring extension villages								■				■■■■■■■									
<b>Diffusability Verification</b>																		■■■■			

#### 1.2 Verification Study Plan

##### 1.2.1 Verification Issues subject to Verification Study

Verification issues subject to verification study are arranged as shown in Table 1.2.1, based on the factors shown in Table 3.2.1 in M/P Section, Chapter 3 and the items added during the Phase 2 Study. To these subjects of verification, we developed verification items and approaches of assessment by each segment and the action plan as shown in 1.2.2 and thereafter was developed.

Table 1.2.1 Verification Issues of Verification Study

Segment	Verification Issues
<b>System Establishment Program</b>	
(1)Cooperation Promotion Workshop	1) With cooperation promotion workshop, is it possible to ensure that the implementation policy and results of the study shall be conveyed to the participants and unify the intentions of the people involved in the UCADR?
(2) UCADR	1) Will it be the contact point of residents support? 2) Is it possible to resolve inadequate cooperation among agents? 3) Can it be a framework for complementing the activities of agents, while the number of agents is being reduced? 4) Can it improve communications between agents and residents? 5) Can it operate project implementation management? 6) Can it extend to other villages in the <i>Department</i> ? 7) Can it develop rural development strategies corresponding to the situation of the region? 8) Can the UCADR continue its activities? 9) Can the existing UCADR bear the role of extension to other Provinces?
(3)UCADR Cooperation Promotion Workshop	1) Can it improve consciousness of agents for problem solving?
<b>Capability Reinforcement Program</b>	
(1)Technical Exchange Meeting	1) Can it supplement the inadequate skills of agents?
(2)Participatory Type Development Approach Training	1) Through conducting by region where agents are actually working, can on the job training be conducted, suitable for the reality and human resources of the region? 2) Can agents acquire skills to put into practical use in the activities in the field? 3) Is it possible to improve communications between agents and residents? 4) Will it lead to capacity development of the organizations for rural development, including UCADR, etc. as a result of perceptual change of administration initiative through acquisition of participatory type approach and the underlying idea by individuals?
<b>Support Tools Improvement Program</b>	
(1)Operation Manual	1) Can it be applicable as a manual of project implementation? 2) Is it in line with the trend of decentralization?
(2)Technical Materials	3) Can they supplement shortages in extension materials?

## 1.2.2 System Establishment Program

Members attending three meetings of the system improvement program differ from meeting to meeting. Table 1.2.2, composition of system establishment program was organized.

Table 1.2.2 Composition of System Establishment Program

Title	Affiliation	Cooperation Promotion Workshop	UCADR Cooperation Promotion Workshop	UCADR
		To be held by regional department	To be held by regional department	To be held by <i>Department</i>
		2	2	4
Regional Department Director	Agriculture, Hydraulics and Halieutic Resources Regional Department	⊙(Chairperson)		
	Animal Resources Regional Department	○		
	Environment, Living Environment Regional Department	○		
<i>Chief of SAC/MR</i>	Agriculture, Hydraulics and Halieutic Resources Regional Department	○	⊙ (Chairperson)	○ (Adviser)
Provincial Office Chief	Agriculture, Hydraulics and Halieutic Resources Provincial Office	○All Provinces under Regional Department	○Provinces where verification study is conducted	Provinces where verification study is conducted (Adviser)
	Animal Resources Provincial Office	○Provinces where verification study is conducted		
	Environment, Living Environment Provincial Office	○The same as above		
<i>Prefet</i>	<i>Relevant Departments</i>	○ <i>Departments</i> where verification study is conducted	○ <i>Departments</i> where verification study is conducted	⊙ (Chairperson)
Agent	Relevant Provincial Offices	○The same as above	○The same as above	⊙ (ZAT Head: Secretary-General) ○ (Other agents)
NGO/Society		○ (Adviser)	○ (Adviser)	○ (Adviser)
CVGT Representative	Relevant Villages			○Villages subject to pilot project

⊙: Chairperson ○: Member

### (1) Cooperation Promotion Workshop

Cooperation Promotion Workshop is a conference regarded as a regional level steering committee. At the workshop, report of study conducted in the previous year and explanation of the study policy of the current year is made in the beginning of year, and intentions of relevant regional departments, provincial offices and UCADR are unified. During the year, progress of study is reported and the problems in the study and future issues are also discussed.

Verification Issues	Verification Items
1) At the cooperation promotion workshop, is it possible to ensure that the implementation policy and results of study are conveyed to participants and unify the intentions of the people involved in UCADR?	<ul style="list-style-type: none"> <li>• Statements at the meeting</li> </ul>

## (2) Rural Development Activity Coordination Unit (UCADR)

This UCADR is an organization positioned at the core of M/P and we will verify the validity of the UCADR as well as aim at improving the abilities of administrators and agents through OJT during the process of a series of implementation project, including selection of village, monitoring and evaluation in order to verify the capacity of enlightening residents of the subject villages in the *Department* and developing rural development plan anchored by the residents.

Verification Issues	Items of OJT and Verification
1) Does UCADR become a contact point of residents support?	<ul style="list-style-type: none"> <li>• Communications, contact and coordination between agents and CVGT in UCADR meeting and implementation of pilot project and enlightenment etc.</li> </ul>
2) Can UCADR resolve inadequate cooperation among agents?	<ul style="list-style-type: none"> <li>• Cooperation among special fields</li> <li>• Role sharing in pilot project other than special fields.</li> </ul>
3) Can UCADR be a framework complementing activities of agents?	<ul style="list-style-type: none"> <li>• Role sharing between agents and NGO, etc. (Conducting projects other than special fields of agents, establishment and enhancement of CVGT, literacy education, wells, etc.)</li> <li>• Restrictions from the working volume of agents</li> <li>• Advisers, including NGO, etc.</li> </ul>
4) Can UCADR improve communications between agents and residents?	<ul style="list-style-type: none"> <li>• Communications in local languages.</li> <li>• Measures for promoting statements of CVGT</li> </ul>
5) Can UCADR conduct project implementation management operation?	<ul style="list-style-type: none"> <li>• Implementation of process of a series of pilot project, from selection of villages to monitoring and evaluation.</li> <li>• Implementation of pilot project by agents</li> </ul>
6) Can UCADR extend to other villages in the <i>Department</i> ?	<ul style="list-style-type: none"> <li>• Neighboring villages extension seminar</li> </ul>
7) Can UCADR develop strategies corresponding to the regional situations?	<ul style="list-style-type: none"> <li>• Utilization of study of resource volume and environmental pressure assessment</li> </ul>
8) Can UCADR continue to carry out activities?	<ul style="list-style-type: none"> <li>• Examination of UCADR members</li> <li>• Institutionalization of UCADR</li> <li>• Development of action plan and request donors for support</li> </ul>
9) Can UCADR bear extension to other Provinces?	<ul style="list-style-type: none"> <li>• Verification of diffusability</li> </ul>

### (3) UCADR Cooperation Promotion Workshop

UCADR Cooperation Promotion Workshop shall be verified by the issue of “whether it is able to improve consciousness of agents toward problem solving.”

As the aforementioned cooperation promotion workshop is an entire meeting, comprised of regional department directors and relevant provincial office chiefs under the regional department, it is inevitable that it is a forum of overall and comprehensive reports. Based on the needs for the forum of resolving problems of each UCADR and exchanging of information, proposed at the end of Phase1, UCADR Cooperation Promotion Workshop is established at Phase 2.

At this Cooperation Promotion Workshop, practicing people involved in project activities at UCADR will exchange information with other UCADR members in each regional department to resolve problems.

The Meeting consists of *Chief* of SAC/MR, Director of Provincial Agricultural Office, *Prefet*, agents and core NGO and Societies that give support to establishment and operation of CVGT and is positioned as a meeting at the level of practicing workers of Cooperation Promotion Workshop. At the end of field study of Phase 2, UCADR Cooperation Promotion Workshop of both regions shall jointly be held.

### 1.2.3 Capability Reinforcement Program

#### (1) Technical Exchange Meeting

Verification issue of the technical exchange meeting is “whether it can supplement inadequate skills of agents.”

##### 1) Purpose

This program has the purpose of arranging communications between administrative organs and Experiment and Research Organizations, promoting experiment and research satisfying the needs of regional residents and transferring techniques from the experiment results through this technical exchange meeting.

Since agents belong to different ministries depending on agriculture, stock raising and forestry, it is effective for role sharing between various fields and cooperation method for them to get together and have a chance for acquiring understanding of land degradation prevention technologies other than their expertise and acquisition of advanced technologies.

It is also important to feed back to the Experiment and Research Organizations the direction of experiment and research, meeting the needs of residents. Technical exchange meeting with

Experiment and Research Organizations shall be held and monitoring shall be conducted to reflect on modification of draft M/P.

Technical exchange meeting had been held once a month until October 2000 by the support from another donor, but it was suspended due to fund shortage. Themes and results of study by Experiment and Research Organizations were not fit for the needs of regional residents and such information was not sufficiently communicated to agents, who were in the position of instructing regional residents.

Accordingly, lecturers will be invited from such Experiment and Research Organizations as Institute of Environmental and Agricultural Research (INERA), National Bureau of Soil (BUNASOLS), National Forest Seeds Center (CNSF) to publish the research results as well as the transferring system shall be established, which meets the needs of regional residents.

## 2) Procedures

This exchange meeting held twice at Phase 1, under the initiative of the study group, conducted selection of themes, proceedings and summary, but at Phase 2, the following procedures shall be taken to cause Burkina Faso to exert initiative and to secure sustainable holding.

- 1) UCADR shall organize technical issues after comprehending the local needs.
- 2) *Chief* of SAC/MR shall collect information of theme selection results from each UCADR.
- 3) Narrow down themes and the selection results shall be reported to UCADR Cooperation Promotion Workshop and the themes shall be decided.
- 4) Request Experiment and Research Organizations for recommendation of dispatch of lecturers by theme
- 5) Holding of technical exchange meeting and monitoring of implementation cases

## 3) Roles of *Chief* of SAC/MR

Rural Society Extension and Guidance Section (SAC/MR) is a contact point of Regional Department that is in charge of extension of national agricultural technologies. This SAC/MR has a contact with Agriculture, Hydraulics and Halieutic Resources Offices under the control of Regional Department and is well acquainted with agricultural situations of each Province.

*Chief* of SAC/MR is the person in charge of technical advisers of each UCADR at this study and suitable for the theme of technical exchange meeting. It also assumes responsibility of technical exchange meeting, including MC of the meeting and summary at the end of the meeting.

*Chief* of SAC/MR must always comprehend the information of Experiment and Research Organizations. On the other hand, it is necessary to always recognize the technical issues and themes for regional residents through participation in UCADR activities.

#### 4) Selection of Themes

- Selection of themes, meeting the needs of regional residents
- Selection from the viewpoint that the results of new experiments and research will be utilized in the region.

There is a wide variety of themes in land degradation prevention. Also, issues and themes of the region differ depending on the subject region. It is necessary for agents to always clarify the issues and themes and recognize the needs of regional residents through the contact with farmers on the site. Since natural conditions differ between Sahel Region and Middle- North Region, themes to be selected will be different.

In order for the results of Experiment and Research Organizations to be utilized in the region, it is necessary for agents to improve their abilities through technical exchange meeting, as their technical levels are also different. It is the objective to transfer the themes selected as new results and information to agents and forest agents and to be used by regional residents, thus the selection of themes is important.

#### 5) Number of Implementations and Period

Technical Exchange Meeting will be held both in Middle-North Region and Sahel Region. Implementation shall be once a year and the period shall be one day for both regions.

#### 6) Scope of Convening

Scope of convening shall be around 10 ~ 11 persons in total, including Chief of Agriculture, Hydraulics and Halieutic Resources Office of the Provinces where there are villages subject to pilot project and agents who are in charge of the villages subject to pilot project (Heads of ZAT, UAT, ZATE and SDECV) in addition to SAC/MR Head for both regions. The focus is on the feedback of the results of application of techniques transferred at the technical exchange meeting to the field of villages subject to pilot project and the managing regions.

#### (2) Participatory Type Development Approach Training

In the first year of Phase 2, participatory type development approach training will be conducted, aiming at use in the field. In the second year, monitoring and evaluation will be made to study how the results of training are realized in the field.

Feedback of the results and the cases of utilization of know how obtained at the training will be announced.

At the Phase 1 Participatory Type Development Approach Training, the focus was on development of abilities of communication and facilitation of individual agents and it was



conducted to acquire theories and basic methods.

On the other hand, understanding of Participatory Type Development Approach took a step forward and such thinking increased as “a means to formulate equal partnership under the policy framework and in cooperation between various stakeholders, and based on it, to give opportunities for empowerment, including decision making power.”

At Phase 2, trainings will be held from such viewpoints. That is, it aims at not only capacity development of individual agents but also improvement of functions of the UCADR, which are the organizations for autonomous rural development, taking into account capacity development of residents, actors of land degradation prevention, coped with this study and administrators involved.

For that purpose, we set out the verification method for the issues set forth in Table 1.2.3.

Table 1.2.3 Issues and Verification Method at Participatory Type Development Approach Training

Verification Issues	Verification Method					
	2004			2005		
	Implementa tion of field training	Monitoring	Question naires to agents of self-evaluati on	Questionnaire with residents and interviews with reports submitted	UCADR activity Analysis of	Workshop
1) Will field training suitable for the reality and human resources of the region be conducted through implementation by region where agents are involved in activities?	○	○	○			
2) Can agents acquire skills and put them into practical use in the field?	→	○	●	○		
3) Can communications between agents and residents be improved?		○	○	○		
4) Will the shift from initiative by administration occur by individuals acquiring participatory approach and the underlying idea, which will lead to capacity development of rural development organizations, including UCADR?		○	→	○	○	●

○ : Method to be used for verification of respective issue

→ : Activities to serve for other verification methods and analysis

● : Verification activities based on the results of verification activities shown by →

Field training in 2004 was conducted in Middle-North Region and Sahel Region respectively to verify the verification issue 1) along with resource study for development of basic rural development plan (PDV) related to establishment of CVGT in new villages.

In 2005, planning was made, aiming at not only capacity development of individual agents but also improvement of functions of UCADR, including residents and administration, i.e., capacity development. Also focusing on application in the field, monitoring was conducted to see how every agent is using the acquired method at such occasions as development of new

project plan, trainings, enlightenment activities by agents. Study Group collected monitoring data through 1) field monitoring, 2) summary of self-evaluation questionnaires and reports, 3) interviews with residents, 4) analysis of various reports submitted by the UCADR.

The interviews of 3) were incorporated in such sections of survey forms to residents as CVGT, cereal bank, literacy education, enhancement of income of women. With respect to the functions of UCADR, related questions were made in the survey forms about such activities.

#### 1.2.4 Support Tools Improvement Program

Support Tools Improvement Program consists of operation manual and technical materials.

##### (1) Operation Manual

Verification Issues	Verification Items
1) Can Operation Manual be applicable as project implementation manual?	<ul style="list-style-type: none"> <li>• Practicability of implementing verification study in line with Operation Manual</li> <li>• Trial use for verification of diffusability in other Provinces</li> </ul>
2) Is Operation Manual in line with trend of decentralization?	<ul style="list-style-type: none"> <li>• Relations with the legal system of Burkina Faso</li> <li>• Opinions of people concerned</li> </ul>

Through implementation and monitoring of UCADR activities, utilizing “Operation Manual (Basic Version),” developed at Phase 1 study, we will conduct verification of practicability of whether “Operation Manual (Basic Version), developed during the study, will be applicable to the actual project. By reviewing the contents depending on the issues arising in the verification study, we will prepare “Operation Manual (Application Version),” which will be applicable to the entire region subject to study.

Out of seven Provinces, which are the subjects of study, at the diffusability verification workshop, which is conducted by inviting to the three existing UCADR administrators and agents from three Provinces, other than the four Provinces, subject to pilot project, each UCADR shall be caused to prepare explanation materials based on the draft “Operation Manual (Application Version)” and they will be used for lectures. Workshop participants shall be caused to start provisional UCADR and engage in the work in line with these materials after reinstated to their original duties

Pay attention to the following matters in preparation of Operation Manual (Application Version). To be the practical references of project management and operation in the field by administrators, NGOs and Societies, such matters will be incorporated as how to think about development of project plan, specific examples of specifications for business contract, procedures for contract, role sharing in implementation of project, matters to be noted at the completion inspection. Real results, including the examples of success and failure, obtained during the process of implementation of study will specifically be stated.

With respect to positioning of UCADR and members, pay much attention to the relations with the legal system concerning decentralization of Burkina Faso and incorporate opinions of the people concerned

(2) Technical Materials

Verification Issues	Verification Items
1) Is it possible to supplement the shortage of extension materials?	<ul style="list-style-type: none"> <li>• Through the trial use of instruction materials and technical extension materials in pilot project, verify its practicability.</li> <li>• Through introduction to other Provinces in extension pilot project, confirm diffusability.</li> </ul>

Practicability of Basic Version of instruction materials and technical extension materials, prepared at Phase 1, shall be verified through the trial use at the training in implementation of pilot project at Phase 2. Agents shall find out the points to be revised through trial use of instruction materials in implementation of pilot project and revise the contents to be applicable to instructions to residents.

- **Instruction materials** are those summarizing the points to be noted by agents or NGOs in extension activities for residents, using the after-mentioned technical extension materials. By adding the trial use results and results of verification study at Phase 2, based on the instruction materials (basic version), application version shall be prepared consisting of general statements, agricultural techniques, stock raising, forest resources management/ usage/ preservation, farm land preservation, living improvement and water resources. In general statements, significance of rural development project in land degradation prevention measures and the purpose and objective of instruction materials and technical extension materials shall be stated.

Scope of application of materials by field and matters to be noted in use shall also be stated.

- **Technical extension materials** are the materials used by agents and NGOs for explanation of technical extension to residents and application version shall be prepared, which consists of agricultural techniques, stock raising, forest resources management / use / preservation, farm land preservation, living improvement and water resources, based on technical extension materials (basic version), adding the study results at Phase 2. In the technical extension materials, contrivances, including the use of many pictures and illustrations shall be made so that illiterate residents can also understand, and in French version, the local language shall also be written to give consideration so that the residents can actually feel that they became able to read as a result of literacy education.

In this regard, the details of rural society / resident's organization shall be incorporated in Operation Manual as they were used for enlightening residents that they understand the current situation and the necessity of natural resources management and CVGT, and for instructions to establishment and operation of CVGT.

### 1.3 Results of Verification Study

#### 1.3.1 System Establishment Program

Verification work was conducted for the validity of system establishment program, centering on UCADR activities.

##### (1) Cooperation Promotion Workshop

With respect to Cooperation Promotion Workshop the results of verification study will be shown along with the verification issues shown in 1.2.2.(1). Monitoring results of the workshop will be shown in the monitoring summary table in attachment 4.

Verification Issue 1) Is it possible to ensure that by Cooperation Promotion Workshop the implementation policy and results of study shall be conveyed to the participants and unify the intentions of the people involved in UCADR?
[Conclusion] Cooperation Promotion Workshop is working as the reviewing body of submission of opinions to the steering committee at the central level. UCADR members have grown to report the results of activities at <i>Department</i> level to the Workshop and discuss them in good position with Regional Department Directors at Ministries of Agriculture, Stock Raising and Forestry and Chief of Provincial Office. The system was established to summarize the opinions of the field at the workshop in each region and escalate it to the above. Central government recognizes it and gives consideration to listening the voices from regions in consolidating the pilot projects. In the final year, a caravan to summarize opinions of regions was sent by the central government and the opinions were reviewed at the center and such actions as proposal to the Workshop were taken by the initiative of the state of Burkina Faso.

##### <Explanation>

Verification agenda at the Workshop from Phase 1 and the history of conducting the Workshop are shown in Table 1.3.1.

At Phase 1, when the study started, people concerned did not fully understand the objective and the details of study. At the first and second sessions of the Workshop, we started by «Analysis of Problems of the System that promotes Land degradation Prevention Measures,» using PCM approach to review the core issues. It was aimed at sharing the issues and understanding among participants.

Then, at the 3rd and 4th sessions, outline of M/P became clearer and at the 4th workshop, «UCADR», which would be the core of M/P, was proposed and the Workshop was positioned as the forum for explanation of the policy and results of study at regional level by the study group.

From the 5th session, the issues and improvement measures for «UCADR» were discussed,

which was the core of system establishment program of M/P, proposed by the study group. In addition, review of policy and results of study was made and it became the forum for unifying the intentions in regions to escalate the opinions from regions to the central government. At Phase 1, however, members from each UCADR had occasions, where they were unable to speak freely at the Workshop, in deference to the regional department directors and chief of provincial office, probably because they were not confident in their operation management of UCADR.

Table 1.3.1 Agenda and Implementation History of Cooperation Promotion Workshop

Segment	Number	Major Agenda	Implementation and History
Phase 1	First	<ul style="list-style-type: none"> <li>• Review of key problems in land degradation prevention measures</li> <li>• Analysis of the people concerned and problems in land degradation prevention measures</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop was positioned as the forum for sharing understanding the key problems of study among the people concerned</li> </ul>
	Second		
	Third	<ul style="list-style-type: none"> <li>• Review of role sharing of related people and cooperation method</li> <li>• Summary of field study and review of the policy for the next Phase study</li> </ul>	<ul style="list-style-type: none"> <li>• Period for review of outline of M/P</li> <li>• The Workshop was positioned as the regional level steering committee as it was proposed to establish UCADR at <i>Department</i> level.</li> </ul>
	Fourth		
	Fifth	<ul style="list-style-type: none"> <li>• Role sharing for planning, implementation, and management of pilot project</li> <li>• Analysis of issues for UCADR activities, review of PDM proposal, and review of issues toward the next Phase</li> </ul>	<ul style="list-style-type: none"> <li>• Period when system establishment UCADR activities started, which is the core of M/P</li> <li>• People concerned clearly recognized the objective, results and details of activities of the Study</li> </ul>
	Sixth		
Phase 2	First	<ul style="list-style-type: none"> <li>• Explanation of draft M/P and policy for Phase 2 study</li> <li>• Progress of Phase 2 study</li> <li>• Study results and future issues</li> <li>• Institutional position of UCADR</li> <li>• Management of UCADR by several villages</li> <li>• Implementation of resource volume study</li> </ul>	<ul style="list-style-type: none"> <li>• Period for verification of validity M/P and capacity improvement of agents</li> </ul>
	Second		
	Third	<ol style="list-style-type: none"> <li>1) Policy for study in the 2nd year</li> <li>2) Specific measures for concretization of project</li> </ol>	<ul style="list-style-type: none"> <li>• Period for establishment as the form of exchanging opinions between the central government and local administrations</li> </ul>
	Fourth	<ol style="list-style-type: none"> <li>1) Policy for summarizing Df/R</li> <li>2) Proposal for pilot project</li> </ol>	

At Phase 2, the verification theme was «whether UCADR members can act on their own. » UCADR members escalate the results of activities at *Department* level to the Workshop and then to the central government after discussing with the regional department directors of

Ministries of Agriculture, Stock Raising and Forestry and Chief of Provincial Office on the equal footing. The central government sent the caravan team to listen to the opinions of regions as appropriate and summarized their opinions and then it made counterproposals at the Workshop. At Phase 2, the consciousness that the Workshop is the regional steering committee was rooted among the participants and it has grown to the state that active discussions are made possible toward the institutionalization of UCADR and realization of the project.

(2) UCADR

Results of verification study related to UCADR conducted along with the verification issues shown in 1.2.2(2) will be shown in Monitoring Summary Table.

Verification Issue 1) Will UCADR be a contact point of residents support?
[Conclusion] As the results of participatory type development approach training for agents have gradually been emerging and the increase in closeness between agents and residents through the work for implementation of project by OJT, UCADR began to work as the contact point of residents support.

<Explanation>

1) Changes in Closeness between Agents and CVGT

In the beginning of 2004(Phase 2), only four villages initially selected were the subjects. Thereafter, from the late 2004 to the beginning of 2005, subject villages gradually increased to include new villages and additional new villages and neighboring extension villages. In the course of expansion, agents continued to consult with CVGT, including selection of subject villages and pilot project items, and review of project contents, etc. and they had experiences to incorporate the desires of residents in the plan through OJT.

In 2005, opportunities for agents to visit villages and meet residents increased such as direct implementation of part of pilot project by agents, which made the relationship between agents and CVGT closer.

In addition, results of participatory type development approach training for agents have gradually been emerging and it was a major factor of increased closeness that agents made interviews on the problems and desires of CVGT and that the capacity to enlighten residents also improved.

2) Contact Point for Residents Support

Residents are often bewildered to whom they should consult on the problems of the village and their desires. There were occasions where by residents bringing such consultation to the UCADR meeting, specific contact points (relevant NGO and branch office of

administration) are introduced to residents at the meeting and residents accessed the said body. It is a significant effect of participation by the *Prefet* and other relevant agents and NGOs and Societies.

<p>Verification Issue 2) Can UCADR resolve inadequate cooperation between agents?</p>
<p>[Conclusion]</p> <p>It was confirmed that more efficient implementation of project would be possible by reduction of materials and equipment to be shared through sharing of action plan of each agent by UCADR members.</p> <p>In the implementation of project other than special field of agents, such as support to CVGT organization enhancement, the person in charge of implementation was appointed from among agents and each agent became able to share their roles in cooperation.</p> <p>Due to communication in local languages, however, work is sometimes concentrated on particular agents, and accordingly, it is necessary for concretization of project to appropriate employment cost of local interpreters to be accompanied to the field.</p>

<Explanation>

1) Cooperation between Various Fields

In pilot project in 2005, it was confirmed that project in each special field was promoted efficiently through cooperation between agents at UCADR, including reduction of number of materials and equipment to be shared between agents by checking their activities each other in the field of rainy season growth (niébe) in agriculture and fodder production (niébe) in stock raising.

With respect to activities related to natural resources management and forest resources management, the *Prefet* and other agents in the fields of agriculture, stock raising and environment are all relevant people and the consciousness was established, of which information sharing at the UCADR meeting will be the foundation of cooperation between agents.

2) Role Sharing between Agents

In 2004, as projects other than special fields of agents, support to organization management of CVGT, income enhancement of women, serial bank, literacy education, well improvement and road crossing construction were conducted.

As examples of role sharing between agents related to the above, there was a UCADR where female stock raising agent assumed a role of coordination of activities for income enhancement of women and a UCADR where ZAT head, who became secretary general from January 2005, bore the responsibility, which showed minimum role sharing.

In pilot project in 2005, it was determined to promote project, clarifying the person in

charge among the agents, who will be engaged in communication and coordination with NGOs, etc. and in monitoring in such fields other than implementation of projects in special fields of agents as support to income enhancement of women, support to organizational enhancement of CVGT and support to training for developing educators of literacy education. Verification was conducted following the year 2004 on how the role sharing among agents would be made.

In Middle-North Region, the person in charge was appointed in terms of efficiency, such as the person who relatively has more free time is appointed, taking into consideration the volume of work of each agent, or the agent conducting project in the neighboring area of the village assumes the duty.

On the other hand, in Sahel Region, there were cases where the person capable of commanding Foulfoulde was appointed to the person in charge because of emphasis on communications in the local language. This means in turn, work is concentrated in the person who can speak Foulfoulde, which can be said the opposite phenomenon as compared in more efficient Middle-North Region. In Sahel Region, training of Foulfoulde was conducted by the volunteers among administrators and agents, but as it is difficult to master the language in a short period of time, it would be necessary to appropriate expenses for employing local interpreters to be accompanies to the field in Sahel Region.

<p>Verification Issue 3)          Can UCADR be a framework to supplement activities of agents who are reduced in number?</p>
<p>[Conclusion]          In addition to support to organizational operation of CVGT, it is essential to utilize NGOs and Societies for project implementation in the fields of income enhancement of women, serial bank, literacy education, well improvement, road repair and maintenance and management of buildings/structures, and the burden of responsibility in the UCADR is getting clearer as the person in charge of implementation has been selected from agents.          In reviewing concretization of project, in the special field where agents are responsible for implementation of project, there might be a project implementation pattern, utilizing NGOs and Societies, taking into consideration the project volume and manpower of agents.</p>

<Explanation>

1) Role Sharing between Agents and NGO/Societies

With respect to facilitation of residents, know how was accumulated with NGOs/Societies. For example, in case of enlightenment activities in the village, there was a case where efficient activities were made by the person in charge who went to the



village overnight to give enlightenment activities by video showing for general residents at night and conducted training for leaders of CVGT in the next morning.

Other than support to organizational operation of CVGT, in project implementation in the fields of income enhancement of women, serial bank, literacy education, well improvement, road repair, as they are outside of special field of agents, it is essential to utilize NGOs/Societies in the technical area. With respect to buildings and structures, there was an opinion that it was difficult to monitor of maintenance and management as it was outside of the special field of agents.

It is essential to utilize NGOs/Societies in project implementation and maintenance and management, but it must be absolutely necessary to avoid total dependence. In such fields, it is necessary to appoint the person in charge from among agents to have them actively participate in such work as resident enlightenment, progress management and maintenance and management.

In implementation of pilot project in 2005, the person in charge of implementation was appointed from among agents and the location of responsibility in the UCADR is getting clearer.

## 2) Restrictions arising from Project Volume

In the beginning of 2004, only one village was subject of UCADR, in 2005, number of subject villages jumped to four to five villages. Further implementation of pilot project in 2005 posted as the verification issue, “whether agents can conduct project implementation directly.” In connection with the increase in project volume, number of days of activities of agents in villages soared, and some spend more than half of the month work outside. If it became an actual project in the future, it is expected that the number of villages to be managed by the UCADR might reach the upper limit due to restrictions from work volume of agents, member of UCADRs.

In consideration of concretization of project, for the project items which agents can directly conduct, it is realistic to have a style of pilot project conducted in 2004, which utilizes resources of NGOs / Societies, and agents give instructions and conduct supervision depending of the project volume and assignment of agents.

## 3) UCADR Adviser

In 2005, we had human resources with rich experience in regional activities, including leaders of NGOs and Societies participate in the UCADR as advisers in order to vitalize UCADR activities in Sahel Region.

Method of advisory work was in accordance with the followings.

Advisers shall attend UCADR meetings and observe and give advice from the following

viewpoints whether the operation method and contents of meetings or field activities of agents are giving consideration to regional situations and will of resident and conducted appropriately and subjectively.

- Whether the role sharing of administrators, agents, persons in charge at NGOs / Societies and CVGT is determined and the attribute of responsibility is clear.
- Whether UCADR activities are conducted actively, autonomously and developmentally.
- Whether consideration is given from comprehensive point of view, taking into consideration the nature of the region and social and economic conditions.

In the beginning, some doubt was brought to the study group about the necessity by administrators and agents but they agreed after discussion.

Details of advice are such basic matters to proceed with meetings efficiently as starting time and intermissions of meetings, and form of presentation and the necessity and its details of making follow-ups of CVGT organization by agents, and also correction of proceedings, which sometimes tended to be proceeded at the pace of administrators and agents and CVGT were left behind.

Such improved matters contribute to vitalization of and more efficient UCADR activities, but we make a rather negative judgment on whether participation of advisers will continue to be effective forever and whether it is necessary, because we believe there is a limit for UCADR members to continue to listen to advice of the outsiders seriously. At the stage of operation, it is necessary to evaluate UCADR activities regularly, and it is important to make most of the power of those people who had much experience.

Verification Issue 4) Is it possible to improve communications between agents and residents by UCADR?
[Conclusion] It is one of the important factors to communicate in local languages and study of local languages shall be incorporated in the training as part of capacity improvement of agents. Such efforts have been made by volunteers. In order to encourage statements of CVGT, it is necessary to improve explanation capacity of CVGT at meetings. CVGT from several villages began to attend UCADR meetings and mutual enlightenment could be observed.

<Explanation>

- 1) Communications in Local Languages

At UCADR meeting, there is a language barrier that disturbs communications between administrators / agents and residents. In the villages subject to pilot project in two UCADRs in Sahel Region, Foulfoulde is spoken. At UCADR meetings, agents who can speak the local language serves as interpreters, but at UCADR of Dori, since only one agent corresponds to the needs, the burden of the agent is quite heavy every time. Under such circumstances, a secretary from CVGT who can speak French served as an interpreter at the meeting at which the secretary attended and generally did a good job. It is difficult for the secretary to attend meetings every time, but as an option to operate meetings, it is conceivable to have CVGT provide a person who can be an interpreter.

Administrators and agents of UCADR of Dori wanted to learn Foulfoulde and training by volunteers started. At UCADR of Sebba, similar movement is observed. It seems to take time to be able to make practical communication, but it is noteworthy that they are willing to communicate with residents as much as possible.

In case of agents working in the field, some Provincial Offices might have interpreters of local language accompany them, but agents, who contact residents in the field, can do no better than acquiring basic local language. Many local languages are spoken in Sahel Region other than Foulfoulde and it is necessary to add local language training corresponding to the region of activities as part of capacity improvement of agents.

## 2) Measures for Encouraging Statement of CVGT

In order to improve communications between agents and residents, it is important to make statements of CVGT more active at UCADR meetings.

From 2005, advisers joining the UCADRs in Sahel Region proposed that first have CVGT report progress of project at UCADR meetings and agents shall make supplemental explanation and that prior to meetings, agenda shall be notified to CVGT to have them consider the contents of statement in advance. This is intended to improve explanation capacity of CVGT at meetings and to make operation of meetings more efficient and improve communications with CVGT.

UCADR meetings in Middle-North Region are not formalistic and conducted in Moore. Accordingly statements of CVGT are more active than Sahel Region in relatively relaxed atmosphere. It is also because of CVGT getting used to meetings.

In addition, as the villages subject to pilot project of each UCADR increased from the latter half of 2004, several CVGT began to attend meetings. Details and methods of reports from CVGT are of all descriptions and mutual enlightenment could be observed as illustrated in the fact that one participant added to the report of the village after hearing the report of other

villages.

Verification Issue 5) Can UCADR conduct project implementation management operation?
[Conclusion] As the number of target villages covered by UCADR increased, the effect of OJT emerged. It was confirmed that such works could be done without any difficulty as selection of villages, present condition study of neighboring villages, follow-up of CVGT support, development of project implementation plan and project implementation. In project items which agents directly bear implementation of project, it was confirmed that they could actively develop planning of training and visit to advanced regions. On the other hand, preparation of specifications other than their special fields is difficult, which requires guidance by Provincial Agricultural Office Chief and <i>Chief</i> of SAC/MR.

<Explanation>

#### 1) Selection of Villages

In selecting new villages in Middle-North Region, there were cases where population was independently incorporated into the criteria, taking into account the integrity of residents in order to make CVGT established in a short period of time with the consideration by administrators and agents. On the other hand, in selection of new villages in UCADR of Dori in Sahel Region, we learned a lesson that as they did not incorporate presence of other project activities into selection criteria, they were not aware of the presence of other projects.

Later, learning constructive lessons from such experiences, in selection of additional new villages and neighboring extension villages conducted from late 2004 to early 2005, they well understood the purpose of study in new villages presented by the study group and set out the selection criteria to select villages in line with the purpose.

#### 2) Study of Present Conditions of Neighboring Villages

In addition to the villages that coped with pilot project by 2004, in 2005, we will have agents propose project plan for neighboring villages and implement valid one. For the preliminary, we had agents conduct general conditions study and resource study of the village.

They were able to study independently the existing statistical materials and complete interviews with residents by keeping contact with the CVGT of the village. It was confirmed that study of present conditions of villages could be conducted without any trouble.

#### 3) Establishment of CVGT in New Villages

In order to make UCADR carry out a series of work from support to selection for establishment of CVGT and to verify their capacity, in 2004, Sindri Village, Guibaré *Department* and Goudébo Village, Dori *Department* were incorporated. Specific works, including enlightenment of residents and organization of these villages, etc. were consigned to NGO to carry out and had UCADR carry out such works as reviewing specifications for business consignment and selection of candidate consignees. As agents had no experience in preparation or reviewing of specifications, the work related to specifications was quite difficult.

If newly established UCADR will carry out such works at the time of actual implementation in the future, it is necessary to take an approach that first Provincial Agricultural Office Chief and *Chief* of SAC/MR, advisers to UCADR, gives guidance and have agents experience consigned contract of one or two villages thorough OJT, and then agents will expand by themselves. Advisers who are in charge of multiple UCADR will give focused instructions at the start of UCADR.

#### 4) Follow-up of Support to CVGT

With certain intervals after establishment of CVGT, CVGT will get rid of the support of NGO, etc. It is necessary for agents to bear the responsibility for follow-ups to CVGT thereafter as part of monitoring.

Advisers in Sahel Region tell that agents must meet officers of CVGT when they visit the village for technical support and enlighten them with the importance and roles of CVGT repeatedly. This is understood to be a statement supported by their experiences and such contact by agents will build up fiduciary relations with CVGT and work for improvement of communications. Based on this, two UCADR in Sahel Region assigned agents in charge of follow-ups of support to CVGT and it was implemented.

#### 5) Operation Management of pilot projects

In selection of pilot project in the initially selected villages in 2004, each UCADR selected and proposed pilot project based on basic development plan. Among UCADR in Sahel Region, such movements of feedback the results of previous year were observed as simple evaluation on the pilot project implemented at Phase 1 at the preliminary stage and that proposal for compost production by compost tank and land conservation by stone lines in concert with follow-up of rainy season growth improvement.

In order for UCADR to be the actor of supporting implement in project, it is required to have the capacity to determine what is required for the target villages of pilot project and how to do, from comprehensive view point, getting rid of the idea only to implement project along the basic development plan.

In 2005, we aimed at having UCADR acquire the capacity of «operation management of a series of project, from selection of project to proposal of project, budgeting (donor finding), and project implementation management, evaluation, monitoring and feed back»,

#### 6) Development of Project Plan

In 2005, as a theme of pilot project implementation, project implementation by agents themselves is posted. In implementation of these projects, we have agents develop prior business plan, including budget, and the study group has consultations on the contents with them to have the agents implement projects, based on the results of consultation. As they are the projects in the special field of agents, they were able to develop the plan, including schedule, budget, training plan for residents, discussion with CVGT on the contribution, etc. without any difficulty.

In Middle-North Region, in the training plan for residents engaged in agriculture and stock raising, there were cases where the budget for lecturers was appropriated not only to agents but also to staffs of Provincial Offices. Training is clearly distinguished from everyday technical instructions and the contents of training are managed by Provincial Offices. Daily allowance of lecturers of training is determined at higher level than that of everyday technical instructions, thus it is necessary to reconsider for concretization of project.

#### 7) Management of Project Funds

In implementation of project by agents, it was a big issue how to make them manage the project funds. In 2005, we conducted verification of how UCADR managed the expenses for purchase of materials and equipment to certain extent. Prior to verification, as we conducted interviews with relevant organizations on fund management by UCADR, it was confirmed that *Department Governor* had no power to implement the budget and with the current UCADR system, we cannot cause *Chief* of UCADR to manage the funds.

As implemented by such project as PNGT□, there is a way to have CVGT manage the funds, but there is a risk on fund management if CVGT has not been functioning adequately.

Based on such results of interviews, in 2005, we decided to verify whether agents could make fund management of expenses for purchase of materials and equipment after we deposited funds with agents, based on the budget submitted by agents in charge of each project implementation. Fund management was caused to be made, adding the confirmation of *Department Governor* and ZAT Head, secretary general as appropriate, and it was confirmed that they could manage without trouble. There were cases, however, where materials and equipment were unable to procure in the vicinity of the place to which agents are assigned, such as UCADR of Guibaré and UCADR of Sebba, and it became possible to procure with the

support from the study group and *Chief* of SAC/MR. In concretization of project, it is necessary to give consideration to communication expenses and materials and equipment transportation expenses.

With respect to fund management capacity in concretization of project, after the start of Communes by decentralization, management will be transferred to Commune Chief.

#### 8) Implementation Capacity of Monitoring and Evaluation

As part of project management capacity of agents and administrators, in 2004, we caused UCADR to conduct evaluation of pilot project, and in 2005, caused them to evaluate NGOs and Societies to which we consigned pilot project in 2004. We made them review evaluation method, evaluation index and standards within UCADR, and UCADR members, including CVGT made evaluation.

At UCADR of Guibaré, in which personnel relocation of agents were frequent from 2004 to 2005, evaluation work of NGOs and Societies did not run smoothly partly due to the holiday season in August. Evaluation of project management capacity of UCADR is largely dependent on the presence of the person with experiences and in case of absence of experienced person due to personnel relocation, it is the key how to fill the vacancy.

It is generally desirable that *Chief* of ZAT, the secretary general will lead the implementation of monitoring evaluation with other agents, and the basic organization will be that under which *Chief* of SAC/MR and Provincial Agricultural Office Chief will support *Chief* of ZAT as advisers.

#### 9) Inspection Visit to Advanced Region

Regarding project operation management, there were cases where agents planned inspection visit to the advanced region for the purpose of enlightenment and training of residents. Specifically, they were the activities of fowl raising of Guibaré UCADR and pasture harvesting and conservation of Korsimoro UCADR. It was confirmed that agents contacted the agents in charge of the visiting place and managed everything, including schedule and arrangement of cars to carry out the visit.

Inspection visit to advanced regions is an opportunity for residents to see the effect of project directly and hear the real voices of the residents of the village visited, and thus has a large impact on enlightenment. At the neighboring village extension seminar held by UCADR of Korsimoro, as can be seen from the fact that the participants from the neighboring villages showed much interest in the inspection visit to advanced regions, conducted at Phase 1 for the residents in Nougou Village, residents are highly willing to acquire skills employed in other villages. It was verified that agents alone could carry out such projects.

<p>Verification Issue 6) Can UCADR make extension to other villages in the <i>Department</i>?</p>
<p>[Conclusion] It was verified that UCADR could carry out planning of seminars for extension to neighboring villages, notification to neighboring villages, preparation of signs and prizes, and proceedings on the day without any difficulty.</p>

<Explanation>

1) Neighboring Villages Extension Seminar

In November 2005, a seminar was held at the initially selected villages (Vousnango, Nougou, Selbo, Diogora), inviting representatives of neighboring villages to introduce the details of pilot project. Along with the holding of this seminar, commendation was made by the sub-committee, selecting good projects from among each and every pilot project, conducted in the villages holding the seminar.

At the seminar, signs in both French and the local language were posted on the structures constructed and installed by the pilot project, in consideration that it would be known to the neighboring residents after the seminar.

Prizes of good project commendation were selected based on the desire of residents that were communicated to agents interviewed with them (small equipment such as monocycle and scoop, etc., and fertilizer). It is effective to present such prizes to improve residents' willingness to act.

All the works of planning of seminar, notification to neighboring villages, preparation of signs and prizes were delegated to UCADR and it was verified they could implement without any difficulty, including the proceedings of the day. It is expected that activities will be more activated and sustained by the extension effect to neighboring villages and encouragement by the sub-committee through commendation.

<p>Verification Issue 7) Can UCADR develop rural development strategies depending on the situation of the region?</p>
<p>[Conclusion] The necessity was understood with respect to the evaluation method of environmental pressure based on the results of resource study, but understanding was not reached as to specifically how to use it in designing development plan and development strategies of the region.</p>

<Explanation>

1) Development Strategies depending on the Situation of Region

In promoting land degradation alleviation countermeasures, it is needless to say that without consideration to the natural resources and social conditions of the target region of study, the



countermeasures cannot be established. In case of promoting rural development, with the initiative of residents, it is required of system establishment in that administration indicates the direction of development precisely and measures for guiding residents. In 2005, for the purpose of recognizing the endowment condition of natural resources in the region, we conducted natural resource volume study in Nougou Village, Vousnango Village and Selbo Village. In this connection, at the third UCADR Cooperation Promotion Workshop held in September, 2005 for consciousness raising of administration, general explanation of evaluation method of environmental pressure was given together with interim report of resource study to obtain understanding of the necessity.

However, specific understanding of how the evaluation results will be used in development plan of the region was not reached. When concretizing the project, it is necessary for UCADR to take the initiative in rural development of the entire Commune but at present, it only has insufficient capacity.

<p>Verification Issue 8) Can UCADR continue to act?</p>
<p>[Conclusion] With respect to composition of UCADR, by assigning the Governor of <i>Department</i> to <i>Chief</i> of UCADR, line of command of each agent became clearer and the posture of agents toward UCADR activities was improved. As three UCADR were officially institutionalized by Provincial order, the ground for UCADR to continue activities after completion of study became clear. Although each UCADR prepared action programs after completion of study, there were differences in degree of elaboration among UCADR because the experiences, quality and posture for tackling problems of agents were comprehensively reflected. It is worried that UCADR activities will scale down due to fund shortage and absence of donors.</p>

<Explanation>

1) About UCADR Members

From the end of 2004, UCADR composition was partly revised as follows.

- *Chief* of UCADR is changed to the governor of *Department* from Provincial Agricultural Office Chief.
- Function of secretary-general was created and *Chief* of ZAT is to be assigned.

Provincial Agricultural Office Chief shall be an adviser, together with *Chief* of SAC/MR, another adviser.

As the governor of *Department* became Director of UCADR, *Chief* of ZATE and forest agents are under the direct command of Director of UCADR, which made directions within UCADR

Before the governor of *Department* became Director of UCADR, as Provincial Agricultural Office Chief, Director of UCADR did not have the power to command ZATE Head and forest agents, agents other than agricultural field conducted UCADR activities under the

directions of Provincial Office Chiefs, who are the direct superiors of them.

While the governor of *Department* is very busy and only attends half of UCADR meetings, in the absence of the governor, deputy of the governor or ZAT Head presides the proceedings of UCADR and they report to the governor of *Department* later.

For quite sometime, the capacity of ZAT Head, the secretary- general has affected the activities of UCADR. At UCADR to which young ZAT Head is assigned, unifying force as the secretary-general is rather inadequate due to lack of experience. While relocation of agents is inevitable in some respect, relocation of the key person largely affect UCADR activities. We expect their future growth with more experiences.

In August and October, 2005, relocation of governors of *Department* was made throughout the nation and in three UCADR, Directors were changed. It has been pointed out that relocation of governors of *Department* is frequent, but despite the said fact, it is advantageous to assign governors of *Department* to Directors of UCADR. It is necessary to give consideration to minimize the impact on UCADR activities by making take over sufficiently.

Provincial Agricultural Office Chiefs, advisers to UCADR, had the experiences of UCADR Directors before, and not only technical advice in agricultural field but also in other fields, they gave appropriate advice, including development of project implementation plan by agents.

Other advisers, SAC/MR Heads participated in two UCADR in Middle-North Region and Sahel Region from the position to comprehend the reality of each Province under jurisdiction of Regional Department and gave advice to UCADR from the general position.

As either adviser works at the Provincial Capital or the location of Regional Department, travel expenses to the meeting place are necessary for them to attend meetings depending on UCADR. Considering sustainability of UCADR, it is necessary to give consideration to the frequency of meeting attendance of advisers by focusing on the start of UCADR.

## 2) Institutionalization of UCADR

It is one of the evidences showing validity of UCADR and the precondition for securing sustainability of UCADR activities after completion of study to officially position the existing four UCADR in the present system. Study group has, since the beginning of 2005, worked on the government to institutionalize the existing four UCADR by Provincial Order or *Department* Order. On the other hand, the study group requested MATD to give specific directions to regions for institutionalization of UCADR organized by the study (Attached Material 2).

As a result, in October 2005, the directive was issued by MATD, which required regional governors in Middle-North Region and Sahel Region to institutionalize UCADR. Based on the directive, at UCADR of Sebba, UCADR of Guibaré and UCADR of Korsimoro, the governor of *Department* officially requested Province for establishment of UCADR and UCADR was officially recognized by the Provincial Order (Attached Material 2). MATD recognized the importance of the roles played by UCADR in reinforcement of Communes and declared that it would position UCADR in the decentralization action plan. (Attached Material 2).

### 3) Action Program

It is a big issue what activities the current UCADR will continue and how will it continue the activities to support residents through pilot project after completion of study.

We had each UCADR understand at the 3rd UCADR Cooperation Promotion Workshop held in September 2005, that continuous activities after completion of study are necessary and had them prepare specific action plan at UCADR meetings. We had each UCADR present action plans at the 4th UCADR Cooperation Promotion Workshop held in November and the contents were discussed.

Comparing action plans by UCADR, there is a big difference in their elaboration. It seems that experiences in UCADR activities, quality, and posture for efforts of agents who actually participated in development of the plan were generally reflected.

### 4) Cooperation with Multiple Donors

In Sahel Region, there was a strong impact that PSB implemented projects under the principle of one village one donor. In 2004, PSB projects were completed and we believe each donor will step forward to cooperate to carry out project in concert, centering on PNGT□.

In Middle-North Region, such projects as PNGT□ and PDL/S have already been implemented in the same Province and it was confirmed that there was no problem in cooperation with other projects.

In fact, at UCADR of Korsimoro, funds for construction of boullis and wells were short and the UCADR was forced to request another donor for the project branch, which was not coped with by the pilot project of the study.

After completion of the study, it is quite relevant to sustainability of UCADR that UCADR has the capacity to cooperate with multiple donors and promote concretization of project in coordination with them in planning and budgeting of projects.

<p>Verification Issue 9) Can the existing UCADR bear extension to other Provinces?</p>
<p>[Conclusion]</p> <p>At the joint workshop for verification of diffusability covering three Provinces, where pilot project was not implemented, planned schedule was followed despite that some agents were requisitioned to opening ballots of Presidential election. It was confirmed that roles of instructors were shared by agents and preparation for holding, preparation of materials and proceedings were made by themselves.</p> <p>There were some cases, however, where the contents were not adequately conveyed to the participants from other Provinces due to the details of explanation and inadequate skill of explanation.</p> <p>Administrators and agents who participated in the workshop could establish provisional UCADR after returning for implementing field training, as scheduled, of selection of villages, resource study, preparation of project plan and request donors for support.</p> <p>In Soum Province, where project implementation by another donor was promoted, a doubt was raised about establishment of UCADR. It is determined that they overlooked the collaborating functions of UCADR between administration of agriculture, stock raising and environmental field and regarded it as a mere project implementation organization. There was inadequate explanation by lecturers and discrepancy between the existing project systems of the Province behind such a negative view.</p>

<Explanation>

1) Verification of Diffusability

Joint workshop was held by three UCADR, in which agents from three Provinces and three *Departments*, where pilot projects were implemented, and administrators and agents from three Provinces, where pilot project was not implemented under the study were convened. At the workshop, verification was made on technical transfer from agent to agent, with respect to the experiences obtained at UCADR in development of project plan and monitoring. Participants were caused to establish provisional UCADR after returning and conduct field training of selection of villages, resource study, preparation of project plan and request donors for support and they were monitored.

As a method of technical transfer, agents who are member of UCADR became instructors to give advice and instructions to agents from three Provinces where projects were not implemented. In addition, monitoring of capacity improvement of UCADR members was made by observing how instructions were given.

At the joint workshop, members of each UCADR (except for Guibaré UCADR) shared and carried out review of programs, preparation of explanation materials and proceedings.

Although there was UCADR which lacked the key person who was requisitioned to process of vote counting of Presidential election, planned schedule was observed. But at the short period workshop, it was observed from the questionnaires that there were cases where the contents were not sufficiently communicated to the participants from other Provinces due to inadequate explanation and explanation skills.

In Soum Province, PNGT□ gives direct support to CVGT and a participant raised doubt about establishment of UCADR. It is determined that they overlooked the collaborating functions of UCADR between administration of agriculture, stock raising and environmental field and regarded it as a mere project implementation organization. There was inadequate explanation by lecturers and discrepancy between the existing project systems of the Province behind such a negative view.

Field training was completed as scheduled in every *Department* and the expected results were achieved.

### (3) UCADR Cooperation Promotion Workshop

Results of verification study related to UCADR Cooperation Promotion Workshop are shown in Monitoring Summary Table in Attached Material 4 and «Materials related to UCADR Cooperation Promotion Workshop»

<p>Verification Issue 1) Can consciousness of agents be raised toward problem solving?</p>
<p>[Conclusion] Agents in the fields of agriculture, stock raising and forestry became able to recognize and resolve the problems beyond the said fields and raised consciousness. Based on the contents of each UCADR Cooperation Promotion Workshop, the following treatment shall be made.</p> <ol style="list-style-type: none"> <li>1) In the application version of operation manual, addition and modification shall be made such as “necessity of estimation of resource volume and way of use,” “gradual transition of members and roles after Communization of villages in the UCADR establishment manual (draft)” and “UCADR operation method.”</li> <li>2) After completion of the verification study, action plan was announced by each UCADR for “how are the previous various pilot projects continued to be coped with” and more specific planning was directed for index, actors and funds. Decentralization implementation program confirmed active efforts of UCADR members toward institutionalization of UCADR.</li> <li>3) With respect to review of PDM3, PDM3 was distributed to all participants and explanation of how to read the table and points was given to make them understand. Moderator organized duplication and errors and nine cases were proposed as the cards for PDM4 (draft). All the participants showed much interest in PDM after participating in the workshop. Multiple explanations were made about five evaluation items (degree of achievement, efficiency, impact, validity and autonomous expansivity)before, and recently the terms in these five evaluation items are often quoted by UCADR members and the explanation this time made their understanding deeper.</li> <li>4) Joint meeting of UCADR Cooperation Promotion Workshop was held for the first time and as participants, three office chiefs of Province (Agriculture, Water Use and Aquatic Resources, Animal Resources, and Environment and Living Environment), who are the superiors of agents, were invited and active discussions and exchange of opinions at various levels (Province, <i>Department</i> and agents) were made, which confirmed the significance of the joint meeting. In the case of holding the meeting in the future, it is the precondition to secure the expenses for the meeting(about 1,100,000 Fcfa), which requires review of hosting expenses, including selection of participants, reduction of unit price, etc.</li> </ol>

<Explanation>

1) Overview of Implementation of UCADR Cooperation Promotion Meeting

In both Middle-North Region and Sahel Region, two UCADR are working respectively. These two UCADR have been working independently but two UCADR Cooperation Promotion Workshops, one UCADR Cooperation Promotion Workshop for each Region, were established in 2004 (Phase 2), recognizing the necessity of exchange of opinions about the common issues and sharing information. In 2004, UCADR Cooperation Promotion Workshop was held twice. In 2005, it was also held twice and the final meeting was a joint meeting of the two Regions, which was held in Kaya (Table 1.3.2)

Table 1.3.2 Overview of Implementation of UCADR Cooperation Promotion Workshop

Segment	Middle-North Region	Sahel Region
Holding Date	1st: November 19, 2004 2nd: January 25, 2005 3rd: September 8, 2005 4th: November 23, 2005(joint meeting with the right)	1st: December 1, 2004 2nd: January 27, 2005 3rd: September 14, 2005 4th: November 23, 2005(joint meeting with the left)
Venue	Kaya	Dori(4 <sup>th</sup> in Kaya)
Number of Participants	1st: 11 persons(excluding study group) 2nd: 10 persons(the same as above) 3rd: 15 persons(the same as above) 4th: 17 persons(the same as above)	1st: 11 persons(excluding study group) 2nd: 17 persons(the same as above) 3rd: 15 persons(the same as above) 4th: 21 persons(the same as above)
Participants	<ul style="list-style-type: none"> <li>• Middle-North Region Agriculture, WaterUse, Aquatic Resources Department, Rural Society Extension and Guidance Section(SAC/MR)Chief</li> <li>• Bam Province Agriculture, WaterUse, Aquatic Resources Office Chief</li> <li>• Guibaré <i>Department</i>, ZAT Chief</li> <li>• Vousnango District UAT Chief</li> <li>• Sanmatenga Province Agriculture, WaterUse, Aquatic Resources Office Chief</li> <li>• Korsimoro <i>Department</i> ZAT Chief</li> <li>• The same, PV Chief</li> <li>• The same, SDECV Chief</li> <li>• Person in charge at NGO</li> </ul>	<ul style="list-style-type: none"> <li>• Sahel Region Agriculture, WaterUse, Aquatic Resources Department Rural Extension and Guidance Section(SAC/MR)Chief</li> <li>• Seno Province Agriculture, WaterUse, Aquatic Resources Office Chief</li> <li>• Dori <i>Department</i>, ZAT Chief</li> <li>• The same, ZATE Chief</li> <li>• The same, SDECV Chief</li> <li>• The same, UAT Chief</li> <li>• Yagha Province, Agriculture, WaterUse, Aquatic Resources Office Chief</li> <li>• Sebba <i>Department</i>, ZAT Chief</li> <li>• The same, ZATE Chief</li> <li>• The same, SDECV Chief, the same, UAT Chief</li> <li>• Person in charge at NGO</li> </ul>
Additional Participants	<ul style="list-style-type: none"> <li>• Participation from the 2nd meeting: Guibaré <i>Department</i> Governor, Korsimoro <i>Department</i> Governor</li> <li>• Only in the 4th meeting: Animal Resources and Environment and Living Environment Provincial Office Chiefs</li> </ul>	<ul style="list-style-type: none"> <li>• Participation from the 2nd meeting: Dori <i>Department</i> Governor, Sebba <i>Department</i> Governor</li> <li>• Only in the 4th meeting: Animal Resources and Environment and Living Environment Provincial Office Chiefs</li> </ul>
Details of Explanation, etc.	1st: <ul style="list-style-type: none"> <li>• UCADR reports(UCADR Director, agents, NGOs)and exchange of opinions among participants</li> <li>• Problem analysis by PCM approach               <ul style="list-style-type: none"> <li>–Middle-North Region: Main Problem “UCADR at Phase 1 did not function well”</li> <li>–Sahel Region: Main Problem ”UCADR at Phase 1 did not function to 100%”</li> </ul> </li> </ul> 2nd: <ul style="list-style-type: none"> <li>• UCADR reports(UCADR Director, agents, NGOs)and exchange of opinions among participants</li> <li>• Theme Analysis</li> </ul>	

	<p>Middle-North Region: Theme 1 “Inadequate communications between each person in charge” Theme 2 “Issues for UCADR covering multiple villages in the future”</p> <p>Sahel Region: Theme 1 ”Insufficient Autonomy of UCADR” Theme 2 “Inadequate communications between each person in charge” Theme 3 “Issues for UCADR covering multiple villages in the future”</p> <p>3rd: Themes common to both Region Theme 1 “Interim report of resource estimation study (including demand and supply balance trial calculation exercise)” Theme 2 “UCADR Establishment Manual (Draft) and Flow of Rural Development Project Implementation (Draft)” Theme 3 “UCADR activities after completion of study”</p> <p>4th: Themes common to both Region (Joint Meeting) Theme 1 “Action Plan of each UCADR after completion of study” Theme 2 “Decentralization Program” explanation by MATD Study and Planning Department staff Theme 3 “Review of PDM3”</p>
--	---

## 2) 4th UCADR Cooperation Promotion Workshop (Joint Meeting of Both Regions)

Here, the 4th UCADR Cooperation Promotion Workshop will be described, where action plans of each UCADR after completion of the study and decentralization program were discussed. (For the 1st to 3rd meetings, see Attached Material 4).

4th UCADR Cooperation Promotion Workshop was held in Kaya as the joint meeting of Middle-North Region and Sahel Region. SAC/MR Chief from Sahel Region presided the proceedings of the meeting. The details were as follows.

- Action plans of each UCADR after completion of study (explanation by each UCADR and questions and answers)
- Decentralization Program (Explanation by MATD Study and Planning Department Staff and questions and answers)
- Review of PDM3 (Card indication method by workshop)

The details of the meeting were as follows.

Item	Middle-North Region and Sahel Region (Joint)
1) Action plans of each UCADR after completion of the study (see, Table 1.3.3)	<p>(1) UCADR of Guibaré (UAT explanation: with references):</p> <ul style="list-style-type: none"> <li>• Explanation Contents: Action Plan for 2006-07 consists of UCADR Meeting, monitoring, evaluation and diffusion seminar. (Outline table shall be shown below)</li> <li>• Details of Q&amp;A:               <ol style="list-style-type: none"> <li>1) Number of monitoring-4 agents monitor 8 times a month and 312 times / year are not too many.</li> <li>2) Fund Procurement-After approval of UCADR, the donor will be determined.</li> <li>3) Necessity of Index and Strategies-based on the plan, action program, incorporating index and date shall be prepared.</li> </ol> </li> </ul>
	<p>(2) UCADR of Korsimoro (Explanation by ZAT Chief: with references)</p> <ul style="list-style-type: none"> <li>• Explanation Contents: Action Plan for the period between completion of the study and commencement of pilot project, consisting of 6 activities (UCADR operation, agriculture, environment, income enhancement of women, stock raising and living environment) (Outline table shall be shown below)</li> <li>• Details of Q&amp;A: 1) Target setting-In the future, detailed program shall be</li> </ul>

	<p>prepared, incorporating targets.</p> <p>2) Addition of items other than JICA verification study-pilot project shall be continued and expanded. Bas-fond improvement is also added.</p> <p>3) Fund Procurement-In addition to approaching to WFP, look for another donor.</p>
	<p>(3) UCADR of Dori(ZATE Chief explanation: with references)</p> <ul style="list-style-type: none"> <li>• Explanation Contents: In addition to UDAR meetings, five items are included in the action plan, but no target was set out. (Outline table shall be shown below).</li> <li>• Details of Q&amp;A: <ol style="list-style-type: none"> <li>1) Fund Procurement-Some donors (A2N: January - December 2006) are determined, but look for donors.</li> <li>2) Preparation of estimation for donor finding-As CVGT cannot prepare, UCADR will support.</li> <li>3) UCADR member change due to new project.-there will be reshuffling of members, but basic composition shall be three Provincial Office Chiefs from Agriculture, Stock Raising and Environment, ZAT Chief, ZATE Chief, SDECV Chief.</li> <li>4) Learning Local Languages-Seminar for Foulfoulde will be continued.</li> </ol> </li> </ul>
	<p>(4) UCADR of Sebba(Explanation by ZAT Chief: no reference)</p> <ul style="list-style-type: none"> <li>• Explanation Contents: Action plan consists of monitoring from March 2006 to February 2007, UCADR Meeting, PDV preparation support, Unit Cooperation Promotion Workshop with Dori UCADR Outline table shall be shown below).</li> <li>• Details of Q&amp;A: <ol style="list-style-type: none"> <li>1) Fund Procurement-Invited National Bank, Adra Fil to the meeting to receive explanation.</li> <li>2) Future activities of 17 persons qualified as teachers through literacy education-accept as recommendation and to be incorporated in the action plan.</li> </ol> </li> </ul>
	<p>(5) Comprehensive Coordination: Summary after explanations by each UCADR and Q&amp;A</p> <ol style="list-style-type: none"> <li>1) UCADR is not a receiver to implement project but proposed as a contact point of land degradation prevention and it is necessary to be an organization that can act for itself after the study group returned.</li> <li>2) Fund is required for activities and it requires estimation.</li> <li>3) Action plan must indicate index, actors, and funds and it is necessary for each UCADR to make a review.</li> </ol>
2)Decentralization Implementation Program	<p>(1) Elucidator: M. Boulaye TAMANI( MATD Study and Planning Department)-with references Explanation references consist of 1) overall situation of decentralization, 2)strategies for promoting decentralization, 3)organizations to carry out strategic framework, 4)Conclusion, 5)Implantation schedule.</p> <p>(2) Q&amp;A</p> <ol style="list-style-type: none"> <li>1) Is it necessary to have relevant ministries delegate authorities? It is necessary to be delegated and simultaneous delegation of authority and budget was expected, but authority shall precede.</li> <li>2) What about human resources at local level and equipment? It is necessary to increase personnel to assign human resources to regions and it will be supported by PRCA(Administrative capacity reinforcement program).</li> <li>3) Shouldn't we secure budget by tax reform? Each municipality shall develop tax system and carry out.</li> <li>4) CVGT was established under four ordinances of Ministry and it will be changed to CVD. Isn't there any objection among ministries? CVD is planned in the Enforcement Ordinance (draft) but we are not sure about the future.</li> </ol>



	<p>5) Why CVGT will be changed to CVD, while CVGT has been recognized by residents? Rural Commune assembly enlightens and establish CVD.</p> <p>6) What is the relation between UCADR and <i>Department</i> Conference? Former works at <i>Department</i> and village level and support residents. Latter relates with the state and support fund procurement.</p> <p>7) What is the distinction between dispersing administrative organs to local organs and decentralization? Delegation of authorities of each Ministry to Regional and Provincial branch offices is dispersion and delegation to municipalities is decentralization.</p> <p>8) Who will be UCADR Director? Rural Commune head will be the Director and authority will be passed over.</p> <p>9) What about institutionalization of UCADR? After establishment of rural Communes, it seems that it will be positioned as “UCADR engages in coordination and technical support.”</p>
3) Review of PDM3	<p>(1) Implementation by Workshop Method</p> <p>(2) To the agent in 4 UCADR (excluding advisers, consisting of Provincial Office Chiefs, SAC/MR Head, NGOs), review was made of PDM3 by card method. Twenty cards were posted and excluding duplication and errors, nine cards were left for reference.</p> <p>(3) The contents are: two were about activities; one was about the index of results; two were about input study group, three were about input Burkina Faso government and one was about preconditions.</p> <p>(4) Based on the contents above, draft PDM4 was prepared and to be incorporated in draft final report.</p>
4) Comment of SAC/MR Head	<p>(1) Action Plan of each UCADR: Each UCADR explained action plan, but as action plan should indicate index, actors and funds, review is requested to each UCADR.</p> <p>(2) Decentralization Implementation Program: Part of cancers about decentralization was resolved. There were some opinions that delegation of authorities should be accompanied by delegation of budget.</p> <p>(3) Review of PDM3: Review was made by card method and based on the results, the study group prepared PDM4 (draft).</p> <p>(4) Joint meeting was held for the first time and vertical and horizontal exchange of opinions was made during the meeting and also at intermissions, which mad the meeting significant. We are grateful to the study group.</p>
5) Analysis by Study Group	<p>(1) Action Plans of each UCADR: They are far different from formal action plan and it is necessary to organize monthly and weekly plan and fund procurement.</p> <p>(2) Decentralization Implementation Program: Before vitalization of decentralization after Presidential election, participants could obtain information of the program in advance; we want them to put priority on discussion of positioning of UCADR and assume the role of institutionalization.</p> <p>(3) Review of PDM3: Modification of PDM at the final stage was naturally a small proposals as the verification study came near to the end and we expect that this knowledge will be utilized in the future as participants could reconfirm the details and composition of PDM.</p>

### 3) Summary of UCADR Cooperation Promotion Workshop

The details of UCADR Cooperation Promotion Workshops, held four times, were as follows and the process of implementation was summarized as monitoring summary table in Attached Material 4.

- (a) As the participants did not understand the purpose of the meeting at the first meeting, both Chiefs of SAC/MR explained the purpose. Later, exchange of opinions over common issues and information sharing was sought one meeting after another.

- (b) At the second meeting, theme analysis was the main agenda, based on the results of the first meeting, understanding of PCM approach was deepened, together with problem analysis of the first meeting. SAC/MR Chiefs recognize the meeting as part of their normal duties and they will sustain the experiences after completion of the study.
- (c) At the 3<sup>rd</sup> meeting, in the application version of operation manual, addition and modification shall be made such as “necessity of estimation of resource volume and how to use,” “gradual transition of members and roles after Communization of villages in the UCADR establishment manual (draft)” and “UCADR operation method.”
- (d) At the 4<sup>th</sup> meeting, after completion of the verification study, action plan was announced by each UCADR for “how are the previous various pilot projects continued to be coped with” and more specific planning was directed for index, actors and funds. Decentralization implementation program confirmed active efforts of UCADR members toward institutionalization of UCADR.

With respect to review of PDM, PDM3 was distributed to all participants and explanation of how to read the table and points was given. Thereafter, agents of four UCADR (excluding advisers consisting of Provincial Office Chiefs, SAC/MR Chiefs and NGOs) entered revisions and comments in the cards and twenty cards were posted. Moderator organized duplication and errors of these cards and nine cases were proposed as the cards for PDM4 (draft). Based on the coordination of these cards and the matters to be added within the study group, PDM4 (Draft) will be prepared and attached to the Schedule of the draft final report. All the participants showed much interest in PDM after participating in the workshop. Multiple explanations were made about five evaluation items (degree of achievement, efficiency, impact, validity and autonomous expansivity) before, and recently the terms in these five evaluation items are often quoted by UCADR members and we believe the explanation this time made their understanding deeper.

Joint meeting of UCADR Cooperation Promotion Workshop was held for the first time and as participants, three office chiefs of Province (Agriculture, Water Use and Aquatic Resources, Animal Resources, and Environment and Living Environment), who are the superiors of agents, were invited and active discussions and exchange of opinions at various levels (Province, *Department* and agents) were made, which confirmed the significance of the joint meeting. In the case of holding the meeting in the future, it is the precondition to secure the expenses for the meeting (about 1,100,000 Fcfa), which requires review of hosting expenses, including selection of participants, reduction of unit price, etc.

- (e) At UCADR Cooperation Promotion Workshop, exchange of opinions over common

issues and information sharing was sought one meeting after another. Raising consciousness of agents became possible toward problem solving.

Table 1.3.3 Outline Table of Action Plan of Each UCADR

UCADR(Period)	Item	Contents	Fund procurement (including plan)
1. Guibaré (2006-07)	UCADR Meeting	Monthly, Extraordinary meeting	PNGT II (presupposes institutionalization of CVGT)
	Monitoring/Evaluation	Pilot project in 4 village (312 time a year/4 persons)	The same as above
	Diffusion Seminar	once/ year	Not required
2. Korsimoro (from completion of the study to commencement of pilot project)	UCADR operation	Monthly, extraordinary meetings, promotion of institutionalization	PDL/S, WFP, etc.
	Agriculture	Improvement rainy season growth, vegetable cultivation	The same as above
	Environment	Vegetable Cultivation, Forestry Resources Management	The same as above
	Income generating activities for women	Accounting book seminar, commercialization technique	The same as above
	Stock raising	Sheep fattening, fodder production, dispute with agriculture	The same as above
	Living environment	Development of Bas-fond	WFP
3. Dori (January 2006-December 2006)	UCADR operation	Monthly meeting, Foulfoulde seminar	NGO, PLE/BN, etc.
	Agriculture	Stone line, Improvement rainy season growth	The same as above
		Compost production	NGO (A2N)
	Environment	Sand dune stabilization, production of seedling	NGO
	Income generating activities for women	Sheep fattening	The same as above
	Stock raising	Recovery of bare land	PLE/BN(*)
		Determination of Transhumance roads	NGO
Fodder production and storage		NGO (A2N)	
Living environment	Protection of waterfront, management of wells	NGO	
4. Sebba (March 2006-February 2007)	UCADR Meeting	Monthly meeting, Donor finding, how to use the persons qualified as teachers by literacy education	National Bank, NGO(ADRA -Fil), etc.
	Monitoring	Pilot projects in 4 villages(48 times a year/4 persons)	NGO
	Preparation of rural development plan	Support to 3 villages	The same as above
	UCADR Cooperation Promotion Workshop	Cooperation Promotion Workshop with UCADR of Dori	The same as above

(\*) PLE/BN: Accumulated Sand Measures Project in Basin of River Niger (Projet de lutte contre l'ensablement / Bassin du fleuve Niger)

### 1.3.2 Capability Reinforcement Program

#### (1) Technical Exchange Meeting

Monitoring Summary Table of technical exchange meeting is shown in Attached Material 4.

<p>Verification Issue 1)          Could supplement inadequate skills of agents?</p>
<p>[Conclusion]</p> <p>The details that have been obtained through four technical exchange meetings are as follows. They could contribute to inadequate skills of agents but the scope of techniques surrounding agriculture, stock raising and forestry is vast and require continuous implementation.</p> <ol style="list-style-type: none"> <li>1) SAC/MR Chief took the initiative of selection of themes of technical exchanges meetings, planning, including implementing method, operation of meetings and summary.</li> <li>2) Implementation cases included efforts by farmers for soil deterioration prevention and productivity improvement by compounding agriculture and stock raising(e.g., use of improved seeds, installation of stone lines, and compost production and use)It is necessary to make efforts for Agro-sylvo-pastral, including forestry in agriculture, stock raising and forestry field.</li> <li>3) Number of themes covered by four technical exchange meetings was 24 in total in the fields of agriculture, stock raising and forestry, but the number of desired themes was 53 in the same fields, which shows strong request for continuation of the exchange meeting.</li> <li>4) From the results of questionnaires, procurement of expense account is pointed out for continuation and about 2 million Fcfa is required, including remuneration for 6 lecturers. It is necessary to reduce expenses by utilizing lecturers from advanced NGOs/ Societies and videos.</li> </ol>

<Explanation>

During the period of study, four technical exchange meetings were held (Attached Material4). From the third meeting at Phase 2, SAC/MR Chief actively managed such works as selection of themes, proceeding and summary and judging from operation of the 4<sup>th</sup> technical exchange meeting, continuous holding acquired firm footing under the initiative of SAC/MR Chief.

1) Selection of Themes

Themes selected at the exchange meetings are shown in Table 1.3.4. As can be seen from the themes, introduction was general statement of land degradation prevention technologies and the themes were selected corresponding to the needs of the region with each time.

Table 1.3.4 Themes of Lectures at Technical Exchange Meeting

Segment	Field	Middle-North Region	Sahel Region
First	Agriculture	CES/DRS(Soil Water preservation/Recovery and protection of soil and )and suitable cultivation technique	Introduction of Sahel Region and land degradation prevention technologies
	Stock raising	Contribution of stock raising field to land degradation prevention countermeasures	Technologies for improvement of grazing land, land degradation prevention countermeasures from the stock raising field
	Forestry	Improvement of biodiversity within agro system and agro-forestry potential in sustainable management of natural resources	Land degradation prevention technologies in forest land, restoration and conservation techniques of plant coating
Second	Agriculture	Land degradation in Middle-North Region(Problems, cause process, frequency, conservation countermeasures)	Contribution of pedology to land degradation alleviation countermeasures
	Stock raising	Land degradation in Middle-North Region(Problems, cause process, frequency, conservation countermeasures)-joint lecture with agriculture	Contribution of pedology to land degradation alleviation countermeasures Joint lecture with agriculture
	Forestry	Land degradation alleviation technologies in Burkina Faso	Land degradation(Causes, strategies, contribution of CNSF)
Third	Agriculture	Production of organic fodder and efficient use	Improvement of agricultural production conditions in Sahel Region
	Stock raising	Production and storage management of fodder related to land degradation alleviation	Stock raising: Reappraisal of local fodder resources for sustainable stock raising in Sahel Region
	Forestry	Installation and management of agro-forestry related to soil and water conservation	Contribution of reforestation activities to land degradation alleviation
Fourth	Agriculture	Land degradation alleviation countermeasures in Burkina Faso, particularly countermeasures against gullies	Compounding of agriculture and stock raising
	Stock raising	Raising of guinea fowls, in particular, countermeasures for death of young birds by disease	Management of livestock and grass resources contributing to land degradation alleviation countermeasures
	Forestry	Approach to sustainable management and conservation of production potential of wet land	Impact of soil and water conservation countermeasures

At these technical exchange meetings, questions and answers were conducted by lecture and efforts were made for solving questions of participants and summary of opinions toward development.

## 2) Implementation Cases after Lecture

Lectures at technical exchange meetings can produce outcomes only after participants apply the know-how acquired to the field. Implementation results of each UCADR were as follows.

- UCADR of Guibaré: Instructions of countermeasures for gullies to farmers
- UCADR of Korsimoro: Instructions of agriculture and stock raising compounding technique of stone line and compost production to farmers
- UCADR of Dori: Establishment of technique combining improved seeds, compost production, stone line.
- UCADR of Sebba: Each theme improved capacity of agents and supported production activities of farmers.

## 3) Outcomes of Technical Exchange Meeting and Future Themes

Outcomes and issues related to technical exchange meetings obtained by workshop and

questionnaires are as set forth in the following table. Themes of technical exchange meetings held four times are carefully selected but there are many themes in agriculture, stock raising and forestry and 53 themes were raised as future themes. (Table 1.3.5) As stated in the comments, the validity of the technical exchange meeting was confirmed, while there is no solution by the state.

Table 1.3.5 Outcomes and Issues related to Technical Exchange Meeting

Segment	Middle-North Region	Sahel Region
1. Technical exchange meeting		
1)Outcome	Reenhancement of agents and cultivation of application orientation	Improvement in the capacity to make application to the field
2)Shortage	Insufficient inspection visit to advanced regions	Time allocation to important themes
3)Proposal	Review for application of techniques	Introduction of complementarity of theory and inspection visit to the field
2. Future Themes		
1)Agriculture	15 cases: cultivation technique of various vegetables, etc.	4 cases: Effect of compost on soil deterioration prevention, etc.
2)Stock raising	14 cases: Fodder production and grazing land management, etc.	5 cases: Effect of transhumance on soil deterioration, etc.
3)Forestry	7 cases: Introduction of fruit trees, early revenue source, etc.	8 cases: Conditions for introduction of fruit tree cultivation, etc.
3. Questionnaires		
1) Theme selection	Issues of region are selected by UCADR	UCADR decides based on the opinions of agents
2)Continuation of exchange meeting	Securing expense account	Securing expense account
4. Comment (SAC/MR Chief)	Although the state is designing countermeasures, since no solution was found, extension of techniques remains at low level to the end farmers and thus significance of holding technical exchange meeting is large and it is necessary to continue.	It is effective as a forum to find clue to solve problems that would be obstacles to shared issues and extension activities and it is necessary to consider measures (expenses, etc.) for continuation.

#### 4) Problem Analysis toward Sustainable Holding

As can be seen in the questionnaires set forth in Table 1.3.5 there is a strong request for continuation of technical exchange meeting after completion of the study. We analyzed problems to hold the meeting continuously and the overview is as shown in Table 1.3.6. Final results of the technical meeting led to decrease in production and unsolved poverty, thus its opposite, “productivity improvement and poverty alleviation” is the focus of this verification study.

Table 1.3.6 Results of Problem Analysis

Segment	Middle-North Region	Sahel Region
1.Main Problem	Technical exchange meeting won't continue.	It is unlikely that technical exchange meeting will continue.
2.Direct causes	No hosting expense	Insufficient fund
	No policy efforts	Targets aimed at are not so clear.
3.Direct Results	Productivity doesn't improve	Technical information of agents is insufficient.
	Life of farmer doesn't improve.	Cooperation in activities is inadequate.
4.Final Results	Poverty is not alleviated.	Harvest yield reduced.

#### 5) Remaining Issues

Although technical exchange meetings were held four times, as aforementioned, request for continuation of the technical exchange meeting is strong. As the themes covered were limited and many themes requested for lecture are remaining, it is necessary to continue the exchange meeting. On the other hand, as aforementioned, years of service of agent are around 2.5 years, which is rather short and technical level of the newly appointed is relatively low.

Here we propose how the technical exchange meeting should be after completion of the study.

- (a) At Provincial level, technical exchanges meeting of around 40 persons shall be held once a year for two days.
- (b) In such an event, two courses shall be offered, on the first day, "general technology" and on the second day, "special technology."
- (c) Technical exchange meeting including training at regional experimental laboratory such as INERA (research trend, response to the needs, and experimental field explanation) will be effective.
- (d) For the hosting cost, Provincial Office Chief concerned will find donors that give support and the reduction of expenses for dispatch of lecturers from Experiment and Research Organizations will concurrently be made to aim at low cost and high level capacity improvement.

#### (2) Participatory Type Development Approach Training

Results of verification study concerning participatory type development approach are shown in monitoring summary table in Attached Material 4.

<p>Verification Issue 1) Can field training be conducted, which is fit for the reality and human resources of the region, conducting by region, where agents are actually working?</p>
<p>[Conclusion]</p> <ol style="list-style-type: none"> <li>1) It was confirmed that vitalization of the efforts of agents for training would be possible as well as the knowledge acquired at field training was utilized in the activities of agents and the advice at UCADR meetings through conducting by region where agents are working and concurrently conducting with the resource study in the villages where PDV is actually developed.</li> <li>2) UCADR appeared, which directly applied to their activities the approaches they learned by training.</li> <li>3) As in Middle-North Region, in the regions where activities of Societies are more active than those of NGOs, it is raised as one of the possibilities for Societies to manage training. With this, training became possible at the cost 30% lower than training by NGOs. It will also lead to utilization of human resources in the region.</li> </ol>

<Explanation>

For the first point, the effect was confirmed at UCADR meetings right after the training. In particular, secondary effect to give information of the region to agents who have recently been assigned was confirmed.

For the second point, it will be described in the case of Korsimoro in the verification issue

4). Regarding the third point, in order to secure cost performance, it is necessary to have close preliminary discussion before and after the training. With respect to this, the secondary effect related to verification issue 4) is recognized. It was confirmed that Society that managed training in Middle-North Region also played a role of so-called adviser-liaison person to agents who don't have communication means in the UCADR in which it later participated for the support to CVGT.

<p>Verification Issue 2) Can agents acquire skills through training and put into practical use in the field?</p>
<p>[Conclusion]</p> <ol style="list-style-type: none"> <li>1) In acquisition of skills and their use in the field, there is much difference between individuals and training.</li> <li>2) Out of approach and skills, acquisition of «tools» is relatively dependent on training, but when it comes to practical use, approach to interviews and the changes in idea and attitudes are more useful than «tools» in the field.</li> <li>3) In order to put into practical use in the field, it is essential to participate in training.</li> </ol>

<Explanation>

With regard to the first and the second point, the reason to be conceived first is that "tools"<sup>1</sup> have an aspect that entirely employs a method to recognize the resources

---

<sup>1</sup> Out of participatory type approaches, those approaches that establish work procedures for residents and

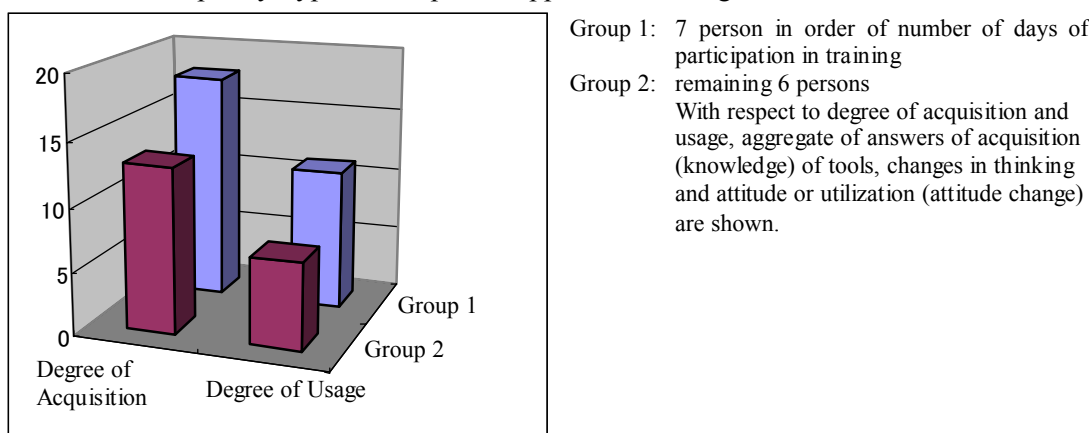


to certain extent and thinking and requests of residents schematically for the particular purpose. It tends to be used for resource study in designing basic development plan, but as can be seen from inspection visit to the field and their monitoring reports, work with residents are mainly comprised of production activities and its demonstrations and there are few opportunities to use tools in the actual everyday activities of agents.

On the other hand, with respect to so-called “soft components” among approaches, including changes in interviews and speech, they have multi-purpose nature in various activities of agents, which began to be aware by agents themselves.

With respect to the third point, Figure 1.3.1, degree of acquisition of those who have not participated in training often is 80% of those who participated in training often. But in actual situation of usage, the figure is only around 50%, which suggests that they need to participate in training several times to put the achievement of training into practice.

Figure 1.3.1 Comparison of Acquisition and Usage Situation by Degree of Participation in Participatory Type Development Approach Training



<p>Verification Issue 3)          Can Participatory Type Development Approach Training improve communications between agents and residents?</p>
<p>[Conclusion]</p> <ol style="list-style-type: none"> <li>1) It was confirmed from the questionnaires for self-evaluation by agents that many agents made judgment and evaluated themselves in terms of participatory type development approach, regarding it as the point to be noted with respect to communications with residents.</li> <li>2) Corresponding to the above, 87% of residents acknowledged that communication capacity of agents improved now as compared to two years ago, when the training started.</li> </ol>

approaches to facilitate them as a set, such as “problem tree” or “work calendar,” are called “tools”

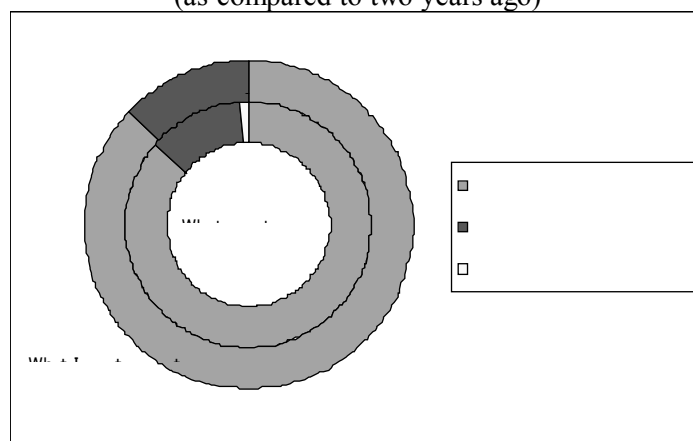
<Explanation>

What the study group took note on the first point was that it did not make simple tabulation of self-evaluation results by questionnaires. This is because self-evaluation of those who are aware of problems tend to be lower than those who are not. In order to complement this contradiction, we asked a question, “write your strong and weak points in your communication” and considered the issue, overlapping the scores of self-evaluation of agents, analysis of this expression in answer and monitoring results of the study group. According to this analysis, there was a tendency that those who answered being aware of problems in their description scored higher in the field monitoring by the study group.

With respect to the second point, in addition to interviews in the village, including CVGT, we conducted by incorporating in the questionnaires to residents.

From the result of questionnaires to residents, we can see that residents recognize communication capacity of agents improved from two years ago (Figure 1.3.2).

Fig. 1.3.2 Changes in Attitudes of Agents that are felt by Residents (as compared to two years ago)



Verification Issue 4)

Will acquisition of participatory type approach and the underlying idea by individuals lead to the shift of idea of initiative of administration and capacity development of organizations for rural development, including UCADR?

[Conclusion]

- 1) It takes about two years to shift to activities by the initiative of residents from the support by the initiative of administration.
- 2) There are more opportunities for utilizing the knowledge acquired at participatory type approach training when a group of agents visit villages rather than an agent acts alone.
- 3) When communications are kept well between agents, communications between residents and agents are also kept well. This will lead development to appropriate

recognition of requests of residents and resource endowment situation and capacity development of UCADR as an organization.
---

<Explanation>

We will consider these points with reference to UCADR of Korsimoro. At the UCADR, it became clear that the effect emerged two years after the first training. At Korsimoro UCADR, in selection of pilot project implemented in 2005, all the three agents who received training visited the village together and conducted resource condition study and based on the results, project plan was determined through consultations with residents. In the report, there are hints to consciousness change and fractions to remind the approach used in the training.

It seems that the direct reason for the success in this point was that UCADR of Korsimoro has only three agents but there was no relocation in several years(from Phase 1 to November, 2005 at Phase 2), and that all the three continued to receive training.

Looking at the proceedings of UCADR meeting, ZAT Chief, a Chief has rich experience but did not employ instructive discourse as a Chief. It was also observed that communications were developed not only with residents but also between agents, which is the ground for participatory type approach. When three agents work at the same time in the village, authoritative problems became fewer in the attitudes of agents toward residents, which is regarded as the old administrative type, and thus good communications are kept. We believe this is why they could extract the requests from residents well and develop project plan, taking into consideration the resource endowment of the village.

### 1.3.3 Support Tools Improvement Program

Study results of Support Tools Improvement Program are shown in Attached Material 4.

Operation Manual

Verification Issue 1)
-----------------------

Can Operation Manual apply as project implementation manual?
--

[Conclusion]
--------------

It was confirmed that pilot project could be implemented under Operation Manual. The points to be improved became clear in the basic version, and it was reflected on preparation of the application version.
---

<Explanation>

#### 1) Practicality in Verification Study Implementation in line with Operation Manual

Through implementation of UCADR activities and monitoring, utilizing “Operation Manual (Basic Version)” developed at Phase 1, we conducted verification of practicality of whether “Operation Manual (Basic Version)” developed at the desk top can be applied to actual project.

Verification results showed that as stated in 2.4. Rural Development Activities

Coordination Unit, UCADR served as a contact point of resident support and it was confirmed that it could carry out the process of development of project plan, project implementation and operation management. But some specific points to be improved became clear. These points were reflected on preparation of application version as stated in M/P, Chapter 3.

- Communication problems in local languages
- In project implementation in the special field of agents, there were forms of project implementation that utilized NGOs and Societies due to consideration of project volume.
- It is very difficult for agents to prepare specifications in the fields other than the specialty of agents, which requires instructions of Provincial Agricultural Office Chiefs and SAC/MR Head.
- It cannot correspond to designing development plan and strategies in the region from macro point of view, including usage of resource study results.

## 2) Peculiarity of *Departments* around Urban Commune

Dori *Department* is located, surrounding Dori urban Commune, which is located in the Provincial capital of Seno Province, and *Department* Hall of Dori *Department* is located in the urban Commune of Dori. Sahel Regional Departments of each Ministry are also located in Dori urban Commune and agents comprising UCADR of Dori have close relations with Regional Departments of each Ministry and Provincial Offices.

Therefore, as their duties consist of administrative clerical work through Provincial Offices, in addition to support activities of technical extension to residents, they became very busy. Such situation is likely to have more or less occurred not only in Dori Department but also in other *Departments*, located in the periphery of Provincial Capitals, including Middle-North Region.

At UCADR with such duty situation, it is conceivable that the number of villages will naturally be fewer, where agents can manage project at the same time and that it is difficult for agents to be directly engaged in project implementation. In *Departments* where target villages are large as in Dori *Department*, there are multiple ZATs (Technical Assistance Zone) and ZAT Chief is assigned to each ZAT. In case of simultaneously promoting rural development of such a large *Department*, across ZAT, it was known that multiple UCADR are established in one *Department*, instead of one UCADR in on *Department*.

## 3) Trial Use in Other Provinces in Diffusability Verification

As stated in 1.3.1(2) Rural Development Activities Coordination Unit (UCADR) and the monitoring summary table of diffusability verification work in Attached Material 4, in verification of diffusability to other Provinces, we have the existing UCADR prepare lecture materials based on draft Operation Manual (Application Version) prepared by the study group in advance, and the practicality was verified.

In the Provinces where other donors have been working, negative opinion was presented to the development approach, using UCADR different from that development approach. It was a doubt about the difference between the approach in which donors directly support CVGT and that of the study group which supports through UCADR, which overlooked cooperation among administrative department.

Participants established provisional UCADR as part of diffusability verification after returning and we had them try the works in line with Operation Manual, including selection of villages, resource study, development of project implementation plan and request donors for support, they completed almost all the works planned and it was confirmed that there was no problem in trial use for practice.

Verification Issue 2) Is Operation Manual in line with trend of decentralization?
[Conclusion] There is no problem in positioning UCADR as the bearer of rural development in Communes. Since there were many opinions that insisted to give consideration to UCADR composition and transitional stage after communization, they were reflected on the application version.

<Explanation>

1) Relations with Legal System of Burkina Faso

In preparation of Operation Manual (Application Version), it is important to put an eye on the trend of decentralization that is now going on in Burkina Faso and we collected information from relevant organizations throughout the period of field verification. At present, there are many uncertainties such as by decentralization in connection with Commune election to be held in March 2006, how will the authorities and roles of administrative staffs be changed, which might bring inconsistency between the statements in Operation Manual (Application Version) and the systems after decentralization.

Information about Decentralization

•Establishment of General Law concerning Municipalities

General Law concerning Municipalities (promulgated as of December 21, 2004) provided for the start of Region and Commune as municipalities to make them bear development

activities of the region and national land improvement.

**Table 1.3.7 Excerpts from General Law concerning Municipalities**

Article 7	State of Burkina Faso is organized by municipalities.
Article 8	Municipalities have autonomy in juridical person and finance and consist of Regions and Communes.
Article 9	Municipalities may perform the following matters. Any and all activities for measures for economic, social and cultural and environmental development and national land improvement Enter into contract with any and all individuals, corporations, Burkina Faso government, other municipalities and public organizations, regardless of public or private, or enter into cooperation with the organizations outside of Burkina Faso to the extent they respect the sovereignty and interests of the state.
Article 17	Communes are the end organizations of municipalities. Territory of Communes is comprised of sectors and/or villages. Executive organs of Communes are Commune assemblies. Commune is managed and operated by Commune Chief. Commune is assisted by two Deputies.
Article 18	Communes are classified into two categories, Urban Communes and Rural Communes.
Article 27	Rural Commune is a group of villages, which has at least 5,000 populations and economic activities that produce 5 million FCFA or more in a year.
Article 36	Delegation of authorities from the state shall be accompanied by transfer of funds and budget required for executing these authorities normally under the terms and conditions provided for in the Law.
Article 38	Financial sources of municipalities are independent revenues and allocation of national budget and other taxes.

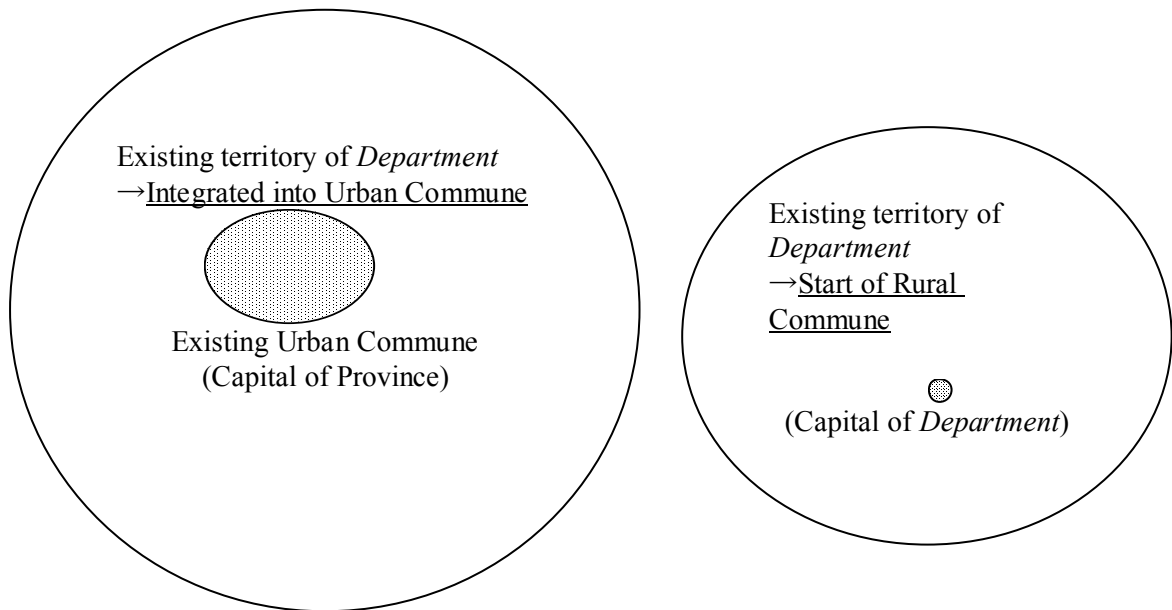
## 2) Assignment of Regional Governors

In 2004, Regional Governors were assigned to 13 Regions of Burkina Faso and the Regional Department Directors of branch offices of central Ministries are under supervision of Governors.

## 3) Creation of Rural Communes

In March 2006, Commune election will be conducted. Existing Urban Communes located in Provincial Capitals will be new Urban Communes, together with *Departments* surrounding the Communes. Other *Departments* will be changed to Rural Communes with the same area. Pattern diagram is as shown in Figure 1.3.3.

Figure. 1.3.3 Pattern Diagram of Communes



As the representatives of Rural Commune, two persons shall be elected by village in the Commune and for the Commune where *Department* Office is located, two persons shall be elected from the divided Sector.

Current *Department* Governor System will remain for the time being, and the Governor will serve as an adviser to Rural Commune Chief.

4) Establishment of Village Development Council, CVD (Conseil Villageois de Développement)

Previous CVGTs are organizations under the provisions for establishment in Joint Ministerial Ordinance and they are not necessarily established in every village. In order to position the current CVGT organizations under laws, in the aforementioned General Law concerning Municipalities, it is provided that CVD shall be established in every village throughout the nation. Regarding its enforcement, National Land Administration and Decentralization Ministry is now hearing from relevant Ministries, but there were opinions opposing the enforcement of the Law which would lead to dismantling of CVGTs, which have eventually been developed in a national scale.

5) Opinions of People Concerned

As the details of “Procedures for rural development project implementation” and “Manual of Establishment of UCADR” to be stated in Operation Manual (Application Version) are particularly influenced by the movement of decentralization, we prepared the draft and conducted hearings of opinions of the people concerned at the 3<sup>rd</sup> UCADR Cooperation Promotion Workshop, etc.

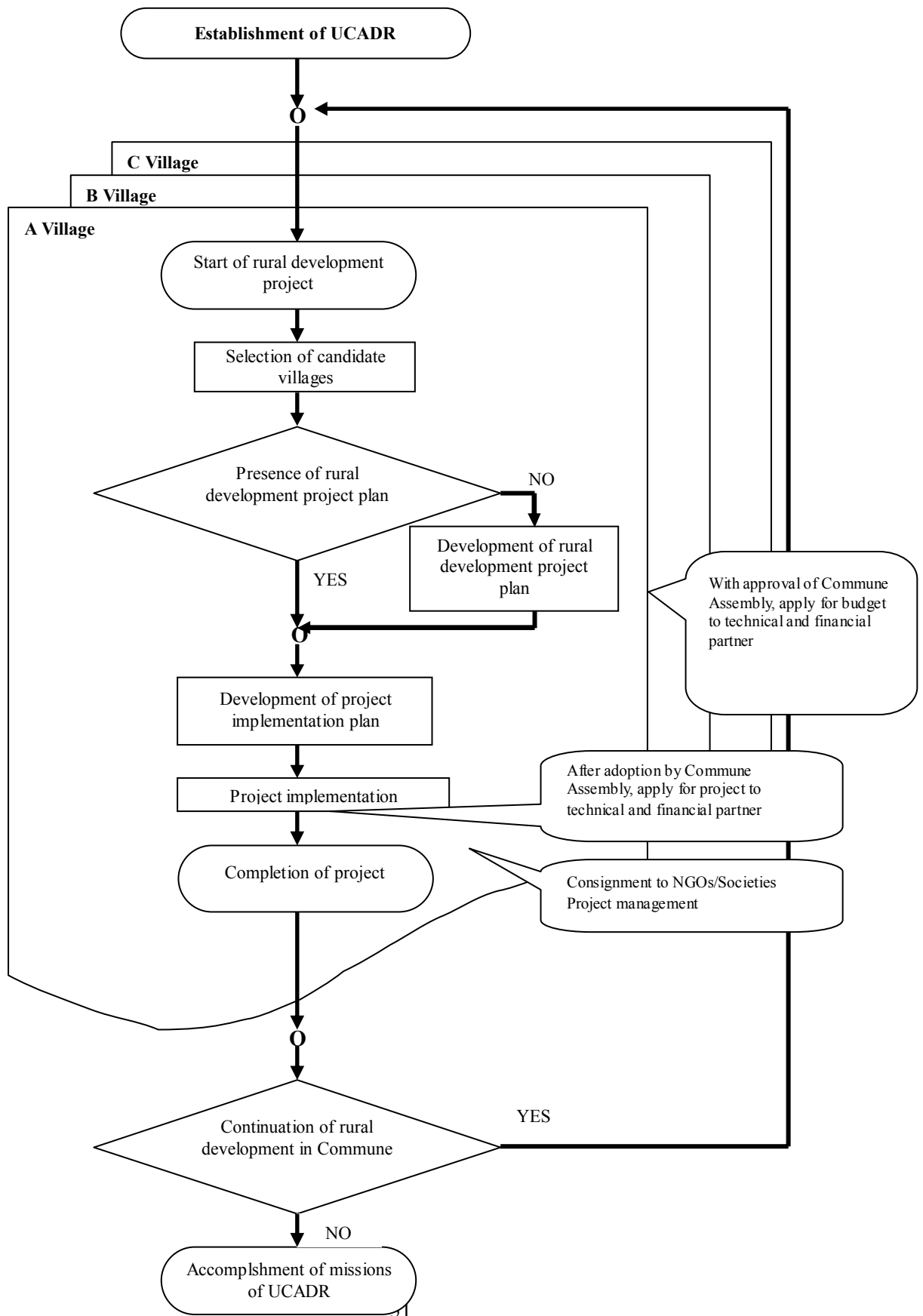
Gist of Draft was as follows.

- (a) To adopt an approach that Rural Communes establish UCADR and UCADR will provide technical support to rural development by the initiative of residents.
- (b) UCADR will carry out selection work of candidate villages for project implementation, it shall obtain approval of the resolution of Commune and it shall be positioned as organization for information exchange and implementation of project and Communes shall make decisions.
- (c) With respect to development of project implementation plan, draft plan likewise shall be submitted to the Commune assembly and discussed by the assembly.
- (d) It will be divided into two stages, CVGT establishment support, and designing rural development plan and implementation of rural development project and budget shall be demanded at each stage.
- (e) Commune Governor shall be UCADR Chief.

Flow chart of implementation of rural development project by UCADR after modification of M/P is shown in Figure 1.3.4.



Figure 1.3.4 Implementation Flow of Rural Development Project by UCADR



To the said draft, the following opinions were raised. These opinions shall be reflected to M/P, as stated in M/P, Chapter 3 and Operation Manual (Application Version) was prepared.

- If Commune establishes UCADR, Commune Governor will designate itself as UCADR Chief and is it not contradictory?
- Commune Governor has no authority to order agents and is it not better for *Department* Governor to be UCADR Chief as before?
- Provincial Animal Resources Office Chief and Provincial Environmental/Living Environmental Office Chief should be added to members.
- Why does Agriculture, Water Use and Aquatic Resources Ministry has to pay expenses for support to establishment of CVGT and designing basic development plan?
- As NGOs/Societies work under contract, it is wrong to accept them as members.
- After start of Communes, the previous development by village might be changed to development by Commune.
- As administrative capacity of Commune Governors is unknown, there might be cases where they have difficulty in commanding UCADR.
- If Commune Governor commands UCADR, is there any probability that project would be conducted with political motives.
- It is doubtful whether Communes can exert functions as expected right from 2006 and it is necessary to have approaches to make transition with time and to show transitional forms.
- Agriculture, Water Use, and Aquatic Resources Regional Departments have no authority to manage funds of rural development projects. Name of particular organ should not be used, thinking of another partner.
- CVD is established by Commune Assembly and not by UCADR.
- After start of Communes, rural development plan will not be prepared and Commune development plan will be prepared.

(2) Technical Materials

Technical materials differ in verification issues of verification study between Phase 1 and Phase 2. At Phase 2, we had agents, NGOs and residents actively participate, aiming at making more practical materials and revised the basic version developed at Phase 1. Hereinafter the results of verification study will be stated.

Monitoring results will be shown in Monitoring Summary Table in Attached Material 4.

<p>Verification Issue 1) Can it supplement shortages of extension materials?</p>
<p>[Conclusion] In pilot project, while making trial use of the basic version prepared at Phase1, agents themselves raised an opinion, «instruction materials that can be used by the people other than experts of the field should be prepared.» Residents made a request, «although illustrated explanation was appreciated as easy to understand but on the other hand, as the explanation language is French, titles should be written in local languages for the participants understand the contents of materials deeper.» Based on such opinions, we added and modified the basic version and developed application version of practical instruction materials and technical extension materials. If developed materials are utilized, shortages of the existing extension materials will be covered in extension of project.</p>

<Explanation>

With respect to pilot projects corresponding to instruction materials (basic version) and technical extension materials (basic version) developed at Phase 1, we made verification of practicality of basic versions through monitoring in case of actual use at each training.

UCADR members raised an opinion, for application version, instruction materials that can be used by the people other than experts of the field should be made.” The background of this opinion is that it is necessary for the people other than the special field to follow instruction materials if UCADR member is relocated and if the materials are too specialized, they are not practical.

Details of basic version used for trial by agents to the participants from the Provinces other than the Provinces where pilot projects are not implemented, through diffusability verification work at the second year of Phase 2 and examples of application version under preparation were introduced. At the workshop of diffusability verification work at UCADR of Korsimoro, by comparing the materials previously used by agents and the application version intended to be made based on the study, opinions about practicality were heard. Looking at the questionnaire results of the workshop participants from Namentenga Province, it was highly appreciated and verified of diffusability.

Agents and NGO training staffs, who actually used instruction materials through pilot project, appreciated to a certain degree. When technical extension materials were distributed to CVGT secretaries, etc., although illustrated explanation was appreciated as easy to understand, but on the other hand request was made that as the explanation language is French, titles should be written in local languages (Moore, etc.) for the participants understand the contents of materials deeper

Based on such opinions and evaluation from the field, at Phase 2, improvement opinions they felt were asked from agents based on actual use of the basic version to modify the materials. For example, there was an opinion that currently more disseminated cultivation method should be stated in the application version rather than traditional method of cultivation of fields stated in the basic version. Instruction materials for poultry raising and fodder production, coped with for the first time, were independently prepared by agents. We had them think for themselves what point should be put focus on when they make explanation to residents and consult illustration composition with illustrators and edit them. With respect to income enhancement of women, CVGT operation management, advice from supporting NGOs/Societies was incorporated and editing was made in consultation with illustrators. With respect to projects newly coped with, we made the materials picture-story cards like composition, using more

pictures and photos.

1) Instruction Materials

In the application version, the background explanation of target techniques, etc. was added in expressions as plain as possible so that the people other than the special field could use. The contents were made so that if users read this part before explaining to residents, they could explain only with technical extension materials for residents. Application version was prepared, incorporating corrective opinions of agents, etc., who made trial use of the materials.

In this regard, materials for micro- credit establishment support and improved oven, which were initially planned, were not prepared since no practice was made at pilot project. On the other hand, materials for fodder production, poultry raising and sumbala production copied with at pilot projects were added.

2) Technical Extension Materials

In the application version of technical extension materials, Moore and Foulfoulde, local languages, were also written in titles. Putting local languages with titles is a contrivance for residents to understand easier. Using more pictures and photos, they were made into picture-story cards like materials.

Table of contents of application version of instruction materials and technical extension materials developed are shown in Table 1.3.8.

Table 1.3.8 Table of Contents of Application Version of Instruction Materials and Technical Extension Materials

Name		Instruction Materials	Technical Extension Materials
Targets		Agents, NGOs	Residents
Overview		Instruction materials are those organized the matters to be noted by agents and NGOs in extension activities to residents, using technical extension materials.	Technical extension materials are comprised of cartoons and used for promotion of enlightenment and rural development activities by residents themselves.
Contents Large item	Contents Small item	Details	
General Statement		Rural development project for land degradation alleviation Purpose and objective of materials Scope of application of each material item and points to be noted in usage	
Agricultural Techniques	Improvement rainy season growth	Installation of compost tank and compost production Soil making Cultivation management Harvest and sale	Installation of compost tank and compost production Soil making Cultivation management Harvest and sale

	Vegetable cultivation	Installation of compost tank and compost production Seed bed making Preparation of field and transplant Irrigation method Intertillage and how to use compost Harvest and sale	Installation of compost tank and compost production Seed bed making Preparation of field and transplant Irrigation method Intertillage and how to use compost Harvest and sale
Stock raising	Poultry production improvement	Necessity of introducing improved stock of poultry Points of improved technical matters for raising improved poultry Fodder feeding Fowl sanitation	Necessity of introducing improved stock of poultry Points of improved technical matters for raising improved poultry Fodder feeding Fowl sanitation
	Fodder production	Mowing and conservation of natural grass Improvement of production techniques of fodder crops	Mowing and conservation of natural grass Improvement of production techniques of fodder crops
	Sheep fattening	Selection of live stock Collection of fodder Construction of sheep house Feeding technique Selection of market	Selection of live stock Collection of fodder Construction of sheep house Feeding technique Selection of market
Forestry resources management/ use/conservation	Operation of residents' seedbed	Flow of raising of seedling work Raising of seedling technique Planting method Reforestation by type	Flow of raising of seedling work Raising of seedling technique Planting method Reforestation by type
	Forestry resource s management	Flow of establishment of management rules Pruning and tree cutting method Natural renewal	Management rules Pruning and tree cutting method Natural renewal
Farmland conservation	Bare land restoration construction	Necessity of restoration construction Selection of cultivation method Usage management rules	Necessity of restoration construction Selection of cultivation method Usage management code
	Stone line installation construction	Stone masonry method Infiltration weir Re-use of stones Usage management rules, Contribution confirmation	Stone masonry method Infiltration weir Re-use of stones Usage management rules, Contribution confirmation
Living improvement	Literacy education	Importance of literacy Method of selection of lecturer and materials Method of selection of students Examination and Sustainability of literacy education Community hall management	Necessity of literacy education  Community hall management
	Cereal bank	Roles and organization of cereal bank Roles and duties of CVGT subcommittee Operation/Management	Roles of cereal bank Organizational composition Roles and duties of CVGT subcommittee Operation/Management method
	Sumbala production	Production technology Accounting management Extension method	Production technology Accounting management Sales channel expansion
	Soap manufacturing	Manufacturing technology Accounting management method	Manufacturing technology Accounting management method
Water resource development	Well improvement	Establishment of resource management rules Points of maintenance and management Necessity of groundwater recharging activities	Resource management rules Points of maintenance and management Necessity of groundwater recharging activities



## Chapter 2 Pilot Projects

### 2.1 Overview of Pilot Projects

#### 2.1.1 Objective of Pilot Projects and relation with M/P

A pilot project is implemented with the purpose of providing UCADR members with opportunities to apply the knowledge, techniques, and supporting tools (procedures of management, teaching materials of techniques), which have been obtained through the principal components of the M/P, i.e., the System Establishment Program and that of capability reinforcement, and thus to demonstrate the effectiveness of the M/P.

The implementation of pilot projects proceed in sequence as follows:

- 1) Selection of target villages of the projects
- 2) Estimation of the amount of resources available in the target villages of the pilot projects
- 3) Assistance for the establishment and management of CVGT, and the formulation of the master plan of development
- 4) Formulation of the plan for the pilot projects
- 5) Implementation and evaluation of the pilot project

In the study of Phase 1, the above-mentioned sequence of tasks was carried out with collaboration between the study team and UCADRs. However, the steps 1) to 3) were carried out mainly by the study team, and it has not yet been confirmed whether UCADRs are able to do them on their own. In the study of Phase 2, the main objective of the pilot project is to demonstrate the effectiveness of UCADR by carrying out the whole sequence of tasks under the initiative of UCADR.

In the selection of pilot projects to be implemented in villages, the subjects were selected based on the evaluation of status of resources available in the target villages. Before UCADR proceeded on the projects, the study team assessed the status of 5 kinds of resources available in the target areas and proposed probable pilot projects, by taking account of the issues identified through analysis of the factors related to the battle against desertification.

#### 2.1.2 Progress of implementation of the pilot projects

Target villages where the pilot projects have been implemented under the current study are listed in the table 2.1.1. In the study, 9 villages in the Middle-North Region and 8 villages in Sahel Region, 15 villages in total, engaged in implementation of the pilot projects.

Table 2.1.1 Target villages of pilot projects

Regions	Counties (UCADR)	First year of project implementation			
		Phase 1		Phase 2	
		2002	2004	2005	
Middle-North	Guibaré	Vousnango	Sindori*	Watinoma	Niangouela
	Korsimoro	Noungou	Foulla	Bascoudre-Mossi	Ouidin, Tansin
Sahel	Dori	Selbo	Goudébo*	Tiounbonga	Bafele
	Sebba	Diogora	Guissindiori	Helga	Ibbal
Village status		G1:Initially selected villages	G1-2:New villages G2-1:Addition al new villages	G2-1: Additional new villages	G2-2: Neighboring villages for diffusion

Implemented contents, in terms of study items, of pilot projects differ depending on the “village status” as indicated in the above table (see table 2.1.2)

In Phase 1, villages (initially selected villages) were selected with a view to demonstrating that the framework of UCADR was effective as the government agency in direct contact with the public, entrusted with the promotion of rural development. In Phase 1, UCADR was not involved directly in any of the relevant steps, including the diagnostic assessment of villages by the participatory type development study (MARP/PRA), the formulation of master plan for rural development (PDV), and the formulation, implementation, and management of the plan for pilot project. Considering such circumstances, in the first year study of Phase 2, efforts were made to enhance the function of UCADR and to build the capability of their members, where members of UCADR were encouraged to take initiative in the selection of new villages, and to experience for themselves all the processes starting from the diagnostic analysis of villages and going through the implementation and management of the pilot projects. Furthermore, in order to enable UCADR to advance the rural development more efficiently, it is needed to establish a management system which is capable of simultaneously implementing different projects in several villages. With a view to realizing this, in the latter half of 2004 and in 2005, UCADR took initiative in selecting new villages (additional new villages) and implemented pilot projects. Besides, in 2005, for the purpose of fostering the initiative of UCADR and demonstrating the possibility to diffuse the effect into neighboring villages by exploiting the acquired capability of villagers assisted by preceding projects, new villages (neighboring villages for diffusion) were selected to implement pilot projects.



Table 2.1.2 Classification of villages characterized by the difference in objectives of pilot projects

Village classification	Subject matters to be demonstrated by the implementation of pilot projects
<b>Initially selected villages (G1-1)</b> (4 villages selected in Phase 1) (G1-1)	To demonstrate the nature of framework required as the effective system of government agencies servicing directly the needs of local residents
<b>New villages (G1-2)</b> (2 villages selected in Phase 2)	To demonstrate the perfection of effectiveness of UCADR (in carrying out the diagnostic assessment of the rural situation, the formulation of rural development plans) Capability reinforcement of UCADR members
<b>Additional new villages (G2-1)</b> (6 villages selected in Phase 2)	To demonstrate the capability of UCADR to manage the simultaneous implementation of projects in several villages.
<b>Neighboring villages for diffusion (G2-2)</b> (5 villages selected in Phase 2)	To demonstrate the fostering of initiative of UCADR, the strengthening of their function and capability, and the possibility of diffusion of project effect via Farmer to Farmer communication.

(1) Criteria and procedures for the selection of target villages

As described in “2.1.2 Progress of implementation of the pilot projects”, since the subject matters to be demonstrated in pilot projects differ depending on the “village status”, the criteria and procedures for selecting target villages vary. Although the task of the selection in the Phase 1 was carried out by the initiative of the study team, in the Phase 2, the selection of new villages, additional villages, and neighboring villages for diffusion was entirely carried out by that of UCADR. The criteria and procedures for the selection of initially selected villages, newly selected villages, and additional newly selected villages are shown in Table 2.1.3.

Table 2.1.3 Criteria and procedures for the selection

Initially selected villages (G1-1)	Criteria for selection 1) Local residents are highly motivated 2) CVGT has not yet been established, or has already been established but is not yet functioning 3) Location is convenient for access 4) Few past experiences as a recipient of external aid 5) Needs for water resource development are great. 6) Residents adhere to the terms of contract specifying the contribution on their part (readiness to donate shares of expenses, to supply labor and materials available locally, etc.).
	Procedures for selection 1) Regional department of Ministry of Agriculture selects 10 villages from each Region of Middle-North and Sahel 2) The study team selects 9 villages, taking account of convenience of access. 3) The study team evaluates the 9 villages taking account of their motivation for development, readiness for cooperation, regional characteristics, and the situation of available resources. 4) 4 villages are recommended to the steering committee and approved 5) 4 villages are recommended to the advisory committee in Japan

Newly selected villages (G1-2)	<p>Criteria for selection</p> <ol style="list-style-type: none"> <li>1) Soil is degraded and local residents are motivated highly</li> <li>2) CVGT has not yet been established, or has been already established but is not yet functioning</li> <li>3) The village is served by the extension agent who also takes charge of the village where the pilot project in the phase 1 was implemented.</li> <li>4) Priority is given to villages located close to those where the pilot project in the phase 1 was implemented.</li> <li>5) Residents adhere to the terms of contract specifying the contribution on their part (readiness to donate shares of expenses, to supply labor and materials available locally, etc.).</li> </ol>
	<p>Procedures for selection</p> <ol style="list-style-type: none"> <li>1) The study team explains to the steering committee how to select the new villages.</li> <li>2) Director of the regional department discusses the matter with those concerned including the director of agricultural office of the province, determines the counties where the new villages are to be selected, and informs the study team about them.</li> <li>3) The study team explains to the county UCADR how to select the new villages.</li> <li>4) UCADR chiefs submit to director of regional department a list of eligible new villages placed in the order with reasons of preferences, and inform the study team of the selection.</li> <li>5) Director of regional office transmits the information to chairman of the steering committee.</li> </ol>
Additional new villages (G2-1)	<p>Criteria for selection</p> <ol style="list-style-type: none"> <li>1) CVGT should have already been established and is functioning in the target village to be selected,</li> <li>2) Priority is given to villages of easy access, so that the demonstration effect is expected to be greater.</li> <li>3) Villages highly motivated for development are selected.</li> <li>4) Priority is given to villages which participated in the seminar held in January 2004, which was intended for diffusion of project results.</li> <li>5) Representative of CVGT regularly participates in UCADR.</li> <li>6) Residents adhere to the terms of contract specifying the contribution on their part (readiness to donate shares of expenses, to supply labor and materials available locally, etc.).</li> </ol>
	<p>Procedures for selection</p> <ol style="list-style-type: none"> <li>1) In the conference of each UCADR, the chief explains to members the objective of additional new villages to make them understand it.</li> <li>2) UCADR chief asks members to select the villages which are considered to have higher priority, among villages they provide with services, taking account of existing situation and issues associated with them. In this case, the main criterion is that, in the eligible village, a CVGT has already been established and is functioning.</li> <li>3) After UCADR chief has selected villages, he or she asks each UCADR member to present, in UCADR conference, proposals (up to 3 proposals per member) for the improvement of selected villages. UCADR chief asks members to prepare those proposals in a written form, detailing them by itemizing factors including the existing situation of the village, issues, necessary measures and inputs, the manner of implementation, anticipated effects, approximate sum of the budget, needed duration, etc.</li> <li>4) UCADR chief sorts out those proposals and puts them to discussions in UCADR conference to leave out about a half of them and to determine the order of priority to those adopted.</li> </ol>

	<p>5) In UCADR conference, the study team makes consultations on the proposals presented by UCADR. If issues are identified in those proposals, the mission volunteers advices, suggesting relevant revisions.</p> <p>6) The study team, if necessary, asks UCADR to provide information other than those proposals, and/or engages in field surveys together with UCADR members.</p> <p>7) The study team examines the contents of proposals from the viewpoint of a donor, and decides on a interim basis to adopt such proposals as seem appropriate in the light of the criteria for selecting pilot projects.</p> <p>8) UCADR chief submits to the director of regional department concerned the report on the reasons for selecting additional new villages, and on the plan of pilot projects (Director of regional department reports about it to Director of the research and planning department (chairperson of the steering committee))</p> <p>9) The study team makes consultations with JICA on the proposed projects adopted on a interim basis and finalizes the decision to implement the projects.</p> <p>10) The study team informs UCADR of the decision to implement the projects and lets it start them.</p>
--	--

## (2) Outcome of selection

Characteristics of initially selected villages, newly selected villages, and additional newly selected villages are respectively summarized in table 2.1.4 to 6

Table 2.1.4 Result of selection of initially selected villages

Regions, counties, villages		Reasons for selection
Middle-North Region	Guibaré Ct. Vousnango Vill.	<ul style="list-style-type: none"> <li>• Residents are greatly concerned with development and highly motivated for raising productivities and improving livelihood</li> <li>• Few past experiences as a recipient of external aid</li> <li>• CVGT exists but is not functioning</li> <li>• No problems for easy access to village</li> <li>• Promise of development in agricultural sector by the development of water resources</li> </ul>
	Korsimoro Ct. Nougou Vill.	<ul style="list-style-type: none"> <li>• Residents are greatly concerned with development and highly motivated for raising productivities and improving livelihood</li> <li>• There is no social conflict between two ethnic groups of Mossi and Peul, which coexist in the village.</li> <li>• CVGT has not yet been established</li> <li>• No problems for easy access to the village</li> <li>• Promise of development in agricultural and animal husbandry sectors by the development of water resources</li> </ul>
Sahel Region	Dori Ct. Selbo Vill.	<ul style="list-style-type: none"> <li>• Residents are greatly concerned with development and highly motivated for raising productivities and improving livelihood</li> <li>• There is no social conflict in the village</li> <li>• Easy access to the village</li> <li>• Promise of further development by the development of water resources</li> </ul>
	Sebba Ct. Diogora Vill.	<ul style="list-style-type: none"> <li>• Residents are highly motivated for development</li> <li>• CVGT has not yet been established</li> <li>• Very few past experiences as a recipient of external aid</li> <li>• No problems for easy access to the village</li> </ul>

Table 2.1.5 Outcome of selection of new villages

Regions, counties, villages	Reasons for selection
Middle-North Region Guibaré Ct. Sindri Vill.	<ul style="list-style-type: none"> <li>• The village conforms to the criteria for selection specified by UCADR</li> <li>• A large number of NGOs are actively in operation in Bam province where Guibaré county is located, making it possible to integrate themselves in activities in the newly selected village to enrich those of UCADR.</li> <li>• The evaluation of activities carried out by the 4 UCADRs in Phase 1 has revealed that the activities performed by Guibaré UCADR were more dynamic than those of others.</li> <li>• In view of the importance of social exchange among residents of different villages, the village environment gives easy access to those in other villages.</li> </ul>
Sahel Region Dori Ct. Goudébo Vill.	<ul style="list-style-type: none"> <li>• The village conforms to the criteria for selection specified by UCADR, and shares the same natural resources from which Selbo village also benefits.</li> <li>• CVGT has not yet been established. The village is not receiving any form of assistance from other donors and remains deficient in all kinds of resources. In neighboring areas, GRN/SY project implemented by DANIDA is ongoing, suggesting possibilities of collaboration with other donors.</li> <li>• Yak dam has been constructed upstream of the village and the depletion of water resources is feared in the immediate future, calling for urgent measures to develop water resources.</li> </ul>

Table 2.1.6 Outcome of selection of additional new villages

Classification Fiscal years	Middle-North Region		Sahel Region	
	Guibaré Ct.	Korsimoro Ct.	Dori Ct.	Sebba Ct.
2004		<b><u>Foulla Vill.</u></b> Selected out of 5 eligible villages. CVGT has been established. Foulla village has been selected, taking account of the fact that it is possible to implement a project in collaboration with PDL/S.		<b><u>Guissindiori Vill.</u></b> The village has been selected out of 20 villages in Sebba county, because CVGT has already been established, there are no problems of access during the rainy season, and there exists no significant social conflict.
2005	<b><u>Watinoma Vill.</u></b> The village has been selected out of 11 villages among 13 of those	<b><u>Baskoudre-Mossi Vill.</u></b> Selection criteria have been applied to 24 eligible villages in	<b><u>Thioubonga Vill.</u></b> UCADR initially intended to select Mammassiol. However, the study team	<b><u>Helga Vill.</u></b> This village has been selected because, although CVGT has not yet been

	<p>in Guibaré county, leaving out 2 villages where current projects are ongoing. Selection criteria have been applied to those 11 villages and grade points have been tallied respectively which has given the highest points to this village.</p>	<p>Korisimoro county, and the order of preference among them was determined. Appreciation was made regarding the activities of CVGT, the facility for access, the motivation for project implementation, and the proximity to Foulla village, resulting in the selection of this village.</p>	<p>suggested reconsideration, judging from the context of selecting new villages. As a result, this village has been selected taking account of such factors as that CVGT has been established with the assistance of GTZ, that the management of natural resources by CVGT is taking root, and that additional small assistance promises to produce effect.</p>	<p>established, it is in the stage of preparation for establishment, and owing to the presence of Dori marsh, there are no problems of access during the rainy season.</p>
--	--	---	--	--

## 2.2 Pilot project and Resources

### 2.2.1 Current Status of Resources in Study Area

In order to promote a system of countermeasures for land degradation by placing the UCADR at the center of the operation, it is necessary to develop a pilot project by understanding the study area's resources from a multilateral viewpoint. Also, it is necessary to pay attention to conflicts or interrelations among different resources.

The Middle-North Region has an area of 20,985km<sup>2</sup> composed of three provinces, Bam, Namentenga and Sanmatenga. The Region has a total of 28 *departments*, 685 villages and a population of 928,321 (as of 1996) and is inhabited mainly by the Mossi people. The Region is located in the Sudanic-Sahelian climatic zone and the mean annual rainfall amounts to 600 to 900mm. The rainy season continues for about five months from mid-May to mid-October. The Region is covered mostly with poorly-evolved erosional soils and the Mossi people have settled in the Region over many years and lived agricultural life but the soils are not fertile

The Sahel Region has an area of 35,614km<sup>2</sup> composed of four provinces, Seno, Soum, Oudalan and Yagha. The Region has a total of 26 *departments*, 584 villages and a population of 708,332 and is inhabited by about 10 ethnic groups including Peul (35%), Rimaibe (20%), Bella Mossi(20%) and Mossi (19%). It is located in the Sahelian climatic zone which accounts for 25% of the total national area and the Region's mean annual rainfall amounts to 150 to 600mm. A year is divided into two seasons—the rainy season

continuing for 3 to 4 months from July to October and the dry season. The Region's soils are composed of three different types, degraded halomorphic soils, tropical ferruginous soils and tropical eutrophic brown soils. Its vegetation is dominated by thorny shrubs growing in steppe.

On an average, each village has a fairly large area of 61km<sup>2</sup> (population density: 20 people/km<sup>2</sup>) in Sahel Region, while the Middle-North Region's village has an area of 31km<sup>2</sup> (44 people/km<sup>2</sup>). Sahelian villages are fairly large and have an area roughly twice that of the Middle-North Region.

In the following sections, the current status of five different resources in the Middle-North and Sahel Regions will be analyzed and issues related to these resources will be indicated.

#### (1) Natural Resources

- The status of natural resources storage and production in the three sectors—agriculture, stock raising and silviculture—is largely different between these two Regions which are target areas for the pilot project.

##### Key issues

- Agriculture: Difference of production potentials between the two Regions and its relationship with the selection of crops
- Stock raising: Difference of livestock breeds raised in the two Regions and the direct influence of excessive grazing on the run-off of surface soil
- Silviculture: Deterioration of plant diversity and its influence on residents' living environment and the direct causes of land devastation

#### 1) Agriculture

##### (a) The Middle-North Region

The main crops cultivated in the Middle-North Region and their average yields for the past five years (in the order from the largest to the smallest planting volume) are sorghum (859kg/ha), millet (680kg/ha), maize (1,041kg/ha) and rice (925kg/ha). The average yield of fonio cultivated only in Bam Province amounts to 1,119kg/ha. The average yield of each of these main crops correspond to approximately 90% of the national average and 95% of the Region's crop requirements is met in years of favorable rainfall conditions, with an exception of heavily populated Sanmatenanga Province where only around 70% of crop requirements is met. In addition, niébe, Bambara nuts, peanuts and sesame are cultivated richly and in Bam Province a large amount of cotton and soybean are cultivated.

## (b) Sahel Region

The main crops cultivated in Sahel Region and their average yields for the past five years (in the order from the largest to the smallest planting area) are millet (451kg/ha), sorghum (524kg/ha) and maize (406kg/ha). The average yields of rice and fonio cropped in Soum Province amount to 162kg/ha and 560kg/ha, respectively. In Sahel Region, even in years crop situations are good in other regions, crop requirements cannot be met fully, with just around 70% of the requirements is met at best. For example, in the year of 1999/2000, the Region had a population of 755,397 and the crop requirements were 143,525 tons but the total crop yielded was only 120,954 tons. Of the total crop yield, food crop accounted for 102,522 tons resulting in a shortage of 41,003 tons of food crop. Cash crops which can be grown in this Region are niébe, Bambara nuts, peanuts and sesame but due to a precipitation deficit the yields of these crops are small.

Since Sahel Region is located in the agro-sylvo-pastoral zone, a combination of excessive cultivation, excessive grazing and a decrease in rainfall leads to a significant deterioration of soils and vegetation and the Region's low agricultural productivity even jeopardizes residents' social life.

## 2) Stock Raising

Cattle breeds are not so diverse in the two Regions and there are a very few breeds including Asawac or Sokoto (also called Gudari) originally introduced to improve milk production through the Project and others are mostly conventional breeds such as Peul. Small and middle-sized livestock breeds are mainly conventional breeds like Sahel breed and breed improvement is not sufficiently progressing. For a more efficient livestock production, it is necessary to introduce improved breeds.

In feeding cattle, goats and sheep, although a method to limit grazing is adopted during the rainy season by employing guards to prevent livestock from damaging agricultural crops, grazing is not limited in the dry season and livestock is put out to fields of millet or sorghum after the crop is harvested. As a result, the pressure of livestock's hooves pad and trample the soils and reduces the porousness significantly giving negative effects on the next season's cultivation as well as promoting run-off of surface soil. Also, due to excessive grazing, sprouts of useful plants are continuously browsed on by livestock, which leads to a decline in the plants' reproductively and a decrease in vegetation coverage, and hence accelerates the progression of soil erosion.

Residents consider livestock as their saving property but for eliminating excessive grazing, such a way of thinking needs to be changed. This problem, however, appears to be quite difficult as it cannot be solved solely through administrative guidance. Both the Ministry of Animal Resources and INERA have been working to eliminate excessive grazing by encouraging drylot feeding to confine and grow animals in a barn environment. This is a kind of indirect raising method and is supposed to promote the selection and culling out of livestock (disposal by way of sale) and hence to eliminate excessive grazing.

For promoting this livestock raising method using a barn environment, it is necessary to develop and improve stock raising facilities as well as to improve the way to produce and use fodder.

(a) The Middle-North Region

The number of livestock is less than Sahel Region and goats raised in the Middle-North Region account for 12% of the national total and sheep account for 13% and cattle account for 8%. The number of goats and sheep raised in this Region per capita is 1.4 times the national average, respectively, and the number of cattle raised per capita is 0.9 times the national average. Since the Middle-North Region is located relatively close to consuming areas, the number of fowl raised in the Region is larger than Sahel Region and accounts for 8% of the national total. The Middle-North Region is promising in that it can get positive effects from an improvement in breeds of small and middle-sized livestock and fowl.

(b) Sahel Region

A large number of goats are raised in this Region, accounting for 21% of the national total. Therefore, in its action plan, the Ministry of Animal Resources expects an increase in the volume of goat milk production in this Region. The number of goats raised per capita in this Region is three times the national average and the numbers of cattle and sheep raised per capita are 1.7 and 1.8 times, respectively. Sahel Region is a leading livestock region in the nation.

The Region is prone to livestock epidemics and the incidence rates of emphysema in cattle and of Pasteurellosis in cattle, goats and sheep take up 30 to 50% of the national total incidence figure. Sahel is a region where significant improvement effects on livestock hygiene can be expected.



### 3) Forestry Resources

#### (a) The Middle-North Region

The Middle-North Region is located in the Sudanese vegetation zone. The northern part of the Region has bush savanna vegetation and the southern part has wood savanna vegetation composed of shrubs and arbors. Since the northern part of the Middle-North Region is a climatic variation of the Sahelian and the Sudanese zones, acacias, thorny shrubs and bushes can be found as in the Sahelian zone. Differences from the Sudanese zone and the Sahelian zone and the transition of vegetation are evident in trees found in the Region, including *Butyrospermum parkii* (French name: karite), *Parkia biglobosa* (French name: néré) and *Khaya senegalensis* (French name: caïlcédrat). When going south, the composition of trees exhibits characteristics of the Sudanese zone and the vegetation coverage gets denser.

Most part of the Middle-North Region is located in the Northern Sudanese zone and the Region's population is highly concentrated. Since cultivation is extensive in the Region, its fragile vegetation can easily lose balance. If any vegetation disappears due to an excessive development, it will be very difficult to restore. The amount of potential wood resources in the Sudanese zone is estimated to be between 7.5 to 31m<sup>3</sup>/ha and if appropriate resource management is carried out, the current trend of soil devastation will be able to mitigate.

The Middle-North Region also has four forest reserves (Tougouri, Yabo, Goada and Tanbili) and two hunting zones (Noungou and Soromzougou). In ponds and other water resources, fish like tirapia is utilized as a halieutic resource and, according to data of the Department of Environment, fish catches in its three *departments* in the year 2000 amounted to 87,792kg in total. These resources also affect the Region's economy significantly.

#### (b) Sahel Region

As it is located in the Sahelian zone, Sahel Region has vegetation dominated by thorny shrubs and bushes and trees including *Acacia Senegal* (French name: gommier), *Acacia nilotica* and *Balanites aegyptiaca* (Balanos) can be found.

Soil degradation in forests affects the environment and results in degradation of biodiversity (vegetation and wildlife contents are degraded as well as genetic diversity is damaged), degradation of living environment (firewood collection

becomes increasingly difficult and the environment gets polluted) and a decrease in economic effects of natural forest training (supply of food, medical substances and timber). In the northern part of Sahel Region, soil degradation causes withering of several tree species and bare lands appear as these trees are withered.<sup>1</sup> Vegetation is concentrated in flat areas, where perennials are decreasing and replaced by annual plants and broad leaf trees which offer a large amount of evapotranspiration to the environment are also being replaced by thorny trees with narrow leaves.

Most part of Oudalan, Soum and Seno Provinces is designated as the Sahelian conservation area with the purpose of protecting natural resources.<sup>2</sup>

Table 2.2.1 shows the vegetation area of each province within the study area as of 1984. It is reported that the vegetation area of Sahel Region amounts to a total of 2,140,000ha and that of the Middle-North Region amounts to 600,000ha, indicating Sahel Region with a more arid climate has a larger vegetation area than the Middle-North Region. This is probably because the data on bush forests and pasture of Sahel Region also includes areas not used for crop cultivation. It evidences that the Middle-North Region is ahead of Sahel Region in terms of use of land for cultivation.

Table 2.2.1 Vegetation of Study Area (1984)

Region	Province	Area (km <sup>2</sup> )	Area of savanna trees (ha)	Area of bush forest (ha)	Total vegetation area (ha)	Vegetation rate (%)
Middle-North Region	Bam	3,991	3,606	86,556	90,162	22.6
	Namentenga	7,449	12,366	167,787	180,153	24.2
	Sanmatenga	9,279	119,414	206,087	325,501	35.1
<b>Total</b>		<b>20,719</b>	<b>135,386</b>	<b>460,430</b>	<b>595,816</b>	<b>28,8</b>
Sahel Region	Oudalan	10,007	0	688,004	688,004	68.8
	Seno <sup>3</sup>	13,385	0	780,522	780,522	58.3
	Soum	13,062	0	673,434	673,434	51.6
<b>Total</b>		<b>36,454</b>	<b>0</b>	<b>2,141,960</b>	<b>2,141,960</b>	<b>58,8</b>

Source : Survey report of Fonte J., Guinko S., et al.

1 The most withered tree species is *Pterocarpus lucens*.

2 Based on data of the International Union for the Conservation of Nature and Natural Resources (IUCN).

3 Information used here is taken from data of 1984, when Seno Province of Sahel Region was not divided into Seno and Yagha Provinces.

## (2) Social Resources

In order to promote and strengthen each village's organization construction, it is necessary to grasp how actors collaborate, cooperate, discuss and compete. It is also necessary to examine how the current government policies such as decentralization policy align or conflict with the conventional land management system. Information like this is taken into account when utilizing limited resources or carrying out the village level activities such as the introduction, selection or planning of a pilot project.

In the following section, social systems and living situations under such systems of both the Mossi people and Peul people will be discussed. In this discussion, attention should be paid to the fact that the Middle-North Region is not necessarily lived dominantly by Mossi or Sahel Region by Peul. For example, a village far away from urban districts, Diogora village, has a population mainly composed of Peul but areas near Dori or bordering on the Middle-North Region have a population composed of several different races.

### 1) The Mossi People's Social System

#### (a) Their Social Unit and Farmers' Production and Life

The Mossi people's basic social unit for production and consumption is called "Yiri." A Yiri is composed of patrilineal family members, usually made up with 25-100 members. The owner or head of a Yiri is called "Yiri Soaba" and his wives, sons and their wives and children live in houses called "Zacka" made of sun-dried bricks and clay walls. Zackas of the same Yiri are located close to the Yiri Soaba's house. That is, a Yiri is a collection of Zackas in which the same Yiri Soaba's families live. Generally, male members inherit the position of Yiri Soaba in the order of age.

Several Yiris make up a hamlet called "Saka." Then, one or more Saka makes up a village called "Tenga."

#### (b) Traditional Village Organization

The traditional village organization was abolished in the aftermath of the revolution. The unit of village, "Tenga," however, has not been changed even after the revolution and the traditional chief of a Tenga called "Teng Naaba" still has a great power to exercise. Although the traditional chiefs have no administrative authority, it is said that three fourths of them carry out Animism religious acts and use influence over residents' social life in a variety of occasions.

A council of village seniors is composed of 7 to 8 members, each of them is assigned with a task. Villagers obediently follow decisions made by the council or by the meetings of villagers (in which Yiri Soabas participate). If a villager does not follow the decision, the person is given caution by a village senior in charge and later by the village chief. The person not following the decision, however, will not be given any other punishment. Residents can leave the village as they wish and the level of bonding control over residents is not so tight.

In addition to traditional chiefs, there are village chiefs who take charge of administrative matters. They are called “Derege” and appointed by the governor of *department*.

In Mossi villages, there are also seniors of the indigenous people called “Teng Soaba,” meaning literally the great-old owner of village, who perform rituals to celebrate land fertility.

Since some of these Teng Soabas manage two or more villages, the number of Teng Soabas is smaller than the number of village chiefs. Heads of Yiri, Yiri Soabas, are provided with the usufruct right to land from Teng Soabas. In some cases, the usufruct right, which is given over from a deceased father to his eldest son, is provided for a fairly long time and the right sometimes virtually means the ownership of land—a means of agricultural production. The land, however, cannot be sold or leased to any third parties.

## 2) The Peul People’s Social System

### (a) Their Social Unit and Farmers’ Production and Life

The basic social unit of the Peul people is called “bade” which is the equivalent of Mossi’s Yiri. A bade is a collection of families called “sudu.” Each sudu has its own land and it functions as a social unit for production and consumption. The usufruct right to land is provided from the traditional chief. The Peul people do not have a system of great-old land owners. Unlike the Mossi people, the Peul people do not have community farmland and they do not operate collectively in units of bade. Only men can inherit property by dividing equally among sons.

In addition, Peul families are smaller than Mossi in terms of the number of family members. Although data is not available for each of ethnic groups, according to data for each village visited by the study team is shown in Table 2.2.2.

Table 2.2.2 Average Number of Family Members

Village	Average Number of Family Member		
	Male	Female	Total
Vousnango	n/a	n/a	18.3
Noungou	6.1	5.4	11.6
Selbo	3.6	3.2	6.5
Diogora	4.8	3.1	7.9

In this Table, Diogora village can be called a typical Peul village. Compared to Noungou village which has a higher percentage of Mossi population, the number of family members in Diogora village is smaller by 20 to 30%. The reason for this may be related to the fact that, as agricultural people, Mossi work in units of family, or Yiri, more often than Peul who are pastoral people and that the Peul people have less chances to work as a community and hence their cohesion through land use is weaker than Mossi.

### 3) Traditional Village Organization and Trend of Decentralization

Since there have not been a social land ownership system for the Peul people, no system has also been constructed to give over the land management practice to next generations as the Mossi people's traditional chiefs, or Teng Naaba, have long been doing. In Peul villages, the land ownership is not intervened by traditional authorities and Peul villages are likely to establish a kind of *laissez-faire* within the context of village.

It is interesting to think of the above-mentioned situations in relation with the RAV (Responsible Administrative Officials of Villages) system introduced by the government late in the 1980s. In an attempt to introduce a new, modern local administration system as a preliminary step of the current decentralization program, the government established the RAV system of village-level administrative officials. RAVs appointed by the government are supposed to maintain the village's order and currently, in Sahel Region where the Peul people are dominant in proportion, RAVs often function as manager of communal land (see Table 2.2.3). Meanwhile, in target villages for the pilot project in Sahel Region, it is found that RAVs also play the role of village chief representing villagers, as they attend visitors and listen and form opinions of villagers prior to the

establishment of a CFGT.

In the past, in a move toward decentralization, the RAV system was abolished. According to a source, however, it is said the system “has been restored in order to win votes in the 2005 presidential election.” It is necessary to follow up the future developments whether the government will utilize the traditional village organization or rather the new RAV system within the move toward promoting decentralization as well as how the government’s influence will be maintained or diminished as the transition from CVGT to CVD makes progress.

Table 2.2.3 Ownership by Land Classification

Land classification	Land owned by family (private land)	Private land where cultivation is abandoned	Land owned by village (holy land, burial ground and communal land)	Uncultivated land not belonging to any family (pastureland, forest and unreclaimed land)
<b>Land manager</b>				
Middle-North	Head of family		Head of land	Head of land
Sahel	Head of family		Village chief or RAV	Village chief or RAV
<b>Land user</b>				
Middle-North	Family	n/a	Villagers	Villagers and others
Sahel	Family	n/a	Villagers	Villagers and others
<b>Land transfer</b>				
Middle-North	Inheritance only; lease is possible		Long-term lease	Can be leased as cultivated land
Sahel	Sale is also possible		Lease	Can be leased as cultivated land

#### 4) Villages’ Internal Groups

Each village has several organizations or groups. These groups appear to have been established spontaneously in order to promote mutual assistance in the village’s production activities. In recent years, donors often utilize these internal groups. Concerning villages not receiving assistance of JICA study team, CVGT’s executive departments did not obtain sufficient information on the number and composition of each of these groups in addition or information on what kind of assistance was given to the village by what kind of donors. In some villages, too many groups are established indiscriminately, resulting in a lack of collaboration among the groups. In order to promote rural development at the village level in the future, it is necessary to establish CVGTs as a village-level organization (CVDs

after decentralization) and make them to represent villagers and coordinate collaboration and cooperation among various organizations and groups.

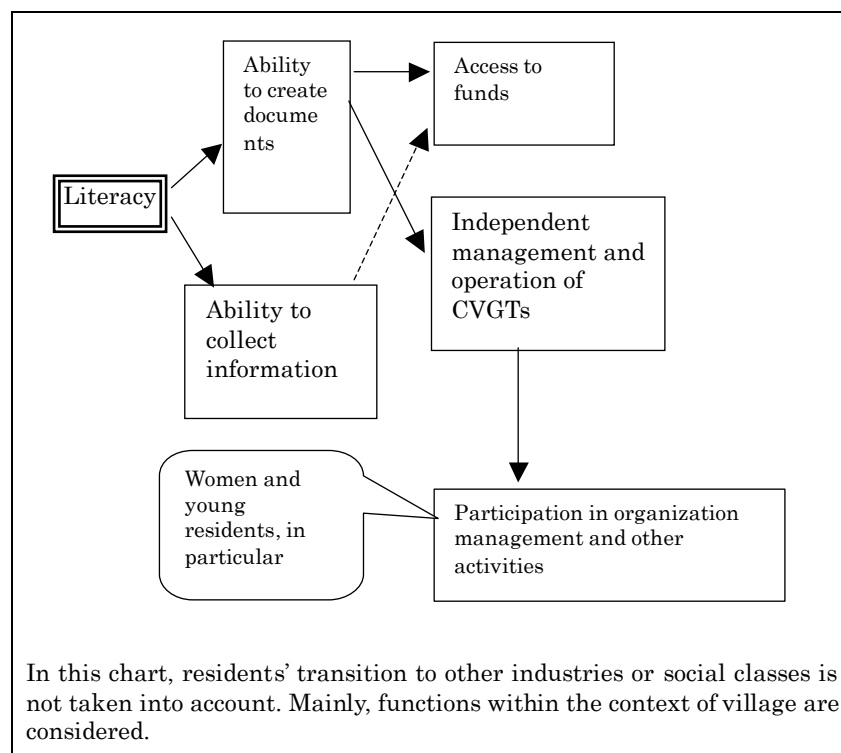
### (3) Human Resources

Residents' ability to manage and operate is an important factor in the selection and planning of projects. It is necessary to understand and analyze residents' literacy that can directly affect project management and operation. It is also necessary to know residents' gender-consciousness which can inhibit women from participating in activities and being utilized as a human resource along with awareness of current status of land degradation. These understanding and analysis need to be reflected on the project selection and planning.

#### 1) Level of Literacy

Although it has been improving gradually, the literacy rate in Burkina Faso is one of the lowest in the world (Report of UNESCO: November 2005). The word of literacy rate used here is defined as something to promote residents' production activities and improve their living environment through various functions illustrated in Figure 2.2.1.

Figure 2.2.1 Positive Influence of Literacy within Village



### (a) Issue of Literacy Gender Disparity

As shown in Table 2.2.4, the literacy gender disparity in Burkina Faso is large at 20%. It is observed that in target villages for the pilot project such a large disparity works as a factor to limit women's access to funds as well as to prevent women from becoming successful in CVGTs. That is, as discussed later in a section—(5) Financial Resources— residents not having ability to create documents are given only limited loans from public institutions such as Caisse Populaire and facing difficulties when making application to receive support from donors.

Table 2.2.4 Literacy

Classification	1990	2001		
		Total	Male	Female
Adult literacy (age 15 or older) (%)	16.3	24.8	34.9	14.9
Juvenile literacy (age 15 to 24) (%)	24.9	35.8		

Source: UNDP Human Development Report (2003)

It is also observed that some women need assistance of men when they manage their own funds or develop plans. This, in turn, becomes a factor to restrict women's advance into society even in the village-level social structure such as CVGTs. If women's literacy rate is improved along with men's literacy rate, it will apparently contribute to the elimination of these social restrictions.

In the meantime, a higher literacy rate of younger residents indicates that it will probably give an impact on the rural society's structure reform. In planning a project in a village, the donor uses CVGTs and makes them serve as an intermediary for the project. As a result, younger residents with literacy are often appointed to important posts in CVGTs, since the posts require an ability to create and exchange documents for loan and other transactions. This will reduce the social power of seniors who have traditionally managed the village's land and residents and will lead to more efficient implementation of village management and village development plans.

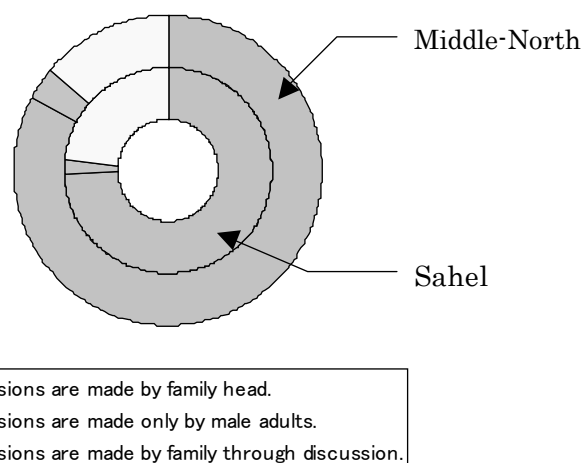
### 2) Women's Status

The environment surrounding women of rural villages is severe. Although these women have been playing an important role in production and management of daily life, they do not have significant power to influence the society, for example, (1) they have no power to make decision on family or village matters due to traditional restraints, (2) they cannot inherit land, and (3) they have no right to dispose their



property. In particular, the trend is more clearly seen in the Middle-North Region (see Figure 2.2.2).

Figure 2.2.2 Mechanism for Important Decision-making



According to data of the former Agricultural Extension Department, women take on 52% of agricultural production activities. In stock raising, the ownership rate of livestock differs between men and women depending on the animal they own. For example, the ownership rate of expensive cattle differs greatly between men and women, men at 94% and women at 6%.

On the other hand, the ownership rate of hen does not differ largely, men at 56% and women at 44%. However, only men can purchase young animals for fattening in the livestock market.

Men also manage the family budget. Women grow peanuts or sesame on small infertile land and earn cash income. Even though they earn money in this way, women cannot spend it freely and the money is often spent for family for making up food expenses or paying children's education costs.

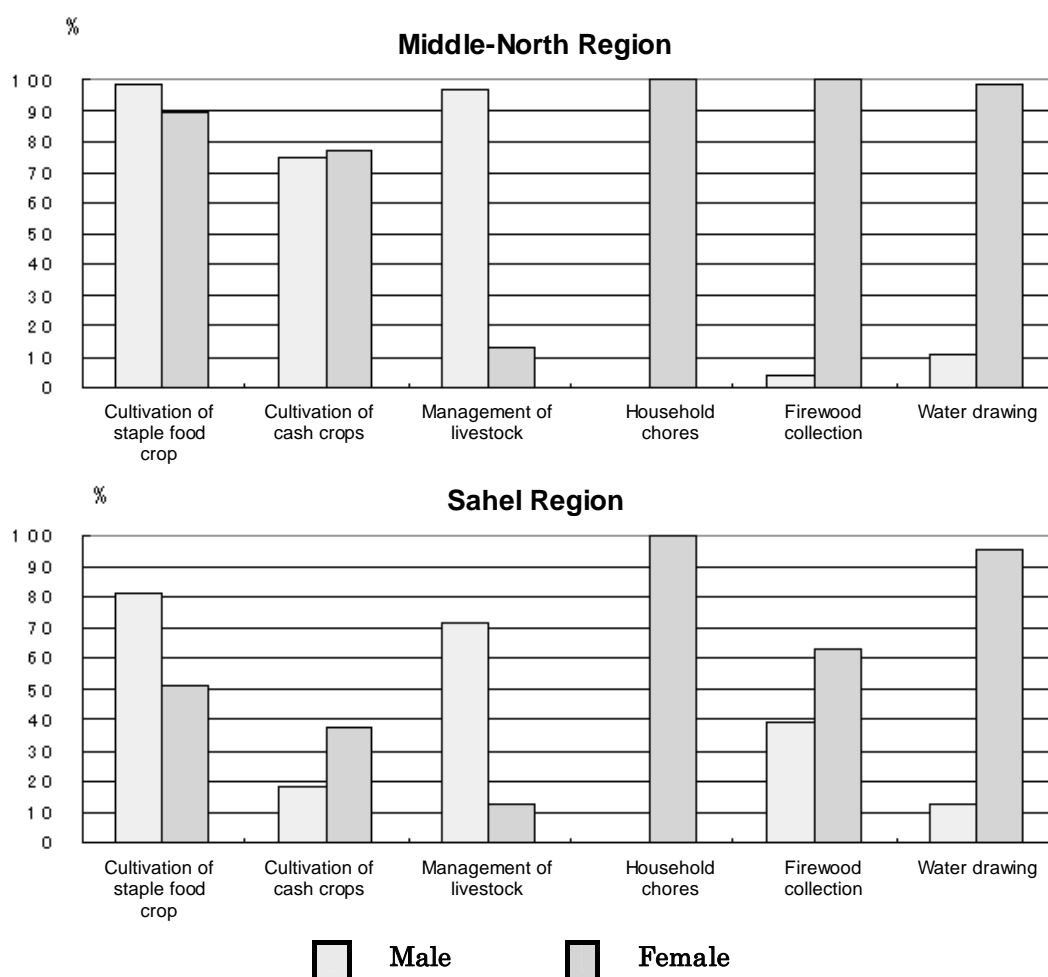
In addition to production activities, women are supposed to take responsibility for household duties and child rearing. In particular, women spend most of their daily labor hours for food preparation including flour grinding—they need to grind flour with wood mortar and pestle to make their staple food, millet. In case any milling facility is not used, the total number of hours women spend on this type of chores sometimes amounts as many as 10.5 hours per day.

Water drawing is also one of women's household duties and they sometimes have to spend a huge amount of time on it depending on the distance between the water sources. In some cases, during the water-starved dry season, women have to spend a long time from midnight to dawn waiting their turn at the well so that they can draw water as early as possible in the morning when the water level becomes high. Women play an important role in production activities and management of daily life

in rural villages and at the same time they have much information on regional resources, but they are facing a number of social and time restrictions as mentioned above. As the result, they find difficult to participate in activities or development programs to improve their living conditions.

Residents of Sahel Region consider that firewood collection is a duty to be done equally by men and women and a similar result was obtained in a questionnaire survey conducted in Phase I. (see Figure 2.2.3).

Figure 2.2.3 Residents' Attitude toward Role Sharing between Men and Women (Multiple answers are allowed)



### 3) Residents' Recognition of Current Status of Land Degradation

In a hearing survey conducted in 2003 in target villages for the pilot project (31

families in Vousnango village, 27 families in Nougou village, 32 families in Selbo village and 10 families in Diogora village), being asked about the amount of resources of their villages such as grass, trees, river water, well water and firewood, more than 93% of residents answered that the amount of these resources had decreased. The cause for the decrease, however, was recognized differently between residents of the Middle-North Region and Sahel Region. As shown in Figure 2.2.4, residents considered the most responsible for the progress of soil degradation was a decrease in the amount of rainfall and more residents recognized the decrease in rainfall as the largest cause in Sahel Region than in the Middle-North Region (Sahel Region at 48% and the Middle-North Region at 62%). Among other causes, residents of the Middle-North Region recognized excessive cutting and excessive grazing at higher rates than Sahel Region, while residents of Sahel Region lacked the recognition to a certain degree. Residents of Sahel Region pointed out a reduction in fallow period responsible for the land degradation at a little higher rate than the Middle-North Region.

Residents in the Middle-North Region recognized that soil conservation at places like stone lines was not sufficient because they actually participated in soil conservation works pretty often and understood the effects of such works (see Figure 2.2.4). On the other hand, as high as 53% of residents of Sahel Region answered that they did “not know about soil conservation works,” which means that they have not experienced the effects of soil conservation works on soil degradation prevention.

Figure 2.2.4 Causes of Progression of Soil Degradation/Erosion

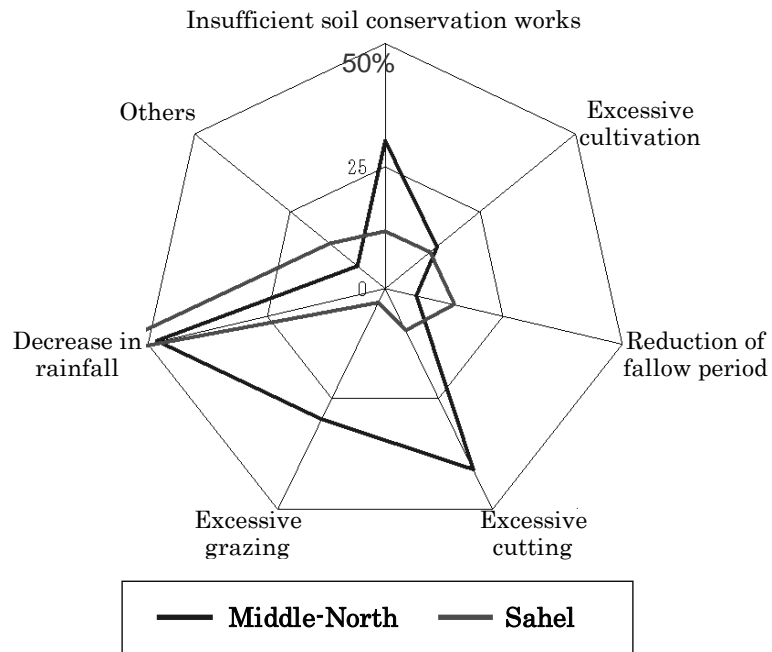
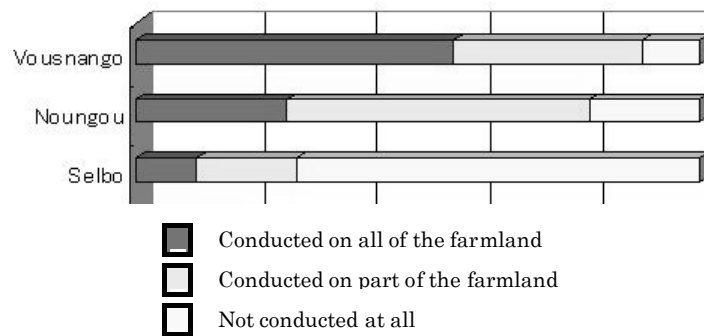


Figure 2.2.5 Soil Conservation Works—Performance per Village



#### (4) Physical Resources

It is necessary to understand the current status of facilities available to residents and the way residents use those facilities, in order to select and plan projects and to forecast input required for each project. In addition, in areas where land degradation progresses, the current conditions of water resources available to or used by residents can provide an important base for activities and project selection.

##### 1) Status of Facility Development

The current status of facility development at 20 villages surveyed in Phase I is shown in Table 2.2.5. Although any significant difference in the rate of facility development cannot be found between the Middle-North and Sahel Regions, a difference among villages is clearly seen depending on how much the village has received assistance in the past. It is necessary to prepare a development plan suited to each village's situation, taking the current development status into account.

Table 2.2.5 Status of Facility Development in Study Area

Region	Province	Village	Population	Elementary school	Islamic school	Literacy center	Agents' office	Community hall/multi-purpose hall	Mill
Middle-North	BAM	MOMENE	1,137	1				1	2
		NAMSIGUIA	2,068	1	1			1	4
		VOUSNANGO	1,863					2	1
	NAMENTENG A	BIRGHIN	1,500	1					
		FAGUIN	1,476	1		1			1
		HORERE	1,610		1				
	SANMATENGA	KOGERE	3,217	1		1			
		NOUNGOU	1,039	2				1	1
		SAORZI	1,163		1	1		1	
ROFENEGA		2,184		1	1				
<b>Total</b>			17,257	7	4	4	0	6	9
Sahel	OUDALAN	KORIZENA	2,684	1				1	
		PETOYE	457		2				
	SENO	BOUDOUGUEL	1,014	1		1			1
		GANGAOL	2,175	1			1		1
		M'BANGA	2,955	1					
	SOUM	SELBO	2,694	1					
		BORGUINDE	943	1		1	1	1	
	YAGHA	BELEHEDE	3,045	1					
		GUISSIGUIORI	334						
	DIOGORA	411							
<b>Total</b>			16,712	7	2	4	2	2	2

Region	Province	Village	Dispensary	Mosque	Vaccination yard	Livestock market /market	Cereal bank	Total number of facilities	Population /facility
Middle-North	BAM	MOMENE					1	5	230
		NAMSIGUIA	2	2				11	190
		VOUSNANGO		1		1		5	370
	NAMENTENGA	BIRGHIN						1	1,500
		FAGUIN	1				2	6	250
		HORERE						1	1,610
		KOGNERE	1	1			1	5	640
	SANMATENGA	NOUNGOU	1				1	6	170
		SAORZI						3	390
		ROFENEGA	1					3	730
<b>Total</b>			6	4	0	1	5	46	380
Sahel	OUDALAN	KORIZENA	1				1	6	450
		PETOYE						2	230
	SENO	BOUDOUGUEL					1	4	250
		GANGAOL						3	730
		MBANGA					1	2	1,480
		SELBO	1	1			1	4	670
	SOUM	BORGUINDE	1	1				6	160
		BELEHEDE	1	1	1	1	2	7	440
	YAGHA	GUISSIGUIORI		1				1	330
		DIOGORA		1				1	410
<b>Total</b>			4	5	1	1	6	36	460

## 2) Status of Water Use

Surface water is available in nature for a total of six months during the rainy season (June to September) and up until the water dries up in November, excluding areas adjacent to a large Bas fond (low ground along a river). In addition, there are digged-in ponds called boulis dotting about in these Regions but most of them dry up in the latter half of the dry season. As the result, residents have to depend on groundwater to ensure steady water supply throughout the year.

The Department of Water Resource Inventory Survey of the Ministry of Agriculture, Hydraulics and Halieutic Resources maintains an inventory of wells around the country in the form of database, particularly of deep wells with a depth of 30 -80m. More than 4,000 wells in the Middle-North and Sahel Regions are already registered in the inventory (average of 3.1 deep wells are registered per village).

According to the database, 30% of the registered wells are in a constant malfunction condition. Although large-aperture wells are supposed to substitute malfunctioning deep wells, they often dry up in the latter half of dry season. Based on the above, it is estimated that currently the number of regular users per deep well is approximately

350 residents (1996 base).

Since the database does not include data on large-aperture wells and surface water use, comprehensive data on water resources, in fact, has not been compiled.

In the study area, residents' have access to water resources for daily use, mainly surface water and groundwater. Table 2.2.6 shows the actual status of use of these water resources along with water improvement measures.

Generally, villages within the study area are composed of about 5 to 7 hamlets and they can be divided into "main village where the village chief lives in and branch villages." The infrastructure of main villages is relatively well developed but residents of branch villages mostly use surface water of low quality as they have long been doing.

Table 2.2.6 Access to Water Resources for Daily Use

Classification	Usage	Disadvantage	Improvement measure
<b>1. Surface water</b>			
1) River water	Up until it almost dries up	Have to use poor quality water which is also used for livestock	After filtration, mix alum
2) Pond	Up until it almost dries up	Have to use poor quality water which is also used for livestock	After filtration, mix alum
3) Rain water	Not used	Water cannot be stored	Purchase water pots or basis
<b>2. Groundwater</b>			
1) Deep well	Hand pump well	Frequent pump failure	Assign good repairmen
2) Large-aperture well	Draw well	Polluted by livestock waste	Manage livestock's water place

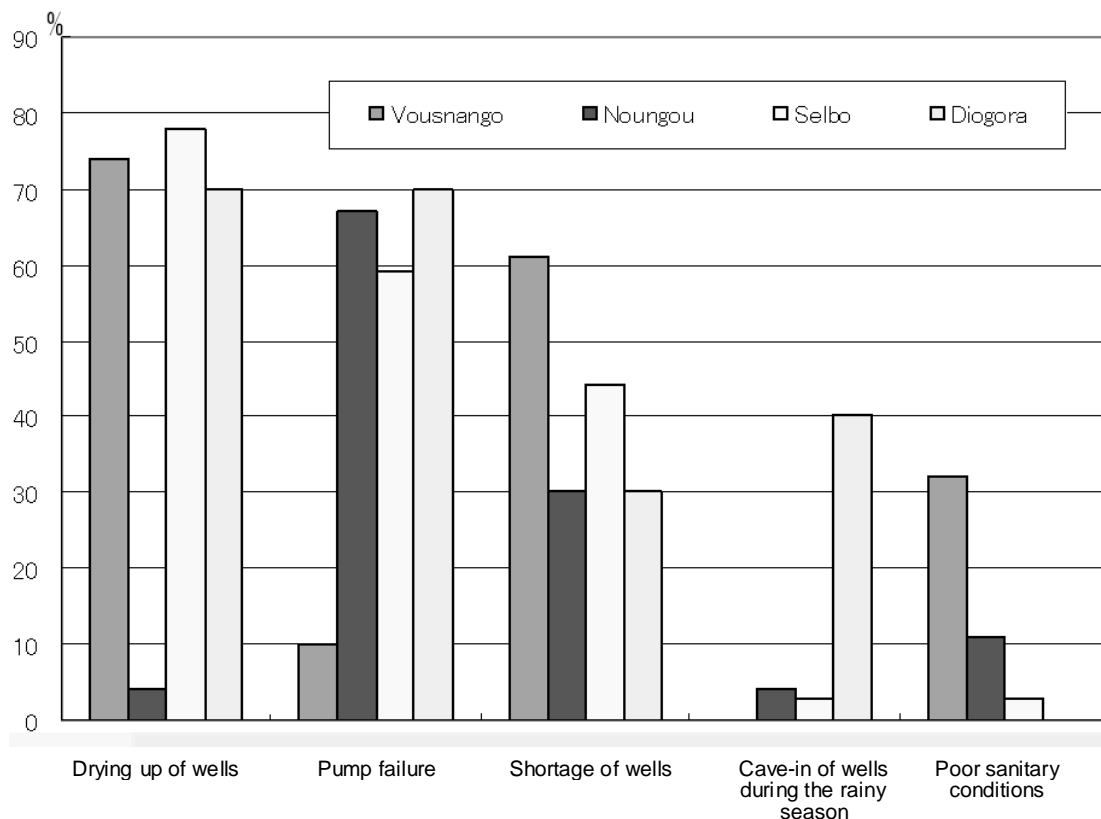
In Figure 2.2.6, problems related to wells at originally selected villages in the study area are shown. From Figure 2.2.6, an overview can be obtained as follows:

- 1) Drying up of wells: The drying up rate is as high as 70% at all the three villages excluding Nougou.
- 2) Pump failure: The pump failure rate is high (60-70%) excluding Vousnangou village.
- 3) Shortage of wells: The number of wells is insufficient across these villages, with a shortage rate at more than 30%.

- 4) Cave-in of wells during the rainy season: During the rainy season, wells often cave in due to the piping phenomenon associated with a rise of groundwater or inflow of surface water. Wells cave in at the rate of 40% in Diogora but in other villages the rate is lower at 0-5%.
- 5) Sanitary condition: The sanitary condition is poor in Vousnangou village and the poor sanitation rate is at 0-10% in three other villages.
- 6) General status: There are a variety of problems concerning access to water resources. Although a number of improvement measures have been taken, it is difficult to solve these problems on a broad level, partly because there are so many main villages (the number of branch villages is severalfold larger).

It is necessary for residents to participate in the development of plans related to access to water resources and to pay their share of the cost, for example, by providing labor to the implementation of such plans free of charge. It is also desirable that such activities be implemented as to even out the irregular bars shown in Figure 2.2.6.

Figure 2.2.6 Status of Wells at Originally Selected Villages





## (5) Financial Resources

In order to also review the possibility of sustaining or expanding project after the completion of assistance provision, it is necessary to obtain substantial information on financial resources available to residents at the village level.

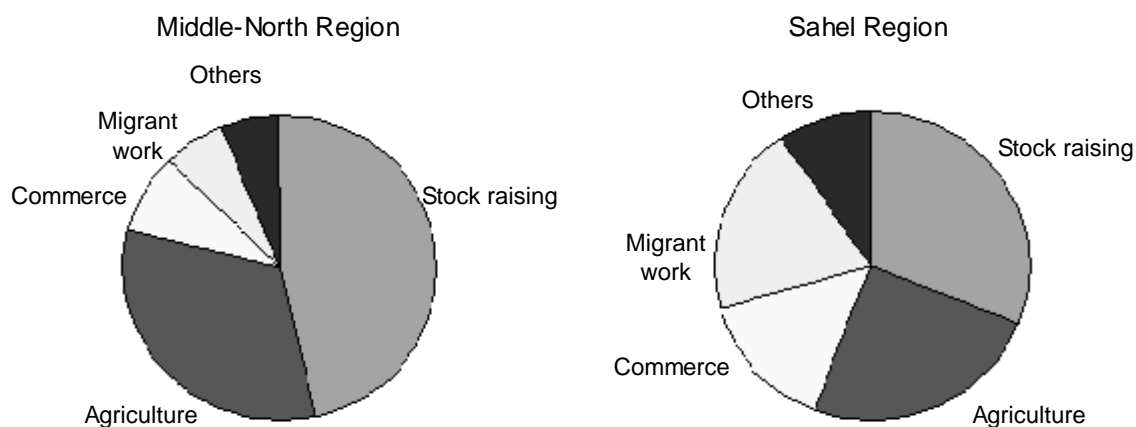
In Burkina Faso, one of the principal financial institutions which can be used by residents is Caisse Populaire. Literally meaning a national cashbox, the Caisse Populaire is a public institution governed by the law (Loi 59/94). The law restricts the establishment of finance systems other than Caisse Populaire and specifies that, for example, if a donor hopes to launch a microfinance system, it is required to obtain prior approval of the Financial Service Agency.

Although the Caisse Populaire was established for residents who have not enough direct access to banks, the management and operation of a borrowing resident organization is subject to examination and approval and funds are furnished at interest. It is also specified that if repayment is behind schedule, the mortgage will be forfeited. In addition, residents are required to exchange documents (i.e., letter of agreement, etc.). Consequently, residents unfamiliar with official written documents and document control feel that the Caisse Populaire is a difficult-to-use institution. As a result, the Caisse Populaire has not been used heavily in rural areas.

In addition, farmers of the Middle-North Region can be provided funds for their agricultural activities from associations established exclusively for farmers such as COOPEC.

Residents earn hard cash mainly through sale of products, migrant work or small-scale trade at bazaar (see Figure 2.2.7). Recently, however, income from sale of livestock or migrant work has become unsteady due to deterioration in public security in the neighboring country, the Republic of Cote d'Ivoire.

Figure 2.2.7 Breakdown of Income



Note: The proportion of commerce is larger in Sahel Region because the figure of suburban Selbo village is large.

Currently, residents sell crops immediately after the harvest when the prices sink to the lowest of the year to earn hard cash for consumer products and they are forced to ensure cash income through migrant work to buy themselves cereals during the off-crop season when the crop prices go up to the highest. Since the annual cereal prices repeat an almost same pattern every year, it is desired to establish a mechanism for residents to ensure food and cash income efficiently at cereal banks.

Furthermore, residents have a strong desire to replace migrant work with vegetable cultivation, if possible, to ensure cash income during the dry season.

### 2.2.2 Impeding Factors of Rural Development Promotion and the Countermeasures

Table 2.2.7 shows technical issues in implementing rural development and indicates factors impeding the development along with the countermeasures. Taking these countermeasures into account, the pilot project was planned and carried out.

Table 2.2.7 Impeding Factors of Rural Development Promotion and the Countermeasures

Actual status (issues)	Impeding factor	Detailed countermeasures
1. Rural society		
Difficulty of accessing to and from the village	Underdeveloped social infrastructure Poor transportation means	Improvement and repair of roads Establishment of a mechanism for participatory maintenance and management
Lack of access to appropriate development assistance and technical guidance	Low literacy rate Insufficient opportunities/places for meeting	Provision of literacy and mathematics education Construction of school rooms and efficient use of existing school rooms Construction and maintenance of community halls
Low cash income	Lack of means of cash income Lack of migrant work and market to sell products Lack of knowledge about cash crop cultivation, handicraft technique and agricultural products processing	Encouragement of cash crop production Reduction of cost burden through cereal banks Value-adding through the processing of agricultural, stock raising and forest products Training on vegetable cultivation, handicrafts, agricultural product processing
Difficulty of accessing to funds	Residents' poor document creation ability	Literacy education and document creation training
Difficulty of women's participation in development	Gender disparities in labor sharing Low social influence Lack of funds to be used freely by women	Educational activities for promoting changes in consciousness Support for women's participation in organization development Support for women's participation in literacy education Support for activities to increase women's cash income Training on cultivation and processing technique
2. Agriculture, stock raising and forestry		
1) Land use		
Inadequate resource management	Restrictions on land use due to traditional practice	Establishment of a natural resources management system through CVGTs
Deterioration of fertility	Exploitative production system of agriculture, stock raising and forestry	Streamlining of cropping systems and appropriate grazing and forest resources management Establishment of rules on natural resources management through cooperation of related administrative bodies
2) Agriculture		
Low agricultural productivity	Unsteady rainfall	Efficient use of water resources Introduction of decreasing water cultivation Introduction of small-scale irrigation systems
	Deterioration of land productivity	Improvement of agriculture of the rainy season growth (introduction of

		improved varieties, securing of appropriate fallow period, introduction of legume plants, etc.) Extension of easy-to-use compost production technique
	Insufficient awareness of scales and measures (square measure)	Education on crop cultivation and composts through OJT
	Delay in introduction of state-of-the-art technologies and new varieties	Construction of a system to offer technical guidance regularly Development of a system for diffusion, breeding and delivery of superior seeds
Low income of farmers	Crop cultivation mainly for personal consumption	Introduction of commercial crop cultivation such as vegetables

### 2.2.3 Overview of Villages and Resources

#### (1) Overview of Villages in Burkina Faso

An overview of the selected villages has been compiled in the attached reference materials 5. The features of the villages can be compiled by each region. The features of the middle north region and the Sahel region are provided in the Table 2.2.8.

Table 2.2.8 Features of Villages in Middle North and Sahel Regions

Middle North Region	Sahel Region
<ul style="list-style-type: none"> <li>• Hamlets (quartier) tend to be dispersed, and there are a large number.</li> <li>• Most of the inhabitants are Mossi.</li> <li>• Average population of subject villages: 2,200 people</li> <li>• Project activities are already being conducted by many supporters.</li> <li>• Traditional customs still remain in Mossi society.</li> <li>• Drop in soil fertility, and lack of cultivated land due to population pressure.</li> <li>• Measures to preserve agricultural land have already been implemented by many NGOs and donors, and many villages are receiving support.</li> <li>• Infrastructure consisting of simple health facilities, cereal warehouses, schools and mills is relatively well developed.</li> <li>• Each village has a grammar school except for one (Ouidin), and literacy education is</li> </ul>	<ul style="list-style-type: none"> <li>• Hamlets are relatively concentrated in one location, and there are not that many hamlets (quartier).</li> <li>• The composition differs in the Peul (Rimaibe, Bella), Sonrai and other respective regions.</li> <li>• Average population of subject villages: 800 people</li> <li>• Only a limited amount of technical support is being provided by agents.</li> <li>• Hamlet policy of government has resulted in training of a relatively large number of villages where people are settling down.</li> <li>• Relatively large amount of land is becoming bare in middle north region. Urgently need to preserve agricultural land, but public support of the country has not been obtained (support being provided by external projects).</li> <li>• Infrastructure not very well developed; only about one school for every 2 villages.</li> <li>• Literacy education limited, resulting in low level of literacy in middle north</li> </ul>

being provided.	region.
<ul style="list-style-type: none"> <li>• Average village area throughout area is 31km<sup>2</sup> (44 people/km<sup>2</sup>) for middle north region, and 61km<sup>2</sup> (20 people/km<sup>2</sup>) for Sahel region.</li> <li>• Villages are dispersed among multiple hamlets (quartier), but this does not mean that the basic infrastructure is equally distributed. For example, in the Selbo village in the Sahel region, infrastructure is concentrated in Debere Loguel hamlet. According to influential people and RAV (person in government responsible for villages), various facilities were built in this hamlet since the population density in other hamlets in the area is low.</li> <li>• The villages in the studied region consist of multiple hamlets with a population of between 300 and 500. In addition, the distance between hamlets is 5km or more and roads do not exist, making it difficult for the people to access the wells, community halls and other facilities.</li> <li>• The Mossi have a landlord (tengsoaba) that administers fertility rites, but the Peul have no such system. Land is inherited, and newly cleared land or land to build housing for relocation is provided by the village chief or landlord (for Mossi) and according to traditional chief (for Peul).</li> </ul>	

## (2) Five Resources

The five types of resources of the selected 17 villages are indicated in attached reference materials 5. The status of resources for the Middle North Region and Sahel Region is shown in Table 2.2.9.

Table 2.2.9 Status of Five Resources in Each Region

Resource Class		Middle North Region	Sahel Region
Natural	Lacking Resource	<ul style="list-style-type: none"> <li>• Decreased rainfall</li> <li>• Progression of soil erosion</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate rainfall</li> <li>• Inadequate grazing land</li> <li>• Decreased forested area</li> </ul>
	Resources that can be Used/ Restored	<ul style="list-style-type: none"> <li>• Basically self sufficient in supplying food except at times of drought.</li> <li>• Land suitable for vegetable growing not being used.</li> <li>• Underground water available</li> <li>• Tree species that can be effectively used for forestry product processing in Karite and Baobao</li> </ul>	<ul style="list-style-type: none"> <li>• Underground water</li> </ul>
Social	Lacking Resource	<ul style="list-style-type: none"> <li>• Coexistence of traditional and modern land systems.</li> <li>• CVGT in Bam province, but is not functioning</li> </ul>	<ul style="list-style-type: none"> <li>• Many villages do not have CVGT in Yagha/Seno provinces</li> <li>• Land management has traditionally been performed by village chief</li> </ul>
	Resources that can be Used/ Restored	<ul style="list-style-type: none"> <li>• Implementation organization</li> <li>• Existing group organization</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation organization</li> </ul>
Human	Lacking Resource	<ul style="list-style-type: none"> <li>• Technology in agriculture, stock raising and forestry</li> <li>• Lack of knowledge to prevent disease</li> </ul>	<ul style="list-style-type: none"> <li>• Low literacy rate among adults</li> <li>• Technology in agriculture, stock raising and forestry</li> <li>• Lack of knowledge to prevent disease</li> </ul>

	Resources that can be Used/ Restored	<ul style="list-style-type: none"> <li>• Agents for agriculture and stock raising and SDECV</li> <li>• NGOs and associations</li> </ul>	<ul style="list-style-type: none"> <li>• NGOs and associations</li> <li>• Resident labor</li> <li>• Agents for agriculture and stock raising and SDECV</li> </ul>
Physical	Lacking Resource	<ul style="list-style-type: none"> <li>• Inadequate potable water</li> <li>• Inadequate irrigation facilities</li> <li>• Unstable agriculture production volume</li> </ul>	<ul style="list-style-type: none"> <li>• Inadequate potable water</li> <li>• Inadequate water for livestock</li> <li>• Village meeting hall, cereal bank? and other infrastructure</li> <li>• Improved seeds not introduced</li> </ul>
	Resources that can be Used/ Restored	<ul style="list-style-type: none"> <li>• Village meeting halls, mills</li> </ul>	<ul style="list-style-type: none"> <li>• Wells</li> </ul>
Finance	Lacking Resource	<ul style="list-style-type: none"> <li>• Access to financing difficult</li> </ul>	<ul style="list-style-type: none"> <li>• Access to financing difficult</li> </ul>
	Resources that can be Used/ Restored	<ul style="list-style-type: none"> <li>• Portion paid by residents</li> </ul>	<ul style="list-style-type: none"> <li>• Remittances by migrant workers</li> <li>• Portion paid by residents</li> </ul>

#### 2.2.4 Study of Resource Volume

In phase 1, the PRA study method was used to determine the status of the five types of resources, and a basic development plan was formulated with the participation of the residents. Pilot projects have been selected from the following two standpoints:

- Projects to strengthen social and human resources, taking BHN enhancement and gender into consideration.
- Projects to directly involve agriculture and stock raising agents from standpoint of strengthening UCADR capacity

The PRA study facilitated a grasp of the relationship of the five types of resources and the qualitative endowment status, but a separate supplementary study is needed in order to obtain an understanding of the qualitative endowment status of natural resources in particular.

In order for the UCADR to secure a budget and promote projects, it is necessary that it obtain a grasp of the qualitative or semi-qualitative endowment status of natural resources, determine the status and cause of degradation numerically, and propose persuasive measures to deal with these problems.

For this purpose, a resource estimation study was conducted with the following three objectives:

- 1) The production potential and consumption volume of plant resources (forests and pastures) were estimated from the existing materials and area study results in order to evaluate the environmental pressure exerted by the villages.

- 2) Resource management methods and utilization methods tailored to the needs of the inhabitants were evaluated by determining the concept and views of land/ resources held by the inhabitants through interviews and studying the causes/measures to deal with degradation. This resulted in confirmation and a judgment that the environment is currently subjected to excessive pressure.
- 3) Participation of agents was promoted in the evaluation of environmental pressure and analysis of the interview study. This facilitates the relay of study techniques, results in a new awareness of activities to secure resources and will help with UCADR activities in the future.

#### (1)Resource Volume Study Plan

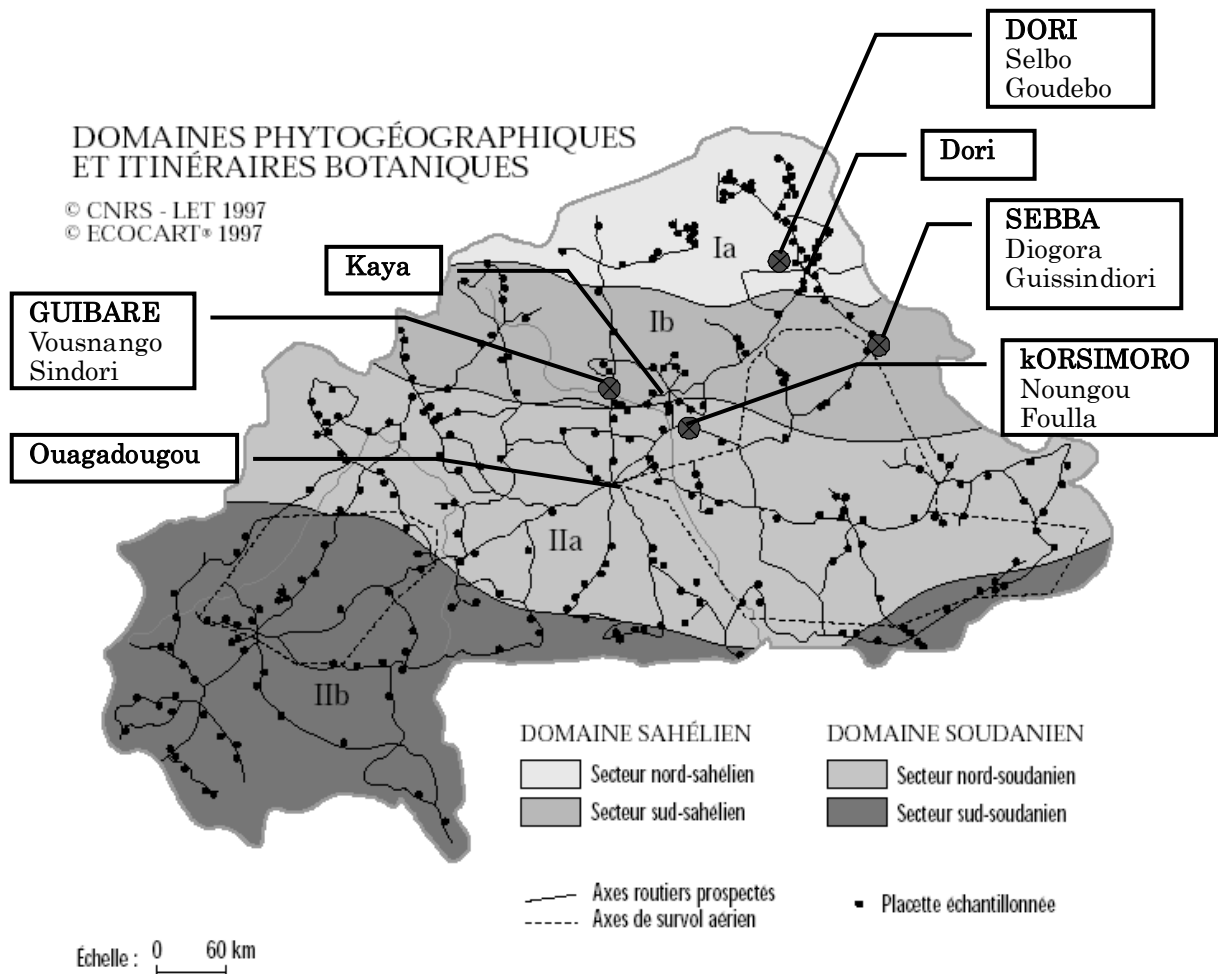
##### 1)Analysis Technique

Analysis/evaluation of local resources was performed mainly through interviews. In addition, the production potential and consumption volume of plant resources (forests and pastures) were estimated from the existing materials and area study results presented later in order to evaluate the environmental pressure exerted by the villages.

##### 2)Study of Production Potential with Existing Materials

Agro-ecological zoning is not performed in the strict sense of the word in Burkina Faso, but geographical classes have been defined by Monod (1957) and Guinko (1984) according to flora and rainfall volume. These classes are shown in Fig. 2.2.8. The verification study was separated into North Sahel (Sahel region: Selbo village, Goudébo village), South Sahel (Sahel region: Diogora village, Guissindiori village; Middle North region: Vousnango village, Sindri village) and North Sudan (Middle North region: Nougou village, Foulla village).

Fig. 2.2.8 Agro-Ecological Zoning in Burkina Faso



The timber volume of the forests and grazing capacity of the pastures were calculated in according with these region classes (Refer to Table 2.2.10 and Table 2.2.11).

Table 2.2.10 Estimated Timber Volume by Region Class

Unit: m<sup>3</sup>/ha

Region Class	Low Forest Density	Medium	High
North Sahel	0.3-0.5	1.0	2.0-3.0
South Sahel	0.8-1.5	1.5-3.0	4.5-7.0
North Sudan	3.0	7.5-8.0	12.0-13.0
South Sudan	4.5	10.0	16.0-18.0

(Source: CAMPUS project, 1995)



The estimated timber volume was calculated using basic data of each site obtained in the study and according to breast high diameter.

Table 2.2.11 Grazing Capacity for Each Region Class

Type of Pasture	Grazing Capacity: ha/UBT/year
North Sahel	5.0
South Sahel	5.0
North Sudan	2.5
South Sudan	1.3

(Note: Tropical livestock units – Cattle: 0.8UBT, Sheep/Goats: 0.15UBT, Camels: 1.0UBT)

These reference values were utilized and field reconnaissance was conducted by means of interviews and GPS to determine the land utilization area within the village in order to calculate and evaluate the resource volume of the village.

(a) Villages Studied

A questionnaire study was implemented in the phase 1 study in the following three villages which represent the above agro-ecological zones being studied:

North Sahel Region	Selbo village: 5 hamlets, 54 km <sup>2</sup>
South Sahel Region	Vousnango village: 7 hamlets, 46 km <sup>2</sup>
North Sudan Region	Noungou village: 7 hamlets, 162 km <sup>2</sup>

(b) Interview Study

Interviews were conducted to determine how degradation of the environment has appeared, obtain a grasp of the extent of the seriousness of this problem, and confirm the awareness of the inhabitants concerning environmental change.

(c) Area Study

The village land manager, elder or other persons familiar with land utilization were identified when the interview study was conducted, and interviews were conducted to determine the rough positioning and area ratio of each land utilization class. An area study using GPS was then performed using the results for reference purposes.

3) Material Collection and Interviews

Collection of existing materials and an interview study of the related agencies were implemented between January to February 2005. Materials were collected from National Institute of Statistics and Demography, Ministry of Agriculture,

Hydraulics and Halieutic Resources, National Institute of Geography, Ministry of Animal Resources, Ministry of the Environment and Living Environment, Ministry of Economic Development, INERA, PNGT II Project Office, Ouagadougou University and other sources. These materials were related to socio-economic statistics, agricultural, stock raising and forest production statistics, water resource development related statistics and other basic materials, as well as examination research and individual projects of INERA and other agencies.

Additional collection of materials concerning similar natural conditions in the target regions was conducted in the 2005 fiscal year.

Forest Resources	Reforestation survival rate Average number of years required to use as fuel after reforestation Firewood consumption trends
Fodder Resources	Fodder harvest made possible by protecting agricultural land
Food (Cereal)	Cereal harvest made possible by protecting agricultural land

## (2) Results of Resource Volume Study

### 1) Interview Study

An outline of the people interviewed is shown in Table 1.5.

Table 2.2.12 Outline of People Interviewed

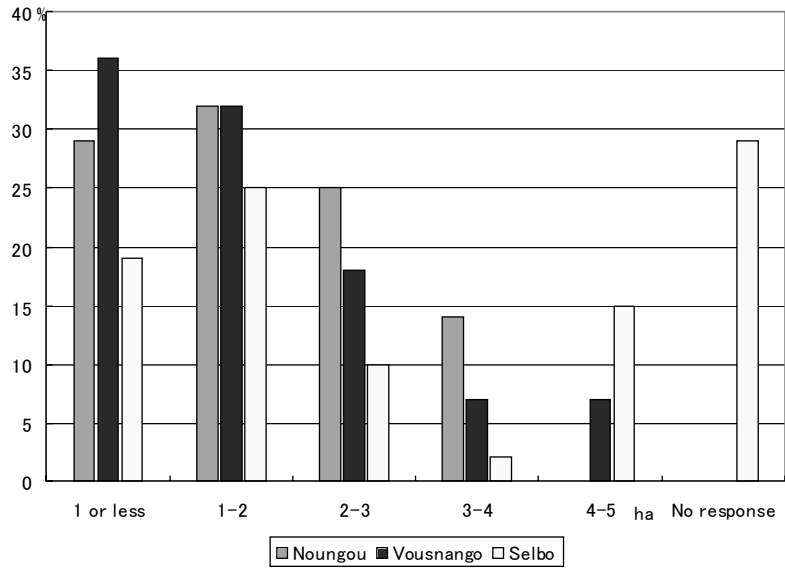
Village	Sex	No.	Ave. Age	Ave. Family Members	Field Used	
					No.	Area (ha)
Noungou	Male	14	52	15	2.9	4.6
	Female	14	46	12	3.1	3.1
Vousnango	Male	14	47	15	5.1	5.3
	Female	14	37	15	4.2	1.7
Selbo	Male	18	48	14	3.2	5.0
	Female	30	43	8	2.7	3.9

The area of farmland per family tends to be polarized between large-scale areas and small areas in the Selbo village in the Sahel region compared to the two villages in the middle north region. This can be judged to be the difference between people that make a living by raising livestock verses people that make a living by means of farming. Farms that cultivated a large area in excess of 9ha amounted to 13% of the responses.

Approximately 30 percent of the people did not answer in Selbo village. About 90% of these were women, indicating that the concept of area is not prevalent among women.

Compared to the two villages in the middle north region, farmland is evenly distributed among each class in Vousnango village, and the ratio of farms of 1ha or less is higher compared to other villages. The field area per family is shown in Fig. 2.2.9.

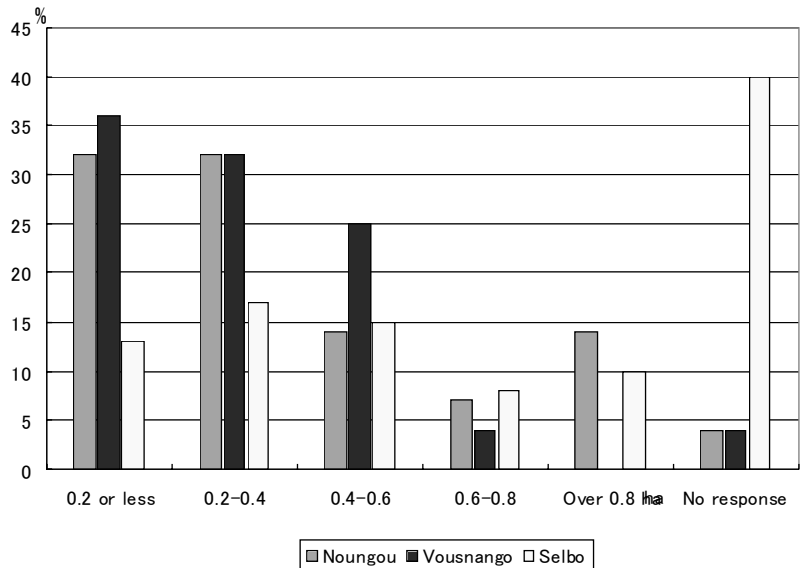
Fig. 2.2.9 Field Area per Family



The farm area per person is evenly distributed among each class in Selbo village. With respect to this, there are more farms of 0.4 – 0.6ha or less in the two villages in the middle north region.

The field area per person is shown in Fig. 2.2.10.

Fig. 2.2.10 Field Area per Person



The results of the interview study are shown in Table 2.2.13 and Fig. 2.2.11.

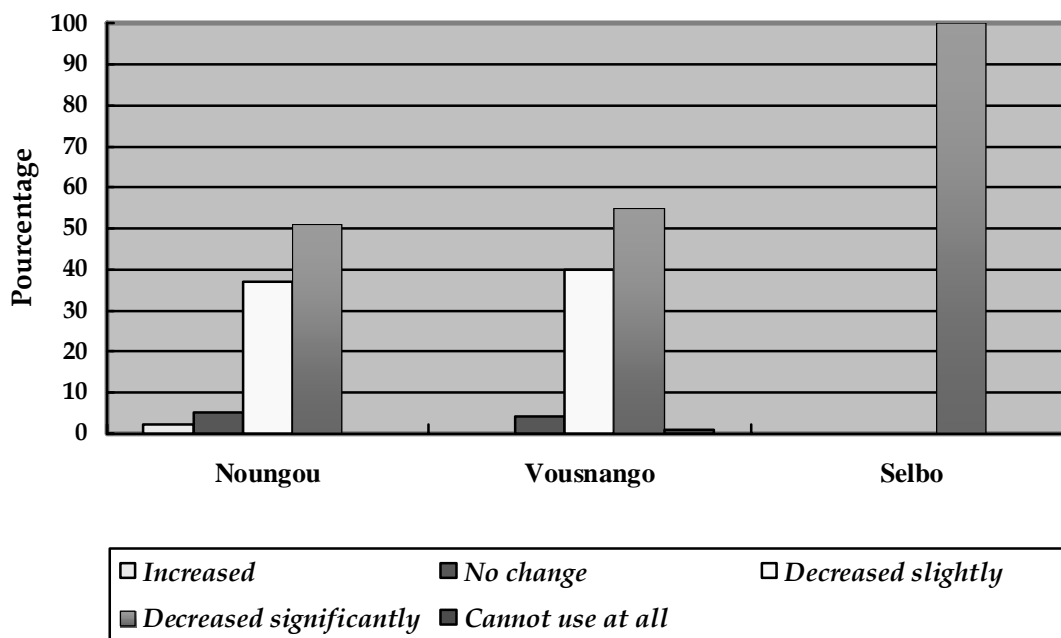
These consist of answers to the question "How has the productivity of the land changed over the last ten years?" The difference between the "Decreased slightly" and "Decreased significantly" answers was mainly due to the subjective of the respondents.

Table 2.2.13 Results of Interview Concerning Productivity of Land

Unit: No. of Fields

Segment	Noungou Village	Vousnango Village	Selbo Village
Increased	2	0	0
No change	4	5	0
Decreased slightly	31	52	0
Decreased significantly	42	72	140
Cannot use at all	0	1	0
No answer	4	1	0
Total	83	131	140

Fig. 2.2.11 Results of Interview Concerning Productivity of Village Land



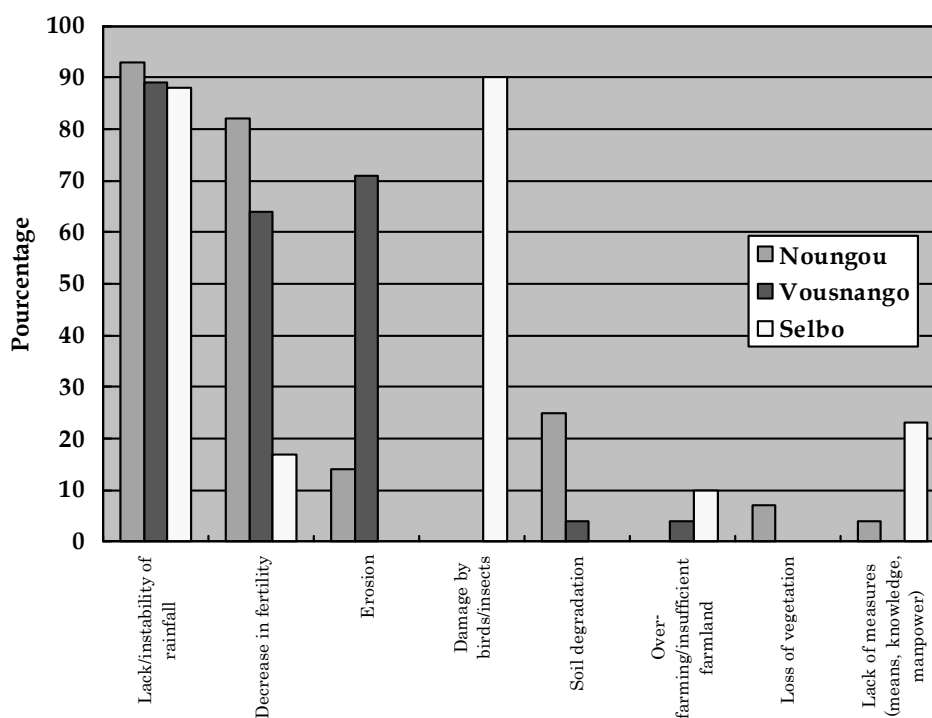
All of the responding inhabitants of Selbo village answered that the productivity of the land "Decreased significantly". This is an indication of the severity of the natural conditions in the Sahel region and the inadequacy of measures that have

been implemented.

In the Middle-North region, people answered that production volume of 90% or more of the farms has decreased in the Nougou and Vousnango villages over the past 10 years. In particular, in Vousnango village, 56% of farms answered that production volume had significantly decreased, including farms that answered that they could not use the land at all. There was no difference between farms that were owned or not owned by the families that cultivated them, but there was a trend for a higher decrease in production volume when the farmland was separated a considerable distance from the family home. In Nougou village, soil conservation measures have been implemented at 59 of the 83 farms (71%), and in Vousnango village, soil conservation measures have been implemented at 94 of the 131 farms (72%).

The causes for the decrease in yield as perceived by the residents are shown in Fig. 2.2.12. Around ninety percent of the inhabitants in each village think that the lack and instability of rainfall is the main cause of the decrease in crop yield. While many people in the two villages in the middle north region say that the fertility of the soil has decreased, ninety percent of the inhabitants in Selbo village cite damage caused by birds and insects as being the main cause. In the Sahel region, there is also the influence of damage caused by locusts, but the inhabitants feel that the threat of soil degradation due to natural phenomenon is stronger, and the scale of projects to create ponds, restore bare land and perform other work makes it difficult for the inhabitants to undertake this work themselves, indicating that restoration projects are needed.

Fig. 2.2.12 Causes Perceived by Inhabitants for Decrease in Crop Yield



## 2) Area Study

### (a) Study Results

The results of the area study using GPS are shown in Table 2.2.14.

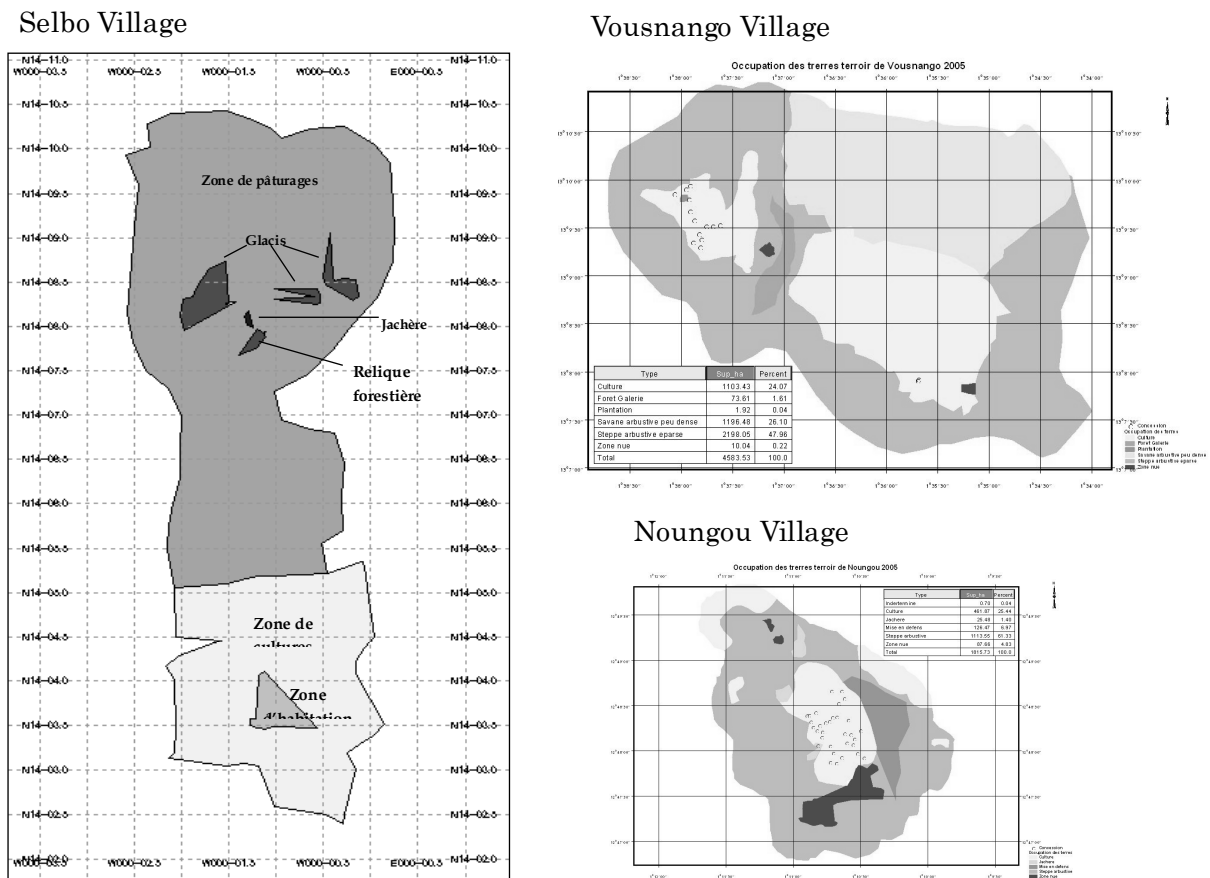
Table 2.2.14 Results of Resource Volume Study (Village Land Resources)

Class	Vousnango village	Nougou village	Selbo village
Agricultural land	24%	26%	29%
Fallow soil	-	1%	0%
Grassland/Shrubs	74%	61%	67%
Woods	2%		0%
Reserves	-	7%	-
Bare land	0%	5%	2%
Residential			2%
Total	100%	100%	100%
Area	4,584ha	1,816ha	5,378ha

When examining the results of this area study, it should be noted that there were some areas that land surface tracing could not be performed for the village

boundaries. In particular, the seasonal creation of a wetland over a wide range on the outer edges of the eastern portion to the north of Nougou village made it necessary to abandon our intention to trace the boundary in that area. As a result of this, a considerably smaller value has been reported for the value of Nougou village. This is a result of the significant seasonal constraints when conducting an area study.

Fig. 2.2.13 Current Land Utilization Status Diagrams



(b) Analysis

Taking the results of the area study into consideration, the changes in resources from the initial stage (before) and after the project was implemented were compared with regard to a) Natural Resources and b) Improvement in Quality of Life in Hamlets.

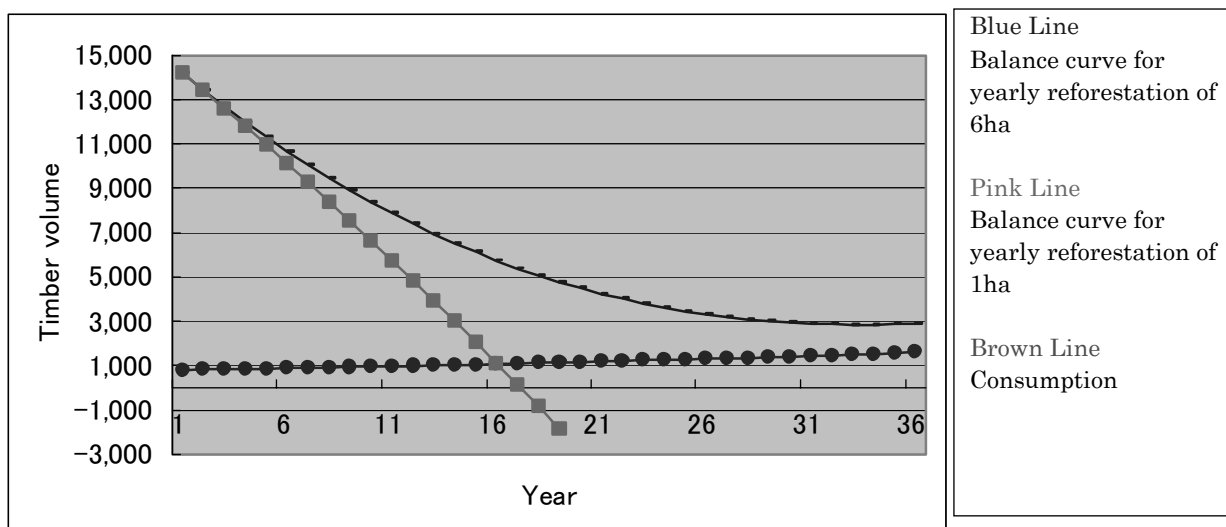
a) Natural Resources

A qualitative analysis was performed of the effectiveness of the pilot project for forest resources, food (cereal) and livestock course feed.

[1] Forest Resources

In the area of forest resources, reforestation of eucalyptus, *Acacia nilotica* and other trees was commenced in 1984 with the objective of preventing desertification, and is currently being continued. Over the last 20 years, reforestation has been performed at an average rate of 1 ha/year. On the other hand, consumption of forest for firewood is estimated to be 796m<sup>3</sup> for hamlets on the whole, and when this is multiplied by the number of residents, it indicates that reforestation of approximately 103ha is required. If it is assumed that there is a forest area of 2,000ha, this amounts to an estimated timber volume of 15,000m<sup>3</sup>. The estimated balance of supply and demand is shown in Fig. 2.2.14. If only 1ha is reforested every year, there will be a deficit in the supply in the 17<sup>th</sup> year, and firewood will need to be procured from external sources. Reforestation of 6ha must be performed every year to maintain forest resources, and implementation on this scale will result in a minimum timber volume in the 32<sup>nd</sup> year, which will increase slightly after that. The interview study indicated that about 800 persons are required to reforest 6ha every year, and this is a figure which can be achieved if the necessary funds are invested and an adequate supply of seedlings is secured.

Fig. 2.2.14 Balance of Supply/Demand of Firewood (Noungou village)



Likewise, 1,000 trees have been planted in Selbo village from 1997 as part of a program to prevent desertification. Approx. 2ha/year of reforestation has been performed over the last 7 years. However, when using a medium forest density of 1.0 m<sup>3</sup>/ha or even a high density of 2.5m<sup>3</sup>/ha to estimate the timber volume per hectare, it becomes apparent that this volume has almost no effect in addressing



the problem.

Prerequisite Conditions for Calculation	
•	A yearly consumption volume of 0.63kg/person/day was used (FAO1984). The figure of 240kg was used for 1 stere (equivalent to 1m <sup>3</sup> in volume unit) (FAO1999). This amounts to a yearly consumption of 0.96m <sup>3</sup> , and since the family does not consume the same volume, this was multiplied by a factor of 0.8, for a value of 0.77m <sup>3</sup> .
•	For timber volume, a medium forest density of 7.75 m <sup>3</sup> /ha can be used to estimate the volume in the North Sudan region (applied to Nougou village) (CAMPUS1995). Likewise, a figure of 1.0 m <sup>3</sup> /ha was used for Selbo village which is located in North Sahel. However, the timber volume estimate does not take into consideration the yearly increase in volume.
•	Gathering by outside persons and other factors are not taken into consideration in calculation of consumption.
•	The increase in the population is assumed to be 2%.

The condition of natural resources has been improved by implementing the projects, and they have helped at least a little in preventing desertification. However, since this study did not concentrate on this aspect alone, the values cannot be guaranteed to be appropriate.

## [2] Food (Cereal)

Improvements have been implemented in crop growing during the rainy season starting in 2003 in Selbo village and Diogora village, and improved seeds have been introduced. In phase 2, follow-up for this was performed, and production of compost tanks and compost took place. The results of this study were used to perform preliminary calculation for the effects of the pilot project.

Agricultural statistic data from Burkina Faso was used for the crop yields before the project was implemented. Crop yield after project implementation was calculated from the study results, and these data were used to make a comparison of the status before/after project implementation

Table 2.2.15 Crop Yield due to Improvement in Rainy Season Growing (*Niébe*, Millet)

Niébe	Selbo village			Diogora village			Ave. Yield (Statistic)
	2003	2004	2005	2003	2004	2005	
Yield (kg/ha)	425	0	688	713	0	865	320
Participants	12	12	12	10	10	10	
Area cultivated per person (a/per.)	0.25	–	8.5	1.5	–	4.8	
Yield per person (kg)	1.06	–	58.48	10.70	–	41.52	

Millet	Selbo Village			Diogora Village			Ave. Yield (Statistic)
	2003	2004	2005	2003	2004	2005	
Yield (kg/ha)	1111	0	468	425	0	720	440
Participants	12	12	12	10	10	10	
Area cultivated per person (a/per.)	0.25	–	9.5	1.2	–	4.6	
Yield per person (kg)	2.78	–	44.46	5.10	–	33.12	

\*1: No yield in both villages in 2004 due to drought and damage by locusts.

\*2: There was more rainfall than average in 2003 and 2005.

Since there was no crop yield in 2004, the crop yields in 2003 and 2005 were compared with crop yields before the project was implemented (statistics) in order to provide preliminary figures for the effect of the pilot project.

A comparison of the yield before project/2003 showed an approx. increase of 1.3 – 2.2 times for niébe, and an approx. increase of 0.96 – 2.5 times for millet due to the introduction of improved seeds. This is assumed to be due to the effects of the first generation improved seeds (F1 seeds). Next, a comparison of the yield before project/2005 showed an increase of 2.1– 2.1 times for *niébe*, and an increase of 1.1 – 1.6 times for millet. In 2005, seeds produced in 2003 (2<sup>nd</sup> generation) and procured by the inhabitants were seeded, but it is assumed to be mainly due to the application of compost. In addition, there was a dramatic increase in the area cultivated per person in 2005 compared to 2003, which was due to a recognition of the participating inhabitants of the effectiveness of the improved seeds. Therefore, the introduction of improved seeds and compost resulted in an improvement in cereal production.

However, when the fact that there was no yield in 2004 due to a drought and locust damage, and that there was higher rainfall than normal in 2003 and 2005 are taken into consideration, as well as the fact that cereal cultivation is influenced considerably by natural conditions, these factors were excluded to perform analysis.

The total crop yield in 2005 was 69 – 240 kg/person when other crops are added to *niébe* and millet.

When yearly cereal consumption per person is assumed to be 190 kg, it can be projected that self sufficiency can be achieved by introducing improved seeds and compost if natural factors and other problems are minimal.

However, since there is no yield data for crops using 3<sup>rd</sup> generation seeds and after

or yield data with the improved seeds for low rainfall, these values cannot be said to be appropriate.

### [3]Livestock Fodder

Calculations for the balance of supply and demand of grazing capacity per hectare in the respective regions are provided in Table 2.2.16.

Table 2.2.16 Balance of Supply and Demand of Livestock Fodder

Village	Grassland Area (ha)	Grazing Cap. (ha/UBT/yr)	Est. Grazing Capacity (UBT)	Current No. of Livestock			Current Req. Vol. (UBT)
				Cattle	Sheep	Goats	
Noungou	1,114	2.5	450	100	2,000	2,100	572
Selbo	3,605	5.0	720	900	1,000	1,500	1,020

In Noungou village, 79% of the required grassland is available, and in Selbo village, 71% is available, but the remaining portion must be made up with cereal residuals and mixed feed, by adjusting the number of livestock that are raised or with other measures.

#### 1)Use of Cereal Residuals

In the pilot project, agents provided guidance on technology to dry the stems and leaves of millet and other cereals (cereal residuals) in order to make up for the shortage in fodder, and the effectiveness is evaluated in this section.

Prerequisite Conditions for Calculation
1) Using data indicating the required energy volume for Sahel cattle is $0.508\text{MJ}/\text{kg}^{0.75}$ (BREMAN and others 1998), and assuming use for 210 days for cattle weighing 250 kg (period during which stems/leaves are used), this is 1 UBT = 6,721MJ.
2) The energy volume for millet leaves/stems is 6.7MJ/dried kg (Savadogo and others 1999), calculated from the digestible nutrients.
3) According to Savadogo and others (1999), the unit yield of millet stems/leaves in the middle north region is 1,395 dried kg/ha, and in the Sahel region it is 1,416 dried kg/ha.

Calculating the effects of utilizing cereal residuals in Noungou village based on the above prerequisite conditions, the required area under cultivation for 1 UBT of millet =  $6,721\text{MJ} \div 6.7\text{MJ}/\text{kg} \times 1,395\text{kg}/\text{ha} = 0.72\text{ha}$ . Since the lack in grazing capacity is 122UBT, by using the leaves and stems of millet from 122UBT=88ha, the lacking nutrient volume can be supplemented. This amounts to approximately 19% of the

agricultural land area (462ha) in Nougou village, and is considered to be an achievable area if usage of cereal residuals is promoted. However, since the usage ratio of stems and leaves should be considered to be about 30% (Hamade KAGONE 2001) as there is the effect of yield increase due to the stone line introduced in the next section, in practice, hay coordination work is required for a little over 60 percent of the harvest. Performing calculations in the same manner, utilization of the stems and leaves from millet on 213ha of the agricultural land area (1,568ha) in Selbo, amounting to 14%, will enable the current number of livestock being raised to be maintained.

## 2) Effect of Yield Increase Due to Installation of Stone Line Facility

The usage of millet residuals (including cereal milling residuals) is described in this section. Milling residuals amount to an equivalent of 10 tons/ha of raw grass. The installation of a stone line facilitates an increased harvest of 30%, and 30% of this will be used as coarse feed for livestock, 60% as a fence/roofing materials, and the remaining 10% as a substitute for firewood (60% of the material will be returned to the fields as dung and waste material)

### Estimation of Increased Harvest Effect Using Basic Specifications (Unit: Estimate/ha)

Item	Before	After	Increase	Unit Consumption	Increased Manpower	Remarks
1. Cereal	400kg	520kg	120kg			(Note 1)
			Milling: 60kg	335g/day/person	179 day/persons	Milling residuals: 60kg
2. Residuals (Stems/leaves)	10 tons	13 tons	3 tons			
(1) Coarse feed			30%: 0.9 tons	1.3kg/day/head	Sheep: 692 day head	Including mountain goats
			(30%: 0.9 tons)	(14.0kg/day/head)	(Cattle: 64 day head)	For cattle only
(2) Fence/roofing			60%: 1.8 tons			
(3) Firewood			10%: 0.3 tons			
(4) Return of Residuals to Farmland (stem/leaves)	6.0 tons	7.8 tons	1.8 tons (Note 2)			Final value of 60% of all stems/leaves

Note 1: The outer husk, inner husk and bran will be used as fodder for pigs, chickens and other small to medium sized livestock.

Note 2: This is used as an organic fertilizer and contributes to an increased harvest for the next crop (Manure from the livestock discharged while grazing also contributes to increasing the harvest volume, and this contribution will be reflected in a sustainable increase in the harvest volume).

## b) Improvement in Quality of Life in Hamlets

### 1) Activities to Increase Income of Women

The potential to actually increase the income of women in the villages for which activities were conducted with the support of the study group in order to increase female income have been extracted and compiled in Table 1.10 (refer to attached materials 5 for details). The women in almost all of the villages had the profit jointly managed by the CVGT Bank or in a similar manner, and do not take the profit individually. All of the profit is being devoted to the procurement of raw materials for the next project.

Table 2.2.17 Activities to Increase Female Income

Village	Product	Sales	Material Cost	Net Profit	No. in Group	Estimated Yearly Increase in Income/ Person
Nianguela	Soumbala	12,000	3,900	8,100	12	3,375
Ouiden	Mui	158,750	127,000	31,750	10	15,875
Tansin	Kurakura	99,690	75,000	24,690	15	8,230

Notes: • The data all represents average values for each group, or is from the final report from the agent.  
 • The unit for other than the number of members of each group is Fcfa.  
 • The estimated yearly increase in income is calculated with the assumption that production activities will be conducted 5 times per year.  
 • Soumbala is a fermented seasoning that is made from the seeds of néré. Mui is a rice that can be stored that is made by steaming rice after it is milled. Kurakura is a confection that is made mainly from peanuts.

## 2) Vegetable Cultivation

In a questionnaire, 98% of the inhabitants said that both the quantity and quality of the vegetables cultivated had been enhanced (39 out of 40 people), 85% responded that the distribution and sales of vegetables was a good thing (34 out of 40 people), and 69% answered that their income had increased as a result of vegetable cultivation (48 out of 70 people), indicating the respective goals were achieved.

## 3) Improvement in Rainy Season Crop

In a questionnaire, 80% of the inhabitants said that both the quantity and quality of the rainy season crop had been enhanced (12 out of 15 people), 80% responded that the distribution and sales of surplus production was a good thing (12 out of 15 people), and 93% answered that their income had increased as a result of the improvement in the rainy season crop (14 out of 15 people), indicating the respective goals were achieved.

## 4) Sheep Raising

The gross profit for sheep raising in Noungou village was calculated to be 25,000Fcfa

(for raising three head). The amounts to an increase of 9% in the average gross income per family, which is 280,000Fcfa. In addition, in Nougou village, 1.3 million Fcfa is provided to bear the expenses of the project, but in five years, funds amounting to 1.6 million Fcfa will remain in the CVGT, even when the failure rate is taken into consideration.

#### 5) Road Repairs

In a questionnaire, 80% of the inhabitants said that their sales income from production had increased as a result of road repairs (32 out of 44 people), indicating the goal was achieved.

#### 6) Well Improvement

In a questionnaire, 100% of the respondents said that the improvement of a well was a "good thing" since this provided a secure source of drinking water, and 92% answered that the well had increased the frequency of washing and bathing, and improved sanitation, indicating the well had contributed to an improvement in the quality of life.

#### 3) Collected Materials and Interview

PNGT II and the National Institute of Geography have reached an agreement after deliberation concerning the provision of data for the creation of a nationwide Land Utilization Status Map, and this data can now be used.

The study group obtained current utilization status maps in November 2005 for the four villages that were initially selected. The current land utilization status is shown in Fig. 2.2.15 and Fig. 2.2.16.

The current utilization status maps that have been obtained are 1/100,000 scale, and do not facilitate a detailed grasp of land utilization area in village units, but they represent adequate basic reference material to obtain a grasp of land utilization status in province units, and to estimate the production potential.

GPS-based land surface tracing is more suitable to determine the owner of cultivated land etc. and provide a clear grasp of the user boundaries, but there are some cases that tracing cannot be performed due to seasonal wetlands, growths of plants and trees and other causes. Current land utilization status maps that have been created by satellite image analysis are effective in estimating the endowment ratio of forest resources and feed resources.