

3) Improvement of Literacy

Improvement of literacy was promoted by the following projects: ① construction and utilization of literacy classrooms-cum-meeting halls, ② training of village literacy teachers, and implementation of literacy education for villagers in classrooms built by the trained teachers, and ③ literacy training.

Table 2.2.1.7 Monitoring Summary [Construction of Literacy Classrooms (Meeting halls)]

Item		Content				
Purpose		<ul style="list-style-type: none"> To energize Terroir Management Committee activities by securing common space To promote literacy education 				
Background		<ul style="list-style-type: none"> There are very few communally owned buildings in the verification project district. Literacy rates are extremely low and the promotion of literacy education is an important issue for rural development. It is necessary therefore to create bases for the promotion of residents' activities and literacy education. 				
Verification Items		<ul style="list-style-type: none"> Construction of the buildings by residents Management of the facilities by residents 				
Planning	Selection Requirements	<ul style="list-style-type: none"> No modern meeting facilities in the village Establishment of management rules and management system by residents Free provision of labor and bricks for constructing the building, and provision of land 				
	Request Status	<ul style="list-style-type: none"> Construction was requested by all 12 villages 				
	Selection Decision	<ul style="list-style-type: none"> As the meeting hall is a base for Terroir Management Committee meetings and literacy education, centers are built as requested in all the villages. 				
Implementation content	Standards/ Structure	<ul style="list-style-type: none"> Single-story banco brick construction with toilet Equipment: blackboard, teacher's desk, pupils' desks 				
		Type	No. of Target Villagers	Area	Target Villages	
		A	700 or over	9.5×5.5m	Kokou, Zambougou	
	B	Less than 700	7×5.5m	Villages other than the above		
	Method/ System	<ul style="list-style-type: none"> Construction work carried out by residents Order placed with National Directorate of Rural Management and Equipment through local recommissioning (provision of materials, construction guidance, technical training) Residents ① provide labor (10 persons/day), ② provide bricks free of charge. No cash burden 				
	Results (Costs)	Year	District	No. of Buildings	Construction Costs (Fcfa)	Remarks
		2000	Soignebouougou Cinzana	3 4	8,667,000 12,140,000	B:3 buildings A : 1 building, B:3 buildings
2001		Cinzana Katiena	1 2	2,908,000 6,403,000	B:1 building A : 1 building, B:1 building	
Total			12	35,934,000		
Human Input	Japanese specialists in improving the living environment 2 M/M Advice by Mali C/P					
Anticipated Effects		<ul style="list-style-type: none"> Invigoration of terroir activities and promotion of literacy education Acquisition of building construction and management skills 				
Activities Condition	Implementation Process	<ul style="list-style-type: none"> June-Nov 2000: The actual situation was ascertained and the wishes of residents obtained through a PRA survey and base line survey. Dec 2000: Discussions were held between the CGTV and the Study Team, and project plans were drawn up. Jan-Mar 2001, Dec 2001-Mar 2002: Meeting halls were built. From Apr 2001: Commencement of use, guidance, monitoring Oct 2002: Training in management techniques 				

	Management	<ul style="list-style-type: none"> • Regular inspection and cleaning of the meeting halls are carried out in all the villages. • Regarding repairs, the toilet doors have been repaired in 5 villages and banking has been performed around the building in 1 village. • The inside of the meeting halls is kept clean and the equipment is well looked after. However, the meeting halls built in 2000 have weathered 2 rainy seasons and cracks have appeared in some of the outside walls, but they have not yet been properly repaired. • The management group meets about once a month and carries out inspections and cleaning.
	Use	<ul style="list-style-type: none"> • The number of users and the purpose of use are recorded daily in each village to monitor the state of use. As a result, the following points have come to light. • The average number of days the center is used each month is 5.0 days/month and the total number of users is 439 per day/per month, so overall the centers are well used. • Use varies from village to village in the range of 0.6 to 14.0 days/month. • In general, the halls are used less in the busy farming season and more in the dry season when farming is slack. • The purposes of use in order are ① education such as literacy training, ② CGTV meetings, group meetings, and ③ others.
Beneficial Seen	Impact	<ul style="list-style-type: none"> • Terroir commission meetings, trainings, meetings of women's groups etc. are held in the meeting hall and the center serves as a base for CGTV activities. In particular, the halls are effective in enabling meetings to be held at night or when it is raining. • Village literacy classes were held a total of 12 times in 9 out of 12 villages. The halls are also used as an elementary school in Bougan. The centers are contributing greatly to promoting literacy education. • Plasterers are fostered in the village through the building activities, and this skill is used in building and repairing other buildings in the village.
Evaluation		<ul style="list-style-type: none"> ① Evaluation of residents (from the results of questionnaires and participatory evaluation) <ul style="list-style-type: none"> • As 97% of residents use the centers and 93% participated in the construction work, the facilities were built and are used by everyone, and ownership is fully established. • Residents evaluate construction of the meeting halls as follows: 1) to energize CGTV activities: 41%, 2) to enable meetings to be held at night: 11%. ② Evaluation of the Study Team <ul style="list-style-type: none"> • Labor was provided more or less according to the selection standards. • Residents provided the land and free bricks according to the selection standards. However, none of the villages made the bricks according to the schedule in the original plan, and the majority of the villages were about 3 months late. Penal provisions need to be considered. • Ségou Regional Rural Management and Equipment implemented training in plastering during construction and succeeded in fostering about 2 plasterers in each village. These plasterers played a leading role in the construction of mills and cereal banks that were built later. As a result, the villages are considered to have a good grounding in basic construction skills. • A management system and management rules have been established, and management is performed by the residents themselves. • It can be judged from the above that the residents are fully capable of taking charge of construction and management themselves. • However, the mortar has been repaired in only 5 villages to date. As annual repairs affect the life of the building, education in the necessity of repairs is required. • Overall the centers are well used, but there is disparity between the villages. In villages with a low level of use the problems must be studied and education and guidance provided to ensure that the centers fulfill their function as bases of CGTV activities. • It was appropriate to implement this project as an M/P project.
Feedback to M/P		<ul style="list-style-type: none"> • No charges are made in the verification study project. However, judging from the necessity of the project, the fostering of ownership and the ability to pay, a charge of 200,000 Fcfa should be made for each building in the M/P. • The construction period should be decided based on discussions with the CGTV, and penalties included against the CGTV in the event of non-fulfillment of their promise to provide labor, etc. • After commencement of use, extension workers should provide guidance in the need for management of the facilities.

Table 2.2.1.8 Monitoring Summary [Training of Literacy Teachers]

Item		Content								
Purpose		• To train teachers of literacy living in the village								
Background		• Literacy rates in the villages are extremely low. To effectively promote development projects and ensure the smooth running of facilities, it is essential to improve literacy rates. However, the cost of inviting external literacy teachers as required is high and is not realistic considering the time and trouble involved in finding teachers.								
Verification Item		• Training of literacy teachers in the villages								
Implementation Content/Planning	Selection Requirements	Initial	<ul style="list-style-type: none"> Proposed by JICA Study Team Villagers are chosen who will continue to reside in the village and can act as literacy teachers 							
		Supplementary	• Literacy teachers in the village, persons in charge of CGTV accounting or clerical work and who have a low level of literacy							
	Request Status	Initial	• 12 villages (Implemented at the suggestion of the Study Team as part of support for the establishment of CGTV)							
		Supplementary	• 4 villages in Soinebougou district (Dafimbougou, Siradoba, Fabougou, Dougoutiguibougou)							
	Selection	Initial	• 12 villages							
		Supplementary	• 4 villages in Soinebougou district (Dafimbougou, Siradoba, Fabougou, Dougoutiguibougou)							
	Standards	Initial	• CGTV chooses villagers who will continue to reside in the village and can act as literacy teachers							
		Supplementary	<ul style="list-style-type: none"> Villagers who will continue to reside in the village, can act as literacy teachers, do clerical work for CGTV, GAS sub-committees and micro credit financial systems, and have a literacy level of III or lower. CGTV and the local coordinator choose villagers who meet the selection standards. Participants bear the cost of their own textbooks. 							
	Method	Initial	• Commissioned to local consultant and implemented for 15 days in Ségou							
		Supplementary	• Commissioned to local NGO and implemented for 30 days in Dougoutiguibougou meeting hall							
	Results	Initial		Year/District	Village	No. of Participants	Level after Training			
							Men	Men	Men	Women
			2001/1/20 ~ 2/3, Katiéna	Kokoun	3	III	X	X		
				Bougan	3	I	II			I
			2001/1/20 ~ 2/3, Cinzana	Dlaba	3	I	II			I
			N'Dinzanawere	2	I	II				
			Sinébougou	3	I	I			I	
			Zambougou	3	I	I			III	
			Zangourabougou2	3	I	I			I	
2001/1/20 ~ 2/3, Soignebougou			Dafimbougou	3	II	III	VIII			
			Sakoibougou	3	I	I			I	
			Siradoba	3	I	II	XI			
			Fabougou	3	II	X	X			
			Dougoutiguibougou	3	III	VIII	XI			
Total			Costs are included in project to support establishment of CGTV	36						
Supplementary	Soignebougou	Dafimbougou	0							
		Siradoba	5	3 out of 5 people reached level I						
		Fabougou	0							
		Dougoutiguibougou	6	3 out of 5 people reached level I						
	Total	Cost : 1,109,155 Fcfa	11							
Anticipated Effect		Literacy teachers are fostered in all the villages.								

Activities Condition	Implementation Process	<ul style="list-style-type: none"> The initial literacy teacher training was implemented for 15 days from January to February 2001. The supplementary literacy teacher training was implemented for 30 days from March to April 2002. 		
	Management/Use	<ul style="list-style-type: none"> Period and number of trained village literacy teachers participating in literacy trainings held by CGTV (Survey up to end of November 2002) 		
			First	Second
		Bougan	1 March-15 April 2001 No. of participants: 23 (inc. 5 women)	28 Sept-28 Nov 2002 No. of participants: 20 (No women)
		Kokoun	12 Feb to 8 June 2001 No. of participants: 40 (inc. 15 women)	8 May-2 July 2002 No. of participants: 42 (inc. 12 women)
		Dlaba	31 April-3 June 2002 (At night) No. of participants: 13 (inc. 2 women)	
		N'Dinzanawere	13 March-4 May 2001 No. of participants: 28 (No women)	
		SinEbougou	18 Sept 2002- In process (as of 25 Nov) No. of participants: 40 (inc. 12 women)	
		Zambougou	9 Feb-15 March 2002	26 July-29 Aug 2002 No. of participants: 91 (inc. 29 women)
		Zangourabougou2	22 April-6 May 2002 (Daytime) No. of participants: 40 (inc. 10 women)	
		Siradoba (Bougounina)	10 April-9 May 2002 (23 days) No. of participants: 10 (inc. 4 women)	
		Fabougou	10-21 Oct 2002 (12 days) No. of participants: 13 (inc. 3 women)	
Dougoutigoubougou	24 April-25 May 2002 (20 days) No. of participants: 11 (inc. 7 women)			
Beneficial Impact Seen		<ul style="list-style-type: none"> A total of 371 villagers (including 99 women) were able to receive literacy education by teachers trained in the literacy teacher training and contributed to the smooth operation of projects. 		
Evaluation	Initial	<ul style="list-style-type: none"> Teachers with a literacy level of II or higher were appointed in 10 out of 12 villages. Comparisons of the improvement in level before and after the training should be made public. Classes should be divided according to the level of the participants. 15 days is too short to bring someone from level III or lower up to level I. Participation in the training should be conditional on the salary and duties of the literacy teacher being decided in advance by the CGTV and the agreement of the participant being obtained. 		
	Supplementary	<ul style="list-style-type: none"> 7 out of 11 participants reached level III or higher at which they are judged to have literacy ability. The participants from Dafimbougou changed their plans just prior to the training. Furthermore, on the day the training commenced, the participants from Dafimbougou and Fabougou refused to attend because of cultural problems with Dougoutigoubougou, resulting in the number of intended participants dropping from 20 to 11. The main cause of this was insufficient explanation of the conditions for participation beforehand. An agreement should be signed in advance by the JICA Study Team, CGTV and the participants regarding their respective duties during and after the training. Considering the cost of meals for participants from other villages, rather than gathering people from a number of villages in one village for literacy education, it would be cheaper to send a literacy teacher to each village. The planning of this project as an M/P project is highly appropriate. 		
Feedback to M/P		<ul style="list-style-type: none"> Rather than gathering the participants in a city for literacy training, it is more effective to send a teacher to each village to implement literacy training. Therefore it is planned to employ teachers and send them to the villages. In this case, the teacher shall spend 90 days in one village. Extension workers will give instructions that agreement is reached between the CGTV and the participants prior to the training regarding the salary to be paid to village literacy teachers appointed from among the participants and the duties of village literacy teachers after training. 		

Table 2.2.1.9 Monitoring Survey [Literacy Training]

Item		Content							
Purpose		• To improve the level of literacy education in the villages							
Background		• Literacy rates in the villages are extremely low. To effectively promote development projects and ensure the smooth operation of facilities, improvement of literacy rates is essential.							
Verification Item		• Implementation of village literacy training by teachers fostered by training for literacy teachers.							
Planning/Implementation Content	Selection Requirements	• (Proposed by the JICA Study Team) The village pays the teacher's salary.							
	Request	• 12 villages (Implemented at the suggestion of the Study Team as part of support for the establishment of CGTV)							
	Selection	• 12 villages							
	Standards	• The teacher's salary is borne by the village. • Night lamps and textbooks are borne by the JICA Study Team.							
	Method	• Evaluation of the training results is commissioned a local consultant (BEAGGES). • About 30 participants are assembled from each village and the training is held for 45 days.							
	Results	2001 Katiëna	Year/District	Village	Period	Participants		Passed (Level III or higher)	
			Total	Women	Men	Women			
		2001 Cinzana	Kokoun	2/9~4/9(45)	30	8	7	1	
			Bougan	2/9~4/9(45)	30	8	7	0	
		2001 Soignebougon	Dlaba	2/8~4/11(45)	30	8	9	2	
N'Dinzanawere			2/8~4/11(45)	21	7	4	0		
Sinébougou			2/8~4/11(45)	30	6	8	0		
Zambougou			2/8~4/11(45)	47	20	6	1		
Zangourabougou2			2/8~4/11(45)	38	4	11	1		
2001 Soignebougon		Dafimbougou	2/8~3/26(45)	30	7	0	0		
	Sakoibougou	2/8~3/26(45)	33	6	17	3			
	Siradoba	2/8~3/26(45)	26	11	6	0			
	Fabougou	2/8~3/26(45)	30	14	4	1			
	Dougoutigoubougou	2/8~3/26(45)	30	9	4	0			
Total			375	108	83	9			
Anticipated Effect		• Improvement in the literacy of all the CGTV officials and participants							
Activities Condition	Implementation Process	• Implemented from 8 Feb to 11 April 2001							
	Management/Use	• For CGTV activities, see the results of management/use of the literacy teacher training project.							
Beneficial Impact Seen		• Projects were implemented smoothly by improving the literacy of those responsible for carrying out the verification project.							
Evaluation		• As some of the village literacy teachers are below the required level for teaching, the level of teaching is low, but most of the participants showed improvement in level through the training.							
Feedback to M/P		• It is planned to appoint all the village literacy teachers who achieved level I. • Extension workers should give instructions that agreement is reached beforehand between the CGTV, the teacher and the participants regarding the conditions for employing teachers and the share borne by the participants. • It is proposed that the participants take part in the training after promising in advance to fulfill their obligations (textbook fee, participation in evaluation tests before and after the training, obligation to attend, agreement of family).							

4) Organizing Residents

Support for organizing residents was promoted by the following projects: ① enlightenment about activities to combat desertification using videotapes, and ② support for the establishment of Terroir Management Committees.

Table 2.2.1.10 Monitoring Summary [Enlightenment about Activities to Combat Desertification using Videotapes]

Item		Content					
Purpose		• To use audio-visual equipment to teach residents the need to actively and systematically undertake activities to combat desertification.					
Background		• Residents are aware of the deterioration of natural resources, but do not know how to prevent it.					
Verification Item		• Implementation of enlightenment activities using videotapes					
Planning Implementation Content	Selection Requirements	• Proposed by the Study Team. No selection requirements.					
	Request Status	• 12 villages					
	Selection Decision	• 12 villages					
	Standards/Structure	• Soil conservation measures, improved ovens, improvement of the living environment for women, mills, terroir management techniques, combined use with entertainment videotapes					
	Method/System	• C/P tour villages promoting enlightenment using videotapes, monitor and generator.					
	Results (Costs)	• Monitor, generator: 800,000 Fcfa, videotapes for promoting enlightenment : 450,000 Fcfa					
	Human Input	<Study Team> Procurement of videotapes, planning of video shows <Mali> CP tour villages showing videotapes					
Anticipated Effect		• Enhanced awareness of residents regarding necessity of measures to combat desertification and methods through watching videotapes					
Activities Condition	Implementation Process	Year/District	Village	Period	Participants		
					Total	Women	Men
		2000/Katiena	Kokoun	10/12~10/13	26	21	5
			Bougan	10/13~10/14	28	24	4
		2000/Cinzana	Dlaba	10/7~10/8	7		
			N'Dinzanawere	10/9~10/10	Not known		
			Sinébougou	10/5~10/6	22	15	7
			Zambougou	10/8~10/9	14	12	2
			Zangourabougou2	10/6~10/7	21	15	6
		2000/Soignebougou	Dafimbougou	9/27~9/28	16	12	4
			Sakoibougou	9/27~9/28	23	23	0
			Siradoba	10/1~10/2	10	9	1
			Fabougou	9/29~9/30	12	11	1
		Dougoutiguibougou	9/28~9/29	13	9	4	
	Total			200			
	Management/Use	Equipment	• Videotapes, monitor, generator				
		Management System	• Managed by JICA Study Team				
		Management/Use Status	• Apart from above, used once in forestry field. Also used independently by local coordinator in Katiena and Cinzana.				
Beneficial Impact Seen		• Awakened residents to the need for systematization to combat desertification (conservation of natural resources) and nurtured confidence in their own ability to do something about it.					
Evaluation		• Videotapes are an effective means of enlightening residents. • The equipment was not used frequently enough, but it provides motivation for residents to gather. • Residents must be informed in advance when using videotapes.					
Feedback to M/P		• As this is an effective means of enlightening residents, the necessary equipment is provided to each Cercle. In addition, the person in charge of looking after the equipment is clearly identified and plans are drawn up for its use.					

Table 2.2.1.11 Monitoring Survey [Establishment of Support System for Terroir Management Committee]

Item		Content
Purpose		<ul style="list-style-type: none"> To establish a residents' organization to enable the residents to develop and manage the natural, social and economic resources in the terroir themselves.
Background		<ul style="list-style-type: none"> Existing organizations in the village are not organizations that will systematically carry out development of the village. The wide-ranging deterioration of natural resources cannot be prevented at individual level. Sustained and effective terroir management requires an organization that will take on and manage development activities.
Verification Items		<ul style="list-style-type: none"> Selection of the Terroir Management Committee (CGTV) members Drawing up of CGTV rules and registration of the CGTV in the commune
Planning Implementation Content	Selection Requirements	<ul style="list-style-type: none"> No existing CGTV in the village
	Request Status	<ul style="list-style-type: none"> To be implemented in all 12 villages as requested
	Standards/Structure	<ul style="list-style-type: none"> Establishment based on the general will of the villagers
	Method/System	<ul style="list-style-type: none"> Commissioned to local consultant (BEAGGES) Examination and amendment of the draft rules proposed by the JICA Study Team by the CGTV Registering of the election of officials and final draft of rules in the commune
	Results (Costs)	<ul style="list-style-type: none"> 58,160,000 Fcfa (including costs of leadership training, literacy teacher training, accounting training)
	Human Input	<p><Study Team> Support for establishment through local coordinator <Mali> Enlightenment and guidance by C/P</p>
Anticipated Effect		<ul style="list-style-type: none"> Systematic and effective operation of projects
Activities Condition	Implementation Process	<ul style="list-style-type: none"> From September through November 2000 residents' meetings were held several times in each village, and the CGTVs were registered in the commune in December after the election of officials and the drawing up of rules and private regulations.
	Management/Use	<ul style="list-style-type: none"> CGTVs operate with appropriate advice from local coordinators. General meetings of CGTVs and subcommittees are held as necessary. CGTVs were established very smoothly and speedily in every village. In most cases, amendments made from time to time to the rules, private regulations and agreements have not been re-registered in the commune. The CGTVs in Soignebouougou district at first could not reelect problematic officials themselves, but now each village changes its rules and reelects its officials itself. The CGTVs in Cinzana district are the most active and keep minutes of meetings, etc. In contrast, Soignebouougou is relatively the most inactive district.
Beneficial Seen	Impact	<ul style="list-style-type: none"> The CGTVs that have been established are contact points for the implementation of projects, and projects are managed effectively. The CGTVs' subjectivity has been adequately established.
Evaluation	Evaluation by Residents	<ul style="list-style-type: none"> All the officials surveyed judged that establishment of the CGTV had been beneficial. All the officials surveyed also thought that the CGTV would continue to be necessary in future. However, about two-thirds of the officials responded that they did not understand the role of officials. When asked about the sustainability of CGTV activities in the future, 10 out of 12 villages replied that they were confident of continuing their activities in future.
	Evaluation by Study Team	<ul style="list-style-type: none"> When approached by an outsider, the villagers' mentality is "if we make organization as we were told, we will gain some kind of profit". The CGTVs are functioning adequately as agencies for implementing village development projects. What most affects the performance of operations is the literacy and accounting ability of the villagers.
Feedback to M/P		<ul style="list-style-type: none"> In the verification project the CGTVs were established after the PRA survey, but as establishment of a CGTV is easy in itself, CGTV should be established at the earliest possible stage, and extension workers should provide guidance on how to change rules and reelect officials as necessary. As residents do not gain sufficient understanding from just one leadership training, extension workers should provide guidance on a continuous basis according to the degree of understanding.

5) Small-scale Financial System

Table 2.2.1.12 Monitoring Summary [Accounting to Support the Establishment of Small-scale Financial Systems]

Item		Content		
Purpose		<ul style="list-style-type: none"> To meet the demand for funding for residents' development activities To improve the ability of residents to plan, implement and manage projects through loans To enable easy access to savings through the use of currency and to endeavor to change the present custom of using livestock as savings. 		
Background		<ul style="list-style-type: none"> Residents' demand for funds is great, but with the exception of Zambougou, 11 villages have no modern loan system. There are banks in the nearby city, but due to the need to be literate in French and the lack of means of transport to the city, etc., the banks are inaccessible to most villagers. 		
Verification Items		<ul style="list-style-type: none"> Establishment of a small-scale financial system in each village Grounding of operation of the system in the CGTV 		
Planning/Implementation Content	Selection Requirements	<ul style="list-style-type: none"> Requested by the village. The village bears 20% of the cost of purchasing the cashbox. 		
	Request Status	<ul style="list-style-type: none"> 11 villages (excluding Zambougou which already has a small-scale financial system) 		
	Selection	<ul style="list-style-type: none"> 11 villages (excluding Zambougou which already has a small-scale financial system) 		
	Implementation Content	<ul style="list-style-type: none"> Distribution of cashboxes. Confirmation of residents' payments to the fund, excluding the grant for the verification project. Laying down of rules. Election of people in charge. Accounting training for people in charge of the fund (7 days). Inspection of developed villages and regular technical guidance for the time being. Establishment of a small-scale finance association and signing of an agreement with the Finance Ministry. Opening of a finance association account with the Agricultural Development Bank and negotiation of loans. 		
	Method	<ul style="list-style-type: none"> Distribution of cashboxes and confirmation of the first contribution are carried out by the Study Team. Support for establishment of the system is commissioned to a local consultant. 		
	Results (Costs)	Purchase of cashboxes: 2,530,000 Fcfa Commission costs Period: 29 June 2001 to 24 January 2002 Costs: 25 million Fcfa Period: 23 January 2002 to 01 May 2002 Costs: 2 million Fcfa Period: 21 June 2002 to 30 January 2003 Costs: 13.8 million Fcfa Inspection of developed villages: 3 September 2001, 1.5 million Fcfa		
Anticipated Effects		<ul style="list-style-type: none"> Provision of the necessary funds for residents' small-scale enterprise activities Improvement of residents' ability to plan, implement and manage projects through loans 		
Activities Condition	Results (Results of training for people in charge of accounting)	Village	No. of participants (Women)	Percentage with degree of understanding of 50% or over
		Kokoun	2(0)	2 out of 2 people
		Bougan	2(0)	1 out of 2 people
		Dlaba	2(1)	2 out of 2 people
		N'Dinzanawere	2(0)	1 out of 2 people
		Sinébouyou	2(0)	2 out of 2 people
		Zangourabougou	2(0)	2 out of 2 people
		2		
		Dafimbougou	2(0)	0 out of 2 people
		Sakoubougou	2(1)	2 out of 2 people
		Siradoba	2(0)	0 out of 2 people
		Fabougou	2(0)	0 out of 2 people
Dougoutiguibougou	2(0)	1 out of 2 people		
Total		22		

		Results as of end of December 2002			
		Village	Total time deposits (Fcfa)	Percentage of working population of village (age 15-55) who are members (%)	Percentage of loans due at end of December 2002 that were repaid (%)
		Kokoun	2,290,000	22	100
		Bougan	1,209,000	20	94
		Dlaba	1,396,955	32	100
		N'Dinzanawere	1,100,930	44	97
		Sinébougou	975,705	32	100
		Zangourabougou2	908,235	44	95
		Dafimbougou	788,900	33	100
		Sakoibougou	1,229,995	37	100
		Siradoba	504,450	45	100
		Fabougou	1,050,000	22	100
		Dougoutiguibougou	1,102,970	35	100
					Average 33%
Management Status		Village	Management system	Management/Use	
		11 villages	Finance Committee	Going well at present with no serious money trouble.	
Implementation Process		<ul style="list-style-type: none"> • Borrowing commenced sooner than expected immediately after the cashboxes had been distributed, illustrating the high demand for funds. • Management ability: The ability to manage the cashboxes is gradually improving through continuous accounting guidance and education in understanding of roles. • A finance association for 11 villages was established in Sinebougou on 4 September 2002. • The association was registered in Ségou cercle on 16 September 2002 in order to conclude an agreement with the Finance Ministry. • An account was opened in the association's name at the Ségou branch of the Agricultural Development Bank on 29 November 2002. • Some of the people in charge of accounting do not have the necessary ability and continued accounting guidance is required. • In some villages cases have come to light where the village's contribution to the project has been loaned arbitrarily at a different rate from that previously decided. As this impedes uniform loan activities, in future all residents' payments shall be put in a time deposit in the name of the CGTV. • As some grants still exist through the verification project, individual commercial activities (minor trading) account for 98% of loans. 			
Beneficial Impact Seen		<ul style="list-style-type: none"> • Economic activities of the villages: The number of loans which stood at 368 at the end of July 2002 increased 2.5 times to 908 by the end of December 2002 and contributed greatly to invigoration of the villages. Of the total number of loans, 54% were to women, contributing greatly to the improvement of women's incomes. 			
Evaluation	Evaluation by Residents	<ul style="list-style-type: none"> • From the results of participatory evaluation, the establishment of a small-scale financial system was highly appraised by both men and women. 			
	Evaluation by Study Team	<ul style="list-style-type: none"> • Sound operation of the small-scale financial system seems set to drive sustained development of the village. • Operation is going well with loan business brisk and a 99% repayment rate on average. • Extension workers advise that the state of lending be reported regularly at village general meetings. • As an M/P project, it is judged to be vital. 			
Feedback to M/P		<ul style="list-style-type: none"> • As a condition for selection, private regulations are laid down whereby from the first year all residents' contributions are put into time deposits, and the CGTV independently collects the necessary expenses for maintenance of facilities and for activities that do not generate profits separately until interest is generated by the time deposits. (The mechanism of the small-scale financial system proposed in the M/P is shown in Figure 2.2.1.1) • Rather than registering individual depositories according to village with the administration (mutual credit union), it was judged easier and more to the wishes of residents to establish an association and register the representative with the administration (autonomous village deposit and loan bank). A system of autonomous village deposit and loan banks is planned in the M/P (See Figure 2.2.1.2) 			

Figure 2.2.1.1 Structure of Small-scale Financial System

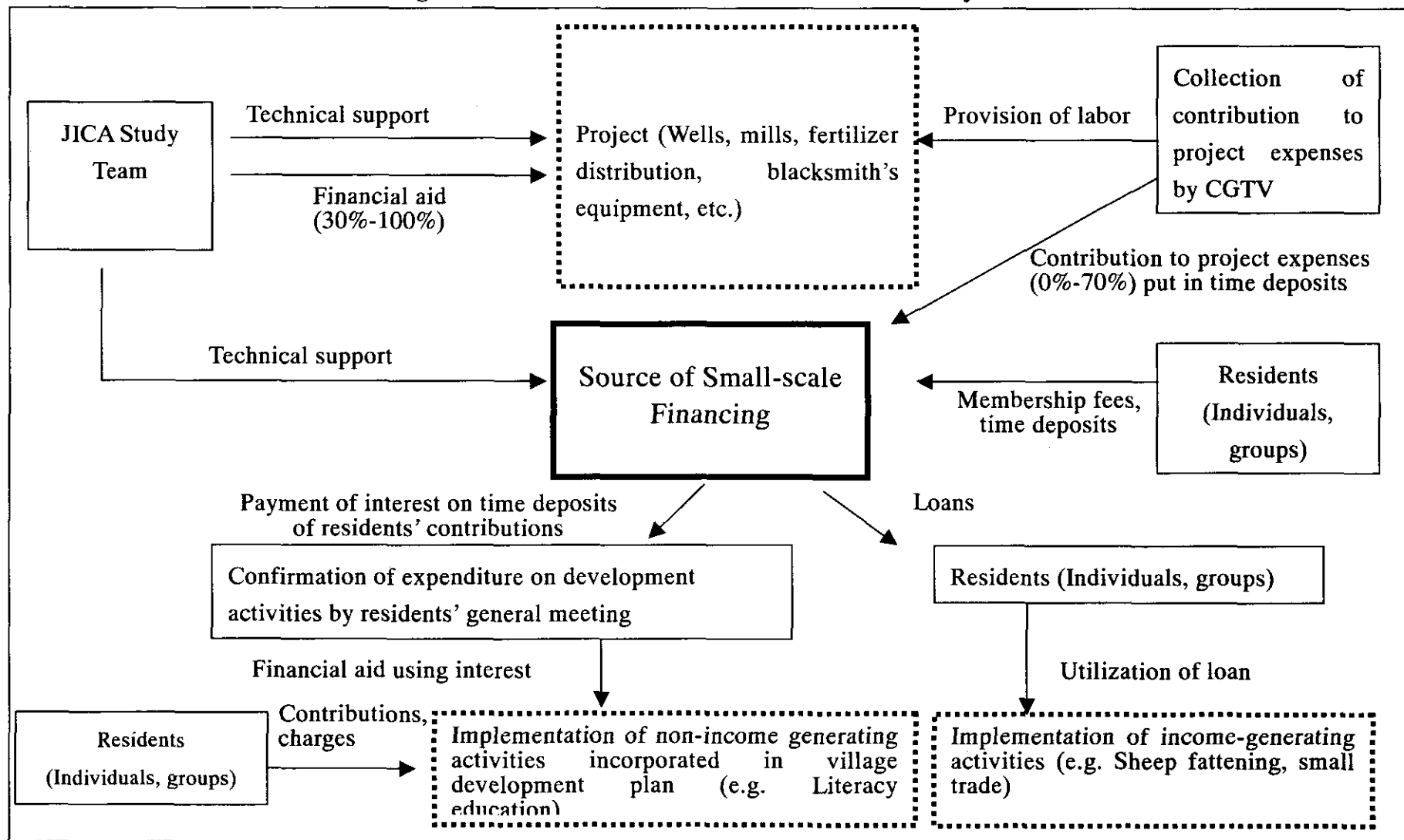
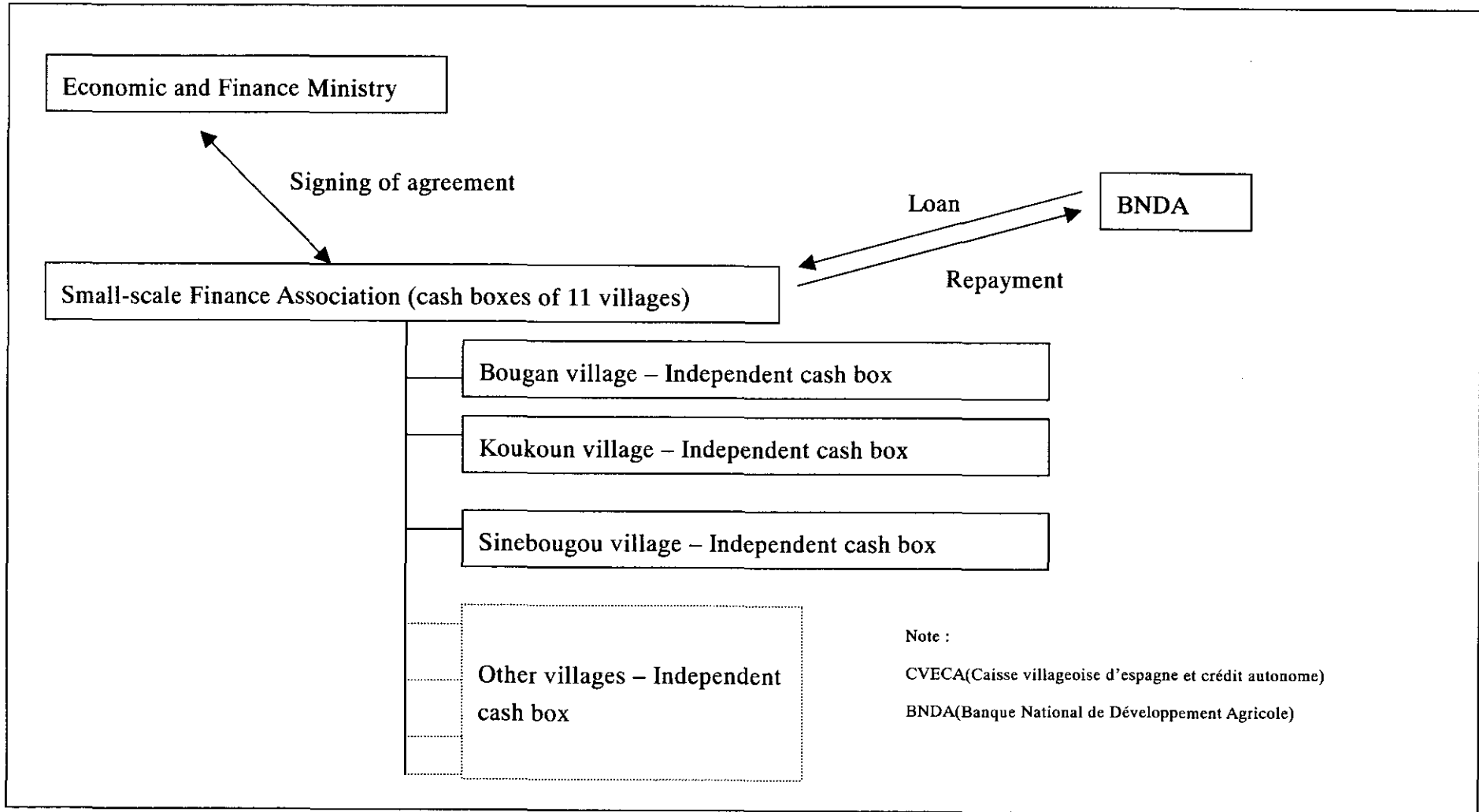


Figure 2.2.1.2 Structure of Small-scale Financial System ②



2.2.2 Fulfillment of BHN

Table 2.2.2.1 Monitoring Summary [Construction of Wells for Drinking Water]

Item		Content					
Purpose		<ul style="list-style-type: none"> To secure safe water for domestic use through the construction of modern wells 					
Background		<ul style="list-style-type: none"> All water for domestic use in the district covered by the verification study is supplied from wells. Modern wells have been constructed in some villages by aid agencies, but most villages still use traditional wells. Problems surrounding traditional wells include pollution of the water, onerous well management and inefficient use of the water. Safe water for domestic use, the basis of everyday life, must be ensured by constructing modern large-diameter wells. 					
Verification Items		<ul style="list-style-type: none"> Well construction with the participation of residents Well management by residents 					
Planning	Selection Requirements	<ul style="list-style-type: none"> Construction of one well per 500 people in each village (including existing boring wells and modern large-diameter wells) Establishment of management rules and a management system by residents, provision of free labor, agreement to contribute to costs (150,000 Fcfa), provision of land 					
	Request Status	<ul style="list-style-type: none"> Requests for a total of 10 wells were received from 5 out of 7 villages (5 villages in Soignebouyou district were not included). According to the PRA survey, it was the top priority request in 4 of the above villages (wells are urgently needed in the villages which requested them). 					
	Selection Decision	<ul style="list-style-type: none"> In accordance with the construction standards of one well per 500 people, a total of 6 wells were selected (excluding Soignebouyou) 2 in Kokoun, 1 in Bougan, Cinzana district: 2 in Zambougou, 1 in N'Dinzanawere 					
Implementation Content	Standards/ Structure	<ul style="list-style-type: none"> Modern large-diameter well: Reinforced concrete structure with a diameter of 1.8m and casing on the inside of the well hole Superstructure: 80cm section above ground, concrete bed extending 2m, concrete walls to keep out livestock Water drawing facilities: Installation of steel poles for drawing water, 4 holes for pulleys 					
	Method/ System	<ul style="list-style-type: none"> Re-contracted locally to construction company Residents provided unskilled labor (5 persons/day for each well) 					
	Results (Costs)	Year/District	Village	No. of Wells	Depth (m)	Cost (Fcfa)	Remarks
		2000	Kokoun	2	17.85, 17.90	10,141,000	
		Katiéna	Bougan	1	22.20	5,736,000	
		2000	Zambougou	2	32.45, 34.9	16,200,000	
Cinzana		N'Dinzanawere	1	33.4	8,075,000		
Total		6		40,152,000			
Human Input	<ul style="list-style-type: none"> Japanese specialists in living environment improvement (2 M/M), groundwater experts (2 M/M), appropriate advice from Mali C/P 						
Anticipated Effects		<ul style="list-style-type: none"> Assurance of safe water for domestic use Implementation of appropriate management by residents (strict observance of management rules, regular cleaning) 					
Activities Condition	Implementation Process	<ul style="list-style-type: none"> June-November 2000: Ascertainment of actual situation through PRA survey and baseline study, and hearing of residents' wishes. December 2000: Discussion between CGTV and Study Team and formulation of project plan January-March 2001: Construction of wells April 2001 -: Commencement of operation, guidance, monitoring 					
	Management	<ul style="list-style-type: none"> Management group is responsible for organizing cleaning, monitoring, etc. Cleaning is performed regularly, mainly by women who use the well. The rules are observed for the most part. However, the provision prohibiting entry wearing shoes is not observed in some villages. Livestock have been kept out completely. 					
	Use	<ul style="list-style-type: none"> Use of the large-diameter wells that have been constructed is increasing and use of traditional wells is decreasing, but the total volume of water drawn is rising. As the water is safe for drinking, it is used by residents from other villages too. 					

Item	Content
Beneficial Impact Seen	<ul style="list-style-type: none"> • The large-diameter wells that have been constructed are well used, increasing water for domestic use and contributing to the improvement of living standards. • Drawing efficiency is not very different from traditional wells, but 4 people can draw water at the same time, reducing waiting time and providing greater convenience for residents. • As few repairs are required and the well is fairly deep, residents are free from worry. • The quality of the water from modern large-diameter wells is better than from other wells and the wells provide a supply of good quality drinking water. • A management system has been established, cleaning is performed regularly and the well facilities are kept clean.
Evaluation	<p>① Evaluation by residents (from the results of a questionnaire conducted on residents and participatory evaluation)</p> <ul style="list-style-type: none"> • 89% of UPAs use the wells and 90% of UPAs know the content of the management rules. • With regard to the effectiveness of the wells, ① 50% of UPAs regarded the water quality as good, and ② 33% of UPAs felt reassured that there was enough water in the dry season. • According to the results of participatory evaluation, the wells were highly appraised by women whose task it is to draw water. • Judging from the above results, the wells are highly appraised by residents. <p>② Evaluation by the Study Team</p> <ul style="list-style-type: none"> • All the items in the selection standards relating to provision of labor, establishment of a management system, and contribution to the cost were fulfilled. In particular, the contribution to the cost was paid early. • Under the selection standards [construction of one modern well per 500 people], residents of some sub-villages (clusters of houses away from the main village) cannot use the modern wells. • As the wells relate to BHN for securing safe drinking water, they are urgently needed and are well managed by residents. • As the wells require virtually no maintenance, no maintenance costs are required, making this type of well appropriate for the current living conditions of residents. • Bore wells ensure excellent water quality and drawing efficiency, and judging from the present ability of residents to manage the wells and contribute to costs, large-diameter wells are appropriate. • This project should be incorporated as an M/P project.
Feedback to M/P	<ul style="list-style-type: none"> • Judging from the need for the project and the ability to contribute to the cost, the present contribution should be increased (Verification project: 150,000 Fcfa, M/P 300,000 Fcfa per well)

Table 2.2.2.2 Monitoring Summary [Improvement of Roads]

Item		Content				
Purpose		<ul style="list-style-type: none"> To improve access to markets 				
Background		<ul style="list-style-type: none"> The infrastructure necessary for everyday life, such as procurement of materials, bases for selling produce, medical treatment and educational facilities, is found in cities or villages where there are markets. However, access roads to these markets are inadequate and there are villages that are virtually inaccessible particularly in the rainy season. 				
Verification Item		<ul style="list-style-type: none"> Road construction and management with the participation of residents 				
Planning	Selection Requirements	<ul style="list-style-type: none"> Selected routes: Sections where there is no road and passage is difficult in the rainy season (limited to the district covered by the verification project) Establishment of management rules and a management system by residents Provision of free labor and contribution of 20% of cost of management equipment (150,000 Fcfa) Provision of land 				
	Request Status	<ul style="list-style-type: none"> Construction was requested for 102 km on 11 routes in 3 districts (Construction was requested by 10 villages according to the PRA survey) 				
	Selection Decision	<ul style="list-style-type: none"> Construction was decided on high priority routes in each district. Katiena : Kokoun~Bougan; Cinzana : Zambougou~Sinebougou, Dlaba~Zangourabougoun II; Soignebougou : Sakoibougou~Dougoutiguibougou 				
Implementation Content	Standards/ Structure	<ul style="list-style-type: none"> Width: 4m, roadbed: 10-20cm Crossing: Sunken bridge type (concrete paving, l=9, 18m), unlined ditch at side 				
	Method	<ul style="list-style-type: none"> Re-contracted locally to construction company. Residents provided unskilled labor (15 persons/day). 				
	Results (Costs)	Year	Route	Length (km)	Cost (Fcfa)	Remarks
		2000	Katiena district	4.6	26,900,000	1 crossing
			Cinzana district	4.2	25,000,000	Roadbed (excluding crossing)
		2001	Cinzana district	(4.2)	10,841,000	6 crossings
			Soignebougou district	6.9	31,303,000	5 crossings
2002	Cinzana district	2.2	16,930,000	1 crossing		
	Soignebougou district	0.3	3,170,000	1 crossing		
			18.2	114,144,000		
Human Input	<ul style="list-style-type: none"> Japanese specialists in living environment improvement (2 M/M), appropriate guidance from Mali C/P 					
Anticipated Effects		<ul style="list-style-type: none"> Securing of access to markets in rainy season Establishment of road management by residents 				
Activities Condition	Implementation Process	<ul style="list-style-type: none"> June-November 2000: Ascertainment of actual situation by PRA survey and baseline study, and hearing of residents' wishes December 2000: Discussions between CGTV and Study Team and formulation of project plan January-March 2001, December 2001-March 2002, October-December 2002: Construction of roads April 2001-: Successive commencement of use after completion, guidance, monitoring October 2002: Training in management techniques 				
	Management	<ul style="list-style-type: none"> The management group meets about once a month and carries out inspections. In Katiena district they regularly clear the mud from the ditches, cut the grass and repair the road surface. They also planted roadside trees in 2001 and 2002 (independent decision by CGTV). No repairs have been performed in parts of Cinzana district and in the whole of Soignebougou district. In villages where maintenance is performed, the management group takes the lead and all the villagers carry out the maintenance. The management rules are observed. 				

Item		Content
	Use	<ul style="list-style-type: none"> • The volume of traffic has increased 50-200% for all modes of transport (trucks, motorbikes, bicycles). • The roads are used not only by villagers from surrounding villages but from a wide area. (They use paved roads even if it means going a slightly longer distance.)
	Beneficial Impact Seen	<ul style="list-style-type: none"> • Access to markets is assured even in the rainy season and traveling time is greatly reduced. • The volume of traffic (trucks, motorbikes, etc.) has more than doubled due to road construction. • Access to villages with markets is assured in the rainy season and it is possible to cope with illnesses, etc. in an emergency, relieving the worries of residents.
	Evaluation	<p>① Evaluation by residents (from the results of a questionnaire conducted on residents and participatory evaluation)</p> <ul style="list-style-type: none"> • 95% of residents know the road management rules, but only 73% have participated in repair work. • Evaluation of road construction is as follows: 1) it is possible to get to market in the rainy season: 62%, 2) it is possible to go to the clinic at night: 40%, 3) it is easier to get to school: 20%. • According to the participatory evaluation, the project is highly appraised and was greatly needed, but awareness of the need for independent management is still low. <p>② Evaluation by the Study Team</p> <ul style="list-style-type: none"> • Labor was provided more or less according to the selection standards. • Land was provided without any problem (no payment was required) • A management system and management rules were established, and management is performed by the residents themselves. • The contribution to the cost of the carts used for road management was paid as planned. • Judging from the above, all the items in the selection standards have been met. • However, not all the villages are implementing maintenance work. • Overall, the roads are well used and their construction has had a great effect. • This project should be incorporated in the M/P.
	Feedback to M/P	<ul style="list-style-type: none"> • In the verification project, no payment of a contribution to the cost of constructing the roads was sought. However, judging from the effectiveness of the project and the ability to pay, a contribution of 50,000 Fcfa per km should be requested in the M/P. • After construction, guidance in road management should be provided by extension workers.

2.2.3 Stability of Farmers' Income

Table 2.2.3.1 Monitoring Summary [Supply of Improved Seeds and Fertilizers]

Item		Content
Purpose		<ul style="list-style-type: none"> To increase cereal production and promote cultivation techniques through the introduction of improved seeds and chemical fertilizers
Background		<ul style="list-style-type: none"> Degeneration of seeds, frequent occurrence of disease and pest damage and reduced yields are seen due to use of existing conventional seeds. Cereal production fluctuates greatly from year to year due to climatic changes, causing food shortages for residents. The unit yield varies due to soil conditions and disparity in farming skills. Deterioration of farm soil, reduced productivity and a drop in the self-sufficiency rate are evident due to population growth.
Verification Items		<ul style="list-style-type: none"> Promotion of cultivation techniques adapted to the introduction of improved seeds and chemical fertilizers Establishment and sustainment of improved cultivation techniques Increased cereal production through the use of seeds and fertilizers
Planning	Selection Requirements	<ul style="list-style-type: none"> Management by CGTV (Preparation of list of material distributors, management of contributions, etc.) Agreement of residents to payment of contribution (70% of cost of procuring materials) Cooperation in surveys of production and yields
	Request Status	<ul style="list-style-type: none"> Following discussion with DRAMR, 3 types of seeds highly suited to local conditions were selected and distributed by the CGTV according to the wishes of residents. Similarly with fertilizers, phosphate rock powder, ammonia phosphate and urea were selected. In the second year residents were asked to state their preferences for type of fertilizer and only one village partly changed to a compound fertilizer.
	Selection Decision	<ul style="list-style-type: none"> Seeds were distributed only in the first year. Enough seeds for 20ha were uniformly allocated to each village and the CGTV was in charge of looking after them. Enough fertilizer for 20ha was uniformly allocated to each village in the first year, and in the second year it was allocated in proportion to the number of UPAs in each village.
Implementation Content	Standards/Structure	<p>[Varieties of seed and types of fertilizer]</p> <ul style="list-style-type: none"> Seeds: Millet = Toroniou C1, NKK, Sorghum = CSM63E Fertilizer, soil conditioner: PNT (phosphate rock powder produced in Tilemusi), DAP (ammonium phosphate), urea <p>[Standards for use]</p> <p>Seeds: Millet 6kg/ha, sorghum 10kg/ha Fertilizer: PNT 250kg, DAP 100kg, urea 50kg per ha</p>
	Method/System	<ul style="list-style-type: none"> Seeds and fertilizer were delivered in bulk to the CGTV in each village. The CGTV was entrusted with distributing them to the UPAs. A register of beneficiaries was drawn up and they were obliged to pay a contribution.
	Results (Costs)	<ul style="list-style-type: none"> Fertilizer, etc.: 14,996,975 Fcfa for 480ha supply Seeds and seed disinfectant: 338,760 Fcfa for 240ha supply
	Human Input	<p><Study Team> Mainly guidance through local coordinators <C/P, DRAMR, SLACAER etc.> Guidance in cultivation techniques (Total approx. 150 man days) <12 UPAs> Establishment of 1ha fields for monitoring (provision of farm labor, rendering of services such as bookkeeping)</p>
Beneficial Impact Seen		<ul style="list-style-type: none"> Acquisition of cultivation techniques, fertilizer application techniques and improved compost making techniques Improvement of unit yield of produce
Activities Condition	Implementation Process	<ul style="list-style-type: none"> Technical guidance in the field was provided after the materials were distributed in 2001 and 2002. A total of 30 monitoring fields were established in addition to the 12 Detail Investigation UPAs fields, and the progress of growth was followed once a month and technical guidance provided at each stage of growth. At harvest time the yield was surveyed and the effectiveness of the materials checked.

Item	Content
Management	<ul style="list-style-type: none"> • The CGTV stores the seeds and fertilizers in the village storehouse and manages them to prevent deterioration due to excessive humidity. They are distributed to the UPAs for use. Guidance is provided in the use of disinfectants when sowing. • In Soignebouougou district, Sakoibougou village was the first to collect the full contribution borne by residents plus an extra 1,000 Fcfa in an effort to extend the project. Another 4 villages in the district followed suit. • Contributions are collected after the cereal harvest.
Use	<ul style="list-style-type: none"> • Used by virtually all UPAs. Cultivation training was provided, but detailed implementation was left up to the UPAs.
Beneficial Impact Seen	<ul style="list-style-type: none"> • As 2001 was a bumper year (about twice the average unit yield of the previous few years) following the extremely poor harvest the year before (2000), residents appraised the project highly. • A major cause of the increased yield was the favorable rainfall conditions, but the synergistic effect of using improved seeds and fertilizers and technical training can also be seen. • Reaction to the poor harvest in the previous year (2000) and the rise in commodity prices following holding of the soccer African Cup in Mali caused the price of cereals to rise two or three times compared with 2000 and this had a beneficial effect on agriculture. Consequently, payment of the contributions for farming materials was smooth. • The unit yield in 2002 fell well below that of 2001. This was due to the lack, late arrival and irregularity of the rain. On average, tilling and sowing were about two weeks later than in 2001. Growth was delayed and at the same time the seedlings in some of the fields that had been sown early withered and died and had to be replanted. • As a result, problems arose regarding payment of contributions. Influenced by the poor harvest, the price of cereals on the market rose to about twice that of average years.
Evaluation	<p>[Improved seeds]</p> <ul style="list-style-type: none"> • Over 80% of UPAs use traditional varieties. On average, improved seeds are used in about one-third of UPA fields. 60% of UPAs participated in trainings on improved seeds. • Evaluation after use focused on relatively easy cultivation techniques, reduced disease and pest damage and greatly increased yields, and in no case were the improved seeds regarded as bad. • Over 90% of UPAs want to use the newly introduced varieties in future, and over 95% of UPAs intend to introduce them by their own efforts without aid. However, they want continued guidance in cultivation techniques in future (95%). <p>[Soil conditioners, chemical fertilizers]</p> <ul style="list-style-type: none"> • 96% of UPAs have experience in using chemical fertilizers and know the effectiveness of fertilizers. They nearly all use compost and its use is well established in the region. The question is how to improve the quality of the compost and enhance its soil improving and fertilizing effects • The types of fertilizer that were introduced and the effects of its use were also highly evaluated and most people wanted to introduce them by their own efforts without aid. <p>[Summary]</p> <ul style="list-style-type: none"> • It was more or less confirmed through the verification project that residents can easily accept the introduction of production materials such as improved seeds and fertilizers. • The reasons for this are that technically they are not that difficult to master, the effects are considerable and visible, and the time required to recover the funds invested is short. • Consequently, this component has adequate feasibility and sustainability and is judged appropriate for adoption in the MP. • However, in order to widely promote this component and ensure its sustainability, it is essential to create an environment in which funds for initial materials can be procured and establish a system for promoting cultivation techniques.
Feedback to M/P	<ul style="list-style-type: none"> • The supply of production materials depends on private economic behavior and even if it leads to reduced soil deterioration or eventual prevention of desertification, it has little of the nature of a project directly for the public good. Essentially, this program should deal with microcredit. • However, under the contribution system used in this verification project, it was also confirmed that the contributions to the production materials contributed greatly to the establishment of a village fund. As a means of establishing a microcredit fund, it was judged that only the initial cost (a grant of 20% for 1 ha per UPA) should be covered by public costs. The remaining 80% of residents' contributions should be deposited by the CGTV as microcredit resources.

Table 2.2.3.2 Monitoring Summary [Vegetable Cultivation by Small-scale Irrigation]

Item		Content
Purpose		<ul style="list-style-type: none"> To cultivate vegetables during the dry season using small-scale irrigation facilities (a combination of small-scale water sources such as a well or marsh and metal fences to keep out livestock).
Background		<ul style="list-style-type: none"> Income-generating activities in the survey area are limited and residents lack the means to obtain a cash income. For this reason, there is a lack of commodities that are hard to produce in the village, such as agricultural tools and medical supplies. To improve this situation, many residents wish to cultivate vegetables during the dry season as this would offer the prospect of earning money in the village during the slack farming season when they are relatively free and would also improve their nutritional condition. However, as the rivers and lakes in the survey area that would be the source of water during the dry season are poor and there are no irrigation facilities, it is not easy to grow vegetables during the dry season. Moreover, fences are needed to keep livestock out of the vegetable fields, but there is a lack of materials as a result of the depleted forests.
Verification Items		<ul style="list-style-type: none"> Implementation of training in vegetable cultivation techniques and in maintenance and management of the facilities Construction of small-scale irrigation facilities with the participation of residents Cultivation of vegetables during the dry season and maintenance and management of the facilities by residents
Planning	Selection Requirements	<ul style="list-style-type: none"> Establishment of management rules and a management system by residents Provision of free labor for construction and agreement to pay a contribution (150,000 Fcfa for each well or marsh that serves as a water source, and 200,000 Fcfa for each vegetable field) Provision of land
	Request Status	<ul style="list-style-type: none"> Requests for construction in a total of 9 places were received from 5 out of 7 villages (5 villages in Soignebougou district where other development projects already exist are excluded) Requests were received for extension of the deadline for payment of contributions (because vegetable cultivation in the dry season is mainly the task of women who have little cash income)
	Selection Decision	<ul style="list-style-type: none"> 8 places were selected excluding 2 villages where irrigation projects are being implemented by other aid agencies (2 places in Kokoun, 1 in Bougan, 2 in Dlaba, 2 in Zambougou, 1 in N'Dinzanawere)
Implementation Content	Standards/ Structure	<ul style="list-style-type: none"> Well: Modern shallow well (Reinforced concrete structure with a diameter of 1.8m) Marsh: Constructed by extending existing marshes (Zambougou: 5,743m³, Dlaba: 3,736m³) Vegetable field: Provided with a fence to keep out livestock (metal fence, gate)
	Method/ System	<ul style="list-style-type: none"> Re-contracted locally to a construction company Unskilled labor is provided free by residents
	Results (Costs)	<ul style="list-style-type: none"> 99,521,202 Fcfa (digging of 8 wells, construction of 2 marshes, preparation of 4.65ha of vegetable fields) 660,000 Fcfa (training in vegetable cultivation and maintenance and management of facilities)
	Human Input	<ul style="list-style-type: none"> Technical training and supervision of construction work were provided for the construction company by the Study Team. Training in vegetable cultivation and maintenance and management of facilities was provided for residents by Mali C/P.
Anticipated Effects		<ul style="list-style-type: none"> Higher income and better nutrition through appropriate vegetable cultivation Appropriate maintenance and management of small-scale irrigation facilities

Item		Content
Activities Condition	Implementation Process	<ul style="list-style-type: none"> • Management organizations were established by residents in all the villages and management rules were laid down. • Contributions were paid as planned in all the villages and labor was provided. • Vegetable fields were allotted in all the villages (over 2/3 to women) and vegetables were cultivated. • Training in maintenance and management of the facilities and in vegetable cultivation were held in all the villages and over half of the vegetable growers have received training. • News spread of the vegetable cultivation project in Bougan, resulting in a request for guidance in vegetable cultivation techniques to the Study Team from the neighboring village of Kaya.
	Management	<ul style="list-style-type: none"> • Management of the facilities based on the management rules and monitoring and cleaning by residents are being implemented in all the villages. • Wire netting, gates, pulleys etc. are regularly repaired in all the villages. • Marsh repairs and soil conservation measures were implemented by residents in Zambougou and Dlaba. Trees were also planted around the marsh.
	Use	<ul style="list-style-type: none"> • Vegetable fields irrigated by wells have been used since November 2001 and vegetables are grown. • In the initial plan two crops were expected each dry season, but due to ① a growing number of seedlings withering and dying through lack of water and ② a lack of desire to work in high temperatures, only one crop was possible. • Vegetable fields irrigated by marshes have been used since August 2002, but use is poor and to date almost no crops have been planted. The reasons for this are: ① residents were busy harvesting millet, their staple food, and were unable to grow vegetables, ② marsh water is used to water the livestock as well as for washing, breeding fish, etc. and villagers refrained from growing vegetables out of fear that the marsh would dry up, and ③ the vegetable growers were working away from the village so there was insufficient labor. It was found that residents placed high priority on using the marsh water other than for irrigation. • The rate of vegetable seedlings taking root improved in all the villages through training and improvement in cultivation techniques was seen. However, there was a lot of disease and pest damage and yields of produce that is difficult to grow, such as cabbages, were poor.
Beneficial Impact Seen		<ul style="list-style-type: none"> • Incomes have risen 1,400-7,800 Fcfa (average approx. 5,000 Fcfa) per person and the social position of women is improving. • About half of the vegetables that are grown are used for their own consumption, improving their diet. In addition, expenditure on food is decreasing because vegetables are easy to obtain. • The project is acting as a model, for example villagers in Zangourabougou II which did not initially choose vegetable growing as a verification project have started making their own vegetable fields. • It has also had the effect of enhancing residents' sense of independence. For example villagers in Bougan have installed their own pump.
Evaluation		<ul style="list-style-type: none"> • Ownership of the facilities is high and maintenance and management are actively implemented. • Residents are eager to acquire technology, but find it difficult to master as they have little experience. It was not easy to improve the technology level. • ①As the period when marshes can be used is short (October-January) and ② they are used to water livestock and breed fish, residents voluntarily limit how much water they use. For this reason, it is difficult to fully utilize marshes as a source of water for growing vegetables. • As an overall evaluation, excluding review of the construction of marshes, the project is feasible and should be incorporated in the M/P.
Feedback to M/P		<ul style="list-style-type: none"> • As villages other than those covered by the project want to grow vegetables, technical training for residents to create their own vegetable fields should be planned to include neighboring villages and added to the M/P. • There is no prospect of adequately improving cultivation techniques in one training. In order to teach high level techniques in stages in line with the level of technology, training in vegetable growing should be divided into three stages, elementary, intermediate and advanced. • Marsh construction should not be incorporated in the M/P.

Table 2.2.3.3 Monitoring Summary [Construction of Cereal Banks]

Item		Content			
Purpose		<ul style="list-style-type: none"> To ensure self-sufficiency in food and improve the income of residents 			
Background		<ul style="list-style-type: none"> Agricultural production in the survey area focuses on cereals, particularly millet. The produce is sold at low prices when harvested (e.g. 35 Fcfa/kg). In order to obtain cash income, farmers have no choice but to sell most of their produce at this price. On the other hand, in the pre-harvest season (May-August) when food is short, millet is resold for 85 Fcfa and some farmers that lack food are buying millet for cash at the above price. There is therefore a need for cereal banks based in the villages in order to correct the food imbalance and improve the income of residents. 			
Verification Item		<ul style="list-style-type: none"> Construction of cereal banks and establishment of management by residents 			
Planning	Selection Requirements	<ul style="list-style-type: none"> No existing effective cereal banking facilities Establishment of management rules and a management system by residents Provision of free labor and bricks, and provision of land Agreement to payment of a cash contribution of 120,000 Fcfa (equivalent to 20% of the cost of introducing materials and equipment such as scales, etc.) 			
	Request Status	<ul style="list-style-type: none"> Requests for construction were received from 10 out of 12 villages 			
	Selection Decision	<ul style="list-style-type: none"> As cereal banks are difficult to run, selection was narrowed down to one village in each district and intensive operation guidance was provided. Katiena district : Bougan, Cinzana district : Zangourabougou II, Soignebugou district : Fabougou 			
Implementation Content	Standards/ Structure	<ul style="list-style-type: none"> Building: One-story building made of banco, measuring 5x8m Purchase of equipment such as scales, cereal bags, etc. 			
	Method/ System	<ul style="list-style-type: none"> Re-contracted to local consultant (procurement of materials, construction guidance, execution of construction work that is too difficult for residents, training and guidance in banking operations) Construction of building by residents (10 persons/day) 			
	Results (Costs)			Remarks	
		Year	No. of buildings	Cost (Fcfa)	
		2001	3	12,529,000	Including construction, training and guidance costs
2002		(3)	5,369,000	Training, follow-up, monitoring	
	Total	3	17,898,000		
Human Input	<ul style="list-style-type: none"> Japanese specialists in living environment improvement (2 M/M), appropriate guidance by Mali C/P 				
Anticipated Effects		<ul style="list-style-type: none"> Assurance of self-sufficiency in food in the village Establishment of appropriate management and operation of cereal bank by residents 			
Activities Condition	Implementation Process	<ul style="list-style-type: none"> June-December 2000: Ascertainment of actual situation by PRA survey and baseline study and hearing of wishes of residents January 2001: Discussion between CGTV and Study Team and formulation of project plan December 2001-March 2002: Construction of buildings, purchase of milling machine, training May 2002-: Commencement of operation, guidance, monitoring 			
	Management	<ul style="list-style-type: none"> Management groups were formed and management rules established. The facilities and cereal stocks are well managed by the management groups. 			
	Use	<ul style="list-style-type: none"> Of the stocks stored in the bank as of April 2002, nearly all had been loaned out by July. Although the plan allowed for initial stocks of 34t, only 15.5t was achieved. 			
Operation Plan	Initial Stocks	<ul style="list-style-type: none"> Initial stocks are assured by residents and the Study Team contributing 50% each. 			
	Loan of Cereals	<ul style="list-style-type: none"> Cereals are loaned in the pre-harvest season (May to August) and returned in kind (cereals) with 25% interest at harvest time (November-December) 			
Beneficial Impact Seen		<ul style="list-style-type: none"> As of June 2002 all the initial stocks had been loaned out, and according to the questionnaire 80% of residents in villages with cereal banks were using them Due to the lack of rain in 2002, the cereal harvest was poor, but the food shortage was relieved to a certain extent by the function of the cereal bank. 			

Item	Content
Evaluation	<p>① Evaluation by residents (from the results of the questionnaire conducted on residents and participatory evaluation)</p> <ul style="list-style-type: none"> • 80% of residents replied that they use the cereal bank and 96% of residents want to use it again, demonstrating the effectiveness of the project. • On the other hand, in villages where cereal banks had been established, only 15% of residents bought cereal from the market, demonstrating the role of the cereal bank in achieving self-sufficiency in food in the villages. <p>② Evaluation by the Study Team</p> <ol style="list-style-type: none"> 1 Effects of the project <ul style="list-style-type: none"> • As the project is closely linked to survival, it is very much desired by residents and is greatly needed. 2 Regarding the selection standards, <ul style="list-style-type: none"> • labor and land were provided without any problem (no compensation was required) • a management system and management rules were established, and management is performed by the residents themselves • a contribution equivalent to 20% of the cost of equipment such as scales was paid virtually as planned • the initial stocks were not secured as laid down in the selection standards • judging from the above, the selection standards were met with the exception of the initial stocks 3 Securing of stocks <ul style="list-style-type: none"> • Discussions were held with the villages on plans to build up stocks at harvest time in 2002, but the harvest was poor and stocks were not secured as planned. 4 Bookkeeping and accounting <ul style="list-style-type: none"> • Immediately after commencing operation, the books were not kept up to date due to the low level of literacy of the people in charge of accounting, but with additional guidance later, they were able to carry out their bookkeeping duties. 5 Repayment <ul style="list-style-type: none"> • As of December 2002, 61% of the loans made in 2002 had been repaid (including interest) and the system is working reasonably well. Residents observe the management rules when borrowing and repaying cereals.
Feedback to M/P	<ul style="list-style-type: none"> • Securing the initial stock is the key condition for stable operation, and extension workers should provide guidance to ensure that ① a penalty clause is included in the selection standards placing an obligation on residents, and ② accumulation of the initial stock starts from the year prior to construction. • In the verification project, residents paid a contribution equivalent to 20% of the cost of the scales, etc. As considerable profit is generated if the bank is operated as planned, residents should pay a contribution of 200,000 Fcfa for the building and 30% of the cost of the equipment. • Extension workers should provide repeated follow-up guidance for those in charge of accounting.

Table 2.2.3.4 Monitoring Summary [Construction of Vaccination Facilities]

Item		Content								
Purpose		<ul style="list-style-type: none"> To reduce loss of livestock due to disease through the permeation of livestock health management For residents to acquire knowledge of livestock health and establish a joint management system with the vaccination facilities 								
Background		<ul style="list-style-type: none"> Lack of a livestock health infrastructure and inadequate knowledge of health measures, such as vaccinations, by herders lead to major loss of livestock through disease and infection carried by external and internal parasites. 								
Verification Items		<ul style="list-style-type: none"> Training in livestock health management techniques for residents Construction of facilities through the provision of unskilled labor, and maintenance and management by residents 								
Planning	Selection Requirements	<ul style="list-style-type: none"> Establishment of management rules and a management system by residents Residents contribute 20% of the cost of equipment and provide unskilled labor and land for construction free of charge 								
	Request Status	<ul style="list-style-type: none"> Construction was requested by 7 villages in 3 districts 								
	Selection	<ul style="list-style-type: none"> As a result of laying down selection requirements according to the layout of the village and the number of livestock (1 place for 500 UBT) in villages with no existing facilities, construction was planned in 5 villages in 3 districts. Construction was planned in 3 places in 2001 and 2 places in 2002. 								
Implementation Content	Structure	<ul style="list-style-type: none"> Taking into consideration durability and safety, the paddock and corral walls are made of concrete blocks and the pillars are made of reinforced concrete. In 2001 the gate was made of steel poles, but in 2002, out of consideration for durability, it was changed to bar to keep horse. 								
	Method	<ul style="list-style-type: none"> In 2001 the work was re-contracted to the Ségou branch of the Rural Development Bureau (construction work, training in maintenance and management techniques for residents). In 2002 it was ordered from BEAGGES. Residents provided unskilled labor. 								
Results			Year/District	Type	No. of places	Cost (Fcfa)	No. of participants in training			Provision of labor
							Inspec- tion	In- doors	In the field	
			2001/ Katiéna Bougan	A (paddock 20×20m)	1	6,102,900	11	5	21	460
			2001/ Cinzana Zangourabougou2	B (paddock 10×10m)	1	4,231,550	4	3	11	375
			2001/ Soignebougou Dafimbougou	B (paddock 10×10m)	1	4,231,550	8	5	12	400
			Total		3	14,566,000				
			2002/ Katiéna Kokoun	B (paddock 10×10m)	1	4,927,000	10	5	10	350
			2002/Cinzana N'Dinzanawere	B (paddock 10×10m)	1	4,927,000	8	3	12	300
	Total		2	9,854,000						
Anticipated Effects		<ul style="list-style-type: none"> A maintenance and management system for the vaccination facilities is established. The importance of vaccinations is recognized by residents and vaccinations are implemented. The rate of livestock contracting diseases falls. 								

Item	Content				
Activities Condition	Implementation Process	<ul style="list-style-type: none"> • Implementation of PRA survey and baseline study (June-December 2000) • Establishment of CGTV (December 2000) • Establishment of stock-raising management rules (January 2001) • Construction of facilities: 2001 (June 2001-January 2002), 2002 (September 2002-October 2003) • In both 2001 and 2002, the construction period of the facilities fell in the busy farming period during the rainy season, making it difficult for residents to provide labor and resulting in delays in completing construction. 			
	Management/Use	Village	Management System	Rules	Management/Use
		Bougan	Established	Established	509 head of cattle were vaccinated in January 2001 and 22 in April, and a total of 25 UPAs used the facilities at a cost of 125 Fcfa/head (100 Fcfa for vaccine, 25 Fcfa (or 50 Fcfa for outsiders) for use of the facilities)
		Kokoun	Established	Established	Completed in October 2002. Fee: 125 Fcfa/head (100 Fcfa for vaccine, 25 Fcfa (or 50 Fcfa for outsiders) for use of the facilities)
		Zangourabougou II	Established	Established	187 head of cattle were vaccinated in January 2001 and 24 in August, and a total of 12 UPAs used the facilities at a cost of 175 Fcfa/head (150 Fcfa for vaccine and 25 Fcfa for use of the facilities)
		N'Dinzanawere	Established	Established	Completed in October 2002 200 head of cattle were vaccinated in January 2003 at a cost of 175 Fcfa/head (150 Fcfa for vaccine and 25 Fcfa for use of the facilities)
		Dafimbougou	Established	Established	519 head of cattle were vaccinated in January 2001, and a total of 12 UPAs used the facilities as well as people from other villages. The fee for using the facilities is the same as for Bougan.
Beneficial Impact Seen	<ul style="list-style-type: none"> • A management system was established in the villages where facilities were constructed and a maintenance and management system was established. • Looking at the vaccination record, 48% of the livestock in Bougan was vaccinated, 95% in Zangourabougou II and 57% in Dafimbougou, so use has exceeded expectations from the very first year. 				
Evaluation	<ul style="list-style-type: none"> • 60% of users in Dafimbougou come from villages other than those participating in the project, showing the high level of interest among surrounding villagers. This is also good for operation of the vaccination facilities. • Residents are well aware of the significance of constructing vaccination facilities and the facilities are highly appraised by residents in the villages where they have been built. In a questionnaire conducted on residents, 99% of respondents said they were satisfied with the vaccination facilities that had been built. • 83% of respondents to the questionnaire said they were satisfied with the management system for operating the facilities, and the establishment of management rules by the Stock-raising Specialized Group had the effect of causing residents to organize themselves. • In the verification project, it was not possible to confirm that vaccinations had caused the occurrence of disease in livestock to drop. • The facilities are essential for improving livestock product production and should be incorporated in the M/P. 				
Feedback to M/P	<ul style="list-style-type: none"> • In Mali, it is extremely difficult to ascertain the number of head of livestock. This makes it difficult to ensure appropriate use of pasture and causes increasing desertification. Construction of vaccination facilities is the best way to prevent loss of livestock and is also an effective means of ascertaining the number of livestock, and in turn, it should be incorporated in the M/P as a way of preventing desertification. • Residents contributed 20% of the cost of equipment for the facilities, but judging from the high public benefit provided by the facilities, a contribution of 150,000 Fcfa should be made for each type A facility and 100,000 Fcfa for each type B facility. 				

Table 2.2.3.5 Monitoring Summary [Manufacture of Nutritional Blocks and Sheep Fattening]

Item		Content									
Purpose		<ul style="list-style-type: none"> To increase livestock productivity by improving nutrition in the dry season To try to improve the living conditions of women in particular, using sheep fattening as a source of cash income 									
Background		<ul style="list-style-type: none"> Livestock productivity is poor due to the lack of nutrition when feed is short in the dry season. Better nutrition through feeding nutritional blocks with a high mineral and protein content will lead to increased livestock productivity. There are few sources of income for village women in the survey area. Sheep fattening is an effective means of securing a source of cash income for women. 									
Verification Items		<ul style="list-style-type: none"> Implementation of training for residents in the manufacture of nutritional blocks and sheep fattening Manufacture of nutritional blocks by residents and short-term sheep fattening by feeding of nutritional blocks 									
Planning	Selection Requirements	<ul style="list-style-type: none"> Establishment of rules for management of the facilities by residents Manufacture of blocks, attendance at purchase of sheep and management of sheep fattening by residents Introduction of one set of block manufacturing equipment per 150 head of sheep currently being raised Contribution of 20% of the cost of procuring the materials and equipment and 100% of the cost of purchasing the feeder stock of sheep 									
	Request Status	<ul style="list-style-type: none"> Request for procurement of a total of 18 sets of nutritional block manufacturing materials and equipment from 10 out of 12 villages Request for purchase of 180 head of feeder stock of sheep from 10 out of 12 villages After commencement of verification project in 2001, request for additional implementation from each district 									
	Selection	<ul style="list-style-type: none"> The request for 18 sets was selected, with 9 sets introduced in 2001 and the remainder in 2002. 									
Implementation Content	Standards	<ul style="list-style-type: none"> Introduction of 10 head of feeder stock of sheep per set of nutritional block manufacturing materials and equipment 									
	Method	<ul style="list-style-type: none"> The equipment procured by the Study Team comprised, per set, 1 drum can, 10 bowls, 1 shovel, 1 bucket. The materials comprised 150kg cement, 100kg salt, 286kg molasses, 100kg urea. Residents procured millet powder and water. In 2001 nutritional blocks were used to fatten the sheep, but as some sheep ate them and others did not, in 2002 the mixing proportions were changed. 									
	Results			Year/District	Village	Unit	Q'ty	Cost (Fcfa)	No. of Participants in Training		
									Inspec- tion	In- doors	In the field
				2001 /Katiena	Bougan Kokoun	Set "	1 1		11 10	5 5	7 12
				2001/Cinzana	Dlaba	Set	1		8	3	13
					N'Dinzanawere	"	1		8	3	12
					Sinebougou	"	1		8	3	12
					Zambougou	"	1		8	4	8
					Zangourabougou2	"	1		4	3	12
		2001/ Soignebougou	Dafimbougou Fabougou	Set "	1 1		8 8	5 5	14 10		
		Total		Set	9	3,703,500	73	36	100		
		2002 / Katiena	Bougan Kokoun	Set "	3 4		Field training implemented from December				
		2002/ Cinzana	Zambougou	Set	1		Introduction of feeder stock started in September				
		2002/ Soignebougou	Dougoutiguibougou	Set	1						
		Total			9	3,132,500					
Anticipated Effects		<ul style="list-style-type: none"> Management groups are established and nutritional blocks are manufactured by women. Sheep fattening is carried out efficiently. Cash income increases. 									

Item	Content									
Activities Condition	Implementati on Process	<ul style="list-style-type: none"> • Implementation of PRA survey and baseline study (June-December 2000) • Establishment of CGTV (December 2000) • Establishment of stock-raising management rules (January 2001) • Block manufacture and fattening: 2001 (September 2001-February 2002), 2002 (August 2002-February 2003) 								
	Management/Use	<ul style="list-style-type: none"> • Sales performance of feeder stock introduced in 2001 is shown in the table below (average figures for 9-10 head of sheep). 								
		Name of village	Weight at time of introduction (kg)	Weight at time of sale (kg)	Fattening period (days)	Daily weight gain (g)	Purchase price (Fcfa)	Selling price (Fcfa)	Income (Fcfaf)	Income (Fcfaf/kg)
		Bougan	25.5	30.2	157	31	19600	25200	5600	1197
		Kokoun	32.4	38.0	83	146.	19800	24800	5000	551
		Dlaba	31.9	45.5	105	129	21400	31550	10150	746
		N'Dinzanawere	30.7	43.3	105	120	19300	25300	6000	477
		Sinebouougou	27.9	41.1	105	125	18500	27900	9400	712
		Zambougou	28.9	41.1	105	117	19100	25750	6650	543
		Zangourabougou2	30.4	48.0	105	111	17500	25400	7900	675
Dafimbougou		21.3	32.8	91	126	18175	27000	8825	769	
Fabougou	24.7	33.5	91	96	18050	25350	7300	833		
The fattening progress of sheep introduced in 2002 is shown in the table below.										
Name of village	Weight at time of introduction (kg)	Weight in November (kg)	Weight gain from time of introduction (kg)	Daily weight gain (g)	Remarks Results of 46 days fattening					
Bougan	26.0	35.0	10.5	228.2	Average for 30 head					
Kokoun	27.6	37.9	10.3	223.9	Average for 40 head					
Zambougou	27.5	39.0	11.5	264.6	Average for 10 head					
Dougoutigoubougou	24.3	34.0	8.4	210.4	Average for 10 head					
Average	26.3	37.0	10.7	231.8						
<ul style="list-style-type: none"> • In 2002 feeder stock for fattening started to be introduced in September when the price was relatively low. 90 head of feeder stock weighing around 25kg were introduced and 4 died. The average daily weight gain was more than double that of the previous year. • Manufacture of the nutritional blocks coincides with the busy farming season and is carried out from December onwards. As the sheep were not keen on eating the blocks in 2001, in 2002 the proportion of salt was increased 5% and the proportion of molasses was decreased. 										
Beneficial Impact Seen	<ul style="list-style-type: none"> • A growing trend was seen in the villages of women's organizations actively securing a source of cash income. • Efforts were made to improve nutrition in the dry season by feeding sheep nutritional blocks and the effects were seen in weight gain. • Fattening in 2001 showed good results with an average daily weight gain overall of over 100g. The average income exceeded 10,000 Fcfa in some villages and the results were good in terms of profits. • In 2 villages in Soignebouougou district 10% interest was added to the contribution for the introduction of feeder stock (100% payment at 20,000 Fcfa per head) and paid to the CGTV. • In 2002, though still in the early fattening stage, performance is good with the average daily weight gain overall in excess of 200g. 									
Evaluation	<ul style="list-style-type: none"> • From the results of the questionnaire conducted on residents, their presence at the introduction of the feeder stock contributed to the high appraisal received. As good results were achieved in fattening, 61% of residents made a profit and were satisfied. • Problems remained with mixing as some sheep were eating the blocks and others not. All residents did not evaluate the nutritional blocks highly in the 2001 project. • The project was effective in securing a source of cash income and should be incorporated in the M/P. 									
Feedback to M/P	<ul style="list-style-type: none"> • The nutritional blocks are intended to supplement mineral and nutrition shortages during the dry season and extension workers should provide guidance to ensure that they are fed to cattle as well as sheep. • Mali has little experience in feeding animals nutritional blocks and it will take time for this to spread. Extension workers should provide guidance to residents to promote use of the blocks. 									

Table 2.2.3.6 Monitoring Summary [Construction of Improved Poultry Houses and Introduction of Poultry Breeding]

Item	Content								
Purpose	<ul style="list-style-type: none"> To improve productivity by improving the poultry-raising environment and introducing poultry breeding To improve living conditions by securing a source of cash income 								
Background	<ul style="list-style-type: none"> Poultry productivity is extremely low due to fowl being kept extensively outside, no administering of vaccinations, and breeding using existing varieties (death rate for poultry exceeds 50%). 								
Verification Items	<ul style="list-style-type: none"> Implementation of technical training in construction of poultry houses and improved poultry raising for residents Construction of poultry houses and breeding management by residents 								
Planning	Selection Requirements	<ul style="list-style-type: none"> Construction of poultry houses by manufacture of banco and provision of labor by residents Construction of one poultry house per 100 existing fowl Agreement of residents to contribution of 20% of cost of procuring equipment and 100% of cost of introducing breeding stock 							
	Request Status	<ul style="list-style-type: none"> Requests for construction of 27 poultry houses were received from 12 out of 12 villages 							
	Selection	<ul style="list-style-type: none"> Construction of 14 poultry houses was planned for 2001 and the remaining 13 for 2002. 							
Implementation Content	Standards /Structure	<ul style="list-style-type: none"> The walls of the poultry house are made of banco with zinc roofing, and the exercise yard has a fence made of steel poles and wire netting. Introduction of 3 breeding cocks per house (Rhode Island Red) As Rhode Island Red breeding cocks were difficult to obtain in 2002, Isabrown were substituted. 							
	Method	<ul style="list-style-type: none"> Distribution of building materials, disinfectors and breeding stock to DRAMR and commissioning of construction guidance for residents Provision of land for construction and manufacture of banco for walls by residents Construction of poultry houses by residents with guidance from DRAMR 							
Results		Year/District	Village	Unit	Q'ty	Cost (Fcfa)	No. of Participants in Training		
							Inspec-tion	In-doors	In the field
		2001 /Katiena	Bougan	Bldg.	3		11	5	3
			Kokoun	"	1		10	5	1
		2001/Cinzana	Dlaba	Bldg.	2		8	3	2
			N'Dinzanawere	"	2		8	3	2
			Sinebougou	"	1		8	3	1
			Zambougou	"	1		8	4	1
			Zangourabougou2	"	1		4	3	1
		2001/ Soignebougou	Sakoibougou	Bldg.	1		8	5	1
			Siradoba	"	1		8	5	1
			Dougoutiguibougou	"	1		8	5	1
		Total		Bldg.	14	2,676,500	81	41	14
		2002 /Katiena	Bougan	Bldg.	2				7
			Kokoun	"	1				8
	2002/Cinzana	Dlaba	Bldg.	2				4	
		N'Dinzanawere	"	2				4	
		Sinebougou	"	1				5	
		Zambougou	"	1				6	
		Zangourabougou2	"	1				2	
	2002/ Soignebougou	Sakoibougou	Bldg.	1				2	
		Siradoba	"	1				1	
		Dougoutiguibougou	"	1				4	
			Bldg.	13	2,702,000			43	
Anticipated Effects	<ul style="list-style-type: none"> Management of poultry raising is appropriately carried out and livestock product productivity is improved. The poultry houses are built by residents and building techniques are mastered. Cash income is increased. 								

Item	Content																																																																																																																																																									
Activities Condition	Implementa- tion Process	<ul style="list-style-type: none"> • Implementation of PRA survey and baseline study (June-December 2000) • Establishment of CGTV (December 2000) • Establishment of breeding management rules (January 2001) • Construction of poultry house and introduction of breeding stock: 2001 (June 2001-February 2002), 2002 (June 2002-January 2003) 																																																																																																																																																								
	Management/Use	<ul style="list-style-type: none"> • Last year over half the breeding stock introduced died due to ① 9 fowl being kept in 1 poultry house because construction was delayed, ② lack of health management, ③ inferior feed, etc. • For this reason, in 2002 field training was held again, including participants from 2001, and efforts were made to improve poultry raising. • Use of the facilities built in 2001 is shown in the table below. <table border="1"> <thead> <tr> <th rowspan="2">Name of village</th> <th rowspan="2">No. of poultry houses built</th> <th colspan="5">When built (January 2002)</th> <th colspan="5">Present time (August 2002)</th> </tr> <tr> <th>Breeding stock ♂</th> <th>Traditional breed ♀</th> <th>Mixed breed ♀</th> <th>Fowl reared</th> <th>Chicks</th> <th>Breeding stock</th> <th>Traditional breed ♀</th> <th>Mixed breed ♀</th> <th>Fowl reared</th> <th>Chicks</th> </tr> </thead> <tbody> <tr> <td>Bougan</td> <td>3</td> <td>9</td> <td>8</td> <td>0</td> <td>0</td> <td>0</td> <td>3</td> <td>23</td> <td>0</td> <td>1</td> <td>3</td> </tr> <tr> <td>Kokoun</td> <td>1</td> <td>3</td> <td>9</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>6</td> <td>6</td> <td>14</td> <td>11</td> </tr> <tr> <td>Dlaba</td> <td>2</td> <td>6</td> <td>14</td> <td>1</td> <td>5</td> <td>29</td> <td>3</td> <td>27</td> <td>0</td> <td>54</td> <td>81</td> </tr> <tr> <td>N'Dinzanawere</td> <td>2</td> <td>6</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>3</td> <td>21</td> <td>0</td> <td>28</td> <td>73</td> </tr> <tr> <td>Sinebougou</td> <td>1</td> <td>3</td> <td>11</td> <td>0</td> <td>14</td> <td>16</td> <td>0</td> <td>6</td> <td>0</td> <td>5</td> <td>8</td> </tr> <tr> <td>Zambougou</td> <td>1</td> <td>3</td> <td>0</td> <td>2</td> <td>0</td> <td>0</td> <td>2</td> <td>13</td> <td>0</td> <td>13</td> <td>16</td> </tr> <tr> <td>Zangourabougou2</td> <td>1</td> <td>3</td> <td>8</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>11</td> <td>0</td> <td>2</td> <td>6</td> </tr> <tr> <td>Sakoibougou</td> <td>1</td> <td>3</td> <td>0</td> <td>0</td> <td>26</td> <td>3</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Siradoba</td> <td>1</td> <td>3</td> <td>13</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>4</td> <td>0</td> <td>7</td> <td>14</td> </tr> <tr> <td>Dougoutigoubougou</td> <td>1</td> <td>3</td> <td>9</td> <td>4</td> <td>0</td> <td>0</td> <td>3</td> <td>11</td> <td>0</td> <td>7</td> <td>30</td> </tr> </tbody> </table>											Name of village	No. of poultry houses built	When built (January 2002)					Present time (August 2002)					Breeding stock ♂	Traditional breed ♀	Mixed breed ♀	Fowl reared	Chicks	Breeding stock	Traditional breed ♀	Mixed breed ♀	Fowl reared	Chicks	Bougan	3	9	8	0	0	0	3	23	0	1	3	Kokoun	1	3	9	0	0	0	0	6	6	14	11	Dlaba	2	6	14	1	5	29	3	27	0	54	81	N'Dinzanawere	2	6	0	0	0	0	3	21	0	28	73	Sinebougou	1	3	11	0	14	16	0	6	0	5	8	Zambougou	1	3	0	2	0	0	2	13	0	13	16	Zangourabougou2	1	3	8	0	0	0	0	11	0	2	6	Sakoibougou	1	3	0	0	26	3	0	0	0	0	0	Siradoba	1	3	13	0	0	0	1	4	0	7	14	Dougoutigoubougou	1	3	9	4	0	0	3	11	0	7	30
		Name of village	No. of poultry houses built	When built (January 2002)					Present time (August 2002)																																																																																																																																																	
Breeding stock ♂	Traditional breed ♀			Mixed breed ♀	Fowl reared	Chicks	Breeding stock	Traditional breed ♀	Mixed breed ♀	Fowl reared	Chicks																																																																																																																																															
Bougan	3	9	8	0	0	0	3	23	0	1	3																																																																																																																																															
Kokoun	1	3	9	0	0	0	0	6	6	14	11																																																																																																																																															
Dlaba	2	6	14	1	5	29	3	27	0	54	81																																																																																																																																															
N'Dinzanawere	2	6	0	0	0	0	3	21	0	28	73																																																																																																																																															
Sinebougou	1	3	11	0	14	16	0	6	0	5	8																																																																																																																																															
Zambougou	1	3	0	2	0	0	2	13	0	13	16																																																																																																																																															
Zangourabougou2	1	3	8	0	0	0	0	11	0	2	6																																																																																																																																															
Sakoibougou	1	3	0	0	26	3	0	0	0	0	0																																																																																																																																															
Siradoba	1	3	13	0	0	0	1	4	0	7	14																																																																																																																																															
Dougoutigoubougou	1	3	9	4	0	0	3	11	0	7	30																																																																																																																																															
Beneficial Impact Seen	<ul style="list-style-type: none"> • The high death rate among the breeding cocks seriously affected production. • There are two types of facilities, open type and closed type. With the closed type, good results were achieved by UPAs that fed the poultry termites, shells, millet powder, fish powder, etc. • Since January 2002 Dlaba in Cinzana district has had a turnover of over 30,000 Fcfa. Some poultry farmers pay their contributions in one installment. The results are good in villages where people have vaccinating skills. In Dougoutigoubougou the person with vaccinating skills is a poultry farmer and none of his breeding cocks has died. • The farmers themselves install egg laying boxes, feeders, waterers, tick removers, etc. and show enthusiasm for improving the breeding environment. • There has been no conspicuous drop in the death rate, but overall the number of poultry has increased almost 2.5 times compared with at the start of the project and progress is good. Growth in Cinzana district is notably good. • Major losses were incurred as a result of inadequate breeding skills using improved breeding cocks. This was because breeding using improved poultry houses was a new experience and skills were inadequate. Learning from their experience in 2001, in 2002 training was held including in vaccination techniques for poultry, measures to deal with internal and external parasites, and improved nutrition practices including for cocks. • As a result of repeated field training, production has improved. Antiinfectants and parasiticides are administered and vaccinations are performed. • Building skills in the construction of poultry houses were acquired through the provision of labor. • Enthusiasm for improving poultry raising is particularly noticeable among poultry farmers in Dlaba, Dougoutigoubougou and N'Dinzanawere. • Some poultry farmers in Dougoutigoubougou, Soignebougou district, have extended their poultry houses and are trying to increase the number of fowl. • The effects of the retraining in 2002 can be seen in the steady growth in the number of fowl raised and the number produced. 																																																																																																																																																									

Item	Content
Evaluation	<ul style="list-style-type: none"> • The number of participants in the field training is small, about 5, but participation of villagers is obtained outside the verification studies and expansion is anticipated. • If breeding skills are improved, the project can be expected to be highly effective and be highly evaluated by residents. • From the results of the questionnaire conducted on residents, 90% of respondents are satisfied with the poultry houses that have been built. The reasons are: ① a drop in the death rate: 55%, ② increased egg production: 18%, ③ reasonably priced facilities: 18%. • 77% replied that they are satisfied with the introduction of breeding stock and the choice of species is judged to be appropriate. • The project is an effective means of securing a source of cash income and should be incorporated in the M/P.
Feedback to M/P	<ul style="list-style-type: none"> • With regard to the introduction of improved breeding stock and the use of poultry houses, relatively high level technology is required for nutritional improvement, health management, breeding management, etc. If such technology is not adequately transferred to residents, failure results. Implementation of the project must be based on adequate training. • The project was intended to be implemented by women in order to secure a source of cash income, but construction is difficult without the cooperation of men. Therefore it should not necessarily be a fixed project for women.

Table 2.2.3.7 Monitoring Summary [Introduction of Improved Pasture Grass]

Item		Content								
Purpose		<ul style="list-style-type: none"> To increase grassland production and improve livestock nutrition by constructing a fodder production infrastructure 								
Background		<ul style="list-style-type: none"> Natural grasslands consist of one year grasses, particularly herbaceous grasses, and are of low nutritional value in terms of protein, etc. For this reason, improved perennial leguminous grasses such as high protein <i>stylosanthes</i> are introduced. There are no improved leguminous grasses in the survey area. Soil nutrients are improved by introducing leguminous grasses. 								
Verification Items		<ul style="list-style-type: none"> Training of residents in fodder production improvement Sowing of pasture grass by residents Management of grasslands through establishment of grazing rules by Stock-raising Specialized Group 								
Planning	Selection Requirements	<ul style="list-style-type: none"> Establishment of grazing rules by residents Seeding through provision of labor and grassland management by residents Seeding of 2% of non-planted land and 1% of fallow land Contribution of 20% of the cost of purchasing fodder seeds 								
	Request Status	<ul style="list-style-type: none"> Request for seeding of 52ha from 11 out of 12 villages 								
	Selection	<ul style="list-style-type: none"> Seeding of 26ha was planned in 2001 and the remainder in 2002 								
Standards		<ul style="list-style-type: none"> Removal of the outer coat of the seeds before planting and field training in seeding methods Ploughing, planting of seeds (5kg/ha) and covering with soil 								
Method		<ul style="list-style-type: none"> Import of seeds from Australia by the Study Team Planting after distributing seeds to residents and grassland management by residents 								
Implementation Content	2001 Results	District	Village	Unit	Area	Costs (yen)	No. of participants in training			
							Inspection	Indoors	In the field	
		Katiena	Kokoun	ha	4.8			10	5	3
			Bougou	"	2.2			11	5	6
		Cinzana	Dlaba	ha	0.5			8	3	5
			N'Dinzanawere	"	2.0			8	3	5
			Sinebougou	"	6.0			8	3	4
			Zambougou	"	3.5			8	4	6
		Soignebougou	Zangourabougou2	"	1.5			4	3	5
			Dafimbougou	ha	1.5			8	5	3
Total	Sakoibougou	"	1.0			8	-	20		
		ha	26.0	815,750		81	36	60		
2002 Results		<ul style="list-style-type: none"> The remaining 26ha were due to be seeded in 2002, but because of a steep rise in the price of imported seeds and the difficulty of procuring seeds in Mali, creation of new land other than that mentioned below was cancelled. No seeding took place in Siradoba village in 2001. Enough seeds for 3ha were distributed to Cinzana district in 2002 and planted. The seeded area for each village was as follows. Dlaba 0.5ha, N'Dinzanawere 1ha, Sinebougou 0.25ha, Zambougou 0.75ha, Zangourabougou 2 0.5ha 								
Anticipated Effects		<ul style="list-style-type: none"> Establishment of a Grassland Management Association in villages participating in the project and appropriate maintenance and management of the grasslands Increased grassland production 								
Activities Condition	Implementation Process	<ul style="list-style-type: none"> Implementation of PRA survey and baseline study (June-December 2000) Establishment of CGTV (December 2000) Establishment of stock-raising management rules (January 2001) Creation of grasslands in 2001 (July-August 2001) and 2002 (July 2002) Establishment of interterroir land use rules in 2002 (already established in Cinzana and Katiena districts) 								
	Management /Use	<ul style="list-style-type: none"> Some seeding took place from mid-August last year and the rainy season ended before the seeds had germinated properly so they did not take root very well. There was concern whether they would grow again this season, but it was confirmed that they did. Residents have little desire to manage the grasslands. This is because they are seeding shared land, the seeds did not take root well, and residents remain well aware that fodder is obtained free. 								

Item		Content						
Activities Condition	Management/Use	<ul style="list-style-type: none"> Growth in the enclosure for estimating the crop by unit acreage sampling as of August 2002 is shown below. 						
		Village	Height			Planting density (per m ²)		
			Excellent	Good	Poor	High	Medium	Low
		Bougan			○			○
		Kokoun	○			○		
		N'Dinzanawere	○			○		
		Sinebougou		○		○		○
		Zambougou			○			○
Dafimbougou	○			○	○			
Sakoibougou			○					
		<p>Note 1 Height: Excellent: over 50cm, Good: 30-50cm, Poor: less than 30cm</p> <p>Note 2 Planting density: High: over 15 per m², Medium: 5-14, Low: less than 5</p> <ul style="list-style-type: none"> As a result of measuring the volume of dry grass by crop estimation, a yield of over 3t/ha is expected in the verification district. As the planting season for <i>stylosanthes</i> was missed, the data varies, but a yield of about 5t/ha is expected. The fodder yield is expected to be about 1.5t/ha-2t/ha. Rhizobiums were not used when planting <i>stylosanthes</i>. It was found that the seeds took root even without them, but growth differs greatly depending on soil conditions. Growth is poor in highly acidic soil. Management of grazing land including improved and natural grasslands in Cinzana and Katiena districts was incorporated in the land use agreement. 						
Beneficial Impact Seen		<ul style="list-style-type: none"> A sense of cooperation began to grow among residents through the establishment of grazing rules, and organization was promoted in each district. Interterroir land use and management rules were established by villagers in Cinzana and Katiena districts and the importance of managing natural resources was recognized by residents. Late planting resulted in the grass not taking root, leading to reduced yields far below target. Looking at growth this year, it was confirmed that, provided livestock grazing is properly managed in the early stages of pasture creation, leguminous grasses take root well. 						
Evaluation		<ul style="list-style-type: none"> Textbooks for education activities in Bambara with illustrations are an effective way of boosting understanding among farmers. The fact that only half of the planned area was seeded was the cause of the low target achievement rate. Systematization for establishing grazing rules in each district was successfully promoted. The project was poorly appraised by residents due to the seeds not taking root in the first year. The main reasons were late seeding and poor grazing management (sheep and goats were put out to graze in the early stages of growth). According to the results of the questionnaire conducted on residents, 66% want to expand fodder production, but adopt a negative attitude to introducing it by their own efforts, and 53% replied that they would introduce it if aid was provided. In Cinzana district an interterroir land use management agreement was signed by 17 villages including neighboring villages. An agreement was also established in Katiena district. This enabled orderly use of shared grazing land. Establishment of the agreement is judged to play a dramatic role in the development of improved grassland creation and management. This will be an effective M/P project if implemented on the assumption that controlled grazing and a seed production system will be established. 						
Feedback to M/P		<ul style="list-style-type: none"> Imported seeds are expensive and difficult to promote. Therefore creation of a system to promote seed production in Mali should be incorporated in the M/P. Controlled grazing for a fixed period during seeding should be included as a point to note when creating pasture and guidance should be provided by extension workers. Guidance should be provided by extension workers to ensure that feed measures in the dry season by increasing production of fodder crops such as niébé and dolique are the first consideration. 						

Table 2.2.3.8 Monitoring Summary [Construction of Mini Nurseries]

Item		Content			
Purpose		<ul style="list-style-type: none"> To facilitate procurement of seedlings by the construction of seedling production facilities on a village-unit basis 			
Background		<ul style="list-style-type: none"> Almost none of the villages has its own seedling production facilities and it is not easy to procure seedlings. Some villages have built facilities through aid in the past, but production has stopped due to damage, lack of engineers, etc. Nevertheless, in general residents are interested in planting trees. Nurseries are established in the villages and produce the necessary seedlings. 			
Verification Items		<ul style="list-style-type: none"> Construction of facilities with the participation of residents Implementation of training Operation of the nurseries by residents 			
Planning	Selection Requirements	<ul style="list-style-type: none"> There are no existing nursery facilities in the village Establishment of management rules and a management system by residents Provision of free labor and agreement to contribute to costs (20% of cost of materials and equipment) Provision of land Securing of water source or prospect thereof 			
	Request Status	<ul style="list-style-type: none"> Requests for construction were received from all 12 villages 			
	Selection Decision	<ul style="list-style-type: none"> 9 villages where there are no existing nursery facilities were selected. 			
Implementation Content	Structure	<ul style="list-style-type: none"> Approx. 100m² was enclosed by a wire netting fence and a shaded section was constructed inside partly using local materials 			
	Method	<ul style="list-style-type: none"> Seedlings are grown using vinyl pots and some direct seeding (Residents bear 20% of the cost of the materials) 			
	Results (Costs)	<ul style="list-style-type: none"> Cost of construction and materials for nurseries in 9 places: 584,650 x 9 = 5,261,850 cfa 2 trainings (10 days each) commissioned to DRCN: 1,650,000 cfa 			
	Human Input	<Study Team> Implementation of PRA, organization support and training through NGOs, local coordinators, etc.		<Mali> Follow-up technical guidance in operation and management by CP <Residents> Provision of labor	
Anticipated Effects		<ul style="list-style-type: none"> Nursery management and seedling production can be performed through residents' own efforts Tree planting is promoted by supplying seedlings from the mini nurseries 			
Activities Condition	Implementation Process	Seedling production	2001	2002	Purchased in 2002
		(Total no. of trees)	(12,658)	(3,445)	(1,221)
		Bougan	418	0	408
		Kokoun	1,481	139	345
		N'Dinzanawere	778	1,106	0
		Dlaba	1,714	932	97
		Sinebougou	1,547	580	0
		Zambougou	2,401	194	260
		Zangourabougou2	740	232	111
		Dafimbougou	996	0	0
	Sakoibougou	2,613	262	0	
	Total	12,658	3,445	1,221	
	Production figures for 2002 are until December, and the number purchased does not include purchase by individuals.				

		<ul style="list-style-type: none"> • With aid from the Study Team, <u>in 2001</u> a total of over 12,000 seedlings were produced in 7 villages. • In addition to the seeds distributed by JICA, some villages planted seeds they obtained themselves, including coconut palm and African mahogany, showing that residents were capable of acting independently. • On the other hand, this was not planned production and buyers were not found for all the seedlings that were produced. • The majority of the seedlings were planted in the villages. • <u>From 2002</u> residents had to bear all costs of operating the nurseries and in general operation slumped. Only 2 villages, N'Dinzanawere and Sinebougou, met demand in the villages by village production alone. At the same time performance began to vary from village to village (positive villages and negative villages). • There is the problem of what to do about paying the people in charge of managing the nurseries. Many villages still have no clear rules. • Only 3 villages, Dlaba, Sinebougou and N'Dinzanawere have bought additional materials and equipment at their own expense. Management rules have more or less been established in all the villages, but with the exception of N'Dinzanawere, how much the people in charge will be paid and how they will be paid has not been settled. Management in Sinebougou and Dlaba is largely dependent on volunteers from among the villagers. • However, some villages have bought fruit tree seedlings that are difficult to grow in village nurseries (quality is low due to lack of grafting skills in the villages) from outside and the decline in supply in 2002 cannot simply be blamed directly on lack of enthusiasm for producing seedlings. • Production in Sakoibougou has to all intents and purposes stopped. This is due to the tree-planting leaders working away from the village in Bamako and a general decline in enthusiasm for tree planting, as well as the low salary paid to the people in charge of the nursery and pressure of work in the cereal fields. Production stopped with the seedlings left over from last year. • In Cinzana district tree planting is changing from being a joint activity to being an individual activity, and the problem of a salary for the people in charge of the nursery remains unsettled. • Most of the Dlaba seedlings were used to supply Cinzana Commune.
	Outstanding Issues	<ul style="list-style-type: none"> • Management of the seedling production process and time management are poor (not enough seedlings are supplied in time for the planting season). • The reason why it is difficult to establish rules for paying those engaged in seedling production is the low level of skills and lack of any prospect of adequate profit. • To solve the above, the tree-growing skills of the people in charge must be improved.
Beneficial Impact Seen		<ul style="list-style-type: none"> • The stage was reached where seedling production activities could be undertaken by residents (those engaged in seedling production) on their own, except for grafting technology. • There was enthusiasm to acquire new skills, especially regarding fruit trees, such as wanting to acquire grafting technology. • There was a growing desire among residents for a diversity of seeds. • In Cinzana district the trend arose for selling the seedlings they produced to the commune through a commission contract (see the example of Dlaba).
Evaluation		<ul style="list-style-type: none"> • Labor was provided and contributions paid more or less as planned. • The facilities were well managed on the whole, but there is concern about sustainability in some villages. • The nurseries are ingeniously used in some villages, such as Dlaba where the nursery is used as a vegetable field in the dry season. • The management system and management rules are still not totally satisfactory (particularly regarding clarification of the salary for the people in charge of management and how it is raised). • Overall this is a feasible project and is appropriate to be incorporated in the plan.
Feedback to MP		<ul style="list-style-type: none"> • Guidance should be provided by extension workers to ensure that a supply plan combining production in the village mini nurseries and purchase of seedlings from outside is laid down by each CGTV. • Guidance should be provided by extension workers to define the duties and salaries of nursery managers.

Table 2.2.3.9 Monitoring Summary [Afforestation]

Item		Content		
Purpose		<ul style="list-style-type: none"> To create forests by planting trees that are communally and individually owned 		
Background		<ul style="list-style-type: none"> Forests are natural resources where villagers are free to collect firewood. Women in particular collect a year's supply of firewood in the dry season. Collecting firewood is becoming increasingly hard labor in view of population growth and deterioration of natural resources. On the other hand, most villages have little or no experience in tree planting. For this reason, there is growing competition for firewood, it has to be collected in increasingly remote places and forests are becoming depleted. 		
Verification Items		<ul style="list-style-type: none"> Implementation of training in tree planting Planting and management by residents 		
Planning	Selection Requirements	<ul style="list-style-type: none"> All the villages requesting afforestation 		
	Request Status	<ul style="list-style-type: none"> All 12 villages 		
	Selection Decision	<ul style="list-style-type: none"> All 12 villages 		
Implementation Content	Standards	<ul style="list-style-type: none"> Communally or individually owned forests 		
	Method	<ul style="list-style-type: none"> Implementation of technical training Selection of planting sites and type of seeds by villagers Planting of trees and management afterwards (protection of individual trees and groups of trees) 		
	Results/Costs	<ul style="list-style-type: none"> Cost of technical training for 214 people from all 12 villages: 900,000 cfa Trees were only planted in 9 villages where mini nurseries were established. Costs were borne entirely by residents 		
	Human Input	<Study Team> Implementation of PRA, organization support and training through NGOs, local coordinators, etc.	<Mali> Follow-up technical guidance in operation and management by CP	<Residents> Provision of labor
Anticipated Effects		<ul style="list-style-type: none"> Trees are planted and cared for after planting by residents. Residents' awareness of forest conservation is heightened. 		
Activities Condition	Implementation Process	Afforested area (Total area (ha))	2001	2002
		Common forested land only	(5.56)	(1.85)
		Bougan	1.51	0.5
		Kokoun	1.00	0.38 [29]
		N'Dinzanawere	0.58	0.40 [72]
		Dlaba	0.56	- [93]
		Sinebougou	0.24	0.18 [24]
		Zambougou	0.61	0.14 [111]
		Zangourabougou2	0.73	0.14 [45]
		Dafimbougou	0.22	-
Sakoibougou	0.11	0.11		
		Individual afforested area could not be measured.	Figure in brackets is approx. area by number of individually owned trees. Rehabilitation of land planted in 2001 is not included.	

	<p>Management</p>	<ul style="list-style-type: none"> • <u>In 2001</u> the common forest area was large as a result of the mini nurseries and training support by the Study Team. • Considerable difference is seen in the growth of trees planted in 2001 depending on the type of protective fence. That is to say, the growth rate at the beginning of August when single trees were surrounded and protected by dead branches was less than 10%. (The root-taking rate directly after planting was 85% on average.) • The reason for this is that young goats and sheep pushed their heads through gaps in the protective fence made by strong winds, such as harmattan, in the dry season and ate the seedlings. • However, if the number of branches is increased to strengthen the protective fence to prevent this happening, it shuts out the sunlight and hinders the growth of the seedlings. • On the other hand, if a large planted area is surrounded and the trees are protected in groups, the growth rate is visually estimated at around two-thirds for eucalyptus. • Considering that planting was late in 2001 and not enough rain fell afterwards, it is assumed that if the trees had been planted at the right time, the growth rate would have been better. • As regards protection of both single trees and groups of trees, better results are seen on individual forest land than on common forest land. • The accountability of afforestation management in the dry season on common forest land is hard to define, and in fact management is poor and so is the level of growth. The growth of trees on forest land far from a village is particularly poor. (The trees are short and thin.) • Trees were actively planted around meeting halls (mainly in Cinzana district) and along the main roads (mainly in Katiena district). • The area of communally owned forests <u>in 2002</u> decreased, but individually owned forests are expanding. • Several villages such as Dlaba are planning joint tree planting once every 2 years and a decline in afforested area does not necessarily mean a decline in the desire to plant trees. • The main cause is poor time management in the production of seedlings. • Disparity in performance has started to appear from village to village. This virtually parallels the degree of awareness of the importance of tree planting in the villages. In Cinzana district performance is relatively good. • After systematic planting of both individually and commonly owned trees in Dlaba village in 2001, they were well managed. • Rehabilitation planting of roadside trees was undertaken in Katiena district. • In Sakoibougou village tree planting activities declined in general due to the absence of the leaders who were working away from home.
	<p>Outstanding Issues</p>	<ul style="list-style-type: none"> • There is no chance of protecting single trees unless flat iron bars are used, though this is more expensive than using dead branches. • The management system and management rules are still not entirely satisfactory (particularly regarding rules concerning responsibility for irrigation in the dry season). Many villages also lack adequate management of common forest land with regard to clearing the undergrowth, etc. • Accountability for forest management in the dry season must be clearly defined in the case of common forest land.
<p>Beneficial Impact Seen</p>		<ul style="list-style-type: none"> • Commonly and individually owned forests were created with the participation of many residents. • This led to efforts to establish interterroir land use rules, including forest protection, first in Cinzana district and then in Katiena district. • Accompanying heightened awareness of forest conservation, villagers desired a greater variety of seeds.
<p>Evaluation</p>		<ul style="list-style-type: none"> • Labor for planting trees was provided more or less as planned, but activities have declined in some villages. • Acquisition of tree planting skills has reached a certain level, but management skills after planting are a problem. • Residents' awareness of forest conservation was heightened to a certain extent. • Overall, the project is feasible and is appropriate to be incorporated in the MP.
<p>Feedback to MP</p>		<ul style="list-style-type: none"> • Guidance should be provided by extension workers to promote protection of groups of trees rather than single trees

2.2.4 Protection and Management of Natural Resources

Table 2.2.4.1 Monitoring Summary [Establishment of Land Use Rules]

Item		Content					
Purpose		<ul style="list-style-type: none"> To improve and establish residents' awareness of land use in order to conserve natural resources 					
Background		<ul style="list-style-type: none"> Unless the land in the survey area is properly managed, the situation will continue to deteriorate with less grassland, fewer trees, etc. Many residents are aware of the worsening situation, but they do not have a clear grasp of what they need to do or how. Residents must understand the necessity of systematic land use and be encouraged to implement land use management themselves 					
Verification Items		<ul style="list-style-type: none"> Implementation of education for establishing land use management rules in each village Support for the establishment of (interterroir) land use agreements by several villages 					
Planning	Selection Requirements	<ul style="list-style-type: none"> None 					
	Residents' Intentions	<ul style="list-style-type: none"> Positive attitude to establishment and enforcement of land use rules in nearly all the villages in all 3 districts 					
Implementation Content	Standards	<ul style="list-style-type: none"> The land use rules cover penalties in the event of infringement. 					
	System	<ul style="list-style-type: none"> Presentation of draft regulations to each village by the Study Team Examination of the content of the draft regulations by each village Meetings and discussions with technical agencies on the administration side and related bureaus such as the commune Completion of authorization formalities through the administrative agency Publicization of the content of the agreement by radio and putting up of signs regarding observance of the rules Interterroir operation and management of the rules 					
Anticipated Effects		<ul style="list-style-type: none"> Increased awareness of land use management by residents Prevention of improper expropriation of resources and promotion of conservation of natural resources by the establishment of rules 					
Activities	Implementation Process	District	Village	Grazing Rules	Tree Planting Rules	Land Management Rules	Interterroir Agreement
		Kaitena	2 villages (Interterroir agreement among 12 villages including 10 neighboring villages)	Established	Not established	Not established Included in interterroir agreement	Not established Formalities in process
		Cinzana	5 villages (Interterroir agreement among 17 villages including 12 neighboring villages)	Established	Not established	Included in interterroir agreement	Established and effective
	Soignebougon	5 villages (Interterroir agreement pending among 21 villages including 16 neighboring villages)	Established	Not established	Not established Included in interterroir agreement	Not established Under discussion	
Explanation of Process		<ul style="list-style-type: none"> A workshop (W/S) was held in January 2002 to draft land use rules in Cinzana district, including persons from the administrative agency. However, some of the views expressed by the administration side (for example, 'grazing rules should be strictly observed right from the start', 'if you are going to charge a fee for entering membership pastures or land to collect firewood, you should pay some of the money to the administration', etc.) dampened the enthusiasm of residents and discussion among residents temporarily stalled after the workshop. Later, following discussion among residents over about 6 months, ① common land, the uses of which had been categorized during the workshop into land for collecting firewood, protected land, tree planting land, grassland, etc. was divided into forest (tree-growing) land and other land, according to how farmers would actually use the land, and ② if membership fees were to be collected, the amount proposed at the workshop was reduced, and registration at the administrative agency was completed in September 2002 and the rules officially came into effect. 					

Activities Condition	Explanation of Process	<ul style="list-style-type: none"> • The key to the successful establishment of land use rules in Cinzana district was the discussions that were held while considering the introduction of improved grass on how to preserve existing commonly used grassland that existed as the membership land of several villages outside the verification area. • Residents in Cinzana district decided to set up signs specifying zones, such as felling zone etc., based on the land use rules. • In this district, a certain organization put out the opinion that the draft agreement on grassland touched on the Malian custom that 'any citizen may use the land'. However, it was explained that the agreement does not prohibit all use of the land; it simply suggests that those involved in using the land should work together and use it with a specific discipline, and that the approach taken in the agreement is that the resources of the area should be managed and preserved by the local people. After discussions, the consent of the organization was obtained. The agreement of the Ségou Governor's Office to the ideas of the Study Team (basically, the ideas of the local residents) was also obtained. • Katiena district has been moving towards establishing land use rules since September 2002, but land is more plentiful than in Cinzana district, the deterioration of resources is not as acute and rules have not yet been established. Discussions and formalities for bringing rules into effect are under way, including 10 neighboring villages outside the verification area. • In Soignebouyou there was no consensus of opinion in the various areas and Dougoutigibougou village started to implement rules independently without obtaining the permission of the administration, causing trouble with neighboring villages. The administration intervened and Dougoutigibougou's rules were suspended, but at present discussions are under way with a view to bringing into effect rules for the whole district including 16 neighboring villages outside the verification district through official procedures.
Beneficial Impact Seen		<ul style="list-style-type: none"> • The agreement in Cinzana district has just come into effect and there has been no conspicuous physical effect. Community awareness is growing in the 17 villages through the discussion process, resulting in interterroir exchange of information and opportunities for cooperation in solving common problems. • The growing awareness of the community resulted in a decision to manage and operate the various contributions to costs under the rules using specific village cashboxes. • Rules will also be established to maintain and implement the agreement.
Evaluation		<ul style="list-style-type: none"> • In Cinzana district the leaders of Sinebouyou village played a key role in establishing an interterroir agreement including 17 neighboring villages. The leadership of residents, the meeting halls in the verification project and the advice of the local coordinators supporting them functioned effectively in coordinating the talks among many villages. • It was confirmed that promotion of the establishment of land use management rules, coupled with implementation of grassland management and management of trees, spread more quickly among residents than assumed at first by the Study Team according to the land use situation facing each village. • According to the results of the evaluation questionnaire conducted on residents, most residents know about the land use rules and feel that it is good to have rules for several villages, including the rules currently under examination. Most residents replied that their view of land use had changed, and thought that promotion of land use rules was effective in changing residents' views of land resources through implementation of various projects related to improvement of agriculture, stock raising, afforestation and living conditions. This project is appropriate to be incorporated in the M/P.
Feedback to M/P		<ul style="list-style-type: none"> • As residents' enthusiasm for drawing up a land use agreement varies according to different environmental, social and economic conditions, guidance should be provided by extension workers to promote introduction starting from districts (villages) where enthusiasm is high. • For the rules to work, the support of the administration is essential. It should be proposed to the administration that information on the progress of establishing rules be made available at an early stage when the moment is opportune for establishing rules in a district.

Table 2.2.4.2 Monitoring Summary [Soil Conservation]

Item		Content				
Purpose		<ul style="list-style-type: none"> To prevent soil erosion inside and outside the village and renew and improve the plant life on land where it has deteriorated 				
Background		<ul style="list-style-type: none"> Soil degradation (desertification) caused by excessive cultivation, overgrazing and depletion of forests is advancing against a background of population growth. Damage caused by soil erosion includes water erosion of fields and fallow land, wind erosion, reduced grassland vegetation and the collapse of slopes, as well as corrosion around some wadis. 				
Verification Items		<ul style="list-style-type: none"> Implementation of technical training in soil conservation in the villages Implementation of individual and joint soil conservation under the leadership of residents 				
Planning	Selection Requirements	<ul style="list-style-type: none"> Contribution of labor for cooperative work Self-procurement of local materials such as stones and brushwood Contribution to costs by residents if equipment is purchased 				
	Request Status	<ul style="list-style-type: none"> Requests for some form of soil conservation activities were received from all the villages 				
	Selection Decision	<ul style="list-style-type: none"> Implemented as requested 				
Implementation Content	Type/ Structure	<ul style="list-style-type: none"> Renewal and improvement of plant life: Contoured stone ridges, masonry for repairing rills and gullies, wadi flood bank protection In the fields: Brushwood fences, hedges (euphorbia, pourghere), andropogon vegetation belts 				
	Method	<ul style="list-style-type: none"> Cooperative work in the village includes wadi bank protection in Kokoun, marsh bank protection and restoration of bare land in Cinzana district, and 1300m of contoured stone ridges in Soigneboungou district Training was commissioned to DRCN 				
	Results (Costs)	<ul style="list-style-type: none"> Cost of seedlings to establish vegetation belt Cost of sandbags Other local materials were free. 	100,000 Fcfa (partly provided free by administrative agency)	750,000 Fcfa (250 per bag)		
	Human Input	<Study Team> Implementation of education, organization support and DRCN training through local coordinators, etc.	<Residents> Procurement of some materials and contribution of all labor			
Anticipated Effects		<ul style="list-style-type: none"> Improved productivity of the soil in the fields through independent expansion of soil conservation activities Soil recovery around the villages 				
Activities Condition	Results	Cumulative Project Scale	Masonry/ Sandbags m	Brushwood Fence m	Hedge m	Vegetation Belt m
		Bougan	-	10	-	-
		Kokoun	220	-	20	10
		N'Dinzanawere	-	-	-	15
		Dlaba	160	-	190	10
		Sineboungou	-	-	-	5
		Zambougou	120	15	-	60
		Zangourabougou2	-	30	5	25
		Dafimbougou	270	105	55	75
		Sakoibougou	580	-	80	80
		Siradoba	300	65	40	60
		Dougoutiguibougou	370	40	20	60
Fabougou	220	40	5	205		

	<p>Process</p>	<ul style="list-style-type: none"> • Joint trainings in soil conservation were held in each district in January 2002 with a total of 44 participants. • Materials and seeds were procured independently in the villages, with the exception of those that were difficult for villagers to obtain, and labor for cooperative work was provided entirely by villagers. • However, there were many UPAs that did not participate in the activities due to pressure of work. • Kokoun wadi bank protection was carried out by a combination of soil ridges and vegetation belt formation. • Whereas the effects of stone and soil ridges were soon apparent, hedges and vegetation belts were not well established. The reason for this was the lack of care given to parts damaged by wind and water. Short-term effectiveness was conspicuously lacking. • Between 60 and 70% of euphorbe and pourghere hedges took root (2001). Less than 10% of andropogon took root in 2001 as the planting season was missed, but in 2002 it was planted in the middle of the rainy season and root-taking improved up to 80%. • As soil conservation is an important project with a direct effect on prevention of desertification, monitoring and guidance were provided by DRCN CPs at the rate of once a month, but there were few cases of cooperative work being managed by residents.
	<p>Outstanding Issues</p>	<ul style="list-style-type: none"> • Soil conservation in individual fields tends to be continued, but as for soil conservation by cooperative work, some UPAs did not provide labor and sustainable maintenance and management was not always adequate. • Soil conservation must be undertaken in the entire river basin and ways of rousing enthusiasm to implement measures through cooperation must be considered.
<p>Beneficial Impact Seen</p>		<ul style="list-style-type: none"> • Soil conservation measures planned by residents were more or less all implemented. • The part of the project involving stone ridges was notably successful in that vegetation downstream was restored in 2 or 3 months, but there was a conspicuous lack of other effects in the short term. However, prevention of surface runoff was successful to a certain extent. • Awareness of the importance of soil conservation spread among residents to a certain extent and led to moves to establish interterroir land use rules in some districts.
<p>Evaluation</p>		<ul style="list-style-type: none"> • Soil conservation activities in individual fields are relatively easy to establish, but soil conservation by cooperative work is more difficult. • It will take time and continued management until results are seen, but awareness of the importance of implementing projects is increasing among residents, albeit slowly. • Overall, judging from the fact that this is an important project and its feasibility could be proved to a certain extent, it should be incorporated in the M/P.
<p>Feedback to MP</p>		<ul style="list-style-type: none"> • A grant of 70% of the cost of carts for transporting materials and equipment should be added to enhance residents' motivation to implement cooperative soil conservation work.

2.2.5 Reduction of Women's Burden

Table 2.2.5.1 Monitoring Summary [Construction of Mills and Training to Improve Living Conditions]

Item		Content			
Purpose		<ul style="list-style-type: none"> To reduce the time women spend on milling and increase their income To improve the quality of life, especially for women 			
Background		<ul style="list-style-type: none"> Women in the verification area have to spend about 4 hours every day making flour. To improve the status of women and enable them to participate in development, instruction must be provided in ways of reducing housework and improving their living conditions. 			
Verification Items		<ul style="list-style-type: none"> Construction of mills and establishment of management by residents Effective use by women of the time created by construction and operation of the mill and implementation of training to improve living conditions 			
Planning	Selection Requirements	<ul style="list-style-type: none"> No effective mill facilities exist Establishment of management regulations and a management system by residents Provision of free labor and bricks, and provision of land Agreement to contribution of 240,000 Fcfa (equivalent to 20% of the cost of purchasing the milling machine) 			
	Request Status	<ul style="list-style-type: none"> Requests for construction were received from 9 out of 12 villages (In the PRA survey, it occupied a high position among requests from women) 			
	Selection Decision	<ul style="list-style-type: none"> Based on requests for construction and the size of the village population, mills were constructed in 7 villages. Katiena district : Bougan, Kokoun; Cinzana district : N'Dinzanawere, Zambougou, Sinebougou; Soignebougou district : Dafimbougou, Dougoutiguibougou 			
Implementation Content	Standards/Structure	<ul style="list-style-type: none"> Building: One-story building made of banco bricks and measuring 5×3m 8hp or 10hp milling machine 			
	Method/System	<ul style="list-style-type: none"> Re-contracted to local consultant (procurement of materials, construction guidance, execution of work that is too difficult for residents, training and guidance in milling operations) Construction of building by residents (10 persons/day) 			
	Results (Costs)	Year	Village	Cost (Fcfa)	Remarks
		2001	Mill (7)	25,077,000	Construction of building, installation of milling equipment, training and guidance
		2002	Mill (7) Training (7)	13,838,000 4,791,000	Training, follow-up, monitoring Training in improving living conditions for women
			43,706,000		
Human Input	Japanese specialists in living environment improvement 3 M/M Mali C/P				
Anticipated Effects		<ul style="list-style-type: none"> Reduction of burden on women through release from milling work Active participation in work that will improve their income such as vegetable growing Acquisition of knowledge relating to keeping fit, health and nutrition 			
Activities Condition	Implementation Process	<ul style="list-style-type: none"> 95% of UPAs use the mill The results for November 2002 show average milling of 60kg/day per village (the original plan was for 200-400kg) 			
Operation Plan	Income	<ul style="list-style-type: none"> Charge for use: 15 Fcfa/kg Prospective volume: 200-400kg/day (approx. 70% use) 			
	Expenditure	<ul style="list-style-type: none"> Fuel, milling machine repairs, labor costs (operation, management) 			
	Profit	<ul style="list-style-type: none"> Annual net profit: 400,000-800,000 Fcfa 			

Item	Content
Beneficial Impact Seen	<ul style="list-style-type: none"> • Judging from the fact that 95% of UPAs use the mill, 64% of UPAs grind almost all their cereals for consumption at the mill and 29% of UPAs grind half at the mill, the time women spend in grinding at home was greatly reduced. • According to the questionnaire conducted on residents, 48% of UPAs spend the time gained in housework and 27% in growing vegetables, thereby contributing to reducing excess labor and increasing income for women. • In some villages, over 100 people participated in the training to improve the living conditions of farming households, demonstrating the major importance of training related to nutrition, keeping fit and health for residents.
Problems	<ul style="list-style-type: none"> • Some people expressed the view that they wanted to use the mill but did not have enough money so did not. Unless implemented in conjunction with measures to improve the income of women, use of the mill will not grow for economic reasons.
Evaluation	<ul style="list-style-type: none"> ① Evaluation by residents <ul style="list-style-type: none"> • As this project has the effect of directly and immediately reducing excess labor for women, it occupies a high position in the participatory evaluation by residents. • In the PRA survey, it is judged to be a high priority project requiring urgent implementation. ② Evaluation by the Study Team <ol style="list-style-type: none"> 1. Effectiveness of the project <ul style="list-style-type: none"> • The project was highly desired by residents and was effective in reducing labor for women. 2. Concerning the selection standards <ul style="list-style-type: none"> • Labor and land were provided without problem (no charge was made). • A management system and management regulations were established and management is performed by residents. • Contributions are paid as planned. • Judging from the above, the selection standards are all met at present. 3. Training and operation guidance <ul style="list-style-type: none"> • Immediately after starting operation there were problems such as the motor breaking down and the cereal feeder not working, but they were solved by dispatching an engineer, changing the parts, etc. Follow-up is therefore judged to be necessary for about 2 years until the operator learns how to perform repairs. • Immediately after starting operation the books were not kept due to the low level of literacy of the people in charge of accounting, but with additional guidance bookkeeping skills were acquired. 4. Training to improve the living conditions of farming households <ul style="list-style-type: none"> • Although newly implemented starting from the verification project in 2002, the interest of participants is extremely high and the training is judged to be very effective.
Feedback to MP	<ul style="list-style-type: none"> • As the machine will sometimes break down and other problems occur, follow-up should be provided by extension workers for about 2 years after construction. • In the verification project residents contributed an amount equivalent to 20% of the cost of the milling equipment. As considerable income is generated if operation proceeds as planned, a contribution of 200,000 Fcfa should be made for the building and 30% of the cost of the milling equipment. • It is very difficult for the mills to operate economically in villages with small populations. The standards in the M/P should be one mill for a minimum of 500 people and one for a number of villages when the populations are small. (If using the mill in another village, the maximum distance should be about 3km.) • Follow-up guidance for people in charge of accounting should be provided by extension workers. • In small villages use of the facilities by neighboring villagers should be promoted by the commune.

Table 2.2.5.2 Monitoring Summary [Promotion of Improved Ovens (Earth-made and iron-made)]

Item		Content	
Purpose		<ul style="list-style-type: none"> To promote improved ovens to ensure efficient use of forest resources and wood 	
Background		<ul style="list-style-type: none"> Simple traditional 3-stone ovens are commonly used in the villages. Traditional ovens are not heat-efficient and consume a lot of firewood. Heat-efficiency of earth-made and iron-made ovens is respectively 50% and 100% higher than traditional ovens. Earth-made ovens have already been introduced in some villages, but have not spread to all villages due to lack of guidance. There are no villages at all in the verification area that produce and sell iron ovens and very few in the survey area. When iron ovens are produced and sold in the village, many women want to use them. Traditional blacksmiths (who make and repair farm machines) are found here and there in the villages and the latent ability to make ovens exists. 	
Verification Items		<ul style="list-style-type: none"> <Earth-made ovens> Training in manufacture and use for residents <Iron ovens> Technical training in manufacture for blacksmiths Increased manufacture and use of improved ovens in the villages 	
Planning	Selection Requirements	<ul style="list-style-type: none"> For earth-made ovens, request from the village. For iron ovens, the presence of an existing blacksmith in the village and agreement to contribute to costs (20% of the cost of materials and equipment) 	
	Request Status	<ul style="list-style-type: none"> Requests were received from all 12 villages for earth-made ovens Requests were received from 9 out of 12 villages for iron ovens 	
	Selection Decision	<ul style="list-style-type: none"> All 12 villages were selected for earth-made ovens As agreement to share the costs could not be obtained in 2 of the 9 villages, 7 villages were selected for iron ovens 	
Implementation Content	Standards	<ul style="list-style-type: none"> <Earth-made ovens> <ul style="list-style-type: none"> Provision of manufacturing labor by residents Preparation of materials, banco (sun-dried bricks, stones) by residents <Iron ovens> <ul style="list-style-type: none"> Manufacture and sale by blacksmiths is supervised by the CGTV 	
	Method	<ul style="list-style-type: none"> Training and introduction of equipment for making iron ovens are commissioned to NGOs 	
	Results (Costs)	<ul style="list-style-type: none"> <Earth-made ovens> <ul style="list-style-type: none"> 234 people (61 men, 173 women) participated in training. Cost: 4,078,000 Fcfa <Iron ovens> <ul style="list-style-type: none"> 8 blacksmiths participated in training. Cost: 3,108,000 Fcfa Cost of manufacturing equipment (8 sets): 1,497,000 Fcfa 	
	Human Input	<Study Team> Education, organization support and training commissioned to NGOs through local coordinators	<Residents> Provision of labor
Anticipated Effects		<ul style="list-style-type: none"> Manufacture of improved ovens by residents and widespread use in villages Forest conservation and reduced wood-collecting labor for women 	
Activities Condition	Manufacturing Results	<ul style="list-style-type: none"> <Earth-made ovens> <ul style="list-style-type: none"> 2001: 210 2002: 392 	<ul style="list-style-type: none"> <Iron ovens> <ul style="list-style-type: none"> 2001: 137 2002: 230
	Process	<ul style="list-style-type: none"> <u>In the case of earth-made ovens</u>, manufacture is simple and materials are easily obtained, so they soon spread and became widely used among UPAs who had received training. Villagers who had received training did not often pass their knowledge on to other villagers. Women need men's understanding and cooperation to participate in training. The degree of cooperation among men varies, resulting in large differences in the number of women participating in training in each village. <u>In the case of iron ovens</u>, manufacturing techniques are mastered entirely by blacksmiths. Iron ovens continue to be sold out in all the villages and supply does not meet demand. Cinzana district achieved the best results for manufacture of both earth and iron ovens (65% of total). 	

	State of Use	<ul style="list-style-type: none"> • As iron ovens are portable, they are used in combination with earth-made ovens by most UPAs
Beneficial Impact Seen	<ul style="list-style-type: none"> • Residents have virtually mastered how to manufacture and use the ovens. • From the viewpoint of contributing to management of resources, the ovens are highly appraised by administrative agencies (the mayor of Cinzana attended the ceremony at the end of the training) and have further encouraged management of resources by both officials and people in the district. • In the case of iron ovens, some blacksmiths incorporated their own ideas, such as making ovens with an automatic fan function using a motor. 	
Evaluation	<ul style="list-style-type: none"> • Residents' awareness of forest conservation was heightened to a certain extent. • Overall, the project is highly feasible and is appropriate to be incorporated in the M/P. 	
Feedback to M/P	<ul style="list-style-type: none"> • In the case of earth-made ovens, guidance should be provided by extension workers to ensure that there are opportunities for people who have received training to pass on their skills to other people in the village. 	

Table 2.2.5.3 Monitoring Summary [Promotion of Manufacture of Handicrafts]

Item		Content					
Purpose		<ul style="list-style-type: none"> To manufacture handicrafts as a means of diversifying income in order to combat poverty and reduce the burden on forest resources 					
Background		<ul style="list-style-type: none"> Villagers have few opportunities to obtain cash income. Opportunities to obtain cash income are mainly limited to agricultural produce, and virtually the only means to obtain cash in the vicinity of the village is to sell firewood or charcoal. Women in particular are kept extremely busy growing food, doing housework and collecting firewood and have little free time. With virtually no opportunities to obtain cash, it is important to diversify women's source of income. 					
Verification Items		<ul style="list-style-type: none"> Implementation of training in manufacturing techniques and sales management Manufacture and sale by residents 					
Planning	Selection Requirements	<ul style="list-style-type: none"> Choice of manufacturing options by residents Establishment of management regulations and a management system Most of the materials needed for manufacture come from existing natural resources and can be procured by residents 					
	Request Status	<ul style="list-style-type: none"> Requests were received from all 12 villages 					
	Selection Decision	<ul style="list-style-type: none"> Implemented in 12 villages 					
Implementation Content	Types of Handicrafts	<ul style="list-style-type: none"> The most popular handicrafts chosen by the villagers were, in order: ① soap and dyed goods: 12, ② cosmetic cream: 11, ③ macaroni: 7, ④ Bisap (juice): 4 					
	System	<ul style="list-style-type: none"> Commissioned to local NGOs Activities implemented at will by each group 					
	Results (Costs)	<ul style="list-style-type: none"> Commission costs, including materials: 6,572,000 Fcfa 					
	Human Input	<Study Team> Education, systematization support and implementation of training commissioned to NGO through local coordinators			<Residents> Partial procurement of materials and all labor for manufacture		
Anticipated Effect		<ul style="list-style-type: none"> Establishment of handicraft manufacturing skills and sales management among women and increased income 					
Activities Condition	Implementation Process	Sustained activity	Soap	Cosmetic cream	Dyed cloth	Macaroni	Bisap
		Bougan	○	○	△	×	△
		Kokoun	△	△	△	-	×
		N'Dinzanawere	○	△	△	-	△
		Dlaba	◎	△	○	○	○
		Sinebougou	◎	△	○	△	○
		Zambougou	◎	△	○	△	◎
		Zangourabougou2	◎	△	○	△	△
		Dafimbougou	◎	-	-	△	-
		Sakoibougou	◎	-	-	△	-
		Siradoba	◎	-	-	-	-
	Dougoutiguibougou	◎	-	-	-	○	
Fabougou	◎	-	-	-	△		
Total manufactured quantity until Dec. 2002		7620	104kg	166 sheets	1.4t	1200L	
Operation		<ul style="list-style-type: none"> Preparation and distribution of manuals (in Bambara with illustrations) at the end of the training was effective in establishing manufacturing skills in nearly all the villages. With a few exceptions, handicrafts continue to be actively made, but manufacture of soap, the most popular item, had to be temporarily suspended due to a lack of karite butter, the raw material. Certain difficulties arose in the sale of dyed goods. The selling price is high and unless the villagers go to Ségou where such items are used, they are not easy to sell. 					

Outstanding Issues	<ul style="list-style-type: none"> • Accurate records of manufacturing activities in each village are not kept and distribution of profits is not clearly recorded. There is a lack of calculating and bookkeeping skills.
Beneficial Impact Seen	<ul style="list-style-type: none"> • Manufacturing skills have been established and opportunities to obtain cash income increased. This has been highly appraised by women. • Villages, and particularly the women, have been energized through this project and activities (namely, activities for improving living conditions) have been implemented by Women's Sections that previously existed only in name.
Evaluation	<ul style="list-style-type: none"> • Establishment of manufacturing skills is relatively easy. • This project contributes greatly to energizing the whole village. • Overall, the project is highly feasible and is appropriate to be incorporated in the M/P.
Feedback to MP	<ul style="list-style-type: none"> • Periodic guidance should be provided by extension workers to improve accounting skills and draw up financial management rules.

2.2.6 Transition of Farmer's Agricultural Operation

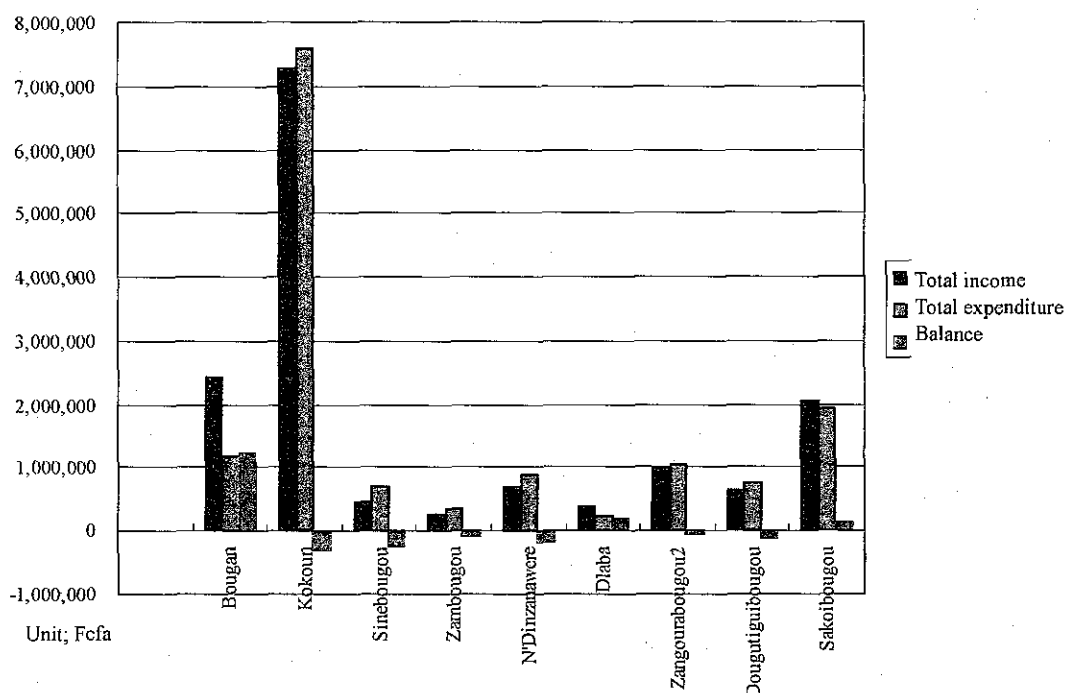
For the verification study, the income of each farmer in the twelve villages was checked (careful examination of UPAs) to evaluate the verification projects from the standpoint of agricultural operation of farmers. The study of the income trend began from July 2001 and data on cash income were checked for more than a year. During this study, three UPAs among the twelve carefully examined ones dropped from the study since the data could not be recorded due to the emigration of literary men.

As a result, the annual cash income per one UPA was a maximum of 7.26 million Fcfa and the minimum of 270,000 Fcfa, with an average of 1.68 million Fcfa, a surprisingly high income in this area.

The UPAs to be carefully examined were selected by the villagers under the provision that there were literary men. In the local society with low literacy rate, the condition given by the study team indicated the UPAs located at the upper level of village class, that means, these UPAs were confirmed to belong to the upper level class, also from the economical standpoint. The UPAs with more than 1 million Fcfa of cash income are the business entities that also operate wholesale or retail business in the village such as the kiosk or brokerage.

Looking at the cash income and expenditure, three UPAs among nine had profits. (Refer to Figure 2.2.6.1) The deficits are assumed to indicate the amount of stock in commercial activity, self-consumption of products, or purchasing of capital goods.

Figure 2.2.6.1 Cash income and expenditure in the carefully examined UPAs



By looking at the contents of cash income and expenditure in a year in the data of UPA in Diaba Village (Table 2.2.6.1), which is considered closest to the general UPA of farmers in the verification districts, the following matters can be pointed out.

- ① 80% of income came from millet sales. The income from agricultural and stock raising including chicken, sheep, and Bambara beans accounts for approximately 90% of the total income.
- ② The income item exceeding 10,000 Fcfa constitutes a valuable income source.

"Introduction of improved seeds and fertilizers", "introduction of improved breed of chicken", "sheep fattening", and "vegetable cultivation", which were treated as the verification projects, could have the annual income of more than 10,000 Fcfa. These projects are considered extremely valuable from the standpoint of cash income and expenditure of farmers.

Table 2.2.6.1 Cash income and expenditure of carefully examined UPAs in Dlaba Village

Unit: Fcfa

Income and expenditure items	Jul-01	Aug-01	Sep-01	Oct-01	Nov-01	Dec-01	Jan-02	Feb-02	Mar-02	Apr-02	May-02	Jun-02	Total
Income													
Millet	11,150	2,200	685	83,000		84,750	20,500	4,000	26,750	45,800	18,500	18,900	316,235
Chicken sales		2,800	1,600	5,650	2,850				5,000			5,500	17,900
Contract of farming	8,500												14,000
Wage	3,000			750									3,750
Baobab powder			310										310
Sheep sales						12,500							12,500
Bambara beans											10,750		10,750
Monetary offering for the deceased										18,750			18,750
Total income	22,650	5,000	2,595	89,400	2,850	97,250	20,500	4,000	31,750	64,550	29,250	24,400	394,195
Rice (including millet and fonio)	2,100				3,000	30,000			550	275	1,750	4,420	40,345
Milk	400	75			100								2,325
Fruits (rouier, mango)	150	500											650
Meat	1,000	750	1,325	1,000	2,350	2,000			2,150	1,300	2,200		10,775
Dried fish	1,000	1,900			3,250	2,000		2,500			500	2,500	14,950
Chicken (including egg)	1,800	550			1,500				6,750				10,600
Sugar	600			250	1,625	950	1,475		850		800		6,550
Salt	100				100		50		100				350
Peanut butter							300				100		400
Vegetable (including potato and watermelon)			400	150			200						750
Cookie and candy							100						100
Nan					50	25		175	250		25		525
Shea butter		150											150
Spice		2,000		5,300			8,800	2,500	2,000	1,000	2,000		23,600
Tobacco	1,250	650	300	650	850								3,700
Soap (4)	1,025	1,800	500	550	825	825	875	350	125	275			6,800
Baobab powder			550	100					75				1,075
Gift and consolatory goods	300		450					100	150	1,500			2,150
Pharmaceutical products	200						475			1,500			2,175
Medical service	1,750								250				2,000
Cloth (including shoes)					1,850		4,975	13,850	4,825			4,420	29,920
Funeral expense										14,000			14,000
Gasoline	650	275	325	375	425			275					2,325
Food bag	750	250	1,500										2,500
Plow and sickle	2,500			175						1,750	1,000	2,500	7,925
Daba	2,700												2,700
Wage for labor					4,000								4,000
Bucket					75								75
Loan payment								1,750					1,750
Other (unknown goods)			200	65			150				25	750	1,190
Total expenditure	18,275	8,900	5,550	8,615	20,000	33,800	16,900	22,000	18,075	20,100	9,550	14,590	196,355
Balance	4,375	-3,900	-2,955	80,785	-17,150	63,450	3,600	-18,000	13,675	44,450	19,700	9,810	197,840

