Burkina Faso

Ministry of Water, Hydraulic Planning and Sanitation General Secretary

Regional Direction of Water, Hydraulic Planning and Sanitation of Central Plateau

PROJECT COMPLETION REPORT (SUMMARY)

ON

PROJECT FOR STRENGTHENING OF HYDRAULIC
INFRASTRUCTURE MANAGEMENT AND
HYGIENE IMPROVEMENT IN CENTRAL PLATEAU REGION
(PROGEA/PCL)

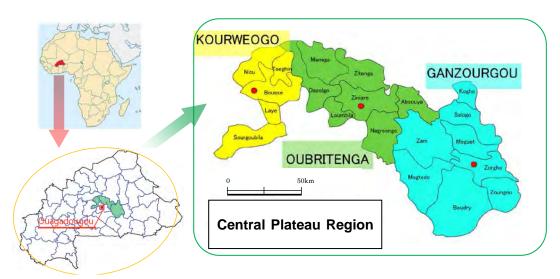
BURKINA FASO

May 2013

Japan International Cooperation Agency

Earth and Human Corporation Japan Techno Co.,Ltd.

Map of target area of project



Target communes list

Provinces	Communes	Types		
Oubritenga	Dapélogo	Pilot Commune		
	Absouya			
	Loumbila			
	Nagréongo	Targeted Communes		
	Ourgou-Manega	rargeted Communes		
	Ziniaré			
	Zitenga			
Kourwéogo	Toéghin	Pilot Commune		
	Boussé			
	Laye	Additional		
	Niou	Communes		
	Sourgoubila			
Ganzourgou	Zorgho	Pilot Commune		
	Boudry			
	Mogtédo			
	Zam	Additional		
	Zoungou	Communes		
	Méguet	Communes		
	Kogho			
	Salogo			

Exchange rate

1 EUR = 120.15 JPY 1 USD = 94.19 JPY 1 EUR = 655.957 FCFA 1 FCFA = 0.183 JPY

(Foreign exchange rate of JICA in April 2013)

Project for Strengthening of Hydraulic Infrastructure Management and Hygiene Improvement in Central Plateau Region, Burkina Faso (PROGEA/PCL) PROJECT COMPLETION REPORT (SUMMARY)

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CHAPTER 1 INTRODUCTION

1-1 Outline of the Project

1-1-1 Purpose of the Project

The Project was implemented to increase the number of users of safe water and improved hygienic and healthy environment in the Central Plateau Region by developing a maintenance and management system for water supply facilities and reinforcing its functions as well as through sanitation and hygiene promotion. The overall goal, purpose and outputs of the Project are as shown in the following table.

Overall Goal Hygienic and healthy environment in the Central Plateau Region will be improved Maintenance and management status for water supply facilities and hygienic behavior of rural residents in target communes (all communes in Oubritenga Province, pilot Project purpose communes in Ganzourgou Province and Kourwéogo Province, and additional target communes in Ganzourgou Province and Kourwéogo Province) will be improved. Organizational structure will be developed in line with the maintenance and Output 1 management system "Reform "in the target communes. Capacities of operation, maintenance and management of water supply facilities in Output 2 rural communities will be strengthened. In association with the operation, maintenance and management of water supply Outputs Output 3 facilities, the spare parts supply and repair system will be improved. Hygienic behavior of rural residents will be improved in the 3 pilot communes of the Output 4 Central Plateau Region. DPAH of each province will be able to conduct monitoring and evaluation of water Output 5 supply and hygienic and healthy conditions and provides support to communes.

Table 1-1 Purpose and Outputs of the Project

1-1-2 Target Area of the Project

The target area of the Project includes all 20 communes in the Central Plateau Region, located in the center of Burkina Faso. These communes are classified into pilot communes, target communes and additional communes, according to the activities. Soon after the project started, a total of 9 communes – 3 pilot communes (1 commune selected from each province) and 6 target communes in Oubritenga Province – were in the scope. Later, following the revision of the PDM after the interim review, the area for the project activities was expanded to all the 20 communes in the Central Plateau Region.

1-1-3 Project Implementation Period

The implementation period of the Project was about 45 months from August 2009 to May 2013.

1-1-4 PDM and PO

With regard to PDM and PO, the project activities were carried out according to the PDM / PO Ver.2 after two revisions.

CHAPTER 2 PROJECT IMPLEMENTATION METHOD

2-1 Basic concept of project

The Project aimed at establishing a maintenance and management system for water supply facilities and improving hygienic and healthy environment in the Central Plateau Region, and was implemented according to the policy for ensuring self-sustaining development after the completion of the Project through encouragement of the concerned parties of Burkina Faso so that the parties participate in independent activities and conduct technical transfer to them.

<u>Basic concept 1</u>: Aim to establish a sustainable maintenance and management system for water supply facilities by developing such system; based on the three pillars of communes, Association of Water Users (AUE) and private pump repairman.

<u>Basic concept 2</u>: Aim to deploy villager-to-villager educational activities to improve awareness and behavior concerning water and sanitation and hygiene through development of administrative trainers, and teacher and village animators, as part of sanitation and hygiene promotion through effective utilization of local human resources.

<u>Basic concept 3</u>: Establish a monitoring system for sustainable support for maintenance and management of drinking water supply facilities and sanitation and hygiene promotion.

2-2 Contents of project activities

Contents of project activities of each year were as shown below.

1st year (July 2009 - May 2010)

Preparation for activities, development of the basis for the activities, information gathering in the fields of water supply and hygiene, and current situation surveys (baseline survey, survey of pump spare parts and repairmen) were conducted. In January 2010, Joint Coordinating Committee (JCC) was held and the concerned parties agreed on the directions and activities of the Project.

In February 2010, a regional workshop was held for the concerned parties in the Central Plateau Regions, where information of the Reform in water facility maintenance and management and explanation of project activities were provided. Moreover, employees of the regional office (DRAHRH, current DRAH) received training about water facility maintenance and management, and preparation for the selection of artisan pump repairmen was also done.

Full-scale activities in pilot communes (1 commune selected from each of the provinces of Oubritenga, Kourwéogo and Ganzourgou) started in March 2010. Such activities as commune workshop concerning the Reform in maintenance and management of water supply facilities, training of relevant parties of communes, establishment of AUE in village, and training of administrative actors and village animators of pilot communes who are charge of the PHA were carried out.

2^{nd} year (July 2010 – May 2011)

Following the first year, we provided support for the maintenance and management activities for water supply facilities and for sanitation and hygiene promotion activities. The scope of activities were expanded to all communes in Oubritenga Province, and water facility maintenance and management activities such as workshop concerning the Reform and support for the establishment of AUE in target villages were carried out based on the activities in the pilot communes.

3rd year (August 2011 – July 2012)

We continued the 2nd year's full-scale activities and promoted the conclusion of maintenance agreements/contracts among parties concerned in maintenance and management of drinking water supply facilities (communes, AUEs and artisan pump repairmen). Based on the result of past activities, we also developed a model for the maintenance and management of water supply facilities and a proposal of an approach to the improvement of hygienic behaviors. Moreover, after the scope was expanded to all communes of the Central Plateau Region as recommended as a result of the interim review of September 2011, we carried out activities for additional communes such as the Reform workshop and activities for the establishment of AUE.

4th year (August 2012 – May 2013)

We continued activities to strengthen the capacity of communes and AUEs in additional communes, and we mainly carried out activities to ensure sustainability and ownership. Also we prepared recommendations for the purpose of handover to the C/P. We also conducted internal implementation and final evaluation of the Project.

2-3 Implementation Structure

2-3-1 Japan team

Based on the basic concept and operation procedures, the Project was carried out through the dispatch of a total of 12 Japanese experts (team leader / strengthening of organization capacities / water supply in rural area, management and maintenance of water supply facility, sanitation and hygiene education, administrator, etc.).

2-3-2 Counterpart organization

The executing agency of the Project was the Ministry of Agriculture and Hydraulic (MAH) and its subordinate agencies were assigned as counterparts. In the field of sanitation and hygienic, in addition to the MAH, the Ministry of Health and the Ministry of National Education and Literacy also carried out the activities as related organizations.

2-3-3 Joint coordinating committee (JCC)

Based on the ministerial ordinance concerning the establishment of PROGEA/PCL Joint Coordinating Committee (Arrêté no2009-046/MAHRH/SG/DGRE) of December 31, 2009, Joint Coordinating Committee (JCC) was established. JCC meetings were held twice a year for report and approval of the project activity status, consideration and approval of an annual activity plan, consideration of solutions to issues related to the project implementation, etc.

1 st JCC (Jan 15, 2010)	Presentation of overall activities of PROGEA/ PCL Consideration and approval of Progress Report 1 (PR1) Consideration and approval of 2010 annual activity and budget plan
2 nd JCC (Sep 8, 2010)	Activity report of the 1 st half of 2010 (PR2) Discussion on the activity plan of the 1 st half of 2010 Revision of PDM indicators of the Project
3 rd JCC (Jan 26, 2011)	Activity report of the 2 nd half of 2010 (PR3) Consideration and approval of 2011 annual activity and budget plan (2011 Plan of Operation) Sharing of other information (such as report of C/P training in Japan)
4 th JCC (Sep 28, 2011)	Interim report (ItR) and the activity report of the 1 st half of 2011 and approval Report of the result of the interim review and approval of the survey report
5 th JCC (Feb 2, 2012)	Approval of the activity report of 2 nd half of 2011 and (PR4) Summary of project activities in 2011 and report and approval of project budget execution status Consideration and approval of 2012 annual activity and budget plan
6 th JCC (Feb 13, 2013)	Report of 2012 annual activity and budget execution status and approval of the annual report Report of the final evaluation of the Project and approval of the joint final evaluation report Exchange of opinions about the prospects after the completion of the Project.

2-4 Actual inputs

2-4-1 Dispatch of japanese experts

Table 2-1 Dispatch of japanese experts

Local Work

Responsibilities	M/M						
responsibilities	1 st year	2 nd year	3 rd year	4 th year	Total		
Team leader / strengthening of organization capacities / water supply in rural area	7.50	7.53	8.80	6.00	29.83		
Sanitation and hygiene education 1	3.10	5.60	2.30	3.50	14.50		
Sanitation and hygiene education 2	2.80	-	2.80	=	5.60		
Management and maintenance of water supply 1	2.00	2.00	4.00	2.30	10.30		
Management and maintenance of water supply 2	1.00	1.00	-	3.20	5.20		
Strengthening of organization capacities 3	-	-	4.00	-	4.00		
Administrator / strengthening of organization capacities 2	2.00	2.00*1	1.00	3.00	8.00		
Administrator / training supervision	-	-	-	2.00*2	2.00		
Total	16.40	18.13	22.90	20.00	77.43		

Note: Cost for *1 and *2 covered by the consultants

Work in Japan

Responsibilities	M/M						
Responsibilities	1 st year	2 nd year	3 rd year	4 th year	Total		
Team leader / strengthening of organization capacities 1 / water supply in rural area	0.30	0.97	1	ı	1.27		
Management and maintenance of drinking water supply 1	-	1.00	1.00	-	2.00		
Total	0.30	1.97	1.00	•	3.27		

2-4-2 Reception of trainees

As shown below, three training sessions were held in Japan during the project period.

Table 2-2 List of training in Japan

Reception period	Area of cooperation	Contents of training	Trainees
Jan 25 – Feb 14, 2009	Water supply and hygienic management	Water supply and hygienic administration in Japan Techniques for maintenance and management of drinking water supply facilities, hygienic dissemination method, etc.	Head of Technology and Facility Development Office – National Office for Sanitation, Waster Water and Wastes Director General of the Water Resource Department of the Regional Office of the Central Plateau
Jan 29 – Feb 6, 2010	"High officials" for water supply and hygienic management	Understanding of water supply and hygienic administration in Japan Understanding of activities in the field of agriculture, etc.	Vice Minister of Agriculture, Hydraulics and Fishing Resources Head of National Office for Crop Production – Ministry of Agriculture, Hydraulics and Fishing Resources
Jan 9 – 22, 2011	Water supply and hygienic management	Understanding of water supply and hygienic administration in Japan Techniques for maintenance and management of drinking water supply facilities and hygienic dissemination method, etc.	Heads of National Office for Water Resources and Drinking Water Supply Office Regional Director of Central Plateau Head of Research and Planning Office Head for Measures against Water Pollution and Hazardous Liquid - National Office for Sanitation, Waste Water and Wastes Provincial Director of Kourwéogo, Ministry of Agriculture and Hydraulic

2-4-3 Provision of equipment

11 motorbikes, 8 desktop PCs with uninterruptible power supply, 1 laptop PC, 8 printers, 1 copying machine and 1 projector were provided.

2-4-4 Local sub-contracting

In the Project, the maintenance and management system for water facilities was established on the basis of the Reform application and capacities of communes and residents were strengthened in all 20 communes and 558 villages in the Central Plateau Region. Counterparts – employees of the bureau of the Central Plateau Region of MAH and ZAT/UAT – were involved in these activities to ensure sustainability of the project outputs. However, for the purpose of addressing issues related to shortage of manpower and capacities of staffs in the field of water, local consultants with abundant knowledge and experience were hired though local sub-contracting for training of the actors concerned in the Reform, follow-up activities, etc.

2-4-5 Local operating costs

The local operating costs incurred during the project implementation period are as below.

Table 2-3 Actual operating cost for each component (FCFA)

	2009				20	2011 2012			20	13	Tot	al
	JICA	Portion covered by Burkina Faso	JICA	Portion covered by Burkina Faso	JICA	Portion covered by Burkina Faso						
Establishment of a maintenance and management system for water supply facilities in the target communes	18 307 245	0	50 281 320	0	56 207 481	0	115 261 905	0	42 113 060	0	282 171 011	0
Strengthening of the operation, maintenance and management of water facilities in rural areas	0	0	66 649 600	0	105 279 200	0	256 898 766	0	55 993 220	0	484 820 786	0
Improvement of the spare parts supply and repair system concerning the operation, maintenance and management of water supply facilities	0	0	5 192 900	0	8 927 830	0	18 218 730	0	3 676 290	0	36 015 750	0
Improvement of hygienic behaviors of rural residents	840 000	0	29 896 190	0	30 268 970	0	57 897 330	0	7 458 740	0	126 361 230	0
Monitoring and evaluation of the water supply and hygienic conditions by a local administrative organ, and strengthening of support to communes	0	0	80 101 430	0	6 740 000	0	8 289 000	0	0	0	95 130 430	0
Cost for project operation	17 254 737	0	59 719 373	26 318 609	37 960 115	18 264 000	60 514 070	24 646 000	34 491 655	52 729 000	209 939 950	121 957 609
Total	36 401 982	0	291 840 813	26 318 609	245 383 596	18 264 000	517 079 801	24 646 000	143 732 965	52 729 000	1 234 439 157	121 957 609

CHAPTER 3 ESTABLISHMENT OF THE HYDRAULIC INFRASTRUCTURE MANAGEMENT SYSTEM

3-1 Selection of pilot communes

To identify the water supply and hygiene conditions in the target area, a baseline survey was conducted in all 20 communes of the Central Plateau Region from December 19, 2009 to January 17, 2010. (Interviews were conducted in 104 villages and 365 CPEs.)

Based on the data collected from the baseline survey etc., the following communes were selected as pilot communes.

✓ Oubritenga Province: Dapélogo

Ganzourgou Province: Zorgho

✓ Kourwéogo Province: Toéghin

3-2 Regional workshop on the Reform of hydraulic infrastructure maintenance and management

For the purpose of providing information concerning the maintenance and management system of water supply facilities based on the Reform and presenting the project activity plan as a kickoff to concerned actors including regional organization of the Central Plateau Region, related donors and NGOs Regional workshop was held on February 10, 2010.

3-3 Commune workshop to facilitate understanding of the Reform

As the first step towards the Reform application in each commune, commune workshop was held to provide concerned parties of each commune with such information as the purpose, principles and outline of the Reform as well as the implementation method and to facilitate understanding of the roles and responsibilities of concerned parties of communes for the Reform application.

3-4 Training on the Reform system of hydraulic infrastructure for communal actors

Three sessions of the training about the Reform were provided to communal actors (Commune Mayor, Commune Councilors, Department Head, etc.). Through these training sessions and the maintenance and management activities for hydraulic infrastructure (such as conclusion of an convention of hydraulic infrastructure management between commune and AUE, conclusion and implementation of a contract of follow-up and monitoring of hydraulic infrastructure with hand pump repairman, commune budget appropriation and execution for maintenance and management of hydraulic infrastructure based on license fee from AUE), we aimed for the establishment of the maintenance and management system for hydraulic infrastructure and the improvement of implementing capacities of each commune based on the Reform.

Table 3-1 Outline of the Reform training of concerned parties of communes

	Contents of training
1 st training	Current system and issues of maintenance and management of hydraulic infrastructure
session	Explanation of the Reform
	How to calculate and determine the water fee for each commune
	Agreements and contracts between communes and AUE and maintenanciers
2 nd training	Purpose and outline of the Reform
session	Commune budgeting for the maintenance and management of hydraulic infrastructure Contract for
	the maintenance and management of drinking water supply facilities between commune and AUE
	Approval of pump repairmen
	Selection of maintenanciers through bidding competition
	Contract for maintenance patrol of water supply facilities between commune and maintenanciers
3 rd training	Review of the maintenance and management system based on the Reform
session	Agreement for maintenance and management of hydraulic infrastructure between commune and AUE
	Contract for maintenance patrol of hydraulic infrastructure between commune and maintenanciers
	Implementation and follow-up of activities base on the contracts and agreements concluded with
	various actors
	Development of an activity plan of each commune

^{*} Due to political instability of Burkina Faso in the spring of 2011, the 2nd and 3rd sessions of target commune training were conducted together.

3-5 Support for the Reform application in the hydraulic infrastructure maintenance and management in each commune

After the training of communal actors, the project provided support to each commune for the Reform application in cooperation with DRAH/DPAH. The major support activities are as described below.

- ✓ Setting of the minimum water fee in the commune and levy from AUE
- ✓ Conclusion of an convention for maintenance and management with AUE
- ✓ Development of an annual commune budget for the implementation of the contract for follow-up and monitoring by maintenanciers
- ✓ Promotion of collection of license fee from AUE
- ✓ Conclusion of a contract for follow-up and monitoring by maintenanciers
- ✓ Implementation of follow-up and monitoring and payment to maintenanciers for the services provided
- ✓ Follow-up of maintenance and management activities by AUE and maintenanciers

3-6 Elaboration of hydraulic infrastructure maintenance and management based on the Reform

The Project established a maintenance and management system for water supply facilities in the Central Plateau Region based on the policy of the Reform. Although the implementation method to apply for the Reform application had been documented by the Burkina Faso side, the project also combined new knowledge and improvements of the method acquired through the activities in the document. Similarly, the project developed training manuals and adopted the contents into a water supply facilities maintenance and management manual, too.

The manual was revised during the manual revision workshop from April 2 and 5, 2013, and completed as PROGEA version manual.

Table 3-2 Implementation status of the Reform of hydraulic infrastructure maintenance and management by each commune

			Activities								
Types	Province	Commune	Setting of water fee and	Conclusion of an	Commune budgeting	Promotion of o	collection of lev (FCFA)	y from AUE	Conclusion of a contract for follow-up and monitoring of PMH by maintenancier	Implementation of follow-up and	
Турез	1 10111100	Communic	license fee in the commune	e fee in management of	concerning PMH maintenance	2011	2012	2013		monitoring of PMH	
	OTG	Dapélogo	0	29/29	0	1 450 000	240 000	-	2/2	Dec 2011 Jun 2012	
Pilot communes	KWG	Toéghin	0	18/18	0	620 000	10 000	-	2/2	Dec 2011	
Communes	GNZ	Zorgho	0	33/33	0	630 000	610 000	-	3/3	Oct 2011 Oct 2012	
		Absouya	0	19/19	0	•	1 020 000	-	4/4	Sep 2012	
		Loumbila	0	30/31	0	470 000	-	-	1/1	Jul 2012	
Target	OTG	Nagréongo	0	19/20	0	-	690 000	-	2/2	Jun 2012 Nov 2012	
communes		Ourgou- Manéga	0	28/28	0	-	560 000	-	-	-	
		Zitenga	0	45/45	0	-	1 100 000		3/3	Sep 2012	
		Ziniaré	0	50/50	0	-	1 640 000		3/3	Nov 2012	
		Boussé	0	18/18	0	ı	-	-	•	-	
	KWG	Laye	0	10/10	0	-	-	-	-	-	
	KWG	Niou	0	21/21	0	-	-	-	-	-	
		Sourgoubila	0	19/19	0	-	-	-	-	-	
		Boudry	0	75/75	0	-	-		-	-	
Additional communes		Kogho	0	16/16	0	-	-	500 000	-	-	
		Méguet	0	26/26	0	-	-	805 000	-	-	
	GNZ	Mogtédo	0	29/29	0	-	-	1 650 000	-	-	
		Salogo	0	15/15	0	•	-	920 000	-	-	
		Zam	0	34/35	0	-	-	1 610 000	-	-	
		Zoungou	0	27/27		-	-	1 100 000	-	-	

^{*}OTG: Oubritenga, KWG: Kurweogo, GNZ: Ganzourgou

CHAPTER 4 CAPACITY REINFORCEMENT OF VILLAGE ORGANIZATION FOR THE HYDRAULIC INFRASTRUCTURE MAINTENANCE AND MANAGEMENT

4-1 Assistance for AUE establishment in villages

4-1-1 Production the materials to promote AUE establishment

- 1) The following manual and promotion tools were produced for assisting AUE establishment in villages;
- 2) AUE establishment manual for animators in villages
- 3) Promotion and sensitization tools (picture-card story)
- 4) Various forms for AUE establishment

4-1-2 Training to animators who assist AUE activities

Animators who assist AUE establishment and carry out follow-up activities after the AUE establishment in villages were selected from among animators of a local consultant, ANTEA, SOS-SAHEL and an international NGO who had working experience in the Reform application program (PAR) and animators who had conducted the baseline survey in 1st year and been involved in AUE establishment in pilot communes. The project organized the training of the assisting activities of AUE.

4-1-3 Establishment of AUE

The AUE establishment assistance in each village was provides step by step in the order of three pilot communes, six targeted communes in Oubritenga Province, and 11 additional communes.

- 1) 3 pilot communes: March to November 2010 (1st and 2nd years)
- 2) 6 targeted communes in Oubritenga Province: January to April 2011 (2nd year)
- 3) 11 additional communes: February to May 2012 (3rd years)

The AUE establishment activities in villages were conducted in the following steps;

- 4) Step 1: Villagers' meeting session 1 (Réunion d'Information et d'Organisation: RIO)
- 5) Step 2: Villagers' meeting session 2 (Réunion de Vérification et de Formation: RVF)
- 6) Step 3: Villagers' meeting session 3 (AUE general assembly) (Assemblée Générale Constitutive de l'AUE: AGC)
- 7) Step 4: Application for approval of AUE

A total of 558 AUEs were established in all of the 572 villages/sectors in all of the 20 communes in the Central Plateau Region by the Project completion. The table below shows a summary.

Table 4-1 AUE establishment in Central Plateau Region

Types	Province	Commune	# of Village/ Sector	# of Establis hed AUE	# of Approve d AUE	Ratio	Female of AUE pers (%)	Ratio	Female of AUE ce (%)
	Kourwéogo	Toéghin	18	18	18	51.0	49.0	63.0	37.0
Pilot	Oubritenga	Dapélogo	29	29	29	60.9	39.1	66.7	33.3
Commune	Ganzourgou	Zorgho	38	33	33	58.1	41.9	69.3	30.7
		Absouya	19	19	19	58.9	41.1	69.0	31.0
		Nagréongo	20	20	20	54.6	45.4	65.2	34.8
Targeted	Oubritongo	Ourgou-Manéga	28	28	28	58.4	41.6	63.3	36.7
Commune	Oubritenga	Loumbila	31	31	31	51.9	48.1	63.1	36.9
		Zitenga	45	45	45	56.7	43.3	66.3	33.7
		Ziniaré	55	50	50	47.6	52.9	57.2	42.8
	Kourwéogo	Boussé	21	18	18	50.1	49.9	48.8	51.2
		Laye	10	10	10	49.3	50.7	46.4	53.6
		Niou	21	21	21	50.1	49.9	55.6	44.4
		Sourgoubila	19	19	19	49.9	50.1	66.0	34.0
A 1 1:4: 1		Boudry	75	75	73	51.4	48.6	67.0	33.0
Additional Commune		Khogho	16	16	16	55.2	44.8	62.5	37.5
Commune		Méguet	26	26	26	49.2	50.8	56.9	43.1
	Ganzourgou	Mogtédo	29	29	29	50.1	49.9	59.3	40.7
		Salogo	15	15	15	57.6	42.4	61.1	38.9
		Zam	36	35	35	50.3	49.7	60.9	39.1
		Zoungou	27	27	27	47.6	52.4	63.4	36.6
	Total		572	558	556	52.7	47.3	62.7	37.3

4-1-4 Assistance for acquisition the approval of AUE

It is essential for AUE to acquire an official approval (Reconnaissance Official) fin order to carry out the activities based on a convention of management of PMH with a commune. Thus, we assisted AUEs to make the arrangements for the approval. The 558 AUEs established and 556 AUEs received the approval by the completion of the project.

4-2 Assistance for capacity reinforcement and training for AUE

4-2-1 Training of hydraulic infrastructure maintenance and management for AUE office members

The training on the maintenance and the management of water supply facility for AUEs was conducted. The training was made up of three steps as described in table 4-2. The goal of AUEs in all the villages is that they are equipped for knowledge and capacity of management ability on water supply facility maintenance based on the Reform. Moreover, monitoring and follow-up assistance was provided by the Project and DRAH/PCL after the training to reinforce the AUE's working capacity in OJT.

Table 4-2 Summary of the Reform training for AUE

Ttraining sessions	Contents
1 st training session	Explanation of water supply facility maintenance and management system the Reform Water supply facility maintenance and management service agreement between commune and AUE Selection of manager of water supply facilities and cooperative agreement Establishment of water fee and payment methods Formulation of each AUE action plan
2 nd training session	Water supply facility maintenance and management activities by AUE Responsibilities under agreements among concerned parties and financial management AUE financial management Report of maintenance and management activities to communes and AUE general assembly Formulation of each AUE action plan
3 rd training session	Water supply facility maintenance and management activities by AUE Functions and roles of AUE Environment surrounding AUE Formulation of each AUE action plan

4-2-2 Workshop of hygiene promotion for the member in charge of hygiene of AUE

Workshop was provided for the members who are in charge of hygiene of all AUEs in the Central Plateau Region, excluding AUEs in three pilot communes where sanitation and hygiene promotion activities (PHA) were conducted, in order to promote their understanding of their roles and responsibilities.

The workshop included explanations on their roles and activities, presentation the experience by village animators in three pilot communes where PHA were conducted, and introduction of support framework for hygiene improvement activities.

4-3 Assistance for hydraulic infrastructure maintenance and management by AUE in villages

The table 4-3 shows a summary of activities on maintenance and management water supply facilities by AUE in each commune.

Table 4-3 Summary of hydraulic infrastructure maintenance and management by AUE

Table 4 6 Cummary of Hydradile infrastructure maintenance and management by 7.02											
					PMH Operation Rate	Activities					
Types	Province	Commune	Number of AUEs	Number of PMHs		Establishment of Village Water Charge/Paymen t Method	Selection of PMH administrator and Conclusion of protocol	Opening of AUE Account	Water Charge Collection and Management (average of each FCFA/AUE)	Submission of Report to Commune	
D'' (OTG	Dapélogo	29	180	89.4%	21/29	23/29	28/29	448 061	25 (2011) 2 (2012)	
Pilot Communes	KWG	Toéghin	18	88	93.2%	18/18	18/18	18/18	357 402	7 (2011)	
	GZG	Zorgho	33	124	97.6%	29/33	28/33	29/33	363 271	5 (2011)	
		Absouya	19	134	87.3%	18/19	18/19	15/19	446 184	-	
		Loumbila	31	118	72.9%	28/31	25/31	29/31	155 310	7 (2012)	
Target	ОТО	Nagréongo	20	100	95.0%	19/20	18/20	19/20	390 327	10 (2012)	
communes	OTG	Ourgou- Manéga	28	108	98.1%	28/28	26/28	26/28	173 362	1 (2012)	
		Zitenga	45	166	94.6%	44/45	43/45	38/45	193 551	9 (2012)	
		Ziniaré	50	269	78.4%	43/50	42/50	39/50	272 359	1 (2012)	
		Boussé	18	143	86.9%	14/18	13/18	9/18	28 374	-	
	KWG	Laye	10	72	86.3%	10/10	10/10	8/10	200 025	-	
	RVVG	Niou	21	120	88.8%	18/21	14/21	11/21	32 007	-	
		Sourgoubila	19	162	88.1%	17/19	17/19	7/19	63 589	-	
		Boudry	75	254	88.4%	57/75	23/75	2/75	88 464	-	
Additional communes		Khogho	16	70	89.6%	14/16	13/16	3/16	97 388	-	
		Méguet	26	193	90.2%	24/26	20/26	11/26	118 469	-	
	GZG	Mogtédo	29	141	89.5	27/29	14/29	6/29	109 156	-	
		Salogo	15	99	97.3%	14/15	7/15	5/15	87 362	-	
		Zam	34	160	88.8%	30/34	30/34	11/34	103 595	-	
		Zoungou	27	122	87.9%	27/27	27/27	5/27	225 633	-	

CHAPTER 5 IMPROVEMENT OF THE SPARE PARTS SUPPLY SYSTEM AND PUMPS REPARATION SYSTEM

- 5-1 Survey and data sorting related to maintenance and repair system of hydraulic infrastructure in target area
- 5-1-1 Survey on pump spare parts and artisan pump repairmen

We confirmed the inventory and repairmen database of water supply facilities of DGRE and conducted a survey on distribution and operation of existing water supply facilities, activities of spare parts suppliers, artisan pump repairmen and tools they own in the target area in 1st year in order to analyze problems related to current spare parts supply system, pump maintenance, repair work system and propose measures for improvement. The table below shows a summary of the survey results

Table 5-1 Survey results of hand pump distribution(2010)

Item	Survey Results
Prevalent hand pump model	ABI, DIAFA, INDIA, KARDIA, VERGNET, VOLANTA
Model with High Rate of breakdown	ABI (40%) 【Reason】 ABI pumps that were popular in the 1980s are not in production and most of the pumps that are out of order are more than 15 years old and thus it is difficult to repair them.
Model with Low Rate of breakdown	DIAFA (10%) [Reason] Most of them were installed in recent projects and contractors are required to provide after-sales services in some projects.

Table 5-2 Results of spare parts suppliers (2010)

Province	Number of Location of Suppliers		Current Situation
Ganzourgou	4	Boudry, Méguet, Mogtédo, Zorgho	They opened as part of the PIHVES(*) project in 2002 and they are still selling on commission as of 2010.
Kourwéogo	1	Niou	No commission sales agreement with manufacturer/agent Parts are purchased directly in Ouagadougou.
Oubritenga	1	Ziniaré	 No commission sales agreement with manufacturer/agent Parts are purchased directly in Ouagadougou. It opened in 1987 but the business was suspended because of dishonor in 2008.

^{*)} Programme Intégré d'Hydraulique Villageoise et d'Education pour la Santé

5-2 Development of pumps spare parts supply system

5-2-1 Sorting and sharing of spare parts information

We sorted the process of spare parts procurement and the data of spare parts distribution channel, distributor network, inventory and the price list by pump model based on the survey results in order to enable quick response to spare parts demand from pumps users.

5-2-2 Examination and development of spare parts supply system

We developed a spare parts supply system in which the project provided spare parts with high replacement for maintenancier association in each province for the initial rotation. In this system the maintenancier association is able to sell the spare parts to pumps repairmen/maintenanciers in a flat price, and the profit is spent for restocking the inventory.

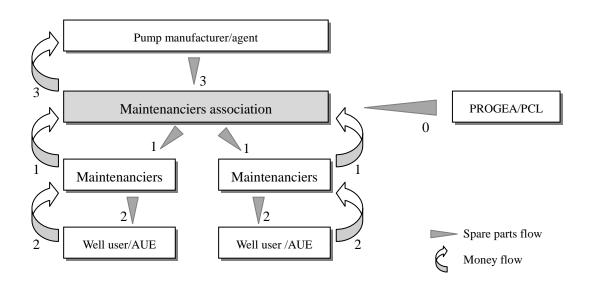


Chart 5-1 Spare parts supply system

5-3 Capacity reinforcement assistance and training for artisan pump repairmen and maintenanciers

5-3-1 Sorting and sharing of the information on artisan pump repairmen

We created a database format for artisan pump repairmen in the Central Plateau Region based on the interview survey and technical examination in 1st year. We also examined the selection standards of artisan pump repairmen should be trained as maintenancier in 2nd year and summarized training experience, working experiences and technical levels of each artisan pump repairmen.

5-3-2 Reform workshop for artisan pump repairmen

We had workshops for artisan pump repairmen at provincial capital in 2010 and 2011 respectively. The purpose of the workshop was to promote understanding on the concept of the Reform and explain the document to be submitted and procedures of application for license (Agrément) for the artisan pump repairmen to conclude a contract with a commune to work as maintenancier in the new system based on the Reform.

5-3-3 Selection and business license of maintenancier

Each artisan pump repairman was supplied for a license after the workshop described in 5-3-2. DRAH screened the submitted application form and issued business licenses to the artisan pump repairmen who were determined as appropriate maintenancier.

The application for the license of a maintenancier was accepted and screened twice, once in 2011 and once in 2012. In addition to Levels 1 and 2, applicants whose technical capacity did not meet a certain level were given business license as tentative license Level 1.

The table below shows the detail of maintenancier that received the business license by province by the project completion.

 Ganzourgou
 Kourwéogo
 Oubritenga

 Level 1
 20
 15
 20

 Level 1 tentative license (**)
 4
 4
 5

Table 5-3 Certified maintenancier in Central Plateau Region

5-3-4 Maintenancier's meeting

Maintenancier's meeting was held regularly in each province to share information on the Reform application and examine solutions for problems related to pump maintenance. The table 5-4 shows a summary of the maintenanciers meeting.

Table 5-4 Summary of the maintenancier's meeting late Agenda

	Date	Agenda						
Meeting 1	May 10 to 14,	Briefing of project overview						
	2010	Repair system and roles of maintenanciers for the Reform						
		 Confirmation of additional information necessary for arrangement of 						
		repairmen's database and entry of survey sheet of new repairmen						
		Technical examination to see repairmen's skills						
Meeting 2	February 17 to	Briefing on selection result of license application						
	21, 2011	Provision of license for maintenanciers						
		Briefing on clauses on license						
		Discussions on activities of Maintenanciers association (strengthening)						
		of association's structure, contents of technical training for apprentice,						
		sharing of repair tools, spare parts supply system)						

	Date	Agenda
Meeting 3	April 5 to 7, 2011	 Confirmation of tools each maintenanciers does not have sufficiently, examination of tools whose provision is under examination as project assistance, and discussions on their management method and system Discussions on spare parts management method Confirmation of establishment and registration of maintenanciers associations and their activities and examination of their possibility of tool and part management Confirmation of preparation for tender of maintenanciers by commune and Q&A
Meeting 4	August 23 to 25, 2011	 Confirmation of large tools provided for maintenanciers associations and discussions on their management method and system Discussions on sales and management method by the association Exchange of views on training and capacity reinforcement of maintenanciers Sharing of experiences of tender and contract conclusion in pilot communes
Meeting 5	February 7 to 9, 2012	 Distribution of new license and briefing on the clauses on it Confirmation of use and management of large pump repair tools provided for maintenanciers association Discussions on spare parts supply system led by maintenanciers association
Meeting 6	February 11 to 13, 2013	 Discussions on sales/rental and management methods of spare parts and large tools by the associations Decision of contents of repairmen's training and trainees SWOT analysis of associations Information on new application and renewal of rmaintnancier's license

5-3-5 Training for artisan pump repairmen and maintenanciers

1) Training on the Reform application for maintenanciers

We provided the trainings on the Reform application for maintenanciers who received business licenses from DRAH/DPAH and commune employees. The purpose of the training was that the maintenancier acquired the capacity to handle tender contract for follow-up and monitoring of water supply facilities, to conclude the contract and to conduct follow-up and monitoring of PMH after its completion. The detail of the training is as follows:

 1st training session: To promote understanding of maintenanciers and commune employees on the contents of contract for follow-up and monitoring to be concluded between a commune and maintenanciers, tender process, follow-up and monitoring, and repair fee setting.

<Contents> Contract of follow-up and monitoring between a commune and maintenanciers, roles and duties of maintenanciers, follow-up and monitoring of PMH, bidding, fee setting, etc.

 2nd training session: To promote understanding of maintenance monitoring activities based on the contract for follow-up and monitoring of PMH to be concluded between a commune and maintenanciers, report after follow-up and monitoring, and payment process, etc.

<Contents> Method of follow-up and monitoring, practice of follow-up and monitoring, fee setting and calculation of bidding price for follow-up and monitoring, and water quality assessment method, etc.

 3rd training session: To reinforce skills and knowledge of maintenanciers on pump repair, maintenance and follow-up and monitoring for different types of pump so that they can acquire skills for examining cause of breakdown and failure location and proper repair method.

<Contents> Introduction to hand pump, particulars of pump, and pump repair practice (field work), etc.

2) Technical training for artisan pump repairmen and maintenanciers

In addition to the Reform training described above, we provided technical training on pump repair to artisan pump repairmen and apprentices in 4th year.

We encouraged representatives of Maintenancier's associations and DPAH employees from the planning stage near the end of 3rd year, and they took initiative in planning need analysis, target trainees, training contents and schedule. We selected experienced and skilled repairmen in each province as trainers. The training was a six-day session (including 2 to 3 days of field work) in each province. The contents of the training included pump parts names, examination of breakdown and repair, pump installation and pump rising.

5-3-6 Follow-up and monitoring of water supply facilities and repair by maintenanciers

As for the follow-up and monitoring of water supply facilities in three pilot communes and six targeted communes, we interviewed applicable maintenanciers and confirmed their activities and problems. The table 5-5 shows their follow-up and monitoring activities in the communes as of February 2013.

Table 5-5 Follow-up and monitoring activities in pilot and targeted communes

Number Number Number Fallow up and manitoring activities in pilot and targeted communes						
Commune	of Contractors	of Sessions	of Payment	Follow-up and monitoring of PMH	Note	
Dapélogo	1	2	2	The second follow-up and monitoring was performed in July 2012. The fees ^{note1} were paid in August.	Because of political reasons, the relationship between the commune mayor and maintenanciers is slightly deteriorating. There is no other problem.	
Toéghin	2	1	1	The second follow-up and monitoring order was not placed with the maintenanciers and thus was not performed.	Because the commune spent charges from AUE for other purposes, it has difficulties making payment for follow-up and monitoring.	
Zorgho	3	2	1	Although the second follow-up and monitoring was performed in October 2012, fees are unpaid.	Because of complaints for the situation in which this village that have not paid charges for the first follow-up and monitoring were also able to receive the service, the payment rate of the charges of AUE in FY2012 is low.	
Absouya	4	1	0	Although the first follow-up and monitoring was performed in October 2012, fees are unpaid.	Because the commune accountant lives in Ziniaré, maintenanciers are forced to travel frequently to sign necessary document, etc. (approx. 100km between Absouya and Ziniaré)	
Loumbila	1	1	0	Although the first follow-up and monitoring was performed in September 2012, fees are unpaid.	The arrangement for follow-up and monitoring by the maintenanciers is not good, with no prior contact with AUE, incomplete signature on document, etc.	
Nagréongo	2	2	0	The second follow-up and monitoring was performed in December 2012, with fees for the first session unpaid. The payment for both sessions is also unpaid.	Although the maintenanciers were told that the commune would pay for both sessions, no payment was yet to be made when the survey was conducted.	
Ourgou- Manéga	2	0	0	No follow-up and monitoring of PMH is performed. The request form is under production and the order is yet to be placed with the maintenanciers.	Because some AUEs have not paid charges for follow-up and monitoring and the commune has not placed the order, no follow-up and monitoring of PMH is performed.	
Ziniaré	3	1	0(**)	The contract between the commune and maintenanciers was concluded in December 2012. Although the first follow-up and monitoring of PMH was performed, fees are unpaid.	The commune selected maintenanciers without the tender process and concluded a contract with them. Only one contractor received payment from the commune.	
Zitenga	3	1	0	Although the first follow-up and monitoring of PMH was performed in September 2012, fees are unpaid.	Although AUE members were not present at the patrol and signature on the document was placed later, it did not affect the follow-up and monitoring of PMH.	

5-4 Establishment of maintenancier's association and assistance for their activities

5-4-1 Establishment of maintenancier's association

In view of after project completion, we promoted activities of repairmen's associations in each province on occasions of repairmen's meetings, training and workshop in order to enhance collaboration among them who scatter in the target area. As a result, repairmen's associations that had been dormant were reorganized as provincial Maintenancier's association in the province and began activities.

There were some associations that had not carried out any activities independently, excluding the meetings held by the Project for such reasons as fund shortage and communication circumstances until the second half of 2nd year and they were in fact dependent on the project assistance. However, as the Project provided assistance for various activities of the associations, independent activities gradually emerged and all associations became active as they held meetings regularly and voluntarily to have discussions and exchange information in the second half of 4th year.

5-4-2 Provision of large repair tools

The survey results in 1st year show that approx. 80 percent of repairmen in the Central Plateau Region had the problem of shortage of repair tools and there was a concern that it would be very difficult for them to perform maintenance work of water supply facilities steadily in the region under such circumstances. Thus, the Project provided large repair tools not for individual maintenancier but for maintenancier's association in each province. The associations charge rental fees to secure funds and managing them jointly or raise members' awareness of ownership and improve their management capacity.

It was confirmed that the repair tools were managed in accordance with policies decided in the association before their provision and some profit was posted.

5-4-3 Training on inventory and fund management

We provided training for maintenancier's associations to acquire knowledge on inventory and fund management to complement the spare parts supply system development and provision of large repair tools for associations described above.

Table 5-6 Summary of training for maintenancier's associations

	Target	Number of Participants	Date	Place	
associati	tative of maintenancier's on of each province (5 and DPAH employees	each province (5 18 May 21 to 23, 2012			
Contents	 spare parts) method Fund management report (balance sheet) 	I (type of account et), and auditing s analysis/decisi	on of target group, planning of co	unt management, balance	

5-4-4 Establishment of union of maintenancier's association

The establishment of union of maintenancier's associations in the Central Plateau Region was decided in order to promote ties and exchange among maintenancier's associations in each province and raise the voice of maintenanciers in the first half of 4th year and the project assisted them in holding a general assembly meeting.

The general assembly meeting was held in Ziniaré on September 24, 2012, attended by 70 members of maintenancier's associations in each province in total, director of DRAH, and DPAH employees. The articles of incorporation, terms approved in the meeting and the minutes were submitted to the Minister for Territorial Administration, Decentralization and Security (MATDS) and the approval (Récépissé) was issued in January 2013.

5-5 Formulation of water supply facility maintenance, management manual and guidelines for pump repairmen's capacity reinforcement

We formulated a pump repair manual for each pump type and used it in technical training in the project. The manual contains many specific illustrations, names of pump and spare parts, timing and contents of regular pump inspections, replacement or parts that are prone to failure, and repair methods.

We also formulated guidelines of capacity reinforcement for maintenanciers (draft) to be able to perform sustainable maintenance and management of water supply facilities. Summaries of the documents were produced and edited as materials from the first to fourth years as reference for the administrative organizations which were in charge of water supply in other regions to carry out similar activities to the Project.

The manual and guidelines were revised together with water supply facilities maintenance and management manual and completed as PROGEA manual.

CHAPTER 6 IMPROVEMENT OF HYGIENIC BEHAVIOR IN VILLAGE

The project also includes sanitation and hygiene promotion activities (PHA) in three pilot communes, Dapélogo (29 villages and 37 primary schools) in Oubritenga Province, Toéghin (18 villages and 19 schools) in Kourwéogo Province and Zorgho (39 villages and 46 primary schools) in Ganzourgou Province.

6-1 Materials for sanitation and hygiene promotion activities

The project formulated three types of mantel and guide ac follow.

Manual for administraitive trainers of PHA



[Taeget user] Administrative trainersof PHA

[Overview] It describes overall framework of PHA, basic hygine and sanitation information and participatory approch. In other words, it is coverd necessary contents for PHA programs to used to train village animators and teachers.

Guide for practice of PHA



[Target user] Actors in village (village animators and teachers9 [Overview] It is guide of process and problem analysis for PHA for village animators and teachers, and also serves as guide that contains activity

. (The guide is written in French and also in the local language of Moore.)

Guide for monitoring of PHA and maintenance sanitation facilities



[Target user] Administrative hygiene trainers

plan and items to be checked.

[Overview] It is guide to be used for activity follow-up, monitoring and evaluation. It contains roles of actors who performs follow-up and monitoring and contents of monitoring as well as various record sheets to understand activities in the flow of field >provincial level>regional level.

Note 1) Administrative hygiene trainers consist of staff of regional bureau, provincial bureau and commune of three ministries of Minister of Agriculture and Hydraulics, Ministry of Basic Education and Literacy, and Ministry of Health.

In addition to the materials introduced above, we also created promotional tool, PHAST Card, for facilitating deepening of understanding on sanitation and hygiene for local villagers and school children. The card shows illustrations of various situations and hygienic behaviors. It is used to explain transmission route of fecal-oral diseases and its blocking method and hygienic behaviors related to 10 items¹ on water and hygiene issues.

¹ 10 items are: ① types of water source, ② conditions of water transportation container, ③condition of water storage container, ④







PHAST card (example)

The materials were well received by Burkina Faso and revised in reflection of experiences of the project in the Central Plateau Region under the leadership of DGAEUE to finally produce a manual and guide to be used across the country. In December 2012, concerned parties from administrative organizations concerned PHA in all regions were invited to introduce and distribute the manual and guide to them and trainers of DRAH, DREBA and DRS as the instructors.

6-2 Training the actors for PHA

We implemented the project with a basic concept of conducting activities while searching ways that met the local needs and capacity so that the activities would be sustained after the project completed.

From the perspective, we effectively used and reinforced capacities of existing human resources who would serve as actors of PHA. We trained and reinforced capacity of actors as follows: 57 administrative trainers who are actors in charge of activities and conduct follow-up and monitoring, 513 village animators and 403 teachers in three pilot communes.

6-2-1 Training for the actors of PHA

Because PHA activities involve thee ministries related to sanitation and hygiene issues, the responsible officers of DRAH, DREBA and DRS were appointed as supervisors. They supervised monitoring and follow-up of on-site activities to ensure the collaboration and cooperation among the three ministries as well as the sustainability after the Project completion.

The supervisors served as instructors of training for employees of the ministries dispatched to the provincial and commune offices with the purpose to enhance knowledge and practical skills to promote improvement of water and hygiene facility management methods and hygienic behavior of these office staffs.

6-2-2 Training for village animators and teachers

The Project aimed at the spread of PHA through existing community organizations and let each village select their animators based on the idea that their activities are voluntary base (unpaid). Five (2 are female) village residents who understood the project purpose and had the willingness to be animators were selected from each pilot village and they received training. Similar training was also given to all primary school teachers.

6-3 Sanitation and hygiene promotion activities (PHA)

6-3-1 Activities conducted by local actors

Village animators and school teachers began PHA after they completed training in their village and at their school, respectively. They conducted the activities based on a quarterly action plan they made.

Village animators informed villagers on the date of animation and were engaged only in use of PHAST card and participatory promotion activities gathering people. However they gradually began visiting homes to handle individual problems of residents and also visited places where many people gather, which include village events (vaccination campaign, ceremony of women's day, etc.) to conduct activities more actively to have more promotion effects.

Teachers also continue sanitation and hygiene education using such a short period of time as moral education class and morning homeroom meeting. Efforts are also made continuingly to raise children's awareness of sanitation and hygiene through such practice of both teachers and students as cleaning toilets and school and installation of hand wash place.

6-3-2 Monitoring and follow-up activities by administrative trainers

Administrative trainers conducted follow-up activities as needed and quarterly monitoring of village actors. Administrative trainers at the commune level decided villages and schools each of them were responsible for and conducted the activities based on the method and monitoring sheet of the guide monitoring of PHA.

A system to have the monitoring results at the commune level picked up at provincial and regional levels took root. A monitoring meeting was held quarterly in each pilot commune to share problems and good practice and discuss measures to solve the problems.

We created a database to integrate the information and the data on results of PHA and impact of the activities (change in hygienic behaviors of villagers and school children) and facilitate understanding of hygienic and health environment improvement conditions.

6-3-3 Unique efforts to vitalize activities

There is the problem about the motivation of village animators since the launch of the project.

Although it is very easy to motivate them by providing money and goods as reward, we looked for other ways to maintain their motivation in view of the time after the completion of the Project. We decided to have a competition of PHA to examine how their hygienic and healthy environment had improved, and choose top three villages and schools to give them an award. We distributed name card and certificate to village animators and teachers to show that they are trained as actors of PHA. And all representatives of the villages and schools that received the award present their daily activities and lessons they learned. The competition provided an opportunity to evaluate outputs of the activities of village animators and teachers, which enabled us to achieve the goal of maintaining and improving motivation of those involved in the activities.

6-4 Outputs of PHA

6-4-1 Improvement of hygienic and healthy environment in village

Activities by village animators helped cause behavioral changes in many villages of the three pilot communes. Main changes are installation of Tippy-Tap, hand-washing using soap and water filtration and sterilization. Some families built a toilet in their house. These changes show that the PHA raised their awareness of cause of fecal-oral diseases and other infectious diseases and transmission route among the villagers.

On the other hand, there are some villages where many villages have difficulties purchasing soap and antiseptic for washing hands and water sterilization. This is slowing down the progress of hygienic behavior improvement. Thus, it is important to present alternative measures.

Paying attention to more specific issues including when to wash hands (after using the toilet and handling excretion of toddlers and before meals) after the completion of the Project is expected to help further improve the hygienic conditions.

The table below shows behavioral improvement of villagers that were discovered in the monitoring results.

Table 6-1 Result of hygienic behaviors change in Dapelogo Commune

NI-	40 Norma	Ratio of villages	Hygienic behaviors at Project completion (Number of villages)				
No	10 Items	where improvement is observed	No good	Good	Excellent	Note	
1	Type of water source	93%	0	3	26		
2	Condition of water transportation container	93%	0	3	26		
3	Condition of water storage container	82%	0	8	21		
4	Water treatment method	17%	17	9	2	Data of 1 village missing	
5	How to handle drinking water	79%	0	18	11		
6	How to wash hands	57%	0	18	11		
7	Toileting habit	63%	5	7	17		
8	How to use a toilet	85%	0	1	19		
9	How to clean the toilet	56%	0	13	12		
10	Cleaning around the well	79%	2	9	18		

Table 6-2 Result of hygienic behaviors change in Zorgho Commune

No	10 items	Ratio of villages where improvement is observed	Hygienic behaviors at Project completion (Number of villages)			
			No good	Good	Excellent	Note
1	Types of water source	97%	1	0	38	
2	Condition of water transportation container	94%	0	2	37	
3	Condition of water storage container	89%	0	4	35	
4	Water treatment method	40%	18	11	8	Data of 2 villages missing
5	How to handle drinking water	48%	0	24	15	
6	How to wash hands	63%	0	21	17	Data of 1 village missing
7	Toileting habit	67%	5	1	37	
8	How to use a toilet	82%	1	1	37	
9	How to clean the toilet	43%	0	23	16	
10	Cleaning around the well	89%	2	1	34	Data of 2 villages missing

Table 6-3 Result of hygienic behaviors change in Toeghin Commune

No	10 items	Ratio of villages where	Hygienic behaviors at Project completion (Number of villages)			
INO		improvement is observed	No good	Good	Excellent	Note
1	Type of water source	100%	0	0	18	
2	Condition of water transportation container	100%	0	0	18	
3	Condition of water storage container	94%	0	1	17	
4	Water treatment method	5%	11	6	0	
5	How to handle drinking water	22%	0	17	1	
6	How to wash hands	-	2	16	0	Data defect at Project beginning. Improvement rate cannot be calculated.
7	Toileting habit	-	8	0	10	Data defect at Project beginning. Improvement rate cannot be calculated.
8	How to use a toilet	-	0	0	18	Data defect at Project beginning. Improvement rate cannot be calculated.
9	How to clean the toilet	-	0	16	2	Data defect at Project beginning. Improvement rate cannot be calculated.
10	Cleaning around the well	-	0	2	13	Data defect at Project beginning. Improvement rate cannot be calculated.

6-4-2 Improvement of hygienic and healthy environment at school

Hygienic and healthy environment of schools changed significantly through daily educational activities, regular cleaning of school and toilets, and hand-washing. For example, hygiene education took root at all schools in the targeted villages in Dapélogo Commune. Schools conducted hygiene education so seriously and actively that administrative trainers say proudly that they can show the improvement to the people outside with confidence. People involved in education are actually feeling much improvement.

The school management committee (COGES) is being established and operated at schools and they were more committed to sanitation and hygiene issues as the project progressed. Under the initiative of the COGES, such action as mothers secure and carry water needed for the day to school where there is no water or purchase cleaning tools and soap for school has emerged.

However, on the other hand, schools with no water facilities or no action of the COGES have less progress of hygiene education than other schools. C/P is supposed to play a leading role to deal with such schools intensively after the project completion.

There are still some schools with no sanitation facilities. However, there is some degree of improvement: a certain place is designated as the place for excretion and has students use it as such and it is now used as such whereas they used to urinate and defecate anywhere outdoors. Once such a habit is established, it is easy to have them have a habit of using toilet when they are built.

The table below shows the behavioral improvement at schools discovered in the monitoring results in the project.

Table 6-4 Result of hygienic behaviors change in Dapelogo commune

No	5 items	Number of schools where improvement is observed (among 36 schools)
1	Handling of drinking water	64%
2	How to wash hands	84%
3	Toileting habit	15%
4	How to use a toilet	14%
5	How to clean the toilet	11%

Table 6-5 Result of hygienic behaviors change in Zorgho commune

No	5 items	Number of schools where improvement is observed (among 46 schools)
1	Handling of drinking water	81%
2	How to wash hands	74%
3	Toileting habit	77%
4	How to use a toilet	69%
5	How to clean the toilet	83%

Table 6-6 Result of hygienic behaviors change in Toeghin commune

No	5 items	% of schools where improvement is observed (among 46 schools)
1	Handling of drinking water	81%
2	How to wash hands	74%
3	Toileting habit	77%
4	How to use a toilet	69%
5	How to clean the toilet	83%

6-5 After the project completion

Village animators and school teachers met in each of the three pilot communes in March 2013 to confirm outputs of the four years of activities, share their experiences, identify problems of each village and find solutions, and formulate action plan after April 2013.

Participants had much interest in their achievements being presented objectively. Because they found out that the outcomes are generally good although there still remain some problems related to some items, they seemed quite satisfied and felt that their activities of which outcomes are hard to see are effective. This is useful to reconfirm their motivation to continue their activities after the project completion.

In the workshop among the actors, exchange of opinions and joint work of both actors were main activities in order to promote cooperation between them to improve the hygienic and healthy environment of the entire village. Participants were engaged in discussions and exchange of views very actively.

Group work by village was also conducted for village animators and teachers to list the problems each village has and measures to solve them and formulated a specific plan to implement them together. The action plan that simply covered what they did changed to one with focus on the current problems. Many villages also included activities in which those involved in schools (including students) and villagers clean public facilities and places (toilets, water facilities, market, etc.) under the initiative of schools and health centers.

Although the activities during the project period yielded some achievements, there remain problems. It is desired that quarterly monitoring and follow-up is performed, led by supervisors of the regional bureau of the concerned three ministries after the project completion for further improvement of hygienic and healthy environment of villages.

CHAPTER 7 CAPACITY REINFORCEMENT OF THE DECENTRALIZED TECHNICAL SERVICES FOR FOLLOW-UP/MONITORING AND SUPPORT TO COMMUNES

7-1 Reform training for DRAH/DPAH/ZAT/UAT

Training on Reform-based water supply facility maintenance and management system was conducted for DRAH/DPAH employees and ZAT/UAT employees. The purpose of the training is as follows:

- ✓ To acquire knowledge on new maintenance and management system.
- ✓ To understand roles of each actor in water supply facility maintenance and management.
- ✓ To promote understanding of roles of MAH and regional organizations in the reform assistance.

Table 7-1 Summary of Reform training for DRA/DPAH/ZAT/UAT

1sr year	Date/Place	February 17 to 19, 2010 (3 days), conference room, Oubritenga Provincial
	Contents	Reform-based water supply facility maintenance and management system
		Roles of those involved in the Reform: AUE, commune, maintenanciers, government, DRAH
		Introduction of outline of PROGEA/PCL activities
		Examination of training contents and training evaluation
2 nd year	Date/Place	February 14 to 18, 2011 (5 days), ANAO conference room (in Ziniaré)
	Contents	Overview of water facility maintenance and management based on the Reform
		Roles of those involved in Reform: AUE, commune, maintenanciers, government, DRAH
		Procedures of AUE establishment, animation activities
		Promotion methods for changing villagers' hygienic behaviors,
		SARAR/PHAST promotion methods (practice)
		Assistance for water supply facility maintenance and management based on the Reform
		Examination of training contents and training evaluation

	Date/Place March 12 to 16, 2012 (5 days), project office	
	Contents (commune training	Current system and problems of water supply facility maintenance and management
	instructor development)	Maintenance and management system of hydraulic infrastructure under the Reform policy
		Roles of concerned parties in maintenance and management system
		AUE establishment
		Conclusion of water supply facility maintenance and management contract
		among commune, AUE and maintenanciers
		Setting of commune water charges
3 rd year		Regional License
		Budget allocation of commune for maintenance patrol by maintenanciers
		Selection of maintenanciers for maintenance patrol
		Animation skill as training instructors and preparation for training of 11
		additional communes
	Date/Place	May 7 to 11, 2012 (5 days), ANAO conference room (in Ziniaré)
	Contents (training	Review of AUE knowledge on new maintenance and management system
	for AUE training instructor	Convention for management between commune and AUE
	development)	Manager selection of cooperative protocol
		Setting of water charges and payment method
		Animation skill as training instructors and preparation for training of 11 additional communes
	Date/Place	September 26 to 28 and October 1 to 3, 2012 (training in two groups, 3 days
		each), ANAO conference room (in Ziniaré)
	Contents (re-training)	Overview of the Reform
əar	(10 training)	Contents of agreements among commune, AUE and pump repairmen
4 th year		Roles of DRAH/DPAH/ZAT/UAT in Reform application (assistance for
.4		project implementation by commune: AMOC)
		Problems of each commune and village related to Reform application
		Classification of problems and measures to solve them

7-2 Reform application follow-up by DRAH/DPAH

DRAH/PCL • DPAH and ZAT/UAT assisted and followed up the Reform application by communes and AUEs.

They gave informed communes where water charges were not collected smoothly or there are villages that refused AUE's water supply facility maintenance and management, discovered in follow-up and monitoring, and the project team, DRAH/PCL • ZAT/UAT, and commune members visited such villages to talk with the AUE and villagers to solve the problems.

The follow-up and monitoring of AUE activities by ZAT/UAT for communes to have active involvement in the activities was conducted in the following process:

- 1) To have meetings between ZAT/UAT and commune to share information on AUE's water supply facility maintenance and management.
- 2) To identify the AUE that needs priority assistance and formulates a monitoring and assistance plan.
- 3) To conduct monitoring and assistance of AUE activities in accordance with the plan.
- 4) To share the results of monitoring and assistance between ZAT/UAT and commune to formulate a plan for the following month.

7-3 Efforts to create sustainable monitoring and assistance system

Efforts were exerted for creating and functioning the system of DRAH/PCL for continuing monitoring and support of commune's and AUE's water supply facility maintenance and management. Specifically, it aimed at the creation of monitoring and assistance system with the C/P in view of the Project completion. We sorted the concept of monitoring system by types and purpose of monitoring and also sorted the report by each activity.

The system is created based on the assumption that information on AUE activities and PHM conditions is given to the commune in the bottom-up style in consideration of difficult financial conditions of communes and DPAH.

As part of efforts to create the system, we aimed to develop the autonomy of the water supply facility maintenance and management performed by communes and close exchange of information between communes and DPAH. Because communes are the main actors under the Reform system, so we always involve communes.

It is demonstrated that the framework of DRAH assistance of the Reform application (PROGEA model) enables proper advice and assistance. And it is very useful when the main actors--communes, AUE, and maintenanciers--face problems about maintenance and management.

On the other hand, it is also true that the PROGEA model functioned with the project assistance. It is essential for DRAH to ensure necessary budget for sustainable functioning of the model and continuing assistance for the Reform application after the project completion.

CHAPTER 8 OTHER RELATED ACTIVITIES

8-1 Internal evaluation of the project

End-line survey for collection of data and information to be provided for final evaluation of JICA and internal evaluation survey for measuring the impact of project activities were conducted. The survey targets included communes, repairmen, AUEs, DRAH/DPAH members, administrative trainers of PHA and other donors that develop the projects in the same field.

The survey results by target group can be summarized as follows:

(1) Commune

As for the training provided in the project, almost all communes were satisfied with the quality of both the contents and instructors. Many responded that documents necessary for the Reform application distributed in the training were very useful. Communes responded as the effect of the Reform application that maintenance and follow-up and monitoring performed by maintenanciers contributed to the reduction of breakdown and faster repair.

On the other hand, they also responded that the Reform application had the problems of surveying the number and type of hand pumps that commission's maintenance and management to AUE, handling of AUE that functioned worse or that did not function at all, and collection of charges.

Respondents also said that having the Reform as common practice requires reinforcement of the Reform application system, which includes clarification of who is responsible for assistance for AUE activities in the commune, establishment of water and hygiene section, ensuring budget for water- and sanitation-related work, and securing new donors in addition to raising awareness of villagers, assistance for follow-up and monitoring by maintenanciers, and handling of AUEs with problems.

(2) Maintenanciers

More than 90 percent of maintenanciers said that they were very satisfied with the quality of the contents and instructors of the training. They also said that document provided is useful as it is partially translated in the local language. On the other hand, some said that it was difficult to understand non-technical issues, which include the calculation method of repair fees and production of document related to the contract for follow-up and monitoring.

They responded that their repair work capacity improved and time required for repair pumps was significantly shortened as spare parts are secured. On the other hand, they also said that patrol in the rainy season is a problem they discovered from their maintenance patrol activities as the road condition deteriorates. Because there are some villages that they cannot access. This presented the need to pay attention to the timing of maintenance patrol.

(3) AUE

Although some AUEs said that the duration of each training was insufficient, most AUEs responded that they were very satisfied with the quality of the contents and instructors. More than 90 percent of AUEs said that all water supply facility maintenance and management system in the village, introduced by the Reform policy, with AUE serving as its core, was effective and 75 percent said that it was better than the previous system with CPE serving as its core in various terms.

Although it is clear that the frequency of direct assistance for each village decreases after the project completion, more than 70 percent of AUEs showed positive attitude toward the settlement of the system with AUE serving as its core. However, they also pointed out that the system was recently introduced and there are many problems for its continued functioning. The problems include collection of fee from water users (villagers) and settlement of conflict between villages resident. They pointed out that they expect the government to provide support from the government for the settlement of the Reform, which includes the following: AUE vitalization, retraining with use of illustrations and photographs, continuing follow-up by DRAH and each DPAH and ZAT/UAT, and positive assistance from communes.

(4) Administrative trainers of PHA

Although some respondents said that the duration of training was short, nearly 70 percent responded that they were satisfied with the quality of the contents and instructors. On the other hand, some suggested addition of contents on information management (database), retraining, and study tour as means to further improve the training contents to have them acquired by the participants.

Many respondents said that PHA and its monitoring that was originally thought to be difficult was greatly activated with the training and other project assistance. As the main reason, the biggest number of respondents said that the manuals and guide and monitoring sheet for hygiene promotion were very easy to understand and use.

(5) DRAH/PCL, DPAH in each province and ZAT/UAT

70 percent of DRAH/PCL employees, DPAH employees, and ZAT/UAT responded that they were satisfied with the training contents of capacity reinforcement necessary for the Reform. They said that the manuals and monitoring sheet provided in the Project are essential for assisting activities of AUEs and communes.

Same as other actors, DRAH/PCL employees, DPAH employees, and ZAT/UAT also said that the water supply facility maintenance and management system based on the Reform, with communes serving as its core, was more effective than the previous management system through CPE.

About 80 percent of respondents said that continued support for communes, AUEs and repairmen would enable the Reform to take root while they also pointed out many problems as they were involved in all activities related to the Reform introduction, which include handling of less-functioning AUEs, settlement of conflict between villages and areas, assistance for AUE office's activities (collection of water fee, in particular), and activities of repairmen.

As future measures, many said that it is essential for communes to play its role actively for the Reform settlement and DRAH/PCL employees, DPAH employees, and ZAT/UAT would be able to work in collaboration with communes actively through sharing of necessary information, support for well digging and rehabilitation, and issuance of licenses for repairmen in addition to directly instructing commune employees. In addition, they also said that clarification of persons in charge of the Reform in the commune would make the collaboration smoother. However, many respondents also said that there was urgent need to secure the budget for the activity as it is necessary for maintaining the same level of dynamism as that in the Project period.

(6) Other donors

The survey results showed that there were nine donors involved in the Reform and AMOC and six donors said that water supply facility maintenance and management based on the Reform is more effective than that with CPE serving as the core and that it can be applied across the country.

On the other hand, all donors responded that they were involved in hygiene promotion and training and PHA including animation by villagers. 10 donors and 7 donors said that they involve DRAH, DREBA and DRS, respectively, in their activities.

As for awareness and evaluation of this project, all donors knew this project and 90 percent of them had the recognition that the approach is effective. There were some cases of collaboration with concerned administrative organizations other than this project and some donors concluded protocol with technical administrative organizations. On the other hand, some donors that mainly assist communes said that there is no need for involvement of technical administrative organizations.

The interview results show that the tools arranged by this project are used by most donors.

Main problems related to the Reform application recognized by PTFs are assistance for

less functioning AUEs, assistance for setting minimum water fee in each commune, survey of the number and types of PHM whose management is commissioned to each AUE, collection of water charges from water users by AUE, maintenance by maintenanciers and collection of repair report from them.

8-2 Collaboration with other donors and partners in hydraulic infrastructure maintenance and management

Many donors and NGOs are involved in activities of water and sanitation issues in the Central Plateau Region. PROGEA/PCL has conducted effective activities in collaboration with the partners in the region.

8-3 Public relations of project

We conducted PR activities using such mass media as TV, local radio stations and newspapers in order to spread information and message on the Reform promotion and PHA.

8-4 Participation in annual PN-AEPA/PAGIRE review

Governmental organizations in water and sanitation sector, donors and NGOs jointly conduct annual review of PN-AEPA/PAGIRE (national plan on drinking water and hygiene/integrated national water resources management plan) in Burkina Faso. Project experts participated as members of Group 3 (GT3: water supply and hygiene project by commune) since the project was launched in order to promote collection and sharing of information on water supply and hygiene sector. We used the GT3 meetings to introduce activities and share problems in the Reform application in the Central Plateau Region and discuss their solutions. This project is regarded as a pilot project to test the series process of the Reform application and information on activities and teaching materials and manuals produced in the project were shared upon request from other donors that are also promoting the Reform application in various areas of the country.

8-5 Participation in 6th World Water Forum

Project experts (supervisor) and C/P (national coordinator) participated in the 6th World Water Forum held from March 12 to 16, 2012, at Marseille in France.

Participants attended various sessions and gave a presentation of an overview of this project activities and water supply facility maintenance and management based on the Reform in Burkina Faso.

CHAPTER 9 ACHIEVEMENT OF PROJECT OBJECTIVE AND OUTPUTS

9-1 Achievement of outputs based on PDM

The table below shows the achievement level of outputs based on the PDM.

Output	Achievement Level	
[Output 0] PDM indicators are identified.	PDM indicators were identified by the interim review survey in September 2011.	
[Output 1] Organizational structure of the targeted communes is established in accordance with maintenance and management system based on the Reform.	AUE establishment, conclusion of convention between commune and AUE, and conclusion of contract between commune and maintenanciers in the nine targeted communes and AUE establishment in the additional 11 communes are completed. The organizational structure in accordance with the maintenance and management system has been developed.	
[Output 2] Hydraulic infrastructure maintenance and management capacity of villages is reinforced.	Hydraulic infrastructure maintenance and management capacity of AUE is steadily reinforced to be able to hold meetings, manage fund, and repair pump. However, there remains a problem of fund collection system.	
[Output 3] Spare parts supply and repair system related to hydraulic infrastructure maintenance and management is improved.	All communes have information necessary for spare parts replacement and maintenance and minor repair is performed at a higher level than expected by maintenanciers. Maintenancier's association is formed in three provinces in the Central Plateau Region and sharing of information on spare parts supply among maintenanciers is in progress. Thus, spare parts supply and pump repair system is being improved.	
[Output 4] Hygienic behaviors of villagers in three pilot communes in the Central Plateau Region are improved.	Six or more items among the 10 items of hygienic behaviors improved in 72 percent of villages in the three pilot communes. Thus, hygienic behaviors of villagers are improved	
[Output 5] DPAH in each province performs monitoring and evaluation of water supply and hygienic conditions to assist communes.	More than 80 percent of staff performs monitoring and evaluation of which DPAH is in charge. DPAH supports communes and carries out activities when necessary.	

9-2 Achievement of project purpose

Hydraulic infrastructure maintenance and management and villagers' hygienic behaviors in the targeted communes are improved².

Achievement Level

The operation rate of the water supply facility in the targeted nine communes is improved excluding Loumbila and villagers' hygienic behaviors are also improved as described in Outcome 4.

² Although improvement of water supply facility maintenance and management is for the nine targeted communes, the target of the hygienic behaviour improvement is limited to three pilot communes.

Because Loumbila is near the capital of Ouagadougou, and water supply facility that uses water from dam lake is developed relatively well, there is an increasing number of villages where deep wells are not needed. Because water supply facility does not need maintenance or management activities by villagers in such villages, the operation rate is likely to decline.

9-3 Prospect for the achievement of overall goal

Overall goal	Achievement Level
Hygienic and healthy environment in the Central Plateau Region is improved.	Because DRAH has already secured 56 million FCFA as 2013 project C/P budget, extension workers (ZAT/UAT) are likely to assist AUEs for a while after the project completion ⁴ . Although it is not decided for 2014 and thereafter, the bureau director has already asked the ministry to allocate the budget and there is a possibility of fund distribution from the budget for sector financial assistance (ABS). Thus, it is likely that the deep well pumps will permanently operate through AUE activities and villagers in 20 communes in the Central Plateau Region will have access to safe water also after the project completion.

9-4 Final evaluation

9-4-1 Results of five evaluation items

The table 9-1 shows the evaluation results of five evaluation items performed in January and February 2013.

Table 9-1 Summary of evaluation results based on fives evaluation criteria

5 Evaluation criteria	Evaluation Results	Evaluation
Relevance	High	The Project is highly relevant because it is consistent with development policy of Burkina Faso and Japan's assistance policy for the country and meets its need for access to safe drinking water and sanitation facility and the project design is appropriate.
Effectiveness	High	The Project is highly effective when the achievement of its objective is considered.
Efficiency	Somewhat high	The Project is somewhat efficient when the injection and its utilization are considered.
Impact	Somewhat high	The Project has somewhat high impact when the achievement of the overall goal and its ripple effect are considered.
Sustainability	Moderate	Sustainability of the Project is moderate as the effectiveness of the Project is maintained after its completion.

⁴ Although C/P budget of the Project includes allowance for C/P, allowance for business trips and fuel cost for extension workers to visit villages are not included. Thus, such expenses need to be posted by the Ministry of Agriculture and Hydraulics for extension workers to continue working.

9-4-2 Response to suggestions

We received some suggestions at the terminal evaluation. The responses to the suggestions are described below.

suggestions are described below.	_
Suggestion	Response
[Sharing of project outputs] The Project yielded such useful knowledge as methodology of AUE establishment necessary for the Reform application process. Efforts are being made to compile the knowledge in the form of manual. Those involved in the Project are expected to inform concerned organizations of information on project outputs and manual production so that the knowledge is shared with the Reform implementing bodies in various region and used by them.	Training manuals produced in the process of project implementation and knowledge acquired in activities was compiled as hydraulic infrastructure maintenance and management and maintenance manual and guidelines. The manuals are finalized as PROGEA manual in workshop participated by central and regional C/Ps. Final seminar participated in central and regional actors involved in water supply and hygiene issues was held on April 10, 2013, to share project outputs and knowledge and lessons learned from the Reform application.
[Promotion for budget allocation for 2014 and thereafter] Promotion activities through visit to villages by extension workers (ZAT/UAT, etc.) are necessary until all villagers share the meaning of the Reform and all villagers who can make payment develop a habit of water charge payment for AUEs to secure organizational sustainability. Although the budget for assisting ZAT/UA activities for 2013 has been already secured, that for 2014 and thereafter will be a challenge. It is expected that concerned organizations will be encuraged to work to secure the necessary budget.	Discussions with DGRE and other concerned organizations are conducted to secure budget for the Reform application follow-up in the Central Plateau Region after project completion.
[Incentive for village animators in charge of hygiene promotion] Although villagers' hygienic behaviors have changed in villages in three pilot communes, it is desired that trained village animators continue activities after project completion for the new hygienic behaviors to become a habit. Thus, it is desired that such concerned ministries and agencies as the Minister of Agriculture and Hydraulics, Ministry of Basic Education and Literacy, and Ministry of Health assist activities to maintain motivation of the animators, which include hygiene competition event.	It is confirmed in the workshop of concerned members held at the project completion that quarterly monitoring and follow-up by administrative hygiene trainers will be continued to maintain motivation of village animators. We encouraged hygiene competition that is held in Dapélogo to be held under the leadership of the commune by sharing information with other communes.
[Expansion of sanitation and hygiene promotion activity] The materials elaborated by the project will be revised for national version. It is expected that PHA activities practiced will be other communes and other regions exploiting these materials. Concerning PHA activities at school, the activities will be continued in cooperation with not only Ministry of National Education and Literacy (MENA) but also COGES. Furthermore it is expected that DGAEUE (Direction of sanitation and drainage) ensure the budget for this activity.	The materials were revised for national version under the initiative of DGAEUE and distributed to organizations charged in the field of sanitation and hygiene in December, 2012. The project asked DGAEUE to follow-up PHA activities on and on. It is not easy that DGAEUE ensure the budget for PHA activities at school. On the other hand, MENA is promoting creation of COGES and its activation and many COGES treat the sanitation and hygiene issue.
[Reinforcement the capacity of communes] Some communes have the service of water and sanitation with support of donors and NGOs. But it doesn't realize creation of this service with own budget. Commune has authority to maintenance and management of hydraulic infrastructures under the Reform, so it is necessary that each concerned organization support communes to budget distribution, personnel positioning, etc. And it is also better to use trained personnel like focal point.	Actually some communes depend on focal point to follow-up AUEs and monitoring of maintenancier's activities. Project side asked communes to exploit the person who has experiences and also to appropriate the budget for the activities of hydraulic infrastructure maintenance and management. On the other hand, the project held meeting with DGRE and concerned donors about creation of service at commune

CHAPTER 10 LESSONS AND SUGGESTIONS RELATED TO PROJECT IMPLEMENTATION

10-1 Creative efforts for project implementation

Much attention was paid to sufficient communication with the C/Ps in the Project implementation. We not only had close communication with the central and regional C/Ps to share information on project activities but involved them all the time from formulation of action plan to its implementation so that they will develop consciousness of ownership.

10-2 Lessons

10-2-1 Lessons related to hydraulic infrastructure maintenance and management

1) Establishment of hydraulic infrastructure maintenance and management system based on the Reform application

Hydraulic infrastructure maintenance and management system was created based on the Reform step by step, which includes AUE establishment, conclusion of a convention for the management of the facilities between commune and AUE and contract for follow-up and maintenance between commune and maintanciers, and capacity reinforcement training for concerned members, by the project completion. It can be said that the framework of the system based on the Reform application was established in the Central Plateau Region through the series of activities.

However, there still remain some people who refuse the principle of Reform without sufficient understanding. The commune is a new local government unit created in 2006 and mid- to long-term efforts are necessary for them to acquire the Reform system that requires complicated administrative procedures and have it take root.

2) Assistance for the Reform application and monitoring by administrative organization in charge of water supply

DRAH/DPAH employees and ZAT/UAT assisted and monitored activities of commune and AUEs in the Project. Identifying problems quickly and examining and taking proper countermeasures through the follow-up activities led to improvement of water supply facility maintenance and management. Their involvement in the Reform application process from the beginning enabled them to acquire sufficient knowledge and experiences related to water supply facility maintenance and management. This also had a great impact on capacity reinforcement and human resources development of administrative organizations in charge of water supply.

On the other hand, assistance and monitoring of activities of communes and AUEs was conducted with assistance from the project and DRAH is expected to secure budget necessary for assistance of communes and villages and conduct continued assistance and monitoring also after the project completion.

3) Hydraulic infrastructure maintenance and management activities by commune

Although capacity of communes was reinforced in the Project, they are yet to acquire capacity to be responsible for hydraulic infrastructure maintenance and management independently. Although some communes are maintaining and managing the facility under their own initiative, majority of communes are still conducting the activities passively.

Communes need to fulfill their duties and actively support actors for the Reform-based maintenance and management activities to take root firmly. To the end, efforts need to be made further to gain understanding of maintenance and management activities among commune members and promote their active involvement through follow-up and monitoring by administrative organizations in charge of water supply.

4) Hydraulic infrastructure maintenance and management by AUE

It is important for all concerned parties to support the purpose of the Reform and actively participate in the water supply facility maintenance and management system. Because further transparency of fund management is sought in the system based on the Reform, it becomes even more strict and complicated. Thus, it is not easy for AUEs consisting of villagers many of whom are illiterate to acquire the maintenance and management method. Thus, it is necessary to continue and enhance raising villagers' awareness and follow-up of AUE activities to gain their understanding and trust.

5) Capacity reinforcement and organization of artisan pump repairmen / maintenancier

Capacity reinforcement and formation of organization of pump repairmen was carried out as activities for improvement of pump repair system in the targeted region. Capacity reinforcement was mainly through the Reform training and technical training. It was very difficult for them to understand all the contents of the Reform system that included such difficult issues as contract for follow-up and monitoring of facilities and bidding procedures. Thus, the complementary training for review was very effective as many participants were able to understand what they could not understand completely in the previous training.

The technical training in 4th year was conducted in such a way that the

Maintenancier's association took the leadership in planning and implementing it with the Project assisting it. Skilled maintenanciers from each province were selected as training instructors and DPAH employees served as their assistants. Maintenanciers deepened their confidence and ties among themselves through the experience and their association is expected to plan training independently to be able to share knowledge and experiences.

Repairmen's associations that were not fully functioning were reorganized at the provincial level as maintenancier's association so that they will become active organizations. As a result, the network of repairmen expanded and they are now able to share skills, by calling skilled repairmen to learn how to repair difficult pump failures, for example. The union of Maintenancier's associations in the Central Plateau Region level for exchange and collaboration of the associations in the three provinces led to creation of ties and increase of autonomy and voices of maintenanciers and it is significant in the sense that maintenanciers who used to work individually before the Project are now influential as regional organizations.

6) Development of spare parts supply system

A system with the maintenancier's association serving as the parts distributors was developed as a spare parts supply system to respond swiftly to water supply facility failures. Because the association has produced a part price list, there will be fewer struggles between them and AUE as the prices are uniform across the province. Because of shortening of time for obtaining parts and easiness of access, the spare parts supply system led by the provincial maintenanceir's association is effective.

On the other hand, many repairmen are poor at paper work and some maintenancier's associations could not perform bookkeeping properly although they received training for inventory and fund management in the project. Thus, there is need to improve the bookkeeping method in accordance with the actual situation of each association.

Although spare parts prices are shared with communes and AUEs in the project, it is also essential to review the prices regularly and share the updated information.

10-2-2 Lessons related to hygiene and sanitation promotion activities

1) Collaboration among multiple ministries and agencies

Two approaches were taken for improvement of hygienic and healthy environment at the village level: direct approach to villagers and approach to students through school education. Thus, the activities were conducted in collaboration not only with the regional bureau of the Minister of Agriculture and Hydraulics (MAH), which is the C/P, but also with those of Ministry of Basic Education and Literacy (MENA) and Ministry of Health (MS).

The employees of MAH and MS have much contact with villagers in performing their routine work and they know their situations in detail. Partly because employees of the Ministry of Health are involved in promotion activities and campaigns for water sanitation and overall health and hygiene, involving them and collaborating with them is particularly effective for improvement of hygienic and healthy environment in the villages. On the other hand, awareness of importance of school hygienic condition is rising and it is included in moral education classes and health clubs of students and teachers for improving school hygienic environment is being established. Involving educational institutions where there is much consciousness of hygiene and education is provided for children who lead the future has a significant meaning.

2) Method of monitoring to evaluate hygienic behavioral changes

Trained administrative trainers for PHA monitored improvement of hygienic behaviors of villagers and students regularly in the project. A monitoring sheet with 10 items of the behaviors at village, 5 items at school, was produced and used. Three levels of behavioral changes of each item are indicated and the sheet was used quarterly for monitoring (sampling survey). This method is to measure the behavioral changes quantitatively. Comparing and analyzing survey results at the beginning and completion of the activities enables easy understanding of which hygienic behaviors are taking root favorably and which still have problems. It also shows that practice of the behaviors supports the feeling of villagers who worked on improvement of hygienic behaviors and it was useful not only for the promoters but also for beneficiaries.

Although the monitoring sheet has some points for improvement, it is useful as a method for quantitatively measuring behavioral changes that are hard to see and that can be hardly seen in a short period.

Motivation of village animator

Villagers who served as volunteer animators and school teachers conducted daily activities of PHA. Because it was part of school curriculum, teachers can continue hygiene education as their regular work and there is no specific problem of their motivation or sustainability. On the other hand, because village animators are volunteers and promotion activities require much tolerance and patience, maintaining

and ensuring their motivation has been a problem since the beginning of the Project. To tackle the problem, administrative trainers conducted quarterly monitoring and hygiene competition was held in villages and at schools to maintain the motivation of local actors—village animators and teachers. It is not exaggeration to say that monitoring and evaluation by concerned members other than project members or villagers until the activities yield some results affect the future activities. Because hygienic behavioral changes eventually depend on consciousness of individuals, it is important not to force them but to stimulate those well and providing opportunities for them to be aware that they are being observed and evaluated is effective.

4) Reorganization of executing agency

The Ministry of Agriculture and Hydraulics (MAH) that was in charge of water supply and hygiene was divided and the Ministry of Water, Hydraulic Planning and Sanitation (MEAHA) were established in January 2013.

Monitoring framework that DRAH/DPAH assisted communes and ZAT/UAT assisted AUE's activates was created through this project. The framework was demonstrated to be very effective for promotion of the Reform application. However, the reorganization had human resources who had played the core roles in the Reform application allocated under the supervision of different ministries and agencies. Particularly, human resources under the provincial bureau were mostly in agriculture and human resources in water are yet to be allocated sufficiently. The governmental reorganization has great impact on sustainability of the project. Although the Project has no power on such circumstances, it is important for the executing agency of Burkina Faso to reestablish a system to implement it under uncertain circumstances so that the project outputs will not be spoiled if reorganization of ministries and agencies and reorganization to the foot requires time.

10-3 Suggestions

 Reinforcement of commune-led system of hydraulic infrastructure maintenance and management

Communes need to play a central role in the Reform application. However, the implementation structure of the commune is fragile in terms of human resources and finance. They do not have sufficient ownership or initiative related to transfer of authority of water supply and hygiene including the Reform application.

Under the framework of decentralization of power to local governments, efforts for

awareness raising and capacity reinforcement of commune members, securing and developing human resources in charge of water supply and hygiene and transfer of power of financial issues are needed for communes to play a central role in water supply and hygiene including the Reform system independently.

2) Institutional improvement and development related to the Reform application

Various institutional problems and problems related to administrative procedures came to surface, which include AUE approval scheme, allocating budget for communes, and contract for maintenance of facilities between commune and maintenanciers and its execution, in the process of the Reform application in the Central Plateau Region. Efforts were made to solve the problems in collaboration and discussions with concerned administrative organizations in the Central Plateau Region.

It is essential to work in collaboration with MEF and MATS and other concerned ministries and agencies of the central government with DGRE as it core to improve the institutional problems in order to spread the Reform system across the nation.

3) Review of contract between commune and maintenanciers

The maintenance service contract between commune and maintenanciers includes different work of repair and part procurement requested by the AUE in addition to follow-up and monitoring in the commune. Commune commissions the work of follow-up and monitoring to maintenanciers and make payment for the service and AUE requests maintenanciers for repair and parts procurement and pay for it. Thus, the commune is not directly involved in repair and part procurement or payment for it. Thus, we suggest that the contents of contract for follow-up and monitoring concluded between a commune and maintenanciers be reviewed, limit it to follow-up and monitoring only and memorandum of understanding be concluded separately for repair and spare parts procurement between the DRAH and maintenanciers.

Payment from a commune to maintenanciers for follow-up and monitoring of PMH is often behind the schedule. The payment is rarely made by the deadline specified in the contract and this lowers the motivation of maintenanciers. These conditions that contradict the actual situation should be revised.

4) Response to literacy level of maintenciers

Although there are several maintenanciers who received secondary education, many of them are less educated and some are illiterate. Thus, most of French materials distributed in the project were translated in the local language of Moore and redistributed. Because they did not understand all the contents of the Reform training, there is need to provide them with opportunities to promote their understanding. It is very difficult for illiterate repairmen to handle document under the Reform system and the language being French makes the situation even more complicated. Thus, it is desired that use of local language as well as French be allowed in filling in the pump monitoring sheet for follow-up and monitoring of water supply facilities.

5) Sanitation and hygiene promotion activities involving multiple ministries and agencies

As described earlier, PHA involving multiple ministries and agencies were effective throughout the Project. Although the MENA were regarded as concerned organizations in the Project, the role it played was very significant. However, the initiative of the two ministries that were concerned organizations were weak when compared with the MAH that was the main C/P at the central and bureau director level, although the ties at the focal point level were very strong and they collaborated.

Because the Project was not limited to hygiene but it focused on both water supply and hygiene, there is every reason why MAH in charge of water supply and hygiene was the main C/P. However, it is very difficult to achieve the overall goal without active involvement of other ministries than the main C/P of MAH and collaboration of the three ministries when the overall goal and project objectives are to improve hygienic and healthy environment of water of villagers. Thus, it is very important to encourage concerned organizations through the project activities partly to have them aware of their responsibilities similar to those of the C/P.

6) Utilization of trained human resources

As described in Lessons as for securing sustainability of motivation of village animators involved in activities as volunteers, introduction of trained human resources to other donors may help improve their consciousness of hygiene and further promote improvement of hygienic environment, in addition to have people outside the village (commune members and administrative officers, etc.) to observe the village regularly, when the situation in which donors are actively intervening hygiene issues is taken into consideration. As hygiene-related assistance has been actively provided in Burkina Faso, each donor is developing actors in the sector. Utilization of exiting human resources is efficient and effective for donors and it helps animators and other actors gain confidence. Thus, a system to utilize such trained human resources will be valuable in the hygiene sector. This is already tried in Boussé, capital of the province where Toéghin is situated. Such efforts are expected to lead to promotion of activities in the sector in Burkina Faso.