

Attachments:

- Attachment A. The latest Project Design Matrix (PDM) and Plan of Operation (PO)
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Project Design Matrix (PDM)

Version: 1 (Current Version)

Title of the Project: Technical Cooperation Project on Community-based Smallholder Irrigation (T-COBSI)

Project Period: From May 7 2013 to December 31 2016

Implementing Organization: Ministry of Agriculture and Livestock (MAL)

Target Areas: Districts where the pilot project was implemented under the Study for Capacity Building and Development for Community-based Smallholder Irrigation Schemes in Northern and Luapula Province in the Republic of Zambia in 2009 to 2011

Target Beneficiaries / Groups: Technical Staff from TSB, extension officers and smallholder farmers in the target areas

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<p>Overall Goal</p> <p>1. Irrigated agricultural production in the target areas is increased.</p>	<p>1. Production of crop by at least 700 farmer groups (Note 1) is increased in the target areas by March 2020.</p>	<p>* Annual reports of the districts</p>	<p>* Smallholder irrigation continues to be a focus area of the policies</p>
<p>Project Purpose</p> <p>To promote and increase irrigated land through the provision of irrigation infrastructure for smallholder farmers in the target areas.</p>	<p>1. More than 500 farmer groups (Note1) in the target areas are engaged in improved irrigated farming with community-based smallholder irrigation schemes.</p> <p>2. The community-based smallholder irrigation schemes cover 700 ha (70 ha by permanent weir and 630 ha by simple weir) or more (Note 2 & 3) in target areas.</p> <p>Apart from the above indicators, GRZ has set a target to construct 36 permanent weirs covering 180ha in the target areas. The GRZ target will be evaluated by the GRZ.</p>	<p>* Results of the Project's monitoring survey</p> <p>* Annual reports of the districts</p>	<p>* No drastic climate change to negatively affect the agricultural production takes place.</p> <p>* Prices of agricultural produce and agro-inputs do not change drastically.</p>
<p>Outputs</p> <p>1. Through hands-on experience, practical skills in design, construction, operation, and maintenance of simple and permanent irrigation facilities for smallholder irrigation schemes are transferred to Technical Staff from TSB.</p>	<p>1.1 Preparatory activities are conducted for at least 400 existing simple irrigation weirs which were developed in the previous study in 2009 to 2011 for upgrading to permanent weirs.</p> <p>1.2 At least 20 Technical Staff from TSB acquire training experience and skills through design and construction of 14 permanent irrigation weirs and 486 simple irrigation weirs.</p> <p>1.3 At least 15 Technical Staff from TSB acquire training experience and skills on permanent weir construction for 36 permanent weirs (Note 4) to be constructed by GRZ.</p>	<p>* Project's training reports</p> <p>* Annual reports of the districts</p>	<p>* There is no drastic incidence to negatively affect the conditions of the sources of water for smallholder irrigation in the target areas.</p> <p>* There is no serious conflict among the farmers in the target areas.</p>
<p>2. Through hands-on experience, practical skills in construction, operation, and maintenance of simple and permanent irrigation weirs for smallholder irrigation weirs are transferred to MAL extension officers.</p>	<p>2.1 More than 150 extension officers acquire training experience and skills in smallholder irrigation farming and on operation and maintenance of smallholder irrigation schemes.</p> <p>2.2 More than 90% of trained extension officers disseminate techniques in smallholder irrigation farming and operation and maintenance of smallholder irrigation schemes to farmer groups in their respective areas.</p>	<p>* Project's training reports</p> <p>* Annual reports of the districts</p>	<p>* Funds for upgrading of simple weirs to permanent weirs are provided.</p>
<p>3. Knowledge and skills of farmers in irrigated</p>	<p>3.1 More than 50% of farmer groups in the developed weirs apply at least one of</p>	<p>* Results of the Project's</p>	

farming and operation and maintenance of simple and upgraded permanent irrigation schemes are improved.	the irrigated farming technologies disseminated by the trained officers.	monitoring survey * Annual reports of the districts	
<p>Activities</p> <p>1.1 Conduct group training for Technical Staff from TSB on design, construction, operation, and maintenance (O&M) of smallholder irrigation schemes.</p> <p>1.2 Train farmers on basic O&M of smallholder irrigation schemes through the on-the-job training (OJT) for Technical Staff from TSB.</p>	<p><u>Zambian Side</u></p> <ul style="list-style-type: none"> - Assignment of Project personnel <ul style="list-style-type: none"> a. Project Director b. Project Manager c. Counterpart personnel - Assignment of supporting staff 	<p>Inputs</p> <p><u>Japanese Side</u></p> <ul style="list-style-type: none"> - Dispatch of experts in the relevant fields such as: <ol style="list-style-type: none"> 1) Team Leader/ Irrigation Planning and Management 2) Co-Team Leader/ Farming System/ Training Design 3) Irrigation Facility Design and Construction Control 4) Water Management/ Irrigation Facility Design and Construction Control (2) 5) Agricultural Marketing 6) Rural Society/ Farmers Organization/ Gender 7) Environmental and Social Considerations - Training of counterpart personnel in Japan and/or the 3rd country - Provision of machinery, equipment and materials for training activities - Supplemental operational cost as needs arise (as per rules and regulations of JICA's Technical Cooperation Projects) 	<p>* Trained officers continue their services in the target areas.</p>
2.1 Conduct group training for extension officers on construction, O&M of smallholder irrigation schemes.	- Provision of office spaces at DOA headquarters and in each province		
3.1 Conduct group training for extension officers on the on-farm water management.	- Provision of operational costs		Preconditions
3.2 Disseminate knowledge and techniques of on-farm water management to the farmers in the target areas.			* Peace and order situation in the target areas is stable
3.3 Conduct group training for extension officers on techniques of irrigated crop production.			* Rural communities in the target areas are willing to take part in the project activities
3.4 Disseminate knowledge and techniques of irrigated crop production to the farmers in the target areas.			

* Note 1: "Farmer groups" referred in the indicators are the groups of farmers in the targeted irrigation sites.

* Note 2: Coverage area of permanent irrigation weirs is derived from calculation based on the average acreage of upgraded permanent irrigation weirs by the Pilot Phase.

* Note 3: Coverage area of simple irrigation weirs is derived from calculation based on the data of Evaluation Workshop in 2014.

*Note 4: GRZ has budgeted resources for 2015 specifically for T-COBSI.

Plan of Operations (PO)

Version 1

Project Title: Technical Cooperation Project on Community-based Smallholder Irrigation (T-COBSI)

Overall Goal: Irrigated agricultural production in the target areas is increased.

Project Purpose: To promote and increase irrigated land through the provision of irrigation infrastructure for smallholder farmers in the target areas.

Project Period: Four (4) years from the date of the first dispatch of Japanese Expert(s)

Activities																						Responsibility
	JFY2013		JFY2013				JFY2014				JFY2015				JFY2016				JFY2017			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Preparatory Activities																						
0-1 Set up the Project																						HQ TSB officers
0-2-1 Conduct follow up monitoring of the pilot projects in the former Study on irrigation and agronomy, and revise the training materials, if necessities arise. The monitoring team will consist of Headquarter (HQ) TSB officers (C/P), provincial officers and JICA experts.																						HQ TSB officers, Provincial TSB offices
0-2-2 Revise the training plan, if necessities arise.																						HQ TSB officers, Provincial TSB offices
Output 1: Through hands-on experience, practical skills in design, construction, operation, and maintenance of simple and permanent irrigation facilities for smallholder irrigation schemes is transferred to TSB staff.																						
1-1 Conduct group training for TSB officers on design, construction, operation, and maintenance (O&M) of smallholder irrigation schemes.																						
1-1-2 Arrange and conduct kick-off training																						
1-1-3 Conduct refresh training																						
1-2 Train farmers on basic O&M of smallholder irrigation schemes through the on-the-job training (OJT) for TSB officers.																						
1-2-1 Conduct site identification, design, BOQ, Costing																						Provincial and district TSB officers
1-2-2 Conduct up-front, procurement of foreign materials and tools.																						
1-2-3 Conduct construction supervision.																						
Output 2: Through hands-on experience, practical skills in construction, operation, and maintenance of simple and permanent irrigation facilities for smallholder irrigation schemes is transferred to MAL extension officers.																						
2-1 Conduct group training for extension officers on construction, O&M of smallholder irrigation schemes.																						
2-1-1 Arrange and conduct training of trainers (TOT) course																						BEOs/CEOs
2-1-2 Arrange and conduct kick-off training																						
2-1-3 Arrange and conduct follow up training (monitoring the performance)																						
2-1-4 Conduct total follow up training (total monitoring of the performance)																						
2-1-5 Inspect and give advices for extension officers to supervise farmer groups.																						
Output 3: Knowledge and skills of farmers in irrigated farming and operation and maintenance of simple and upgraded permanent irrigation schemes and facilities are improved.																						
3-1 Conduct group training for extension officers on the on-farm water management.																						
3-1-1 Arrange and conduct training of trainers (TOT) course																						BEOs/CEOs
3-1-2 Arrange and conduct kick-off training																						
3-1-3 Arrange and conduct follow up training (monitoring the performance)																						
3-1-4 Conduct total follow up training (total monitoring of the performance)																						
3-2 Disseminate knowledge and techniques of on-farm water management to the farmers in the target areas.																						BEOs/CEOs

Attachment A-3

Assignments of Major Counterparts (Officially Assigned PIU members)

Institution	Name, Position	Area of Specialty	Assigned Period	Name of Expert in Charge	Employment Period in the Institution		Remarks: e.g. level of involvement in project
					From	To	
MOA	Kenneth Zulu, Senior Irrigation Engineer (N)	Irrigation engineering	May 2013 to Dec 2014	All the experts as assigned	N/A	Present	Member of the PIU in Northern
MOA	Sifaya Mufalali, Senior Farm Power Mechanization Officer (N)	Irrigation/ Farm power mechanization	May 2013 to Apr 2017	All the experts as assigned	N/A	Present	Member of the PIU in Northern
MOA	Ackson Mbewe, Senior Technical Officer (N)	Irrigation/ general agriculture	May 2013 to Apr 2017	All the experts as assigned	N/A	Present	Member of the PIU in Northern
MOA	Kelvin M. Simukoko, Senior Technical Officer (N)	Irrigation/ general agriculture	May 2013 to Apr 2017	All the experts as assigned	N/A	Present	Member of the PIU in Northern
MOA	Annie Bluaya Senior Technical Officer (N)	General agriculture	May 2013 to Apr 2017	All the experts as assigned	N/A	Present	Part time member of PIU in Northern
MOA	David M. Tembo (N)	Irrigation engineering	April 2015 to Apr 2017	All the experts as assigned	N/A	Present	Member of the PIU in Northern
MOA	Nelson Phiri, Technical Officer (M)	Irrigation/ general agriculture	May 2013 to Dec 2014	All the experts as assigned	N/A	Present	Member of the PIU in Muchinga
MOA	Stephen Syansingu (M)	General agriculture	May 2013 to Apr 2017	All the experts as assigned	N/A	Present	Member of the PIU in Muchinga
MOA	Mayson Saila, Acting Senior Irrigation Engineer (L)	Irrigation engineering	May 2013 to Apr 2017	All the experts as assigned	N/A	Present	Member of the PIU in Luapula
MOA	Obed Chanda, Acting Senior Land Husbandry Officer (L)	Irrigation/ general agriculture	May 2013 to Apr 2017	All the experts as assigned	N/A	Present	Member of the PIU in Luapula
MOA	Jonathan Sinkolongo, Principal Technical Officer (L)	General agriculture/ GIS	May 2013 to Apr 2017	All the experts as assigned	N/A	Present	Member of the PIU in Luapula

MOA: Ministry of Agriculture and Livestock/ PIU: Project Implementation Unit (established in each province)/ N: Northern Province, M: Muchinga Province, L: Luapula Province.

List of Equipment Procured under the Project and Handed over to the Counterpart Agency

No.	Asset	Spec	Currency	Cost	Date of purchase	User Dept
1	Mitsubishi Pajero	Pajero	ZMW	327,400.00		PACO's office, Northern province
2	Mitsubishi Pajero	Pajero	ZMW	327,400.00		PACO's office, Luapula Province
3	Copy machine	Canon IR 2520	ZMW	26,293.00	Sep 2013	TSB office, Northern province
4	Color printer	Canon i-SENSYS LBP7750CDN	ZMW	5,313.00	Sep 2013	TSB office, Northern province
5	Printer	Canon IR 1020	ZMW	5,171.00	Sep 2013	TSB office, Luapula province
6	Laptop computer	Toshiba Satellite L855	ZMW	5,397.00	Sep 2013	TSB office, Northern province
7	Laptop computer	Toshiba Satellite L855	ZMW	5,397.00	Sep 2013	TSB office, Northern province
8	Laptop computer	Toshiba Satellite L855	ZMW	5,397.00	Sep 2013	TSB office, Northern province
9	Laptop computer	HP Compaq 650	ZMW	5,397.00	Sep 2013	TSB office, Northern province
10	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Kasama district
11	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Mungwi ditrict
12	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Mporokoso ditrict
13	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Mbala ditrict
14	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Luwingu ditrict
15	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Nsama district
16	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Nakonde district
17	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Mpika district
18	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Isoka district
19	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Mafinga district
20	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Shiwang'andu district
21	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Mansa district
22	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Mwense district
23	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Kawambwa district
24	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Nchelenge district
25	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Milenge district
26	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Mwansa Bombwe district
27	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Chipili district
28	Auto level	STANLEY AL24	ZMW	8,146.56	Sep 2016	DACO's office, Chembe district
29	Generator	Jiang Dong S1100WP	ZMW	11,800.00	Dec 2014	TSB office, Northern province
30	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Kasama district
31	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Mungwi ditrict
32	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Mporokoso ditrict
33	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Mbala ditrict
34	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Luwingu ditrict
35	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Nsama district
36	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Nakonde district
37	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Mpika district
38	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Isoka district
39	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Mafinga district
40	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Shiwang'andu district
41	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Mansa district
42	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Mwense district
43	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Kawambwa district
44	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Nchelenge district
45	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Milenge district
46	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Mwansa Bombwe district
47	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Chipili district
48	Motorbike	YAMAHA AG200	ZMW	47,000.00	Apr 2017	DACO's office, Chembe district
49	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Northern province
50	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Northern province
51	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Northern province
52	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Northern province
53	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Northern province
54	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Northern province
55	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Northern province
56	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Luapula province
57	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Luapula province
58	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Luapula province
59	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Luapula province
60	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Luapula province
61	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	TSB office, Muchinga province
62	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	DACO's office, Kasama district
63	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	DACO's office, Mpika district
64	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	DACO's office, Nakonde district
65	GPS	GARMIN GPS Map 64	ZMW	4,890.00	Apr 2017	DACO's office, Kawambwa district
66	Laptop computer	HP Probook 450 G3	ZMW	8,300.00	Apr 2017	TSB office, Northern province
67	Laptop computer	HP Probook 450 G3	ZMW	8,300.00	Apr 2017	TSB office, Northern province
68	Laptop computer	HP Probook 450 G3	ZMW	8,300.00	Apr 2017	TSB office, Northern province
69	Laptop computer	HP Probook 450 G3	ZMW	8,300.00	Apr 2017	TSB office, Luapula province
70	Laptop computer	HP Probook 450 G3	ZMW	8,300.00	Apr 2017	TSB office, Luapula province
71	Laptop computer	HP Probook 450 G3	ZMW	8,300.00	Apr 2017	TSB office, Luapula province
72	Laptop computer	HP Probook 450 G3	ZMW	8,300.00	Apr 2017	TSB office, Luapula province
73	Laptop computer	HP Probook 450 G3	ZMW	8,300.00	Apr 2017	TSB office, Muchinga province
74	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	TSB office, Luapula province
75	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Kasama district
76	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Kasama district
77	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mungwi ditrict

No.	Asset	Spec	Currency	Cost	Date of purchase	User Dept
78	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mungwi ditrict
79	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mbala ditrict
80	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mbala ditrict
81	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mporokoso ditrict
82	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mporokoso ditrict
83	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mpika ditrict
84	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mpika ditrict
85	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Isoka ditrict
86	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Isoka ditrict
87	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Nakonde ditrict
88	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Nakonde ditrict
89	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mansa ditrict
90	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mansa ditrict
91	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Kawambwa ditrict
92	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Kawambwa ditrict
93	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mwense ditrict
94	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mwense ditrict
95	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Chipili ditrict
96	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Chipili ditrict
97	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Nchelenge ditrict
98	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Nchelenge ditrict
99	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Luwingu ditrict
100	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Nsama ditrict
101	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mafinga ditrict
102	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Shiwang'andu ditrict
103	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Milenge ditrict
104	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Mwansa Bombwe ditrict
105	Desktop computer	HP Desktop 490 G3 MT	ZMW	10,257.40	Apr 2017	DACO's office, Chembe ditrict

**MINUTES OF
THE JOINT COORDINATION COMMITTEE MEETING OF JICA PROJECTS
HELD AT GRAND PALACE HOTEL
ON 7TH NOVEMBER 2013**

PRESENT

No	Name	Position
1	Mr. N.Chikwenya	Acting Director Policy & Planning Department
2.	Mr. Peter Lungu	Acting Director, Department of Agriculture
3	Mr. Timothy Tonga	M& E Officer, Policy and Planning Department
4	Mr. N Daka	Deputy Registrar, Department of Cooperatives
5	Mr. T Kato	2 nd secretary, Embassy of Japan
6	Mr. Charles Sondashi	Ag. Deputy Director – Advisory Service, Department of Agriculture HQ
7	Mr. Derrick Chimanga	Ag. Provincial Agricultural Coordinator-Lusaka
8	Mr. Andrew Banda	Provincial Agricultural Coordinator-Northern
9	Mr. Liyembeni Luhamba	Provincial Agricultural Coordinator-Western
10	Mr. Chate Godwin	Provincial Agricultural Coordinator-Luapula
11	Dr. Victor Mulopa	Provincial Agricultural Coordinator-Muchinga
12	Mr. Pascal Chipasha	Principal Agricultural Officer-Lusaka
13	Mr. Charles Kapalasha	Principal Agricultural Officer-Northern
14	Mr. Mwiya Mukungu	Principal Agricultural Officer-Western
15	Mr. Osbed Hamweete	Principal Agricultural Officer-Luapula
16	Mr. Fred Chikuta	Principal Agricultural Officer-Muchinga
17	Mr. Masayoshi Ono	Chief Advisor (RESCAP)
18	Mr. Goichi Sasakai	Extension Advisor (RESCAP)
19	Mr. Takahiro Miyoshi	M & E Advisor (RESCAP)
20	Mr. Peter K Lungu	Ag. Director, Department of Agriculture
21	Mr. Kenneth Zulu	Provincial Irrigation Engineer-Northern
22	Mr. Nelson Phiri	Provincial Irrigation Engineer-Muchinga
23	Mr. Obed Chanda	Provincial Irrigation Engineer-Luapuala
24	Mr. Chiba	Consultant T-COBSI
24	Dr Phiri	Deputy Director (ZARI)
25	Mr. Mwila	Chief Agriculture Research Officer-Chilanga
26	Mr. Henry Mgomba	Principal Farm Management Officer, Department of Agriculture, HQ
27	Mr. Malumo Nawa	Chief Crops Agronomist
28	Mr. Chitambi	Principal Agricultural Research Officer-Northern
29	Mr. Christantius Mutale	Agricultural Research Officer, Western
30	Mr. Mathias Ndlovu	Senior Agricultural Research Officer-Chilanga ZARI

31	Dr. Catherine Mungoma (Ms)	Director of SCCI
32	Mr. Yukinori Ito	Chief Advisor - FoDiS-R
33	Mr. Iino	JICA Expert – FoDIS-R
34	Mr. Yoshihide Teranishi	Chief Representative, JICA Zambia Office
35	Ms Mamiko Tanaka	Assistant Resident Representative, JICA Zambia Office
44	Mr. Patrick Chibbamulilo	Senior Programme Officer, JICA Zambia Office

The Joint Coordination meeting was held at the Grand Palace Hotel on the 7th November 2013. The meeting comprised of three JICA projects namely the Food Crop Diversification Support Project Focusing on Rice Production (FoDiS-R); the Technical Cooperation Project on Community Based Smallholder Irrigation (T-COBSI); and the Rural Extension Service Capacity Advancement Project (RESCAP).

The meeting commenced at 0830hrs and it was chaired by Mr. Nicholas Chikwenya, the Acting Director for Department of Policy and Planning. The Introductions were done starting with the Deputy Director Agriculture-Advisory Services Branch Mr. Charles M. Sondashi.

Welcoming Remarks

After the introductions were done, Mr. N. Chikwenya welcomed everyone to the joint JICA Projects Coordinating Committee meeting. In his welcoming remarks Mr. Chikwenya disclosed the purpose of the meeting:

- To receive progress reports, challenges and chart the way forward in all three areas of project implementation
- To re-focus to obtain the desired results

In addition to this, he announced that while projects had held separate coordinating meetings, they would now be done jointly hereon in order to reduce on costs. Further points mentioned included:

- That synergies would be brought-out as the projects were being implemented
- That the agenda was circulated and the members were free to comment. The agenda was proposed for adoption and was seconded by one of the members.

The JICA Chief Resident Representative Mr. Yoshihide Teranishi read the opening speech.

In his speech he welcomed all the people that were present and urged all the stakeholders to participate in the discussions for the fruitfulness of the meeting.

He said that he was pleased to be part of the landmark meeting which saw the three projects in the Cooperation in the Agriculture sector coming together under one roof. These Projects are namely the Food Crop Diversification Support Project Focusing on Rice Production (FoDiS-R); the Technical Cooperation Project on Community Based Smallholder Irrigation (T-COBSI); and the Rural Extension Service Capacity Advancement Project (RESCAP).

He mentioned that the purpose of the meeting was for fruitful discussions that would enhance mutual understanding to attain the objectives of each technical cooperation project successfully. He also pointed out that JICA has been training about 100 staff each year and as at 2013 the figures stood at 3,000

since 1968. He also said that there has been some Ministry staff who received training in Japan in the different sectors of Agricultural extension, Irrigation, Policy and statistics and Fisheries and Livestock to mention but just a few.

He also highlighted the fact that the Japanese Government has contributed the largest portion in grant form to the Agriculture sector compared to other Cooperating partners (based on the recent ODA study in Zambia).

Mr. Teranishi also mentioned that JICA has been cooperating in the area of agricultural mechanization by piloting some tractor scheme with the Ministry and hopes that the Ministry would continue to work diligently towards resolving difficulties encountered to ensure success. The JICA representative also mentioned that, at the time of the meeting, there were seven Japan Overseas Cooperation Volunteers that were working in the Agriculture Sector, based in Kafue, Kasama, Luwingu and Chinsali District. He further said these volunteers were complementing projects like RESCAP and FODIS-R.

He assured the meeting that JICA was committed to working with the Government of Zambia as Partners towards meeting the aspirations of the Zambian people. He looked forward to improved dialogue so that collaboration in areas of importance would be more effective.

He also stressed that JICA would remain open to discuss with the Ministry in order to align Projects to the changing environment, as long as changes are compatible with the JICA framework of Cooperation.

The JICA representative also recognized the efforts that had been put towards the organization of the meeting and thanked everyone for taking their time off their busy schedules to be a part of the meeting.

Presentation of Achievement and Planned Activities of the three (3) JICA Projects

The Presentations were done by each Project to highlight the activities being undertaken by each project. There was also a question and answer session after the presentation to seek clarifications make comments and also to make recommendations as follows:

Summary of Question and Answers on T-COBSI

1. Setting of Targets in advance; One of the participants wanted to know why the targets, as to how many farmers will benefit and how much area (Ha) will be developed, had not been set, since the project had already started.

The SIE (Senior Irrigation Engineer) in Northern Province indicated that the survey on the impact of the Pilot project of COBSI will determine which sites will qualify for upgrading to permanent structures. And based on the unit targets set, i.e. area (Ha) per site, number of beneficiaries per site, the overall target will be determined. Additionally, GRZ (Government of the Republic of Zambia) financial support will also influence the number of sites to be developed.

2. Sustainability of Irrigation Schemes Developed; The participants wanted to know what JICA is doing differently to ensure that there is sustainability of the irrigation schemes after donor (JICA) support has been withdrawn.

The Deputy Director of TSB (Ag. Director of Agriculture) reported that unlike past projects, JICA has done extensive training of both farmers and Officers. Additionally there is strong component of

community participation from inception and thus enhancing the sense of community ownership thereby guaranteeing sustainable maintenance of the schemes.

3 Training of Technical Officers and Camp Extension Officers; One participant wanted to know whether the trainings indicated by the presenter would include promotion of irrigation packages including agronomical, marketing, and farmers organizational aspects since putting up infrastructure without supporting those aspects usually leads to the infrastructure not fully utilized. The PIE (Provincial Irrigation Engineer) for Northern Province responded in the affirmative and added that exposure visits will be arranged for farmers where the infrastructure will be developed and this would be to schemes which have recorded success such as Chinenke irrigation scheme in Mbala district.

4. Training of TSB Officers from Other Provinces on COBSI; The PACO for Western Province wanted to know if it was possible to extend the training in COBSI approaches and techniques to other provinces to narrow the technological gap in TSB officers countrywide. He further added that this would enable the TSB officers implement the COBSI approach using GRZ funding in the other provinces not under the project.

The acting Director of Agriculture (Deputy Director of TSB) supported the idea and JICA indicated that the proposal can be considered for discussion considering that there was no budget line for the inclusion of other provinces. JICA indicated that there would be no problem if GRZ would sponsor staff from other provinces for training to the project areas. However, there would be need for discussions if experts were to be requested to move to other provinces to undertake the training because there is no budget for activities in non-target provinces.

5. Comments; The PACO for Northern commented that in some instances the weirs constructed for irrigation are also used as crossing points by communities, thereby adding extra load to the structure. He added that the thirty year period before maintenance may be required is rather too long unless the concrete works are done to the highest standards. He stated that what the province has done is to facilitate the formation of community based maintenance committees in the schemes.

The Assistant Director, Agri-business added that besides maintenance committees, there is need to incorporate the aspects of agri-business so that the targeted smallholder farmers may generate income. This idea was supported and district officers were encouraged to train CEOs implementing T-COBSI in issues of marketing activity.

Summary of Question and Answers on RESCAP

PACO Western Province enquired why Western Province is not given further allocation of funds for the expansion of PaViDIA Micro Projects. Mr. Mgomba, Principal Farm Management Officer of DoA HQ explained that the funding is different from the ones for Western Province (WFP/Japan Fund) and the one for North Western and Northern Provinces (KR2 Counterpart Fund). It was further explained that the progress of the implementation of the project in Western Province is rather slow and the funding from WFP/Japan is still being utilized with the implementation of the second and third sub-projects in the target Districts.

Summary of Question and Answers on FoDiS-R

1. **Q:** What is the adoption rate in the target areas where farmers are growing rice for the first time? For example in Kafue and Nyimba.
A: Indicative statistics are that the project has an adoption rate between 60 and 90 % though it is very difficult to measure adoption at the time the project is implementing- especially that this is only the second year of project implementation. The adoption rate of the project activities can be measured after the project has come to an end
2. **Q:** FISP is promoting and distributing rice in FoDiS-R none target areas. How is it operating to compliment the activities in its none target areas.
A: The Department of Agriculture (DoA) is the one responsible for the rice activities in FoDiS-R none target areas. The districts involved undertake demonstrations to spearhead the production of the crop. For the next year, DoA will try to include FoDiS-R target area into FISP program so that both activity can be corroborate well.
3. **Q:** In order to optimize adoption, FoDiS – R should target rice areas which are traditionally growing rice.
A: This point was taken and it was explained that the project is targeting both areas were rice is traditionally being grown and areas were rice is not grown. The major reason for growing rice in none traditional areas is that the areas have a very big potential due to the existence of continuous water sources and dambos.
4. **Q:** Who has been offering free rice shelling services and where?
A: The project offered free rice shelling services to farmers in Nyimba to encourage farmers on production. This was undertaken to make farmers realize that their quality of rice was as good as the rice that is sold in the shops

Concluding Remarks

The acting Director Policy and Planning thanked all that participated in the meeting being the first of its kind. Specifically he thanked all those that travelled from the provinces.

He also thanked JICA for the meeting to provide synergies.

He further said that he hopes to see more of such meetings in 2014 taking place. He also stressed that the Ministry was keen to see more of these Joint Coordinating/Steering meetings as this would help to cut down on the costs.

He was expectant that all the three JICA projects would include comments provided by the participants to refine their projects and improve the way activities were being conducted. He thanked all once again, and assured that these meetings will be held once a year and that JICA would advise when the next meeting would be held. The meeting ended at 12:48hrs.

MINUTES OF MEETING
ON
THE MID-TERM REVIEW
ON
TECHNICAL COOPERATION PROJECT ON
COMMUNITY-BASED SMALLHOLDER IRRIGATION
IN THE REPUBLIC OF ZAMBIA

Japan International Cooperation Agency (hereinafter referred to as "JICA") and Ministry of Agriculture and Livestock organized the Mid-term Review Team (hereinafter referred to as "the Team") from November 24 to December 10, 2014 in order to review the progress and achievements of the Technical Cooperation Project on Community-Based Smallholder Irrigation (hereinafter referred to as "the Project").

After the intensive study and analysis of the progress and achievements of the Project, the Team prepared a Joint Mid-term Review Report (hereinafter referred to as "the Report") attached and presented it to the Joint Coordinating Committee (hereinafter referred to as "the JCC") held in Lusaka on December 10, 2014.

At the JCC, persons concerned with the Project discussed the major issues of the Project stated in the Report and agreed on the matters attached hereto.

Lusaka, December 10, 2014



Mr. Hisanao NODA
Chief Representative
Japan International Cooperation Agency (JICA)
Zambia Office



Mr. Peter Lungu
Director, Department of Agriculture,
Ministry of Agriculture and Livestock
Republic of Zambia

Main points of discussions based on the Report at the Meeting are as follows.

1. Acceptance of the Report

After the intensive discussion, persons participated in the Meeting accepted the Report and agreed to take necessary actions to each recommendation.

2. Revision of Project Design Matrix (PDM)

The Team proposed the revised PDM (version 1) and JCC agreed and accepted it after the intensive discussion.

3. Extension of the Project

The Project activities have been progressing well and the outputs have been getting attained. However JICA noted the necessity of continuous activities on the monitoring and evaluation of the COBSI Approach in the target areas. It is, therefore, proposed that the Project period be extended for six (6) months, starting from December 31, 2016 to June 30, 2017.

After the intensive discussion, JCC approved the proposal, and JICA and GRZ agreed to take necessary actions to the extension of the Project period.

Attachment 1: List of Attendees

Attachment 2: Joint Mid-term Review Report



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List of Attendees

Attachment 1

No	Name	Affiliation/Position	Station
Ministry of Agriculture and Livestock			
1	Mr. Peter K Lungu	Director of Department of Agriculture	Lusaka
2	Mr. David Mundia	Director of Department of Agribusiness and Marketing	Lusaka
3	Mr. Maketo Mubyana	Director of Department of Cooperatives	Lusaka
4	Mr. Sakara Emmanuel	Deputy Director of Technical Services Branch	Lusaka
5	Mr. Chate Godwin	Provincial Agricultural Coordinator, Luapula	Mansa
6	Dr. Victor Mulopa	Provincial Agricultural Coordinator, Muchinga	Chinsali
7	Mr. Andrew Banda	Provincial Agricultural Coordinator, Northern	Kasama
8	Mr. Osbed Hamweete	Principal Agricultural Officer, Luapula Province	Mansa
9	Mr. Fred Chikuta	Principal Agricultural Officer, Muchinga	Chinsali
10	Mr. Charles Kapalasha	Principal Agricultural Officer, Northern	Kasama
11	Mr. Saila Mayson	Provincial Irrigation Engineer, Luapula	Mansa
12	Mr. Syansingu Stephen	Provincial Irrigation Engineer, Muchinga	Chinsali
13	Mr. Sifaya Mufalali	Farm Power Mechanization Engineer, Northern	Kasama
14	Dr. Jiro Nozaka	JICA advisor	Lusaka
Mid-term Review Team			
15	Mr. Emmanuel Mabvuto Nyirenda	Principle Irrigation Engineer, Department of Agriculture	Lusaka
16	Ms. Harriet Matipa	Economist, Department of Policy & Planning	Lusaka
17	Mr. Shinjiro Amameishi	JICA headquarter	Tokyo
18	Mr. Takuya Oiwa	JICA headquarter	Tokyo
19	Mr. Atau Kishinami	Consultant	Tokyo
Embassy of Japan			
20	Hiroyasu KIRIOKA	Second Secretary, Embassy of Japan	Lusaka
JICA			
21	Mr. Hisanao Noda	JICA Chief Representative	Lusaka
22	Dr. Isaya Higa	ARR	Lusaka
23	Mr. Patrick Chibbamulilo	Senior Programme Officer	Lusaka
24	Mr. Tatsuya Ieizumi	JICA Expert, T-COBSI	Kasama
25	Mr. Hideaki Hiruta	JICA Expert, T-COBSI	Kasama
26	Ms. Makiko Yamamoto	JICA Expert, T-COBSI	Kasama
Others			
27	Mr. Tokutaro Iino	JICA Expert, FoDiS-R	Lusaka



P. K. Lungu

MINUTES OF THE JCC MEETING HELD ON 10TH DECEMBER, 2014.

Summary of the Discussion

1. Financial resources from GRZ needs to be released and on time to ensure consistency on implementation of activities
2. To minimize unnecessary disputes, farmer groups need to be established and legalized as cooperatives
3. Acquirement of water permits by farmer groups needs to be facilitated by MAL where applicable
4. Collaboration with other stakeholders and MAL departments should be considered and encouraged especially in training associated with agribusiness, marketing, linkages between producers and retailers
5. Indicators of the project purpose and outputs need to be quantified such as size of area brought under irrigation, for the easy assessment of the Project
6. Diversification need to be considered and encouraged; specifically fish farming where the demand is high
7. Pilot activities of the SHEP approach need to be tailored to the local conditions

Discussion

Crop Diversification

- There is a need to ensure that food insecurity is not created as farmers grow crops for selling. To promote food security, farmers must be encouraged to grow and sell horticulture crops as encouraged by the GRZ's policy on crop diversification and food security.
- It was reported that under T-COBSI, irrigation is encouraged and applied during the dry season for various horticulture crops which farmers can grow and sell. Therefore, staple foods such as maize and cassava are still produced during the rainy season hence food security is maintained.
- Further, irrigation enables farmers to have a wider choice of crops to produce. As a result of irrigation, farmers produce both during the dry season as well as the rainy season.

Budget Disbursement

- Low disbursement of the GRZ funds allocated to the T-COBSI project caused challenges to implement activities on time in 2014. The PACOs from the three provinces where the Project operates should continue to encourage MAL officers to work despite the low funds sent to the Provinces. However, in the 2015 budget, there is money allocated as counterpart funds for T-COBSI that will go towards the construction of 50 permanent weirs in the three Provinces. MAL will engage in discussions with the Ministry of Finance to ensure that these funds are released and on time.
- Given that financial resources have been released as counterpart funds for SIP and IDSP Projects to support irrigation in the some parts of the Country including the Southern Province, it is therefore envisaged that T-COBSI counterpart fund could also be released to support irrigation in the Northern Part of the country.

Simple and Permanent Weirs

- It was recommended that MAL TSB technical staff and representatives of farmer groups from Luapula, Northern and Muchinga Provinces should undertake a field visit to the irrigation facilities developed by SIP in Southern province in order to learn ideas from the farmers and scheme managers.
- Although focus is on the construction of permanent weirs under the T-COBSI project; simple weirs are still cost effective and are entry points to the construction of permanent weirs.. Construction of simple weirs has no major cost except for mobilization of labour among the communities. Simple weirs also help farmers learn how to operate and maintain irrigation sites before permanent weirs are constructed. Therefore, the use of simple weirs is one way of introducing the farmers to irrigated agriculture and for them to appreciate the impact before construction of permanent weirs.

PDM Indicators

- There were no targets set in the PDM on area to be irrigated. It was recommended that targets be set and developed up to 2016 so as to provide the base for review of the Project's performance; GRZ has a target to develop and irrigate a total of 17,500 ha under the Presidential Directives in the period of 5 years (2012 to 2016)

Terminology

- It was recommended that some terminology in the Evaluation report be changed. It was suggested that the word "Schemes" be replaced with the word "sites", "TSB staff" be replaced with the words "TSB Technical staff".

Value Addition and Marketing

- It was reported that the training conducted by T-COBSI should include officers from the Department of Agribusiness and Marketing. Value addition and marketing are key components in Agriculture. It is important for farmers to study and understand the market they operate in. for example, the fact that groundnuts at *Chanda Nakulu* are harvested earlier than in the other parts of the Northern Province, farmers are able to fetch more money from the commodity. In addition, processing of the agriculture produce enables a long life and adds value to the commodities.
- The PACO for Northern Province, Mr. Andrew Banda recently undertook a training in Japan and Kenya on (SHEP). He reported that he had formulated an action plan of SHEP approach that is going to be piloted in Mungwi District, Northern Province based on the lessons learnt from Kenya. SHEP will eventually be applied to the other provinces in the future.
- It was also reported that the Department of Agribusiness had produced a marketing manual.

Capacity Development

- Competency of engineers at provincial and district level is a challenge and inadequate: For instance, in Northern Province, there are only two officers who have technical background in irrigation engineering. Most of the TSB technical officers are junior officers who have educational background in general agriculture, but are still trainable.
- Further, external assistance in training of extension officers on simple weir technologies is still needed especially for new officers.

Institutional Development

- It was recommended that formation and strengthening of farmer groups or irrigation committees should be encouraged and it is necessary for the effective Operation and Maintenance (O&M) of irrigation sites. Therefore, there is need for farmer groups to form maintenance committees to ensure that there is sustainability.
- In addition, farmer groups need to be formalized and legalized as cooperatives.
- Group work is essential for harnessing best practices, sharing effective water and farm management as planned activities and coping with seepages. Simple weir irrigation is an entry point to learn how to work together.
- An example of a successful farmer group was shared. Buleya Malima Irrigation Cooperative in Southern province, is a farmer group that started small and is now one of the biggest groups using irrigation. By using contributions made by members of the cooperative, they are able to effectively manage the irrigation facility without Government involvement. The Cooperative bought a truck and tractor for the scheme. It was reported that Buleya Malima Cooperative has a system that should be encouraged and extended to other farmer groups.
- *Sefula* irrigation scheme has some challenges in water management; strong institution is the key for the water management.
- The number of water user associations needs to be clarified.

Water Permit

- Application for water permits need to be encouraged by MAL to avoid conflicts among the farmers sharing the same stream due to limitations in water resources as the number of farmers using irrigation increases.
- However, it was reported that application for water permit is applicable only to the sites with a minimum water intake of 500 m³/day.

Impact of the Climate Change

- It was raised that the Impact of climate change needs to be considered when constructing irrigation facilities. As the demand for irrigated land increases, deforestation and environmental degradation may also increase. Deforestation leads to the reduction of the catchment area, and thus resulting into the reduction of river discharge.
- One solution shared to reduce deforestation was the use of rosewood in the construction of simple weirs. The use of rosewood can minimize deforestation as it can germinate a root system from the timber put on the ground when used in the construction of simple weir.
- In relation to the reduction in deforestation, it was reported that the main structure of the simple weirs usually remains even after the rainy season based on the follow-up survey conducted for the simple weir sites which were constructed during the COBSI Study.
- Further, during training farmers are advised not to use trees near the river and the trees more than a certain size in diameter may not be cut during construction of weirs.

MINUTES OF MEETING
ON
THE TERMINAL EVALUATION
ON
TECHNICAL COOPERATION PROJECT ON
COMMUNITY-BASED SMALLHOLDER IRRIGATION
IN THE REPUBLIC OF ZAMBIA

Japan International Cooperation Agency (hereinafter referred to as “JICA”) and Ministry of Agriculture organized the Terminal Evaluation Team (hereinafter referred to as “the Team”) from June 1 to June 24, 2016 in order to review the progress and achievements of the Technical Cooperation Project on Community-Based Smallholder Irrigation (hereinafter referred to as “the Project”).

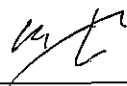
After the intensive study and analysis of the progress and achievements of the Project, the Team prepared a Joint Terminal Evaluation Report (hereinafter referred to as “the Report”) as attached and presented it to the Joint Coordinating Committee (hereinafter referred to as “the JCC”) held in Lusaka on June 22, 2016.

At the JCC, persons concerned with the Project discussed the major issues of the Project as stated in the Report and agreed on the matters attached hereto.

Lusaka, June 22, 2016



Mr. Hisanao NODA
Chief Representative
Japan International Cooperation Agency,
Zambia Office, Japan



Mr. Peter K Lungu
Director, Department of Agriculture,
Ministry of Agriculture,
Republic of Zambia

Main points of discussions based on the Report at the Meeting are as follows.

1. Acceptance of the Report

After the intensive discussion, persons participated in the Meeting accepted the Report and agreed to take necessary actions to each recommendation.

2. Termination of the Project

The Project activities have been progressing well and the outputs have been getting attained. The Project agreed on termination of the Project as scheduled on June 2017.

ANNEX 1: List of persons participated in the Meeting

ANNEX 2: Joint Terminal Evaluation Report



List of Attendees

No	Name	Affiliation/Position	Station
Ministry of Agriculture			
1	Mr. Peter K Lungu	Director of Department of Agriculture	Lusaka
2	Mr. Kaputa Chongo	Deputy Director of Department of Agriculture	Lusaka
3	Mr. Mulenga Chisakuta	Deputy Director of Technical Services Branch	Lusaka
4	Mr. Dominic Namanyungu	Provincial Agricultural Coordinator, Luapula Province	Mansa
5	Dr. Victor Mulopa	Provincial Agricultural Coordinator, Muchinga Province	Chinsali
6	Mr. Andrew Banda	Provincial Agricultural Coordinator, Northern Province	Kasama
7	Mr. Obed Chanda	Principal Agricultural Officer, Luapula Province	Mansa
8	Mr. Fred Chikuta	Principal Agricultural Officer, Muchinga Province	Chinsali
9	Mr. Charles Kapalasha	Principal Agricultural Officer, Northern Province	Kasama
10	Mr. Salla Mayson	Provincial Irrigation Engineer, Luapula Province	Mansa
11	Mr. Syansingu Stephen	Provincial Irrigation Engineer, Muchinga Province	Chinsali
12	Mr. Sifaya Mufalali	Provincial Irrigation Engineer, Northern Province	Kasama
13	Dr. Yusuke Haneishi	JICA advisor	Lusaka
Embassy of Japan			
14	Hiroyasu KIRIOKA	Second Secretary, Embassy of Japan	Lusaka
JICA			
15	Mr. Hisanao Noda	JICA Chief Representative	Lusaka
16	Dr. Isaya Higa	ARR	Lusaka
17	Mr. Patrick Chibbamulilo	Senior Programme Officer	Lusaka
18	Mr. Tatsuya Ieizumi	JICA Expert, T-COBSI	Kasama
19	Mr. Hideaki Hiruta	JICA Expert, T-COBSI	Kasama
20	Mr. Nobuaki Chiba	JICA Expert, T-COBSI	Kasama
21	Mr. Yoshihiro Sagawa	JICA Expert, T-COBSI	Kasama
Evaluation Team			
22	Mr. Sitali Cornelius Mulako	Principle Irrigation Engineer, Department of Agriculture	Lusaka
23	Ms. Harriet Matipa	Economist, Department of Policy & Planning	Lusaka
24	Mr. Shunichi Nakada	JICA headquarters	Tokyo
25	Mr. Takuma Noguchi	JICA headquarters	Tokyo
26	Dr. Hideaki Higashino	Consultant	Tokyo

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MINUTES OF MEETING
ON
DRAFT FINAL REPORT
ON
TECHNICAL COOPERATION PROJECT ON
COMMUNITY-BASED SMALLHOLDER IRRIGATION
IN THE REPUBLIC OF ZAMBIA

The Ministry of Agriculture (MoA) and Japan International Cooperation Agency (JICA) has been implementing the Technical Cooperation Project on Community-Based Smallholder Irrigation (“the Project” or “T-COBSI”) from May 2013 to June 2017.

As the Project is coming to end, the Project Implementation Unit (PIU), comprising of Japanese experts and Zambian counterpart officers, made a presentation to the Joint Coordinating Committee (JCC) on the project outline, achievement, lessons learned and way forward as the main contents of the draft final report.

At the JCC meeting held on April 4, 2017, persons concerned with the Project discussed the major issues of the Project as to be stated in the draft final report and agreed on the matters attached hereto.

Lusaka, April 4, 2017



Mr. Peter K Lungu
Director, Department of Agriculture,
Ministry of Agriculture,
Republic of Zambia

Mr. Tatsuya Ieizumi
Team Leader
JICA Project Team for T-COBSI
Japan

The Final Joint Coordination Committee (JCC) meeting was held at the Taj Pamodzi Hotel on the 4th April 2017. The meeting included the project provinces and the proposed three provinces (Central, Copperbelt and Northwestern provinces) to be included in Phase II.

The meeting was called to order at 10:00hrs and it was chaired by Mr. Peter K. Lungu, the Director for Department of Agriculture in the Ministry of Agriculture. The members present started by introducing themselves by name, designation and station of operation as per attached attendance list. The chairperson read the agenda and the Deputy Director TSB proposed for adoption and the PACO Muchinga Province seconded for adoption

WELCOMING REMARKS

After the introductions were done, the chairperson welcomed everyone present to the final JCC meeting. In his welcoming remarks Mr. Peter K. Lungu disclosed the purpose of the meeting:

- To receive draft final report presentation on the T-COBSI project achievement
- To discuss the way forward on the proposed T-COBSI Phase II

In addition to this, he emphasized that irrigation is a key area in agricultural development and that T-COBSI scored in capacity building in farmers and MoA staff in the project area in irrigation skill development and that the knowledge acquired should be passed on to other farmers and staff in the ministry.

He also informed the house that 5,600 ha of irrigation land in addition to the 900 ha developed by T-COBSI had been put under irrigation beating the 5,000 ha set target. This contribution is attributed to the cooperation of JICA and Government of the Republic of Zambia.

The ministry is seeking treasury authority for funds to establish a database to collect inventory on smallholder irrigation and document sites under irrigation.

He informed the house of other projects and funders that are contributing irrigated agriculture through development of irrigation schemes such as IDSP, ADB, and APMEP. He also informed that it is planned a team be dispatched to the area for finding appropriate sites for upgrading.

On behalf of MOA, the director thanked JICA for the contribution to irrigation development.

PRESENTATION

Mr. Sifaya Mufalali a member of the Project Implementation Unit made a presentation on the achievement of the project throughout the project period and reported that the project purpose has been achieved, main indicators of which include the following:

- Number of Technical Service Branch (TSB) staff trained: net 47 and gross 388 officers
- Number of extension officers trained: net 185 and gross 506 officers

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- Number of farmer groups applied at least one of the technologies introduced: 88%
- Number of farmer groups engaged in improved irrigation farming: 788 groups
- Area under irrigation: 948.2 ha

DISCUSSION

Responses to Recommendation from the Terminal Evaluation Team

The chairperson guided the respective implementing teams to respond on what was achieved in regard to the recommendations made by the terminal evaluation team.

To the Project Team

1. To clarify changes and effects on beneficiary farmers from economic and social aspect
Mr. H. Hiruta responded that from the survey carried out in the project and non-project areas, income levels per year in the project area were 2.3 times higher than the non-project area.
2. Technical Support on Application Procedure for S3P Project as to enable potential beneficiaries to access the fund for community level irrigation
Mr. N. Chiba responded that 15 sites in the S3P project area had been surveyed and Bill of Quantities (BOQs) and designs were ready and some applications had already been submitted to S3P. He also informed the house that another 9 sites in non S3P operational area had been prepared.
3. Compilation of the project data for facilitate budget request as to support budget application process
Mr. H. Hiruta responded that resources and budgetary allocation was facilitated and that \$350 was required to train each office. Also, 65 liters/ha and 87 liter/site were required that are less than US\$100.
4. Implement wrap-up training for TSB
Mr. Y Sagawa informed the participants that in March 2017 a TSB wrap up training was conducted
5. Review on the Training Materials
Mr. Ieizumi responded that the materials were reviewed and cited an example of the posters and flayers that were distributed during the dissemination workshop and JCC meeting.

To the Zambian Side

1. To improve communication with cooperation partners to share Information on Agriculture Sectors
The PACOs from the three project areas (Luapula, Muchinga and Northern provinces) responded that quarterly meetings were being held where DACOs shared the information with other departments.
2. Utilization of Trained CPs as to implement the training programs of T-COBSI, and examine the feasible way for further expansion.
The director indicated that the ministry has plans to use the trained CPs in orientation programmes for newly employed staff.
3. Budget Allocation as to cover both training implementation and weir construction
The Director indicated that government is committed to fulfil the counterpart funding
4. To arrange field visit for MoA Officers by the end of August 2016 as to show the impact of the project to the stakeholders including core officers on Irrigation Policy Development in MoA
The Deputy Director TSB visited the project site in 2018.

5. To conduct dissemination seminar as to share the output of the project and discuss possible ways to expand COBSI approach

The Director alluded that the workshop was held successfully on the 3rd of April 2017.

To the Japanese Side

1. Cooperation to the Site Visit to T-COBS Sites and Dissemination Seminar

Mr. Hiruta responded that JICA supported the planning, preparation of the dissemination workshop, and thanked Dr. Haneishi for the effort and time towards the successful implementation of these activities.

2. Additional Resource Allocation for Impact Assessment

Mr. Hiruta informed the house that JICA had dispatched two expats to the project sites for two months to carry out the impact assessment and nutritional impact.

ANY OTHER BUSINESS

Transport Challenge

The Director responded to the concern from the PAO Copperbelt province that the ministry had reached advanced stage in the procurement of motor bikes and vehicles which will be distributed to the most affected camps and provinces. Mr. Hiruta acknowledged the fact that even from the project side it was difficult for MoA staff to monitor the project activities and thus the Project was in the process of acquiring 19 motorbikes to be distributed to the 19 project districts to be used by the TSB staff.

Sustainability Measures

Dr. Haneishi the advisor to MoA reminded the house to start putting up measures of sustaining the activities that were being implemented by T-COBSI especially if phase II of the project was not to be approved. Mr. Moffat Gondwe, a SIE from the Copperbelt province encouraged the house especially his fellow TSB members to continue with implementation of the project activities and to take ownership of the activities.

Irrigation inventory and human resource

The Director responded to the concern from the SIE from Northwestern province on the understaffing of the TSB section that in those lines the section is being considered to be full-flagged Department and the proposal has been submitted to cabinet awaiting approval. The director further emphasized the need for in-service trainings to be a continuous process in the ministry.

The Director responded to the follow-up regarding the handover of equipment procured by the project that he was positive and in agreement with the proposal submitted by the project team regarding the retention of the equipment to the project area.

CLOSING REMARKS

Dr. Fujiie's, the Chief Resident Representative of JICA Zambia office presented closing remarks. In his speech he welcomed all the people that were present and thanked all the stakeholders who participated in the discussions for the fruitfulness of the meeting.

He said that he was pleased to be part of the occasion to share the observations on the progress of the project as it comes to the end. He further said that he was confident that meeting provided good lessons drawn from

the project and hoped members can use these lessons for implementation of similar projects on irrigation in the future.

He highlighted from the discussion of the dissemination workshop a lot of issues regarding role of irrigation in agriculture and the progress of this project. We also had the opportunity to listen to presentations by the Project Team, evaluators from the University of Zambia and from the beneficiary farmers. There was a consensus in the presentations that the project had positive impacts that were observed among the staff in the Ministry of Agriculture and at the farm level.

He encouraged the ministry the following issues to be considered to enhance irrigation development in the country:

- Allocation and release of the budget by the Ministry of Agriculture towards the implementation of the future project activities. This will enable officers to implement various project activities like farmer training, monitoring and evaluation, among others;
- Allocation of resources to upgrade priority simple weirs to permanent ones; in the last project there were limited resources to undertake this activity
- Allocation of more resources to strengthen farmer groups organization at community level. This can entail strengthened arrangements for Operations and Maintenance (O&M), as well as to ensure that water is more equitably shared among the community beneficiaries
- Enhanced linkages with other stakeholders like training institutions and Ministries that are related to the project (water resources, environment and natural resources, among others)
- Inclusion of the experiences learnt from the Project into the Irrigation Policy being developed so that the good practices from the project can be scaled up to reach out to more beneficiaries

The JICA representative paid tribute to the people who had contributed to the success of seminar. Thanked the ministry of agriculture for their coordination to bring the members together for such a dialogue. Last but not the least, he thank the team of organizers (comprising the team from T-COBSI and their counterparts in MoA) for worked tirelessly to ensure that the logistics were in place.

Concluding Remarks

The Director of the Department of Agriculture thanked all that participated in the meeting and for the positive contributions to the deliberations. Specifically he thanked all those that travelled from the provinces. He also thanked JICA for the meeting and the contribution towards irrigation development. He thanked all once again, and wished all those travelling a safe trip. The meeting ended at 12:48hrs.

Attachment 1: List of persons participated in the Meeting

No	Name	Affiliation/Position	Station
Ministry of Agriculture			
1.	Mr. Peter K Lungu	Director of Department of Agriculture	Lusaka
2.	Mr. Stanslous Chisakuta	Deputy Director of Technical Services Branch	Lusaka
3.	Mr. Chate Godwin	Provincial Agricultural Coordinator, Luapula	Mansa
4.	Dr. Victor Mulopa	Provincial Agricultural Coordinator, Muchinga	Chinsali
5.	Mr. Andrew Banda	Provincial Agricultural Coordinator, Northern	Kasama
6.	Mr. Fred Chikuta	Principal Agricultural Officer, Muchinga	Chinsali
7.	Mr. Charles Kapalasha	Principal Agricultural Officer, Northern	Kasama
8.	Mr. Saila Mayson	Provincial Irrigation Engineer, Luapula	Mansa
9.	Mr. Syansingu Stephen	Provincial Irrigation Engineer, Muchinga	Chinsali
10.	Mr. Sifaya Mufalali	Senior Irrigation Engineer, Northern	Kasama
11.	Mr. Kelvin Simukoko	Assistant Technical Officer	Kasama
12.	Mr. Acson Mbewe	Assistant Technical Officer	Kasama
13.	Dr. Yusuke Haneishi	JICA advisor	Lusaka
Other Provinces			
14.	Mr. Derrick Simukanzye	Provincial Agricultural Coordinator, Northwestern	Solwezi
15.	Dr. Obvious Kabinda	Provincial Agricultural Coordinator, Copperbelt	Ndola
16.	Dr. Adreen Nansungwe	Provincial Agricultural Coordinator, Central	Kabwe
17.	Mr. Mubambwe Simbarashe	Provincial Agricultural Officer, Northwestern	Solwezi
18.	Ms. Janie C Monga	Provincial Agricultural Officer, Copperbelt	Ndola
19.	Ms. Elizabeth Chuma	Provincial Agricultural Officer, Central	Kabwe
20.	Mr. J M Bwalya	Senior Irrigation Officer, Northwestern	Solwezi
21.	Mr. Moffat Goma	Senior Irrigation Officer, Copperbelt	Ndola
22.	Mr. Adamson Tembo	Senior Irrigation Officer, Central	Kabwe
23.	Mr. John Hikanyemu	Senior Irrigation Engineer, Lusaka	Lusaka
Embassy of Japan			
24.	Mr. Shingo Matai	Second Secretary, Embassy of Japan	Lusaka
JICA			
25.	Dr. Hitoshi Fujiie	JICA Chief Representative	Lusaka
26.	Dr. Isaya Higa	Assistant Resident Representative	Lusaka
27.	Mr. Patrick Chibbamulilo	Senior Programme Officer	Lusaka
28.	Mr. Tatsuya Ieizumi	JICA Expert, T-COBSI	Kasama
29.	Mr. Hideaki Hiruta	JICA Expert, T-COBSI	Kasama
30.	Mr. Nobuaki Chiba	JICA Expert, T-COBSI	Kasama
31.	Mr. Yoshihiro Sagawa	JICA Expert, T-COBSI	Kasama

P.K.L

Outline of the Sites for Permanent Weir Construction (2014) (1)

No.				
Name of scheme	Mpela	Kawama	Mufili Chibwale	Musanza
Province	Northern	Northern	Northern	Muchinga
District	Mporokoso	Mbala	Luwingu	Nakonde
No. of members	23	55	39	30
Present irrigated area (ha)	4.0	10.0	5.0	4.0
Scheme area (ha)	16.0	23.0	79.0	25.0
Type of weir	Fixed type stone masonry with stop log.	Fixed type stone masonry with stop log.	Fixed type stone masonry with stop log.	Fixed type with stop log. Stone masonry and embankment combined.
Total length of weir	35.0m	25.0m	17.0m	120m
Height of weir	1.7m	2.4m	2.2m	2.6m
Spillway	W=4.0m Design flow depth: 0.6m Stop log: W = 0.8m x 1	W=5.0m Design flow depth: 1.0m Stop log: W = 0.8m x 2	W=6.0m Design flow depth: 1.1m Stop log: W = 0.8m x 2	W=4.0m Design flow depth: 1.2m Stop log: W = 0.8m x 2
Top Elevation*1	EL. 6.7m	EL.5.0m	EL.7.3 m	EL.7.6m
Over flow crest elevation*1	EL. 5.5 m	EL.3.4m	EL.5.4 m	EL.5.8m
Intake	Right side Trapezoid Bottom width: 0.6m Bottom elevation : EL.5.2m	Right side Trapezoid Bottom width: 1.0m Bottom elevation : EL.3.1m	Left side Trapezoid Bottom width: 1.0m Bottom elevation : EL.5.0m	Right side Trapezoid Bottom width: 0.6m Bottom elevation : EL.5.5m
Design discharge (lit/s)*2	127	216	344	127
Maximum irrigable area (ha)*3	11.0	23.7	29.1	9.2
Estimated potential irrigable area (ha)	6.0	15.0	7.0	8.0

*relative elevation, *2 design discharge > actual river flow, *3 design capacity

Outline of the Sites for Permanent Weir Construction (2014) (2)

No.			
Name of scheme	Lubanga	Buyantanshi	Munsa
Province	Muchinga	Luapula	Luapula
District	Mpika	Mwense	Nchelenge
No. of members	36	40	120
Present irrigated area (ha)	5.0	8.0	11.0
Scheme area (ha)	65.0	16.0	30.0
Type of weir	Fixed type with stop log. Stone masonry and embankment combined.	Fixed type with stop log. Stone masonry and embankment combined.	Fixed type with stop log. Stone masonry and embankment combined.
Total length of weir	40.0m	52.0m	23.0 m
Height of weir	1.75m	1.7m	1.9m
Spillway	W=4.0m Design flow depth: 0.5m Stop log: W = 0.8m x 1	W=8.0m Design flow depth: 0.5m Stop log: W = 0.8m x 2	W=8.0m Design flow depth: 0.5m Stop log: W = 0.8m x 2
Top Elevation*1	EL. 5.15m	EL.6.0m	EL. 4.0 m
Over flow crest elevation*1	EL. 4.05 m	EL.4.9m	EL. 2.9 m
Intake	Both side Trapezoid Bottom width: 0.6m Bottom elevation : EL.3.75m	Right side Trapezoid Bottom width: 0.6m Bottom elevation : EL.4.6m	Both side Trapezoid Bottom width: 0.6m Bottom elevation : EL.2.6m
Design discharge (lit/s)*2	127 x 2	127	127 x 2
Maximum irrigable area (ha)*3	17.3	12.7	32.4
Estimated potential irrigable area (ha)	8.0	10.0	13.0

*relative elevation, *2 design discharge > actual river flow, *3 design capacity

Outline of the Sites for Permanent Weir Construction (2015)

No.				
Name of scheme	Munyele	Lualizi	Kalila	Chansamalamba
Province	Northern	Muchinga	Luapula	Luapula
District	Nsama	Isoka	Mansa	Kwambwa
No. of members	150	36	42	37
Present irrigated area (ha)	2.25	2.5	2.6	2.25
Scheme area (ha)	30	10.0	7.8	7.75
Type of weir	Fixed type stone masonry with stop log.	Fixed type stone masonry with stop log.	Fixed type with stop log. Stone masonry and embankment combined.	Fixed type with stop log. Stone masonry and embankment combined.
Total length of weir	31.6m	15.0m	46m	50m
Height of weir	4.1m	2.2m	2.5m	2.5m
Spillway	W=8.0m Design flow depth: 1.3m Stop log: W = 0.8m x 1	W=8.0m Design flow depth: 1.0m Stop log: W = 0.8m x 1	W=11.0m Design flow depth: 1.4m Stop log: W = 0.8m x 2	W=12.0m Design flow depth: 1.1m Stop log: W = 0.8m x 2
Top Elevation*1	EL. 4.8m	EL.5.2m	EL.6.0 m	EL.5.5m
Over flow crest elevation*1	EL. 2.9 m	EL.3.6m	EL.4.0 m	EL.3.8m
Intake	Left side Trapezoid Bottom width: 0.6m Bottom elevation : EL.2.5m	Right side Trapezoid Bottom width: 1.0m Bottom elevation : EL.3.2m	Left side Trapezoid Bottom width: 0.6m Bottom elevation : EL.3.7m	Right side Trapezoid Bottom width: 1.0m Bottom elevation : EL.3.5m
Design discharge (lit/s)*2	205	344	127	216
Maximum irrigable area (ha)*3	16.8	25.5	9.0	15.6
Estimated potential irrigable area (ha)	5.0	6.0	7.8	7.8

*relative elevation, *2 design discharge > actual river flow, *3 design capacity

Outline of the Sites for Permanent Weir Construction (2016)

No.			
Name of scheme	Musanda	Twikatane	Fitungulu
Province	Northern	Northern	Luapula
District	Kasama	Mungwi	Chipili
No. of members (HH)	85	25	27
Present irrigated area (ha)	4.5	2.5	2.5
Scheme area (ha)	8.0	8.25	7.0
Type of weir	Fixed type stone masonry with stop log.	Fixed type stone masonry with stop log.	Fixed type stone masonry with stop log.
Total length of weir	20.3m	24.5m	19.4 m
Height of weir	2.3m	2.5m	2.1m
Spillway	W=4.0m Design flow depth: 0.8m Stop log: W = 0.8m x 1	W=10.0m Design flow depth: 0.9m Stop log: W = 0.8m x 2	W=6.0m Design flow depth: 1.0m Stop log: W = 0.8m x 1
Top Elevation*1	EL. 4.1m	EL.3.2m	EL. 2.7 m
Over flow crest elevation*1	EL. 2.7 m	EL.1.7m	EL. 1.1 m
Intake	Left side Trapezoid Bottom width: 1.0m Bottom elevation : EL.2.3m	Left side Trapezoid Bottom width: 0.6m Bottom elevation : EL.1.3m	Right side Trapezoid Bottom width: 1.0m Bottom elevation : EL.0.7m
Design discharge (lit/s)*2	344	200	344
Maximum irrigable area (ha)*3	25.5	15	25.5
Estimated potential irrigable area (ha)	7.0	15	12

*relative elevation, *2 design discharge > actual river flow, *3 design capacity

S3P Candidate Sites

Province		District	Camp	Site name	Beneficiary (HH)	Irrigated Area (lima)	Total Project Cost (ZMK)	Farmers' Contribution (ZMK)	Remarks
Northern	1	Mbala	Chindo (S3P)	Musankwa	130	20	246,730	80,231	
	2		Senga (S3P)	Mpwani	50	36	266,031	74,241	
	3	Luwingu	Tungati (S3P)	Chilinda	75	6	257,429	65,661	
	4		Mufili (S3P)	Ipandula	35	12	196,449	49,112	
	5	Mporokoso	Shibwalya kapita (S3P)	Kalashi	40	11	289,479	100,576	
	6	Kasama	Lukulu North (S3P)	Chilemba	40	13	244,238	63,616	
	7	Nsama	Kasonsa (S3P)	Mukotwe	100	15	256,510	64,128	
	8	Mungwi	Malole North (S3P)	Bwambi stream	327	12	237,399	61,729	
Muchinga	1	Nakonde	Mwenzu (S3P)	Musesengoma	20	16	341,759	90,224	
	2	Isoka	Kantensha (S3P)	Namota	90	82	440,902	113,370	
	3		Lualizi (S3P)	Mumbwe	120	21.25	298,623	76,240	
	4		Nansala (S3P)	Nansala	150	22	170,728	42,880	
	5	Mpika	Kaburamwiko (S3P)	Chiseke	100	29	343,738	86,323	
	6		Mukungulu (S3P)	Chikumbi	63	13	267,191	68,516	
	7	Mafinga	Chitapo (S3P)	Mundebe	37	29	264,092	67,960	
Total	15				1377	337.25	4,121,298	1,104,807	

Candidate Sites for Other Donors

		District	Camp	Site name	Beneficiary (HH)	Irrigated Area (lima)	Total Project Cost (ZMK)	Farmers' Contribution (ZMK)	Degrees of priority and Remarks
Northern	1	Mporokoso	Kapumo	Kapumo	57	24	265,996	98,073	
	2	Kasama	Chikosho	Ituna	10	5	197,291	49,472	The scheme intends to include downstream area and increase number of beneficiary and irrigated area
	3		Milungu West	Mwika	40	12	276,454	90,634	
Muchinga	1	Shiwangandu	Mukungwa	Mwango	41	8.4	205,599	48,813	
	2		Philip	Musowa	30	3	387,890	97,350	
Luapula	1	Mwense	Mubende	Kasengu	21	1	220,625	66,638	
	2	Nchelenge	Mulwe	Chipili	23	8	208,286	60,771	
	3	Chipili	Kalundu	Milayi	15	6	157,096	45,455	
	4	Mwansa Bombwe	Chipunka	Mununshi	43	10.5	300,403	83,936	
Total	9				280	77.9	2,219,640	641,142	

Result of Self-Evaluation of TSB Officers on their Capacity in Permanent Scheme Development

Evaluation Items	Average	1	2	3	4	5
(1) Survey	3.98					
Able to survey elevation with dumpy level and to calculate elevation.	4.18	1	1	4	13	15
Able to make a drawing of cross section according to survey data.	3.53	2	6	7	10	9
Able to measure and calculate water flow quantity of a stream	3.76	1	3	8	13	9
Able to carry out survey of socio-economic condition	4.45	0	2	2	8	21
(2) Irrigation water requirement	3.75					
Able to carry out survey of farming and cultivation condition	4.33	0	0	1	20	12
Able to make a cropping calendar	4.30	0	0	6	11	16
Able to calculate irrigation efficiency	3.62	1	5	10	8	10
Able to calculate irrigation water requirement of the scheme	3.65	0	5	11	9	9
Understood design discharge capacity of intake	3.39	0	8	9	8	6
Able to calculate maximum irrigable area	3.61	0	6	7	11	7
Able to operate CROPWAT	3.59	1	7	7	9	10
Able to prepare report of irrigation water requirement by "Word"	3.53	0	6	9	14	5
(3) Design of Permanent weir	3.40					
Understood procedure of implementation	3.82	1	7	2	11	13
Able to calculate flood water flow area	3.32	3	6	7	13	5
Able to determine design high water level (Calculation of spillway flow area)	3.28	3	5	10	8	6
Able to determine various elevation	3.39	2	6	9	9	7
Understood determination of various dimensions (intake)	3.21	3	8	8	7	7
Able to prepare design report by "Word"	3.34	3	5	11	4	9
(4) Drawing	3.14					
Able to make a drawing of Plan	3.15	5	6	9	5	8
Able to make a drawing of Longitudinal section	3.15	4	8	7	7	7
Able to make a drawing of various cross sections	3.13	5	7	6	7	7
(5) BOQ	3.24					
Able to calculate the quantity of stone masonry	3.26	3	8	8	7	8
Able to calculate the quantity of excavation	3.24	4	8	5	8	8
Able to calculate the quantity of rubble stone	3.21	6	5	7	8	8
understood how to calculate the quantity of Mortar	3.21	4	7	8	8	7
Understood how to calculate the quantity of sand	3.29	5	7	5	7	10
Understood how to calculate the quantity of cement	3.44	4	4	10	5	11
Able to prepare BOQ with "Excel"	3.00	4	9	10	5	6
(6) Work plan	3.58					
Able to calculate required manpower	3.47	1	8	7	10	8
Able to calculate required work period	3.55	1	7	5	13	7
Able to make work schedule	3.74	1	6	5	11	11
(7) Cost estimation	3.68					
Able to calculate material cost	3.59	1	7	7	9	10
Able to calculate labor cost	3.59	1	7	7	9	10
Able to calculate transportation cost	3.76	1	4	8	10	11
Able to calculate supervision cost	3.79	1	4	7	11	11
(8) Supervisor	4.12					
Understood procedure of implementation and schedule	4.03	1	1	6	13	12
Able to install pegs at major points according to the drawing	3.88	1	4	6	9	13
Able to instruct the farmers on excavation of river diversion and construction of coffer dam	4.12	1	3	4	9	17
Able to instruct the farmers area and depth of excavation according to the drawing	4.06	2	2	4	9	16
Able to indicate the various elevation at the site according to the drawing	3.88	1	4	9	4	16
Understood mortar mix proportion, mortar mixing and placing	4.29	1	1	5	7	20
Able to instruct the farmers on stone masonry work	4.24	1	3	4	5	21
Able to instruct farmers on O&M of permanent weir and furrow.	4.48	0	2	3	5	23

Present your degree of IMPLEMENTATION	Average	1	2	3	4	5
(1) SURVEY by YOURSELF.	4.10	2	0	2	14	11
(2) IRRIGATION WATER REQUIREMENT by YOURSELF.	3.65	2	2	10	8	9
(3) DESIGN OF PERMANENT WEIR by YOURSELF.	3.29	1	8	10	5	7
(4) DRAWING by YOURSELF.	3.17	3	8	8	3	8
(5) BOQ by YOURSELF.	3.50	2	5	8	6	9
(6) WORK PLAN by YOURSELF.	3.84	1	3	7	9	11
(7) COST ESTIMATION by YOURSELF.	3.65	3	2	8	8	10
(8) SUPERVISOR by YOURSELF.	4.39	0	0	4	11	16

- 1: Not able, not understood
- 2: A little able, understood
- 3: Partially able, understood
- 4: Almost able, understood
- 5: Fully able, understood