List of Equipment Provided by JICA

Abbreviations used in the List

Dated : 29 August, 2003

Activity Field

On-farm F. : On-farm Facility
Water M. : Water Management
System D. : System Development
W.U.O. : Water Users' Organization
Farming : Farming
Admin.. : Coorinator/Training

Place of Installation

RID Head quater
IEC405 : Experts' Room
IEC410 : Coordinator's Room
IEC407 : Chief Advisor's Room
IEC401 : Analyses Policy Section (Planning Division)
ITC : Information Technology Center (IEC303)
RAH : Research and Applied Hydrology Branch
IMD : Improvement and Maintenance Division
WIFB : Water Information and Forecast Branch
TOB7 : Technical Building 7F(On-farm Design Branch 4)
IWUDB : Irrigation Water Use Development Branch
WMB : Water Management Branch
TD : Transport Division

Khok Kathiem, Lopburi, and other areas
KPSO : Khok Kathiem Project Site Office
KO&MPO : Khok Kathiem O&M Project Office
DDO8 : Ditch and Dike Operation 8 (currently 10)
RIO8 : Regional Irrigation Office 8 (currently 10)
LPAEO : Lopburi Provincial Agricultural Extension Office (DOAE)
KO&MPWM1 : Khok Kathiem O&M Project, Water Master1 Office
KO&MPWM2 : Khok Kathiem O&M Project, Water Master2 Office
HC5 : Hydrology Center 5 (Central Hydrology Center)
MAO&MP : Manorom O&M Project Office
CKO&MP : Chong Khae O&M Project Office
RRO&MP : Roeng Rang O&M Project Office
MHO&MP : Maharaj O&M Projecrt Office
CNTAMC : Chainat Agricultural Machinery Center (DOAE)

List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
E-1	Mitsubishi Pajero, GLS 4WD	Super Select Invecs-II GDI Model No.:V75	1	00.08.31	Yen	2,900,000	2,900,000	TD	0	1	C	B	Mitsubishi
E-2	Lot of the Spareparts		1	00.08.31	Yen	290,000	290,000	TD	0	1	C	B	Mitsubishi
E-3	Current Meter	CM-1SX. 0.02-1.00M/S	1	00.12.08	Yen	565,000	565,000	KO&MPO	0	1	C	B	Kawasho Co.,Ltd.
E-4	WideCom,Scanner, Plotter with spare parts	SLC936 WC936	1	00.12.08	Yen	2,700,000	2,700,000	TOB7	0	1	C	D	Kawasho Co.,Ltd.
E-5	Sigmatec, Uninterruptable Power Supply	1000TA, 1000VA	1	00.12.08	Yen	21,000	21,000	TOB7	0	1	C	C	Kawasho Co.,Ltd.
E-6	Current Meter w/2m sensorseting rod	model:2000	1	01.04.27	Yen	671,200	671,200	KO&MPO	0	1	C	B	Yamato Kagaku
E-7	Current Meter w/standard accessories	CM-IBX rod:RD-101, weight:CW-3	1	01.04.27	Yen	532,000	532,000	KO&MPO	0	1	C	B	Yamato Kagaku
E-8	Water Jacket (farm inlet)	model:A-200	20	01.04.27	Yen	5,320	1,064,000	DDO8	0	1	C	B	Yamato Kagaku
E-9	Drive Harrow, Spare Parts	Model:HL3208-3L	1	01.04.27	Yen	704,000	704,000	CNTAMC	0	1	C	B	Yamato Kagaku
E-10	Rear Grader, Spare Parts	Model:MRG2440	1	01.04.27	Yen	259,600	259,600	CNTAMC	0	1	C	B	Yamato Kagaku
E-11	Ridger, Spare Parts	Model:PR115-5	1	01.04.27	Yen	639,400	639,400	CNTAMC	0	1	C	B	Yamato Kagaku
E-12	GPS Receiver	Magellan GPS315	1	01.04.27	Yen	26,600	26,600	WIFB	0	1	C	B	Yamato Kagaku
E-13	Rain Gauge	Davis 7852M, Data Logger, O-DL	2	01.04.27	Yen	42,700	85,400	WIFB	0	2	C	B	Yamato Kagaku
E-14	Cylindrical Intakerate Meter and options	DIK-4200, DIK-4200-51,52,53	1	01.11.15	Yen	572,700	572,700	KO&MPO	0	1	C	B	Purchased through
E-15	Electric Conductivity Meter	TOA/OKK, CM-21P	3	01.11.05	Yen	121,600	364,300	WMB	0	3	C	B	Purchased through
E-16	Drive Harrow, with Spare Parts	Matsuyama, Model:HL3208-3L, s/n : 2180	1	02.12.10	Yen	616,000	616,000	KPSO	0	1	C	B	K R Co., Ltd.
E-17	Rear Grader with Spare Parts	Star Model:MRG2440, s/n : 4492692	1	02.12.10	Yen	263,000	263,000	KPSO	0	1	C	B	K R Co., Ltd.
E-18	Ridger with Spare Parts	Kubota, Model:RR115-5, s/n:0802046	1	02.12.10	Yen	891,000	891,000	KPSO	0	1	C	B	K R Co., Ltd.

Total Cost(Yen) 13,165,200 Total Cost (Baht) Exchange Rate.(2003.10) : Baht 1 = ¥ 2.867 Yen

BahtCostTotal(Yen) 43,333,092

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K:Expert G:Purchased by Local Budget
EL:Purchased by Local Spppliers E:Purchased in Japan

NP:Dumped U(frequency of use): A=daily B=1-3/week C=particular period
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No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
EL-1	Isuzu TR Supreme 4WD	TFS 55 HPY, 1ton, Dissel 2800cc	1	00.01.31	Baht	681,500	681,500	KPSO	0	1	C	B	Isuzu Chaicharoenkij
EL-2	Canon Copy Machine	NP6130, ADF-AI, MS-AI, Pedestal	1	00.03.31	Baht	146,640	146,640	KPSO	0	1	B	B	Kawasho Co.,(Thailand)
EL-3	Eiki Multi Media Viewer	V-5100	1	00.03.31	Baht	77,411	77,411	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-4	Eiki LCD Projector	LC-XGA982	1	00.03.31	Baht	237,267	237,267	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-5	Minolta Camera and Tripod	DYNAX505SI with AF75-120mm	1	00.03.31	Baht	20,950	20,950	KPSO	0	1	B	B	Kawasho Co.,(Thailand)
EL-6	Kodak Slide Projector	EKTAPRO 5020, 75-120mm Lenz	1	00.03.31	Baht	51,593	51,593	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-7	Panasonic Video Camera	NV-DS99EN	1	00.03.31	Baht	58,023	58,023	KPSO	0	1	C	B	Kawasho Co.,(Thailand)
EL-8	National Television 29"	CF-29H3PN	1	00.03.31	Baht	14,605	14,605	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-9	TOA Amp, Microphone, Speaker	A-1061, DM-1200, F-160GM	1	00.03.31	Baht	20,750	20,750	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-10	Ushitaka Planimeter	X-PLAN360C+	1	00.03.31	Baht	60,499	60,499	KPSO	0	1	C	B	Kawasho Co.,(Thailand)
EL-10.1	Video Player:Panasonic NV-SJ6AM	Multi-system compartibility, Bilingual,	1	00.03.31	Baht	6,048	6,048	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-10.2	AV Screen for LCD / Slide Projector	Educator, 178x178cm, Portable type :	1	00.03.31	Baht	5,376	5,376	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-10.3	AC Cabinet : AV6-54	Cabinet or Rack for storing 29" TV, Video	1	00.03.31	Baht	4,725	4,725	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-10.4	Drafting Board Chair	A0 Size (80x120cm), Revolving chair on	1	00.03.31	Baht	3,885	3,885	KPSO	0	1	B	B	Kawasho Co.,(Thailand)
EL-10.5	Backu-up Power Supply	UPS PC Guard, 650VA (for PC, Laser	1	00.03.31	Baht	3,675	3,675	IWUDB	0	1	B	B	Kawasho Co.,(Thailand)
EL-11	TOA Wireless Speaker, Microphone	WA6410, WM-270, WA-641C, WM-270,	1	00.03.31	Baht	53,405.5	53,405.5	IWUDB	0	1	C	B	Kawasho Co.,(Thailand)
EL-12	TOA Wireless Speaker, Microphone	WA6410, WM-270, WA-641C, WM-270,	1	00.03.31	Baht	53,405.5	53,405.5	KO&MPO	0	1	C	B	Kawasho Co.,(Thailand)
EL-13	WINWAY Personal Computer	CPU:PentiumIII 533MHz	1	00.03.31	Baht	33,684	33,684	IWUDB	0	1	A	B	Kawasho Co.,(Thailand)
EL-14	PC Software:MS Office 2000 standard	Thai/English full pack	1	00.03.31	Baht	18,165	18,165	IWUDB	0	1	A	B	Kawasho Co.,(Thailand)
EL-15	Fujitsu Laser Printer	Printerpartner 20W/Ethernet Card	1	00.03.31	Baht	61,320	61,320	IWUDB	0	1	A	B	Kawasho Co.,(Thailand)
EL-16	Hewlett Packerd Scanner	HP Scanjet 6300C	1	00.03.31	Baht	19,320	19,320	IWUDB	0	1	B	B	Kawasho Co.,(Thailand)
EL-17	Table & Chair for PC	No Brandname: 120x60x75cm	2	00.03.31	Baht	3,727.5	7,455	IWUDB	0	2	A	B	Kawasho Co.,(Thailand)
EL-18	ATEC Personal Computer Server	NEXUS 700, Dual PentiumIII 500MHz	1	00.03.31	Baht	140,705	140,705	ITC	0	1	A	B	Kawasho Co.,(Thailand)
EL-19	Software (1)	MS Window 2000 for Server	1	00.03.31	Baht	142,525	142,525	ITC	0	1	A	B	Kawasho Co.,(Thailand)
EL-20	Software (5)	MS Windows 2000 Thai Professional	1	00.03.31	Baht			TOB7	0	1	A	B	Kawasho Co.,(Thailand)
EL-21	Software (2)	Norton/Anti-Virus 2000 for Server	1	00.03.31	Baht			ITC	0	1	A	B	Kawasho Co.,(Thailand)
EL-22	Software (3)	MS Visual Studio 6.0 Professional	1	00.03.31	Baht			ITC	0	1	C	B	Kawasho Co.,(Thailand)
EL-23	Software (4)	Borland/Delphi 5.0 Professional	1	00.03.31	Baht			ITC	0	1	C	B	Kawasho Co.,(Thailand)
EL-24	ASUSTEK Laptop Personal Computer	L8400, Pentium II 300MHz, 14.1TFT	1	00.03.31	Baht	87,500	87,500	ITC	0	1	B	B	Kawasho Co.,(Thailand)
EL-24	ASUSTEK Laptop Personal Computer	L8400, Pentium II 300MHz, 14.1TFT	1	00.03.31	Baht	87,500	87,500	RAH	0	1	B	B	Kawasho Co.,(Thailand)
EL-25	Winway Disktop Personal Computer	CPU:PentiumIII 533MHz	1	00.03.31	Baht	48,045	48,045	TOB7	0	1	A	B	Kawasho Co.,(Thailand)
EL-26	Fujitsu Laser Printer	PR 20W	1	00.03.31	Baht	61,320	61,320	ITC	0	1	A	B	Kawasho Co.,(Thailand)

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No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
EL-27	Ushitaka Planimeter	X-plan 360+ with mini-printer	1	00.03.31	Baht	72,146	72,146	WMB	0	1	C	B	Kawasho Co.,(Thailand)
EL-28	Kubota Farming Tractor, 82HP	Single Speed PTO, 4WD, M8200DT	1	00.04.27	Baht	826,000	826,000	KPSO	0	1	C	B	Nomura Trading Co.,
EL-29	Kubota Rotary Tiller	Working width:80 inch	1	00.04.27	Baht	115,000	115,000	KPSO	0	1	C	B	Nomura Trading Co.,
EL-30	Kubota Disc Plow	3 Disc X 26 inch	1	00.04.27	Baht	30,000	30,000	KPSO	0	1	C	B	Nomura Trading Co.,
EL-31	Over Head Projector:3M	3M Model:9200, 1094754	1	01.01.30	Baht	23,000	23,000	KO&MPO	0	1	C	B	Nomura Trading Co.,
EL-32	Sokkia Automatic Level	Sokkia, Model:B20, 364800	1	01.01.30	Baht	31,500	31,500	KO&MPO	0	1	C	B	Nomura Trading Co.,
EL-33	Electric Digital Theoddite	Sokkia, Model:DT5, 163313	1	01.01.30	Baht	97,000	97,000	KO&MPO	0	1	C	B	Nomura Trading Co.,
EL-34	Copy Machine	Canon, Model:NP6130, DPD803739	1	01.01.30	Baht	190,000	190,000	IWUDB	0	1	A	B	Nomura Trading Co.,
EL-35	Panasonic Video Camera	Panasonic, NV-DS99EN	1	01.01.30	Baht	87,000	87,000	IWUDB	0	1	C	B	Nomura Trading Co.,
EL-36	Color Printer	Canon, Model BJC-5100, WO3840069123	1	01.01.30	Baht	14,000	14,000	IWUDB	0	1	B	B	Nomura Trading Co.,
EL-37	LCD Projector	3M, Model:MP8745, GOC203653	1	01.01.30	Baht	318,000	318,000	IWUDB	0	1	C	B	Nomura Trading Co.,
EL-38	Minolta Camera, Tripod	Model:DYNAX 505si, 92002750	1	01.01.30	Baht	27,000	27,000	IWUDB	0	1	C	B	Nomura Trading Co.,
EL-39	Slide Projector, Screen	Kodak, Model:EKTAPRO 5020, 1492745020	1	01.01.30	Baht	60,000	60,000	IWUDB	0	1	C	B	Nomura Trading Co.,
EL-40	Compaq Computer	Presario 7000 P.III 1000/30GB/128MB	1	01.01.30	Baht	83,000	83,000	KO&MPO	0	1	A	B	Nomura Trading Co.,
EL-41	Software:MS Office 2000	Thai / English Full Pack	1	01.01.30	Baht	21,000	21,000	KO&MPO	0	1	A	B	Nomura Trading Co.,
EL-42	HP Printer	Laser Jet 5000	1	01.01.30	Baht	65,000	65,000	KO&MPO	0	1	A	B	Nomura Trading Co.,
EL-43	Epson Scanner	Perfection Scannerr 1200U	1	01.01.30	Baht	8,500	8,500	KO&MPO	0	1	B	B	Nomura Trading Co.,
EL-44	Socomec 1 Backup Power Supply	Socomec, EGYS-LP 1000VA	1	01.01.30	Baht	8,000	8,000	KO&MPO	0	1	A	B	Nomura Trading Co.,
EL-45	Table & Chair for PC	120x60x75cm	2	01.01.30	Baht	3,000	6,000	KO&MPO	0	2	A	B	Nomura Trading Co.,
EL-46	Suzuki Motorcycle	FD 110xRed Color	3	01.03.20	Baht	37,000	111,000	KO&MPO	0	3	C	B	Nomura Trading Co.,
EL-48	Compaq Computer with Montor 17", DVD, CD	CPU:P866MHZ, HD:15GB, Intel815e	1	01.03.20	Baht	102,400	102,400	DDO8	0	1	A	B	Siam Taj Co., Ltd.
EL-49	Compaq Laptop Computer	Presario 1700-P650MHz, Windows98	1	01.03.20	Baht	91,700	91,700	DDO8	0	1	B	B	Siam Taj Co., Ltd.
EL-50	Ushikata Plani-meter	X-Plan 360C+	1	01.03.20	Baht	72,100	72,100	DDO8	0	1	C	B	Siam Taj Co., Ltd.
EL-51	HP Printer	Laser Jet 2100TN	2	01.03.20	Baht	17,150	34,300	TOB7&DD08	0	2	B	B	Siam Taj Co., Ltd.
EL-52	Microtek Scanner	V6USL with software OCR	2	01.03.20	Baht	7,550	15,100	TOB7&DDO8	0	2	C	B	Siam Taj Co., Ltd.
EL-53	Epson Digital Camera	PC800	1	01.03.20	Baht	26,400	26,400	DDO8	0	1	A	B	Siam Taj Co., Ltd.
EL-54	Desk & Chair	CRX-2001, W81xD68xH117	1	01.03.20	Baht	6,100	6,100	DDO8	0	1	A	B	Siam Taj Co., Ltd.
EL-55	Topcon Rotating Laser	RL-H1S	1	01.03.20	Baht	270,600	270,600	DDO8	0	1	B	B	Siam Taj Co., Ltd.
EL-56	Topcon Level Senser	LS-B2	1	01.03.20	Baht	267,500	267,500	DDO8	0	1	B	B	Siam Taj Co., Ltd.
EL-57	Software:Autocad 2000 License Box		1	01.03.20	Baht	154,500	154,500	TOB7	0	1	C	B	Siam Taj Co., Ltd.
EL-58	MS Windows 2000 Server OEM	Software for Server 5 clients	1	01.04.05	Baht	35,000	35,000	WIFB	0	1	A	B	Nomura Trading
EL-59	Software: MS Office 2000 Pro / Thai		1	01.04.05	Baht	25,000	25,000	ITC	0	1	A	B	Nomura Trading

EL-3

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EL-60	Socomec UPS	EGYS-LP1000	1	01.04.05	Baht	8,500	8,500	ITC	0	1	A	B	Nomura Trading
EL-61	Socomec UPS	EGYS-LP1000	1	01.04.05	Baht	8,500	8,500	WIFB	0	1	A	B	Nomura Trading
EL-62	Socomec UPS	EGYS-LP1000	1	01.04.05	Baht	8,500	8,500	RAH	0	1	A	B	Nomura Trading
EL-63	Compaq Personal Computer with Monitor17" (1)	Deskpro ENC P.III 866MHz/1.5GB/128MB,	1	01.04.05	Baht	71,000	71,000	WMB	0	1	A	B	Nomura Trading
EL-64	Compaq Personal Computer with Monitor17" (2)	Deskpro ENC P.III 866MHz/1.5GB/128MB,	1	01.04.05	Baht	71,000	71,000	RIO8	0	1	A	B	Nomura Trading
EL-65	Compaq Personal Computer with Monitor17" (3)	Deskpro ENC P.III 866MHz/1.5GB/128MB,	1	01.04.05	Baht	71,000	71,000	MAO&MP	0	1	A	B	Nomura Trading
EL-66	Compaq Personal Computer with Monitor17" (4)	Deskpro ENC P.III 866MHz/1.5GB/128MB,	1	01.04.05	Baht	71,000	71,000	HC5	0	1	A	B	Nomura Trading
EL-67	Compaq Personal Computer with Monitor17" (5)	Deskpro ENC P.III 866MHz/1.5GB/128MB,	1	01.04.05	Baht	71,000	71,000	IMD	0	1	A	B	Nomura Trading
EL-68	Compaq Personal Computer with Monitor19" (1)	Deskpro ENC P.III 866MHz/1.5GB/128MB,	1	01.04.05	Baht	101,000	101,000	WIFB	0	1	A	B	Nomura Trading
EL-69	Compaq Personal Computer with Monitor19" (2)	Deskpro ENC P.III 866MHz/1.5GB/128MB,	1	01.04.05	Baht	82,000	82,000	ITC	0	1	A	B	Nomura Trading
EL-70	Compaq Personal Computer with Monitor19" (3)	Deskpro ENC P.III 866MHz/1.5GB/128MB,	1	01.04.05	Baht	82,000	82,000	RAH	0	1	A	B	Nomura Trading
EL-71	Network Equipment: (1-1)	SMC LAN HUB 8 Port	1	01.04.05	Baht	2,500	2,500	RAH	0	1	A	B	Nomura Trading
EL-71	Network Equipment: (1-2)	SMC LAN HUB 8 Port	1	01.04.05	Baht	2,500	2,500	WMB	0	1	A	B	Nomura Trading
EL-71	Network Equipment: (1-3)	SMC LAN HUB 8 Port	1	01.04.05	Baht	2,500	2,500	IMD	0	1	A	B	Nomura Trading
EL-71	Network Equipment: (1-4)	SMC LAN HUB 8 Port	1	01.04.05	Baht	2,500	2,500	RAH	0	1	A	B	Nomura Trading
EL-72	Network Equipment: (2-1)	SMC HUB 16 Port	1	01.04.05	Baht	4,500	4,500	ITC	0	1	A	B	Nomura Trading
EL-72	Network Equipment: (2-2)	SMC HUB 16 Port	1	01.04.05	Baht	4,500	4,500	WIFB	0	1	A	B	Nomura Trading
EL-73	Network Equipment: (3)	Cable UTP CAT SE	1	01.04.05	Baht	3,000	3,000	ITC	0	1	A	B	Nomura Trading
EL-74	Network Equipment: (4)	RJ 45 Plug	1	01.04.05	Baht	1,500	1,500	ITC	0	1	A	B	Nomura Trading
EL-75	HP Laser Printer	HP 5000N	1	01.04.05	Baht	85,000	85,000	WIFB	0	1	A	B	Nomura Trading
EL-76	HP Laser Printer	HP 5000N	1	01.04.05	Baht	85,000	85,000	RAH	0	1	A	B	Nomura Trading
EL-77	HP Inkjet Color Printer	Deskjet 1220C	1	01.04.05	Baht	18,500	18,500	ITC	0	1	A	B	Nomura Trading
EL-78	Epson Dot Impact Printer	LQ-580	1	01.04.05	Baht	9,290	9,290	RAH	0	1	A	B	Nomura Trading
EL-79	Walky Talky	fMotorola, GP-68	3	01.04.05	Baht	12,000	36,000	KO&MPO	0	3	A	B	Nomura Trading
EL-80	Video Player	Panasonic /NV-FJ720AM	1	01.11.21	Baht	14,705	14,705	IWUDB	0	1	C	B	JAT E&C Co.,Ltd.
EL-81	Television	Panasonic TC29P20NB	1	01.11.21	Baht	27,760	27,760	IWUDB	0	1	C	B	JAT E&C Co.,Ltd.
EL-82	AV Cabinet	Cabinet for 29" TV and Video Player	1	01.11.21	Baht	1,655	1,655	IWUDB	0	1	C	B	JAT E&C Co.,Ltd.
EL-83	Cassette Tape Recorder & Microphone	Sony TCS-580V, ECM-R100	1	01.11.21	Baht	9,675	9,675	IWUDB	0	1	C	B	JAT E&C Co.,Ltd.
EL-84	Notebook Computer	Compaq Presario 1700,PIII:850MHz,20GB,	1	01.11.21	Baht	86,940	86,940	IWUDB	0	1	A	B	JAT E&C Co.,Ltd.
EL-85	Desktop Computer	Compaq Presario 5000,PIII:1.1GHz,40GB	1	01.11.21	Baht	45,540	45,540	KO&MPWM1	0	1	A	B	JAT E&C Co.,Ltd.
EL-86	Software	MS Office XP Standard(Thai Full Pack)	1	01.11.21	Baht	25,360	25,360	KO&MPWM1	0	1	A	B	JAT E&C Co.,Ltd.
EL-87	Color Printer	Canon S-4500 Color Bubble Jet	1	01.11.21	Baht	12,420	12,420	KO&MPWM1	0	1	A	B	JAT E&C Co.,Ltd.

EL-4

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List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
EL-87	Back-up Power Supply (UPS)	SECOMEC EGYS-LP520 500VA	1	01.11.21	Baht	3,725	3,725	KO&MPWM1	0	1	A	B	JAT E&C Co.,Ltd.
EL-89	Table and Chair for PC	for Desktop computer, Color Printer, and	1	01.11.21	Baht	2,535	2,535	KO&MPWM1	0	1	A	B	JAT E&C Co.,Ltd.
EL-90	Megaphone	T.O.A. ER-2015W Sholder Type,	3	01.11.21	Baht	3,830	11,490	KO&MPO	0	3	C	B	JAT E&C Co.,Ltd.
EL-91	Bush Cutter	Makita Model RBC410 Sholder Type	4	01.11.21	Baht	8,995	35,980	KO&MPO	0	4	C	B	JAT E&C Co.,Ltd.
EL-92	Chain Hoist	Clinton HS5 Max 5 t, standard lift:Approx	2	01.11.21	Baht	23,500	47,000	KO&MPO	0	2	C	B	JAT E&C Co.,Ltd.
EL-93	Electric Hammer	Makita Demolition Hammer HM1302, 1300w	2	01.11.21	Baht	19,155	38,310	KO&MPO	0	2	C	B	JAT E&C Co.,Ltd.
EL-94	Pump	HONDA WZ 30 K1-TR, 5.2HP, 200cc	2	01.11.21	Baht	11,595	23,190	KO&MPO	0	2	C	B	JAT E&C Co.,Ltd.
EL-95	Engine Welder	Honmar 7KVA, Max Electrode:5mm,	1	01.11.21	Baht	40,505	40,505	KO&MPO	0	1	C	B	JAT E&C Co.,Ltd.
EL-96	Object Projector	EIKI Visual System Presenter V-5300	1	01.11.21	Baht	82,800	82,800	IWUDB	0	1	C	B	JAT E&C Co.,Ltd.
EL-97	Zip Drive	IOMEGA 250MB, USB Port	1	01.11.21	Baht	12,420	12,420	IWUDB	0	1	B	B	JAT E&C Co.,Ltd.
EL-98	Digitizing Tablet	KYE System(Genius), New Sketch 1212 III	1	01.11.21	Baht	5,485	5,485	IWUDB	0	1	C	B	JAT E&C Co.,Ltd.
EL-99	CD-R/RW Drive	IOMEGA CD-RW Predator	1	01.11.21	Baht	11,905	11,905	IWUDB	0	1	B	B	JAT E&C Co.,Ltd.
EL-100	Printing Machine	RISO RN2030, ADF V, Job Separator III,	1	01.11.21	Baht	183,195	183,195	KO&MPO	0	1	C	B	JAT E&C Co.,Ltd.
EL-101	Binding Machine	Ibico-Info Data, KOMBO 21, A4, 21 Holes	1	01.11.21	Baht	17,075	17,075	KO&MPO	0	1	C	B	JAT E&C Co.,Ltd.
EL-102	Design Pen Set	STAEDTLER, Technical Pens for Paper 700	1	01.11.21	Baht	2,000	2,000	KO&MPO	0	1	B	B	JAT E&C Co.,Ltd.
EL-103	Video Editing Machine	Panasonic Digital Video Master	1	01.11.21	Baht	73,515	73,515	IWUDB	0	1	C	B	JAT E&C Co.,Ltd.
EL-104	Duster	Marunaka MD-361	1	01.11.21	Baht	16,560	16,560	KO&MPO	0	1	C	B	JAT E&C Co.,Ltd.
EL-105	Mist Blower	KUBOTA Model:SK30AH, HONDA G200K1	1	01.11.21	Baht	23,255	23,255	KO&MPO	0	1	C	B	JAT E&C Co.,Ltd.
EL-106	Personal Computer	Compaq DeskPro EN PIII 1G, 17", Windows	1	01.11.26	Baht	73,131	73,131	CKO&MP	0	1	A	B	FDI Co.,Ltd.
EL-107	Personal Computer	Compaq DeskPro EN PIII 1G, 17", Windows	1	01.11.26	Baht	73,131	73,131	RRO&MP	0	1	A	B	FDI Co.,Ltd.
EL-108	Personal Computer	Compaq DeskPro EN PIII 1G, 17", Windows	1	01.11.26	Baht	73,131	73,131	MHO&MP	0	1	A	B	FDI Co.,Ltd.
EL-109	O/M Information Display Device(LCD Projector)	Toshiba TLP-471	1	01.11.26	Baht	222,900	222,900	WMB	0	1	C	B	FDI Co.,Ltd.
EL-110	O/M Information Display Device(LCD Projector)	Toshiba TLP-471	1	01.11.26	Baht	222,900	222,900	RIO8	0	1	C	B	FDI Co.,Ltd.
EL-111	Color Scanner	DeSKan Express Color V5, A0, ProVec	1	01.11.26	Baht	231,822	231,822	WIFB	0	1	C	B	FDI Co.,Ltd.
EL-112	Digital Camera (1)	EPSON Photo PC 3100Z	1	01.11.26	Baht	46,600	46,600	WMB	0	1	C	B	FDI Co.,Ltd.
EL-113	Digital Camera (2)	EPSON Photo PC 3100Z	1	01.11.26	Baht	46,600	46,600	ITC	0	1	C	B	FDI Co.,Ltd.
EL-114	Network Equipment (Hub)	3COM SuperStack 3 Switch 3300XM	1	01.11.26	Baht	34,000	34,000	WIFB	0	1	A	B	FDI Co.,Ltd.
EL-115	Modem	Allied DATA Tonardo 56K V90 (RS-232)	2	01.11.26	Baht	1,537	3,074	ITC	0	2	A	B	FDI Co.,Ltd.
EL-116	Software (1)	MS Windows 2000 Server, 5 User License	1	01.11.26	Baht	32,200	32,200	ITC	0	1	A	B	FDI Co.,Ltd.
EL-117	Software (2)	MS SQL Server 2000 Standard, 5 User	1	01.11.26	Baht	49,670	49,670	ITC	0	1	A	B	FDI Co.,Ltd.
EL-118	Software (3)	Norton System Works 2000	1	01.11.26	Baht	1,461	1,461	ITC	0	1	S	B	FDI Co.,Ltd.
EL-119	Software (4)	Adobe PageMaker 7.0	1	01.11.26	Baht	24,380	24,380	ITC	0	1	A	B	FDI Co.,Ltd.

EL-5

K:Expert G:Purchased by Local Budget
EL:Purchased by Local Spplers E:Purchased in Japan

NP:Dumped U(frequancy of use): A=daily B=1-3/week C=particular period
P: Possessing M(管理状況): A=daily use B=normal C=need service D=not operable

List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
EL-120	Desktop Computer	Compaq Presario 5000, PIII 1.1GHz, 128MB	1	01.11.13	Baht	47,100	47,100	KO&MPWM2	0	1	A	B	SIAM TAJ Co.,Ltd.
EL-121	Software	MS Office XP, Thai	1	01.11.13	Baht	21,200	21,200	KO&MPWM2	0	1	A	A	SIAM TAJ Co.,Ltd.
EL-122	Color Printer	Canon S4500, A3 size, BC-30e,BC-31e	1	01.11.13	Baht	22,900	22,900	KO&MPWM2	0	1	A	B	SIAM TAJ Co.,Ltd.
EL-123	Back-up Power Supply (UPS)	Model Black 500Ei	1	01.11.13	Baht	3,300	3,300	KO&MPWM2	0	1	A	B	SIAM TAJ Co.,Ltd.
EL-124	Table and Chair for PC	120x60x75 cm, Revolving Chair on casters	1	01.11.13	Baht	3,300	3,300	KO&MPWM2	0	1	A	B	SIAM TAJ Co.,Ltd.
EL-125	Bush Cutter	Makita RBC410Z, Sholder Type	8	01.11.13	Baht	8,925	71,400	KO&MPO	0	8	C	B	SIAM TAJ Co.,Ltd.
EL-126	Current Meter (large size)	OTT Universal Current Meter : OTT C31	1	02.04.05	Baht	943,000	943,000	WIFB	0	1	C	B	JAT Engineering Co.,
EL-127	Current Meter (middle size)	OTT Universal Current Meter : OTT C31	1	02.04.05	Baht	512,500	512,500	WIFB	0	1	C	B	JAT Engineering Co.,
EL-128	Personal Computer (Desktop) with UPS	Dell Optiplex	4	02.01.25	Baht	68,740	273,880	WMB	0	4	B	C	JAT E&C Co., Ltd.
EL-129	Personal Computer (Laptop)	Fujitsu Lifebook C-6632, P3,1GHz,	2	02.01.25	Baht	120,950	241,900	WMB	0	2	A	B	JAT E&C Co., Ltd.
EL-130	R/S Software	ERDAS Imagine Professional Ver 8.5	1	02.01.25	Baht	348,720	348,720	WIFB	0	1	A	B	JAT E&C Co., Ltd.
EL-131	Desktop Personal Computer	Compaq DeskPro SB P4,	1	02.03.08	Baht	50,900	57,500	TOB7	0	1	A	B	Hino Computer
EL-132	Reversible Compactor	Mikasa MVH-150D	2	02.03.29	Baht	145,000	290,000	DDO8	0	2	C	B	YUH Machine Tools
EL-133	Submersible Pump	Mikasa WP-3LBx7	1	02.03.29	Baht	27,000	27,000	DDO8	0	1	C	B	YUH Machine Tools
EL-134	Pendulous Type Concrete Vibrator and Shaft	Mikasa GH-38BX4	2	02.03.29	Baht	13,500	27,000	DDO8	0	2	C	B	YUH Machine Tools
EL-135	Power Drive Unit for submerge pump and	Mikasa GE-5LV Complete Set	1	02.03.29	Baht	20,000	20,000	DDO8	0	1	C	B	YUH Machine Tools
EL-136	External Vibrating Motor	Mikasa KJ150-S2P	2	02.03.29	Baht	20,300	28,420	DDO8	0	2	C	B	YUH Machine Tools
EL-137	Radio Transcever for Base Station(1)	LVB 8526 Type C	1	02.03.29	Baht	24,299.075	24,299.075	DDO8	0	2	B	B	Larp Viboonkij Ltd.,
EL-138	Radio Transcever for Base Station(2)	LVB 8526 Type C	1	02.03.29	Baht	24,299.075	24,299.075	DDO8	0	1	B	B	Larp Viboonkij Ltd.
EL-139	Radio Transceiver for mobile unit	LVB 8528V (LCD type)	10	02.03.29	Baht	10,373.83	103.7383	DDO8	0	10	B	B	Larp Viboonkij Ltd.,
EL-140	CD-R/W Drive	Kodak CD-RW, 4832USB+Cable	1	02.03.08	Baht	6,500	6,500	TOB7	0	1	B	B	Hino Computer
EL-141	Desk and Chair	Computer Desk PC-1201, Chair	1	02.03.08	Baht	3,500	3,500	TOB7	0	1	A	B	Hino Computer
EL-142	Backup Power Supply	APC Back-UPS Pro 500VA with AVR	1	02.03.08	Baht	4,500	4,500	TOB7	0	1	A	B	Hino Computer
EL-143	Printing Machine	RISO Graph RN 2030, ADFV, Job	1	02.04.24	Baht	182,310	182,310	IWUDB	0	1	C	B	advance purchase
EL-144	Binding Machine, Ibico KOMBO 21	A4 Size, 21 Holes, Accessories	1	02.04.26	Baht	16,500	16,500	IWUDB	0	1	C	B	advance purchase
EL-145	Planimeter (Area-curvimeter)	Ushikta X-PLAN 520F	1	02.04.23	Baht	81,320	81,320	IWUDB	0	1	C	B	advance purchase
EL-146	Farming Tractor	85HP, 4-WD, Single Speed PTO, 3-point	1	02.04.26	Baht	963,900	963,900	KPSO	0	1	C	B	advance purchase
EL-147	Disk Plow		1	02.04.26	Baht	40,000	40,000	KPSO	0	1	C	B	advance purchase
EL-148	Rotary Tiller		1	02.04.26	Baht	132,000	132,000	KPSO	0	1	C	B	advance purchase
EL-149	Duster, Marunaka	MD-361, Knapsack Power Mist Duster	2	02.04.23	Baht	15,500	31,000	IWUDB	0	2	C	B	advance purchase
EL-150	Mist Blower	KUBOTA, SK-30AH	2	02.04.23	Baht	17,000	34,000	IWUDB	0	2	C	B	advance purchase
EL-151	Plotter, HP Design Jet 800PS	Size 42 inch, Color, 160MB RAM, 6GB HD,	1	02.04.26	Baht	275,825	275,825	WIFB	0	1	A	A	advance purchase

EL-6

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List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
EL-152	Digitizer, CalComp DrawingBoard III	Size 36x48 inch, RS232 and USB Interface	1	02.04.29	Baht	139,000	139,000	ITC	0	1	B	B	advance purchase
EL-153	Concrete Mixer	Diesel Engine with 8HP,Drum	1	02.04.26	Baht	87,000	87,000	DDO8	0	1	C	B	advance purchase
EL-154	Hydraulic Jackie	Oil Pressure, Lift Capacity:10,000kg	1	02.04.26	Baht	43,500	43,500	DDO8	0	1	C	B	advance purchase
EL-155	Steel Cutter	Electric Motor 2kw, 4 inch Blade	1	02.04.26	Baht	9,400	9,400	DDO8	0	1	C	B	advance purchase
EL-156	Digital Levle	Range:2-100m, Zoom:X32	1	02.04.26	Baht	104,325	104,325	DDO8	0	1	C	B	advance purchase
EL-157	Internal Hard Disk (1)	80 GB/IDE, Bus:100, 7200rpm	1		Baht	3,400	3,400	IEC303					planned in 2003
EL-158	Internal Hard Disk (2)	80 GB/IDE, Bus:100, 7200rpm	1		Baht	3,400	3,400	IEC303					planned in 2003
EL-159	Internal Hard Disk (3)	80 GB/IDE, Bus:100, 7200rpm	1		Baht	3,400	3,400	WIFB					planned in 2003
EL-160	Internal Hard Disk (4)	80 GB/IDE, Bus:100, 7200rpm	1		Baht	3,400	3,400	WIFB					planned in 2003
EL-161	Internal Hard Disk (5)	80 GB/IDE, Bus:100, 7200rpm	1		Baht	3,400	3,400	WMB					planned in 2003
EL-162	Internal Hard Disk (1)	40GB/SCSI, 7200rpm	1		Baht	8,100	8,100	WMB					planned in 2003
EL-163	Internal Hard Disk (2)	40GB/SCSI, 7200rpm	1		Baht	8,100	8,100	IEC303					planned in 2003
EL-164	External Hard Disk(USB)	80GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	IEC401					planned in 2003
EL-165	External Hard Disk(USB) (1)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	WMB					planned in 2003
EL-166	External Hard Disk(USB) (2)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	WMB					planned in 2003
EL-167	External Hard Disk(USB) (3)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	RAH					planned in 2003
EL-168	External Hard Disk(USB) (4)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	RIO8					planned in 2003
EL-169	External Hard Disk(USB) (5)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	HC5					planned in 2003
EL-170	External Hard Disk(USB) (6)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	MAO&MP					planned in 2003
EL-171	External Hard Disk(USB) (7)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	CKO&MP					planned in 2003
EL-172	External Hard Disk(USB) (8)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	RRO&MP					planned in 2003
EL-173	External Hard Disk(USB) (9)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	MHO&MP					planned in 2003
EL-174	External Hard Disk(USB) (10)	40GB/USB(2.0), 7200rpm	1		Baht	7,000	7,000	KO&MPWM1					planned in 2003
EL-175	Anti-Virus Software (1)	Norton Security 2003	1		Baht	2,400	2,400	WMB					planned in 2003
EL-176	Anti-Virus Software (2)	Norton Security 2003	1		Baht	2,400	2,400	WMB					planned in 2003
EL-177	Anti-Virus Software (3)	Norton Security 2003	1		Baht	2,400	2,400	WMB					planned in 2003
EL-178	Anti-Virus Software (4)	Norton Security 2003	1		Baht	2,400	2,400	RAH					planned in 2003
EL-179	Anti-Virus Software (5)	Norton Security 2003	1		Baht	2,400	2,400	WIFB					planned in 2003
EL-180	Anti-Virus Software (6)	Norton Security 2003	1		Baht	2,400	2,400	WIFB					planned in 2003
EL-181	Anti-Virus Software (7)	Norton Security 2003	1		Baht	2,400	2,400	IEC303					planned in 2003
EL-182	Anti-Virus Software (8)	Norton Security 2003	1		Baht	2,400	2,400	RIO8					planned in 2003
EL-183	Anti-Virus Software (9)	Norton Security 2003	1		Baht	2,400	2,400	HC5					planned in 2003

EL-7

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List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
EL-184	Anti-Virus Software (10)	Norton Security 2003	1		Baht	2,400	2,400	MAO&MP					planned in 2003
EL-185	Anti-Virus Software (11)	Norton Security 2003	1		Baht	2,400	2,400	CKO&MP					planned in 2003
EL-186	Anti-Virus Software (12)	Norton Security 2003	1		Baht	2,400	2,400	KO&MPO					planned in 2003
EL-187	Anti-Virus Software (13)	Norton Security 2003	1		Baht	2,400	2,400	RRO&MP					planned in 2003
EL-188	Anti-Virus Software (14)	Norton Security 2003	1		Baht	2,400	2,400	MHO&MP					planned in 2003
EL-189	Adobe:Acrobat Software	Acrobat 6.0	1		Baht	19,600	19,600	IEC303					planned in 2003
EL-190	Seagate:Crystal Report 9	Aeagate:Crystal Report 9, Developer Edition	1		Baht	25,300	25,300	IEC303					planned in 2003
EL-191	Virtual Studio Net Upgrade	Virtual Studio Net Upgrade	1		Baht	21,800	21,800	IEC303					planned in 2003
EL-192	Macromedia:Dreamweaver	Macromedia:Dreamweaver	1		Baht	15,100	15,100	IEC303					planned in 2003
EL-193	Computer Memory:RAM (1-1)	256MB, RDRAM, PC800	2		Baht	5,675	11,350	IEC303					planned in 2003
EL-194	Computer Memory:RAM (1-2)	256MB, RDRAM, PC800	2		Baht	5,675	11,350	WMB					planned in 2003
EL-195	Computer Memory:RAM (1-3)	128MB, RDRAM, PC800	2		Baht	2,950	5,900	WMB					planned in 2003
EL-196	Computer Memory:RAM (1-4)	128MB, RDRAM, PC800	2		Baht	2,950	5,900	WMB					planned in 2003
EL-197	Computer Memory:RAM (2-1)	256MB, SDRAM, PC133	1		Baht	3,200	3,200	WMB					planned in 2003
EL-198	Computer Memory:RAM (2-2)	256MB, SDRAM, PC133	1		Baht	3,200	3,200	RAH					planned in 2003
EL-199	Computer Memory:RAM (2-3)	256MB, SDRAM, PC133	1		Baht	3,200	3,200	IEC401					planned in 2003
EL-200	Computer Memory:RAM (3)	256MB(128MBx2), EDO DIMM unbuffered,	1		Baht	3,150	6,300	WMB					planned in 2003
EL-201	Computer Memory:RAM (4-1)	256MB, SODIMM, PC100	1		Baht	4,500	4,500	IEC303					planned in 2003
EL-202	Computer Memory:RAM (4-2)	256MB, SODIMM, PC100	1		Baht	4,500	4,500	IEC303					planned in 2003
EL-203	LCD Projector Spare Lamp (1)	Toshiba, TLPLU6	1		Baht	19,800	19,800	WMB					planned in 2003
EL-204	LCD Projector Spare Lamp (2)	Toshiba, TLPLU6	1		Baht	19,800	19,800	RIO8					planned in 2003
EL-205	LCD Projector Spare Lamp (3)	EIKI LC-982 (LC-XGA982 Projector)	1		Baht	20,900	20,900	KO&MPWM2					planned in 2003
EL-206	LCD Projector Spare Lamp (4)	3M MP8745 Projector	1		Baht	23,600	23,600	IWUDB					planned in 2003
EL-207	External CD Writer (1)	USB1.1/2.0	1		Baht	4,850	4,850	WMB					planned in 2003
EL-208	External CD Writer (2)	USB1.1/2.0	1		Baht	4,850	4,850	IEC401					planned in 2003
EL-209	External CD Writer (3)	USB1.1/2.0	1		Baht	4,850	4,850	RIO8					planned in 2003
EL-210	External CD Writer (4)	USB1.1/2.0	1		Baht	4,850	4,850	DDO8					planned in 2003
EL-211	Handy Drive	64 MB, USB1.1/2.0	1		Baht	1,100	1,100	WMB					planned in 2003
EL-212	Diesel Engine	Max. Power:11 HP	2		Baht	36,600	73,200	DDO8					planned in 2003

Total Cost(Yen)

Total Cost (Baht) 13,999,135 Exchange Rate (2003.10) : Baht 1 = ¥ 2.867 Yen

BahtCostTotal(Yen) 43,333,092

EL-8

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List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
G-1	Brother Laser Printer	HL-P2000	1	99.07.02	Baht	21,645	21,645	IEC405	0	1	A	B	Slip No.7-3
G-2	Hard Disk for Thai	Smart 13GB, DFM-5601S	1	99.08.17	Baht	7,656	7,656	IEC407	0	1	B	B	Slip No.8-41
G-3	Blind with Cartoon Box	250cm x 120cm	1	99.09.15	Baht	19,600	19,600	KPSO	0	1	A	B	Slip No.9-31
G-4	National Cleaner		1	99.09.15	Baht	7,100	7,100	KPSO	0	1	B	B	Slip No.9-32
G-5	Carpet	60m^2	1	99.08.17	Baht	30,000	30,000	KPSO	0	1	A	B	Slip No.9-33
G-6	System Table	8 persons	1	99.08.17	Baht	16,198	16,198	KPSO	0	1	A	B	Slip No.9-36
G-7	MWMS Signboard		1	99.08.17	Baht	7,000	7,000	KPSO	0	1	A	B	Slip No.9-39
G-8	National Refrigerator	NRA1755R	1	00.01.25	Baht	12,400	12,400	KPSO	0	1	A	B	Slip No.1-53
G-9	Mobile Phone	ERICSSON A10185	1	00.02.04	Baht	15,970	15,970	IEC410	0	1	C	B	Slip No.2-15
G-10	Roof Materials for Storage and Garage		1	00.03.10	Baht	23,815	23,815	KPSO	0	1	A	B	Slip No.3-22
G-11	Foundation Materials for Storage and Garage		1	00.03.10	Baht	19,700	19,700	KPSO	0	1	A	B	Slip No.3-23
G-12	Wall Materials for Storage and Garage		1	00.03.10	Baht	28,000	28,000	KPSO	0	1	A	B	Slip No.3-24
G-13	Power Spreyer with HONDA Engine	5HP	1	01.03.29	Baht	14,700	14,700	KPSO	0	1	C	B	Slip No.3-108
G-14	Honda 1.5 inch Irrigation Pump		1	01.03.29	Baht	6,500	6,500	KPSO	0	1	C	B	Slip No.3-108
G-15	Diesel Engine, KUBOTA	KUBOTA ET110, 11 HP	1	01.12.21	Baht	37,000	37,000	DDO8	0	1	C	B	No.12-071
G-16	SCSI Card for Scaner	Adaptec AHA 2940 UW	1	02.01.08	Baht	10,700	10,700	TOB7	0	1	A	A	No.1-005
G-17	Printer : Canon S-600	Canon S-600/Parallel	1	02.01.11	Baht	11,390	11,390	IEC407	0	1	A	A	No.1-010
G-18	Tractor Attachment Parts (1) : Chisel Plow	K86-0071, 4 pieces	1	02.01.17	Baht	25,680	25,680	KPSO	0	4	C	B	No.1-051
G-19	Tractor Attachment Parts (2) : Chisel Plow	K86-0072, 3 pieces	1	02.01.17	Baht	19,260	19,260	KPSO	0	3	C	B	No.1-052
G-20	Tractor Attachment Parts (3) : Chisel	K86-0073, Body unit	1	02.01.17	Baht	19,260	19,260	KPSO	0	1	C	B	No.1-050
G-21	Printer : HP Deskjet 1125C	HP Diskjet 1125C	1	02.02.14	Baht	13,700	13,700	RIO8	0	1	A	B	No.2-045
G-22	Auto Level Sensor and Tripod	SOKKIA:Model-B21, 387330, Tripod PSA1	1	02.02.20	Baht	30,000	30,000	KPSO	0	1	C	B	No.2-046
G-23	Staff Gage and Measurment Tape	NED(3m)x2, YAMAYO(5m)x2, NR 50X x2	1	02.02.20	Baht	15,000	15,000	KPSO	0	3x2	C	B	No.2-046
G-24	Printer Switch Box	Auto Gross R&D 1 to 2 (MB125)	1	02.02.21	Baht	1,600	1,600	DDO8	0	1	C	B	No.2-064
G-25	UPS APC Back 500EI	s/n AB0150140874, AB0150240281,	3	02.03.18	Baht	3,290	9,870	WMB	0	3	A	A	No.3-060
G-26	Printer : Epson Stylus C80	Colro, A4 Size	1	02.03.28	Baht	11,980	11,980	IMD	0	1	A	A	No.3-096
G-27	Current Meter Cable 15m to 25m		1	02.03.28	Baht	9,362.5	9,362.5	WMB	0	1	C	B	No.4-025
G-28	Zip 100 Drive (USB)	Iomega Zip 100 Drive, Z100USBS,	1	02.06.28	Baht	3,745	3,745	IEC410	0	1	B	B	No.6-036
G-29	CD-RW Drive (USB)	Iomega CD-RW Drive, Predator,	1	02.06.28	Baht	10,900	10,900	IEC410	0	1	B	B	No.6-037
G-30	Transformer	500 watt	1	02.10.16	Baht	1,100	1,100	KPSO	0	1	A	B	No.10-038
G-31	Ink Jet Printer	Canon Bbble Jet Printer S200SP	1	02.10.16	Baht	3,699	3,699	KPSO	0	1	B	B	No.10-039
G-32	Transformer	500 watt	1	02.12.24	Baht	1,177	1,177	KPSO	0	1	A	B	No.12-084

G -9

K:Expert G:Purchased by Local Budget
EL:Purchased by Local Spplers E:Purchased in Japan

NP:Dumped U(frequency of use): A=daily B=1-3/week C=particular period
P: Possessing M(管理状況): A=daily use B=normal C=need service D=not operable

List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
G-33	Computer Display	CTX 17 inch,	1	03.03.12	Baht	4,365	4,365	IEC405	0	1	A	B	No.3-049
G-34	Pump with Engine	Honda, Model:30XT	2	03.03.26	Baht	8,500	17,000	DDO8	0	2	C	B	No.3-080
G-35	Network Hub	3-COM, Office Connect, Dual Speed Switch	2	03.03.27	Baht	8,453	8,453	HC5	0	1	A	B	No.3-083
G-36	Desk for the Scaner	160 x 120 cm	1	03.03.27	Baht	5,564	5,564	WIFB	0	1	A	B	No.3-084
G-37	Laminater and Paper Cutter	A3 Size, HIC SM-330, KOBRA 360-EM	1	03.03.27	Baht	12,950	12,950	KPSO	0	1	B	B	No.3-086
G-38	Cable and Data Loader for Digital Level	SOOKIA, DOC27 + PROLINK for Automatic	1	03.03.28	Baht	5,350	5,350	DDO8	0	1	C	B	No.3-092

Total Cost(Yen)

Total Cost (Baht) 519,390

Exchange Rate (2003.10) : Baht 1 = ¥ 2.867 Yen

BahtCostTotal(Yen) 43,333,092

K:Expert G:Purchased by Local Budget
EL:Purchased by Local Suppliers E:Purchased in Japan

NP:Dumped U(frequency of use): A=daily B=1-3/week C=particular period
P: Possessing M(管理状況): A=daily use B=normal C=need service D=not operable

List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
K-1	IBM computer with monitor	Aptiva E273	1	99.05.03	Yen	232,400	232,400	IEC405	0	1	A	B	Dr. Yuyama :
K-2	Olympus MO Drive	640MB Turbo White(s/n:90200574)	1	99.05.03	Yen	61,600	61,600	IEC405	0	1	B	B	Dr. Yuyama :
K-3	PC software : MS Office 97	MS-Office97 pro	1	99.05.03	Yen	55,800	55,800	IEC405	0	1	A	B	Dr. Yuyama :
K-4	PC software : Fortran	Visual Forttran 6.0	1	99.05.03	Yen	70,500	70,500	IEC405	0	1	C	B	Dr. Yuyama :
K-5	PC Software	Word Processor : Ichitarou V9	1	99.05.03	Yen	15,160	15,160	IEC405	0	1	B	A	Dr. Yuyama :
K-6	Canon Printer	BJ-F600	1	99.05.03	Yen	33,320	33,320	IEC405	0	1	A	B	Dr. Yuyama :
K-7	Voltage Stabilizer	MATUNAGA, SVC-2000ND	1	99.05.03	Yen	47,700	47,700	IEC405	0	1	A	B	Dr. Yuyama :
K-8	Olympus Camera	C-1400XL	1	99.05.03	Yen	79,930	79,930	IEC405	0	1	B	B	Dr. Yuyama :
K-9	Toa Denpa EC Meter	CM-14P	1	99.05.03	Yen	82,500	82,500	IEC405	0	1	C	B	Dr. Yuyama :
K-10	Hard Disk	4.3GB	1	99.05.03	Yen	20,000	20,000	IEC405	0	1	A	B	Dr. Yuyama :
K-11	IBM computer with monitor, RAM	Aptiva 273	1	99.05.13	Yen	398,000	398,000	KPSO	0	1	C	B	Mr. Namba :
K-12	MO Drive	MOF-S640/SPC1	1	99.05.13	Yen	60,000	60,000	KPSO	0	1	C	B	Mr. Namba :
K-13	Epson Scanner, Connecting Cable	GT-7000U	1	99.05.13	Yen	44,800	44,800	KPSO	0	1	B	B	Mr. Namba :
K-14	Epson Printer, Connecting Cable	PM-3000C	1	99.05.13	Yen	67,000	67,000	KPSO	0	1	C	B	Mr. Namba :
K-15	Tranformer, Plug	Matsunaga:SVC-600NDII	1	99.05.13	Yen	27,600	27,600	KPSO	0	1	C	B	Mr. Namba :
K-16	Mac Computer	Power Mac G3/350	1	99.05.26	Yen	335,000	335,000	IEC410	0	1	A	B	Mr. Suzuki :
K-17	ADTEC 15" Monitor	AD-LTXG15A	1	99.05.26	Yen	120,000	120,000	IEC410	0	1	A	B	Mr. Suzuki :
K-18	Panasonic Super Drive	LKRM/734-UZ	1	99.05.26	Yen	26,000	26,000	IEC410	0	1	A	B	Mr. Suzuki :
K-19	PC Software : Office	MS Office 98 / Mac	1	99.05.26	Yen	61,000	61,000	IEC410	0	1	A	B	Mr. Suzuki :
K-20	PC Software : FileMaker	FileMaker Pro 4.1	1	99.05.26	Yen	38,000	38,000	IEC410	0	1	B	A	Mr. Suzuki :
K-21	Canon Printer	BJ-F600	1	99.05.26	Yen	37,000	37,000	IEC410	0	1	A	B	Mr. Suzuki :
K-22	Epson Scanner	GT-7000C	1	99.05.26	Yen	33,000	33,000	IEC410	0	1	C	B	Mr. Suzuki :
K-23	Canon Printer	Multipass B-10	1	99.05.26	Yen	75,870	75,870	KPSO	0	1	B	B	Mr. Onimaru :
K-24	APC UPS with Stabilizer	BP300 JPNP	1	99.05.26	Yen	23,000	23,000	KPSO	0	1	B	B	Mr. Onimaru :
K-25	Transformer : Matsunaga	SVC-600ND	1	99.05.26	Yen	22,000	22,000	KPSO	0	1	B	B	Mr. Onimaru :
K-26	Konica Digital Camera	DG-1	1	99.05.26	Yen	90,000	90,000	KPSO	0	1	C	B	Mr. Onimaru :
K-27	Accessories for Digital Camera	DG-PC1	1	99.05.26	Yen	46,570	46,570	KPSO	0	1	C	B	Mr. Onimaru :
K-28	IBM Computer with monitor	Aptiva 273	1	99.05.03	Yen	346,300	346,300	KPSO	0	1	B	B	Mr. Onimaru :
K-29	MO Drive	MOF-S640H	1	99.05.03	Yen	51,800	51,800	KPSO	0	1	B	B	Mr. Onimaru :
K-30	IBM Computer with monitor	Aptiva 273	1	99.05.03	Yen	285,600	285,600	IEC405	0	1	A	B	Mr. Nakazawa :
K-31	IO Data Memory Card	64MB	1	99.05.03	Yen	21,000	21,000	IEC405	0	1	A	B	Mr. Nakazawa :
K-32	Fujitsu MO Drive	SMB-1300N	1	99.05.03	Yen	99,800	99,800	IEC405	0	1	B	B	Mr. Nakazawa :

K - 11

K:Expert G:Purchased by Local Budget
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NP:Dumped U(frequency of use): A=daily B=1-3/week C=particular period
P: Possessing M(管理状況): A=daily use B=normal C=need service D=not operable

List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
K-33	Ricoh CD Record Unit	MP7040SEW	1	99.05.03	Yen	55,000	55,000	IEC405	0	1	B	B	Mr. Nakazawa :
K-34	IO Data SCSI Card	2940AU	1	99.05.03	Yen	43,500	43,500	IEC405	0	1	B	B	Mr. Nakazawa :
K-35	Epson Scanner	GT-7000U	1	99.05.03	Yen	20,000	20,000	IEC405	0	1	B	B	Mr. Nakazawa :
K-36	Transformer:Matsunaga	SVC-1000NDII	1	99.05.13	Yen	36,000	36,000	IEC405	0	1	A	B	Mr. Nakazawa :
K-37	Fuji Digital Camera	DS260HD	1	99.05.13	Yen	112,000	112,000	IEC405	0	1	A	B	Mr. Nakazawa :
K-38	PC Software : Photron	RAPID-7 PROWIN	1	99.05.13	Yen	115,200	115,200	IEC405	0	1	C	B	Mr. Nakazawa :
K-39	Epson Colour Printer	PM-3000C	1	99.05.13	Yen	69,900	69,900	IEC405	0	1	A	B	Mr. Nakazawa :
K-40	NEC Computer	Mate NXMA35D/M	1	99.07.29	Yen	268,000	268,000	IEC407	0	1	A	B	Mr. Miyazaki :
K-41	Meruko 15" monitor	FTD-XT15A-S	1	99.05.26	Yen	130,000	130,000	IEC407	0	1	A	B	Mr. Miyazaki :
K-42	Epson Printer	PM-770C	1	99.05.26	Yen	52,000	52,000	IEC407	0	1	A	B	Mr. Miyazaki :
K-43	Epson Dititai Camera	CP-700Z	1	99.05.26	Yen	78,000	78,000	IEC407	0	1	C	B	Mr. Miyazaki :
K-44	IO Digital Flash Memory Card	PCCF-48M	1	99.05.26	Yen	25,000	25,000	IEC407	0	1	C	B	Mr. Miyazaki :
K-45	Transformer:Toyozumi Transformer	CD220-15	1	99.05.26	Yen	28,000	28,000	IEC407	0	1	A	B	Mr. Miyazaki :
K-46	Ushitaka Planimeter with mini printer	X-PLAN360C+	1	99.08.04	Yen	166,400	166,400	RAH	0	1	C	B	Mr. Hiehata :
K-47	Yokogawa Electromagnetic Rainfall Gauge	B00410-00-00	1	00.01.26	Yen	238,800	238,800	KO&MPWM2	0	1	A	B	Mr. Miyazaki :
K-48	Portable Electromagnetic Flowmeter	Model-2000	1	00.02.23	Yen	660,000	660,000	KO&MPO	0	1	C	B	Dr. Sato : Purchased
K-49	Rod for Electromagnetic Flowmeter	#2000-1-3-5	1	00.02.23	Yen	37,000	37,000	KO&MPO	0	1	C	B	Dr. Sato : Purchased
K-50	Water Level Meter	WL-50M	1	00.03.28	Yen	34,000	34,000	KPSO	0	1	C	B	Mr. Furudono :
K-51	GPSset w/anntena cable, soft	Magellan, MAP410	1	00.10.31	Yen	156,000	156,000	ITC	0	1	C	B	Mr. Shiono : Purchased
K-52	GIS Software	ArcView for Windows V3.2	1	00.10.31	Yen	80,785	80,785	ITC	0	1	B	B	Mr.Shiono (Short term
K-53	Accessories for PC Set	Plug, Ink, Paper,	1	99.05.26	Yen	73,600	73,600	KPSO	0	1	B	B	Mr. Onimaru :
K-54	Book		1	99.05.26	Yen	41,448	41,448	IEC405	0	1	C	B	Mr. Onimaru :
K-55	Book		1	01.02.26	Yen	36,495	36,495	IEC405	0	1	C	B	Dr. Sato : Purchased
K-56	Personal Computer with Ex. RAM	Toshiba Dynabook A1/X85PMC	1	01.07.24	Yen	399,000	399,000	IEC407	0	1	A	B	Purchased through
K-57	Software	Ichitaro V11, Virus Buster 2001, and others	1	01.07.24	Yen	44,720	44,720	IEC407	0	1	C	B	Purchased through
K-58	Computer Accessories	Battery, AC Cable, Modem Saver LT,	1	01.07.24	Yen	134,220	134,220	IEC407	0	1	A	B	Purchased through
K-59	Brother Multi Function Fax	Brother MFC9200C	1	01.07.24	Baht	33,200	33,200	IEC407	0	1	A	B	Purchased through
K-60	Software, ArcGIS	ArcGIS LAB KIT-Master License	1	01.11.01	Baht	477,755	477,755	WIFB	0	1	B	B	ESRI (Thailand) Co.,
K-61	Suspending Pipe for Current Meter	TOHO DENTAN RD-105, 1MX2PCS	1	01.11.05	Yen	34,200	34,200	KO&MPO	0	1	C	B	Purchased through
K-62	Arc IMS for Windows	ArcIMS Standard Edition Server/CPU	1	02.03.29	Baht	84,958	84,958	ITC	0	1	B	B	ESRI : Purchased
K-63	Computer Softwares	Norton System Works 2002, Office 2000	1	02.03.25	Yen	55,500	55,500	IEC410	0	1	A	A	Dr.T.Ueda
K-64	Concret Test Hammer and others	Schmidt Hammarr NR, Record Paper,	1	02.05.31	Yen	201,200	201,200	KPSO	0	1	C	B	Mr. S. Katayama

K - 12

K:Expert G:Purchased by Local Budget
EL:Purchased by Local Sppliers E:Purchased in Japan

NP:Dumped U(frequency of use): A=daily B=1-3/week C=particular period D=not operable
P: Possessing M(管理状況): A=daily use B=normal C=need service

List of Provided Equipment

No.	Item	Specification	Qty	Date	Unit	@Price	Cost	Place	NP	P	U	M	Remarks
K-65	Solid Sampler	Solid Sampler(FV-478)	1	03.09.15	Yen	96,500	96,500	KPSO	0	1	C	B	Mr. Y. Ichikawa
K-66	Sampling Tube	Sampling Tube: 100ml 6PCS with a case	6	03.09.15	Yen	10,800	54,000	KPSO	0	6	C	B	Mr. Y. Ichikawa
K-67	Soil Hardness Tester	Soil Hardness Tester: Yamanaka, Standard	1	03.09.15	Yen	61,800	61,800	KPSO	0	1	C	B	Mr. Y. Ichikawa
K-68	Filter Papers	Filter Papers: φ7cm, 0.26mm	1	03.09.15	Yen	25,400	25,400	KPSO	0	1	C	B	Mr. Y. Ichikawa

Total Cost(Yen) 6,671,918 Total Cost (Baht) 595,913 Exchange Rate (2003.10) : Baht 1 = ¥ 2.867 Yen

BahtCostTotal(Yen) 43,333,092

K-13

K:Expert G:Purchased by Local Budget
EL:Purchased by Local Spplers E:Purchased in Japan

NP:Dumped U(frequency of use): A=daily B=1-3/week C=particular period
P: Possessing M(管理状況): A=daily use B=normal C=need service D=not operable

The List of Counterpart Personnel Trained in The C/P Training in Japan

Date : 2003.11.06

No.	JFY	Title of Training	Name	Duration
1	1999	Water Management	Mr. Sombat Sontisri	2000.2.13 - 2000.3.17
2	1999	Development of Irrigation	Mr. Poolsawat Duanduan	2000.2.13 - 2000.3.17
3	1999	Data Communication	Mr. Somnuk Jirasirisopn	2000.2.13 - 2000.3.17
4	1999	Farming	Mr. Yaung Kethkaew	2000.2.06 - 2000.2.23
5	2000	Water Management	Mr. Athaporn Punyachom	2000.8.21 - 2000.9.27
6	2000	On-farm Level Water Management	Mr. Kanching Kawsard	2000.8.21 - 2000.9.23
7	2000	Development of On-farm	Mr. Nathawut Wangsaengsuk	2000.8.21 - 2000.9.27
8	2000	Planning and Management of Agriculture Extension	Mr. Wunchai Sajjabanpot	2000.11.19 - 2000.12.05
9	2001	Water Management	Mr. Piphat Sathianpantarit	2001.5.07 - 2001.6.10
10	2001	Organization of On-farm Level Water Management	Mr. Wutthikrai Smitthimadhindra	2001.7.09 - 2001.8.04
11	2001	Development of On-farm	Mr. Charoen Amornmorakot	2001.7.09 - 2001.8.04
12	2001	Farming	Mr. Somrak Boonyasurak	2001.10.29 - 2001.11.20
13	2001	Development of On-farm Facilities	Mr. Junrat Wiwattanapan	2002.1.14 - 2002.2.09
14	2001	Water Management	Mr. Pornchai Ponchour	2002.1.14 - 2002.2.09
15	2001	Participatory Irrigation Management/On-farm Water Management	Mr. Somsak Vivithkeyoonvong	2002.1.14 - 2002.2.09
16	2002	Remote Sensing and GIS	Mr. Somkid Sapaokham	2002.8.26 - 2002.10.04
17	2002	Farmers' Organization and Irrigation Facilities Improvement	Mr. Phatcharin Pimsing	2002.9.10 - 2002.10.04
18	2002	Water Users' Organization	Mr. Autthaporn Thingthae	2002.9.10 - 2002.10.04
19	2002	Farmers' Organization and Farming	Mr. Surat Sangansub	2002.9.10 - 2002.10.04
20	2002	Development of On-farm Facilities	Mr. Va-son Boonkird	2003.3.08 - 2003.3.23
21	2002	Water Users' Organization	Mr. Kanching Kawsard	2003.3.08 - 2003.3.23
22	2003	Project Management	Mr. Theerawat Tangpanich	2003.7.21 - 2003.8.06
23	2003	Water Management	Mr. Chatchom Chomprdit	2003.7.13 - 2003.8.06
24	2003	Remote Sensing and GIS	Mr. Sompob Intaraksa	2003.7.13 - 2003.8.16
25	2003	Operation and Maintenance of Telemetering System	Mr. Anurat Tungkhasiri	2003.9.01 - 2003.9.30
26	2003	Water Users' Organization	Mr. Sompong Bangtrakul	*2004.1.15 - 2004.2.15*
27	2003	On-farm Facilities Improvement	Mr. Prasit Sitho	*2004.1.15 - 2004.2.15*
28	2003	Farming	Mr.Charoen Pimkhan	*2004.1.15 - 2004.2.15*

* JFY : Japanese Fiscal Year, from April 1 to March 31 in the following year.

Local Cost implementation/Japan

Unit:Yen¥

No.	Category	Budgetary Year					Amount
		FY.1999	FY.2000	FY.2001	FY.2002	FY.2003	
1	Administration(General Affairs)	8,834,296.00	3,968,875.80	4,361,606.60	4,099,566.00	3,503,000.00	24,767,344.40
2	Human Resources Development and Fuel						
3	Technical Extension		1,804,728.60	1,928,670.25	1,338,462.00	652,000.00	5,723,860.85
4	Improvement of Infrastructure			7,984,990.00			7,984,990.00
5	Technical Exchange Program				1,563,621.05	1,163,463.00	2,727,084.06
6							
Total		8,834,296.00	5,773,604.40	14,275,266.85	7,001,649.05	5,318,463.00	41,203,279.31

* In FY.2003, each amount in Administration and Technical Extension is the estimated amount while Technical Exchange Program is the executed amount.

* The Baht amounts in each fiscal year are converted based on the following exchange rate respectively.						
Exchange Rate on	March 2000	March 2001	March 2002	March 2003	August 2004	
1 Baht =	2.940	2.727	3.107	2.806	2.874	Unit : Yen

Application of Budget/Thai

Unit: Baht

No.	Description		1999 April-Sept.	1999 - 2000 Oct-Sept	2000 - 2001 Oct-Sept	2001 - 2002 Oct-Sept	2002 - 2003 Oct-Sept	2003 - 2004 Oct-March	Total
1	Techr cal Equipment for Staff	Received Budget	720,300	1,745,900	2,116,195	3,177,458	2,999,727	*1,866,922*	12,626,502
		Expenditure	720,300	1,745,900	2,116,195	3,177,458	*2,999,727*		*10,759,580*
2.1	Building construction	Received Budget		10,000,000	10,000,000		133,000		20,133,000
	(Ditch & Dike Works in the18R area)	Expenditure		10,000,000	10,000,000		133,000		*20,133,000*
2.2	Building construction	Received Budget				590,800	9,940,500	*9,900,000*	20,431,300
	(Rehabilitation of the 18R canal)	Expenditure				590,800	*9,940,500*		*10,531,300*
3	Telemetering System (Pilot Project)	Received Budget					20,956,000		20,956,000
		Expenditure					*20,956,000*		*20,956,000*
4	Farming Support (DOAE)	Received Budget					176,650	*150,000*	326,650
	(seeds, fertelizers, training, etc.)	Expenditure					*176,650*		*176,650*
5	Budget by DTEC	Received Budget	426,634	911,995	1,082,540	1,082,540	1,082,540	*541,270*	5,127,519
		Expenditure	426,634	911,995	1,082,540	1,082,540	1,082,540		*4,586,249*
	Total Budgetary Plan								
	Total Received Budget		1,146,934	12,657,895	13,198,735	4,850,798	35,288,417	*12,458,192*	79,600,971
	Total Expenditure		1,146,934	12,657,895	13,198,735	4,850,798	35,288,417		*67,142,779*
	Balance of Fiscal Year								

* Thai Fiscal Year : 1 October to 30 September in the following year.

* The figures of Buget-by-DTEC are based on the recode of the budget allocation document for each expert. All other figures are based on the survey in each working group.

* Technical Equipment for Staff : the amount includes the facilities expenditures and the C/Ps' field study expenses and perdiem.

* No Custom Fee for Imported Equipment

* The amount of the budgetary plan in all of the is unknown at the time of survey.

* All of the received budget are expected to spend nearly 100%.

The List of Counterpart Personnel Assigned for each Working Group(W/G) in the MWMS Project

Field		Name	Assignment					Remarks
			JFY 1999	JFY 2000	JFY 2001	JFY 2002	JFY 2003	
			4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	
On-farm Facilities								
*	Mr.	Va-son Boonkird	←				→	2003.3.08-23(C/P Training)
	Mr.	Akkapong Boonmash	←				→	
	Mr.	Apinon Sonthayanon	←				→	
	Mr.	Phatcharin Pimsing			←		→	2002.9.10-10.04(C/P Training)
	Mr.	Pharinya Chaturapornsawat	←				→	
	Mr.	Kaew Trisorat	←				→	
	Mr.	Prasit Sitho			←		→	
	Mr.	Nathawut Wangsaengsuk	←				→	2000.8.21-9.27(C/P Training)
	Mr.	Noppom Chaipichit			←		→	
	Mr.	Pisit Piboonsiri	←				→	
	Mr.	Junrat Wiwattanapan			←		→	2002.1.14-2.09(C/P Training)
	Mr.	Sompong Bangtrakul	←				→	
	Mr.	Sanya Sangpumpong	←		→ 5.01 Transferred to RIO-9, Nong Pla Lai Reservoir O&M Project			
	Mr.	Pratip Klomrit	←	→ Sept. 2001 Transferred to Pasak Dam O&M				
	Mr.	Theeraphan Phan-umong	←		→			Director, RIO-8, now retired
	Mr.	Montri Onvimon				2003.1.21 - ←	→	Director, RIO-10 (Deputy Project Manager)
	Mr.	Bai Opasvong	←		→ 9.30 Retired			

* Chief of Working Group

Field	Name	Assignment					Remarks
		JFY 1999	JFY 2000	JFY 2001	JFY 2002	JFY 2003	
		4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	
Basin and Delta Level Water Management							
	Mr. Virat Khao-uppatum	←→	←→	Project Manager	2003.3.17- DDG, Dept. of Water Resources		
	Mr. Theerawat Tangpanich					2003.3.17- Project Manager	
*	Mr. Pongsak Arulvijitskul			←→	←→	←→	
	Mr. Pornchai Ponchour	←→	←→			←	2002.1.14-2.09(C/P Training)
	Mr. Sombat Sontisri	←→	←→			←	2000.2.13-3.17(C/P Training)
	Mr. Anurat Tungkhasiri			←→	←→	←→	
	Mr. Chatchom Chompradit			←→	←→	←→	
	Mr. Atthaporn Buddhapalit	←	←	←	←	←	
	Mr. Anusak Mujjalinvimuti	←→	←→	←→	←→	←→	
	Mr. *Athaporn Punyachom*	←	←	←	←	→	2000.8.21-9.27(C/P Training)
	Mr. Atthaporn Thingthae	←	←	←	←	←	
	Mr. Piphat Santhianpantarit	←	←	←	←	→	2001.5.07-6.10(C/P Training)
	Mr. Chairat Kua-arun	←	←	←	←	←	
	Mr. Somnuk Jirasirisopon	←→	←→	←→	←→	→	2000.2.13-3.17(C/P Training)
	Mr. Phonchai Klinkhachorn	←→	←→	←→	←→	←→	
	Ms. Chayanan Verachingchai			←	←	←	-
	Mr. Tanasak Taptone	←	←	←	←	←	
	Mr. Chaiwut Wattanakorm			←	←	←	
	Mr. Somkid Sapaokham			←	←	→	2002.8.26-10.04(C/P Training)
	Mr. Sompob Intaraksa			←	←	←	

* Chief of Working Group ←——— Water Management ←--------- System Development

** The W/Gs of Water Management and System Development were integrated and reorganized as the W/G of Basin and Delta Water Management after the Mid-term Evaluation.

Field	Name	Assignment					Remarks
		JFY 1999	JFY 2000	JFY 2001	JFY 2002	JFY 2003	
		4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	
Previous Water Management & System Development							
	Mr. Apinon Sonthayanon	←	→				
	Mr. Patcharin Pimsing	←	→				
	Mr. Chatchai Boonlue	←	→				
	Mr. Supot Promnaret	←- - - → 1999.4-9:Retired					

Field	Name	Assignment					Remarks
		JFY 1999	JFY 2000	JFY 2001	JFY 2002	JFY 2003	
		4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	
Water Users' Organization							
*	Mr. Poolsawat Duanduan	←				→	2000.2.13-3.17(C/P Training)
	Mr. Kanching Kawsard	←				→	2000.8.21-9.23, 2003.3.08-23(C/P Training)
	Mr. Wutthikrai Smitthimadhindra		6.22- ←			→	2001.7.09-8.04(C/P Training)
	Mr. Vipob Teamsuwan	←			→	2003.4.01- Study at Tsukuba University for 2 years	
	Mr. Urit Rattanatangtrakul				2003.1.30- ←	→	
	Mr. Sompong Bangtrakul	←				→	
	Mr. Autthaporn Thingthae	←				→	2002.9.10-10.04(C/P Training)

* Chief of Working Group

Field	Name	Assignment					Remarks
		JFY 1999	JFY 2000	JFY 2001	JFY 2002	JFY 2003	
		4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	
Farming							
	Mr. Arth Intalak				2002.10.1- Director of Agri-Business Promotion Div.(DOAE)		
	Mr. Wanchai Sajjabanpot	←			→ 2002.6.17- Transferred to Kon Kaen Office		2000.11.19-12.05(C/P Training)
*	Mr. Surat Sangansub			2002.6.16 - ←		→	2002.9.10-10.04(C/P Training)
	Mr. Suchart Ondum	←		→		From 2002.2.01, Transferred to Chainat Office, DOAE	
	Mr. Wutthichai Chinnavong		2000.10- ←	→ Transferred in Oct.2001			
	Mr. Tanwit Tewa-aksorn		2000.10- ←			→	
	Mr. Arnat Hoonhla	←				→	
	Mr. Somboon Maoragodjinda			2001.11.01- ←		→	
	Mr. Charoen Pimkhan				2002.8.16 - ←	→	
	Mr. Somyod Pak-kiew			2002.4.01- ←		→	
	Mr. Chanchai Aiemprapai	←				→	
	Mr. Prasid Phoyee		2001.1- ←			→	
	Mr. Apichai Wathanayomnaporn	←				→	
	Mr. Sompong Bangtrakul	←				→	
	Mr. Sunthorn Reun-ngam	←				→	
	Mr. Somrak Boonyasurak		2000.10- ←			→	2001.10.29-11.20(C/P Training)
	Mr. Yaung Kethkaew	←	→ 1999.4-2000.9				2000.2.06-2.23(C/P Training)

* Chief of Working Group

Field	Name	Assignment					Remarks
		JFY 1999	JFY 2000	JFY 2001	JFY 2002	JFY 2003	
		4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	4 5 6 7 8 9 10 11 12 1 2 3	
Training (Administration)							
	Mr. Shartri Keoplung		←	—	→		Transferred to the Office of Administration
	Mr. Chachawal Punyavateenun				←	→	Acting Deputy Project Manager
	Mr. Chumpon Rugsasai	←	—	—	→		Transferred to the DG's Office
*	Mr. Supanat Pariyachat				2003.1.30- ←	→	Project Coordinator (T/A)
	Mr. Somsak Vivithkeyoonvong	←	—	—	—	→	2002.1.14-2.09(C/P Training) (T/A)
	Mr. Nappadon Phaka	←	—	—	—	→	(T/A)
	Mr. Charoen Amornmorakot			←	—	→	2001.7.09-8.04(C/P Training) (T/A)
	Mrs. Pensri Kulachan	←	—	—	—	→	(A)
	Mrs. Sakuntala Bhatitrummarak	←	—	—	→		(A)
	Miss Thayida Siritreeratomrong			←	2003.1.30-(2003.9.30) →		Training for 8 months in UK (T/A)
	Miss Siriwan Kitiwechakul				2003.1.30- ←	→	(T/A)
	Miss Jitta Ponvichai				2003.1.30- ←	→	(T/A)
	Mr. Boonchob Homkesorn		←	—	→		(A)
	Mr. Channarong Supapprom			←	→		(T)

* Chief of Working Group

T : training A : administration

Evaluation Grid
The Modernization of Water Management System Project in the Kingdom of Thailand

Evaluation Criteria	Survey Item	Detailed Survey Item	Means of Verification	Findings
1 Relevance	1.1 Relevance to the national development policy, needs and demands of people and farmers	1.1.1 Consistencies with the 9th National Economic and Social Development Plan and Agricultural Development Plan	-National Development Plan -Record of the Project -Questionnaire to experts and C/P	The Project is in line with the 9th National Economic and Social Development Plan (2002-2006). It states the efficient use of water, promotion of less-water used crops, and participatory development. The concerned issues behind the policy, namely, rice price, plague, and water supply, show good signs in recent years.
		1.1.2 Logical consistencies between the Overall Goal and the Project Purpose (Applicability of the Model and possibility of the extension of the Model)	-Questionnaire to experts and counterparts	The plan is weak in the logical consistencies. Crop diversification with less water in the Model Area may hardly lead to an increase in farmer's income. (Dry-season's field cropping with less water is costly in the Model Area. In general, income from dry-season's paddy surpasses the one from dry season's field crops.
		1.1.3 Consistencies with farmers' needs and demands (needs for On-farm facilities development and crop diversification)	-Questionnaire to experts and C/P -Interview with farmers	In the paddy monoculture, such as the Model Area, farmers' needs for paddy are larger than the ones for field crops. However, they still show their interests in dry-seasons field crops.
		1.1.4 Consistencies with RID and DOAE's needs for skills and knowledge in water management and crop diversification	-Interview with experts, C/P	RID has needs for the modernization of water management system. While, the needs for crop diversification of DOAE is relatively low. DOAE still has a policy of crop diversification, but the selection of cropping under participatory irrigation management depends on farmers' decision.
		1.1.5 Adequacy of the target area (18R lateral canal commanding area) as a model	-Interview with experts, C/P	The selection of the target area is not adequate because heavy clay soil in this area is not suitable at all for cultivating upland crops.
		1.1.6 Technical advantage and utility of Japanese technologies and experiences	-Interview with experts, C/P	Land Improvement Distric/Land Improvement Law can be a model for strengthening water users' organization.
		1.1.7 Coordination with international organizations (WB: Irrigation Management Modernization in the Chao Phraya Basin, ADB: Participatory Irrigation Management)	-Interview with experts, C/P	There is no coordination with other international organization.
	1.2 Relevance of the project plan	1.2.1 Logical consistency of "Narrative Summary"	-Questionnaire to experts -PDM	Logics is not very straight. The Project Purpose has two objectives, at the same time, they have means and ends relationships.
		1.2.2 Clarity and accuracy of the Project Purpose	-Records of the Project -PDM	It is clear in the meaning that the Project Purpose has numerical targets.
		1.2.3 Adequacy of the project duration	-Records of the Project -PDM	Duration is too short to achieve the set goal (the Project includes the establishment of cultivation methods of " 5 "crops and farming in a large scale)
	1.3 Relevance of the important assumptions to realize the Overall Goal by the Project		-Interview with experts, C/P -PDM	In the PDM, the important assumptions are described as "Outputs of the Project are diffused from the Model Area to the upper east bank of the CPD". However, the following items are to be included as important assumptions. (1) the government does not change the water management policy and crop diversification policy, (2) farmers choose upland crops instead of paddy druing dry seasons, and are willing to invest their land for necessary on-farm facility development.

2	Effectiveness	2.1	Achievement of the Project Purpose		-Questionnaire to experts and C/P	In the 2002/2003 dry seasons, 25 farmers planted 33.6ha of mungbean and 3.2ha of sweet corn; however, none of these but for 0.3ha of sweet corn was successful in harvest. Weekly water allocation plan at the lateral irrigation canals was made by RID, but it was not practiced. Therefore, the Project Purpose is not achieved at the time of evaluation and will not be attained at the time of completion.
		2.2	Effects of the Outputs to realize the Project Purpose	2.2.1 Adequacy of guidance, instruction, and technical transfer to farmers by RID and DOAE in each field	-Interview with experts, C/P (RID, DOAE), and farmers	Both RID and DOAE transferred techniques to farmers appropriately through seminars and on the jobs.
				2.2.2 The level of understanding and satisfaction of farmers	-Interview with experts, C/P (RID, DOAE), and farmers	According to questionnaire after the seminar, 81.5% of participants answered that they were well understood about the method.
				2.2.3 Performance of the farmers after instructions (Do they perform as instructed?)	-Interview with experts, C/P (RID, DOAE), and farmers	Famers performed as they were instructed; however, in the 2002-2003 dry-seasons, unseasonable heavy rain forced them to take different measures from they were taught.
				2.2.5 The number and titles of the Guidelines prepared by the Project	-Interview with experts	Four guidelines were prepared by the Project. (1) Guideline for on-farm facilities development for dry season's field crops, (2) Guideline for water management planning and operation, (3)Effective use of irrigation water and farmers' participation (for RID), (4) Handbook of irrigation management for large-medium scales O&M project (for farmers)
				2.2.6 Necessary Guidelines which have not been completed	-Interview with experts	Guideline for dry-season's field cropping (title is not fixed)
				2.2.7 Progress of the adequate crop diversification methods in the Model Area	-Interview with experts	Due to the failures in harvest in 2002-2003 dry seasons, recommended upland crops have not yet been selected, nor cultivation/irrigation methods.
				2.2.8 Techniques which have been transferred to RID, DOAE, and farmers	-Interview with experts, C/P	Main techniques include on-farm facilities development, techniques for data-report and database system, GIS layers, and Remote sensing,and skills for strengthening water users' groups.
				2.2.9 Technique which have not been transferred to RID, DOAE, and farmers	-Interview with experts	Techniques necessary for dry season's field cropping, e.g. cultivation methods in a large-scale farmland, land preparation method, and irrigation method, drainage methods, construction methods of irrigation ditch for dry-season's deep-water rice and floating rice, techniques for development and O&M of the telemtering system, capacity of rotational irrigation planning, legal system of the water users' groups.

2	Effectiveness	2.3	Hindering factors to achieve the Project Purpose	2.3.1	Reasons for failures to yield the field crops (mungbeans and sweet corns) during a 2002-2003 dry season	-Interview with experts, C/P (RID, DOAE), and farmers	(1)Heavy rainfalls in December delayed the planting (cultivation period changed). (2)Heavy rainfalls in March caused a water stagnant in a plot and damaged sweet corn. (3)Land preparation was not enough for a heavy clay soil.
				2.3.2	Problems of drainage inefficiencies and stagnant water on farm level	-Interview with experts	A size of one plot is too large(the distance to drainage ditch is 300m); therefore, without special ridging, excess water does not drain properly.
				2.3.3	Potential of soil (heavy clay) for dry season's field crops	-Interview with experts	Heavy clay soil requires special attentions to land preparation, irrigation and drainage for dry season's cropping.
				2.3.4	Problems in land preparation	-Interview with experts	A three-time plowing and high ridge making may recommended for sweet corn.
				2.3.5	Problems in seeding and irrigation	-Interview with experts	Careful attentions in selection of crops, seeding, application of fertilization, weeding, and irrigation are required
				2.3.6	Profit of each field crop	-Interview with experts	Considering high costs for preparation, sweet corn may be the one as a recommended crop. Mungbean may be considered as a green manure crop. It is necessary to examine economic benefits for each crop.
				2.3.7	Accuracy of irrigation water allocation plan at the Chainat-Pasak main canal	-Interview with experts	Accuracy of the water allocation plan is one of the problems to be solved. Current data collection and observation are not enough to increase the accuracy.
				2.3.8	Reasons for a disparity between planned and actual water allocation	-Interview with experts	Farmers do not follow the water allocation plan and instructions by RID and demand more water than the plan.
				2.3.9	・Measures to be taken to resolve the existing problems ・Feasibility of the measures ・Necessary inputs ・Expected outcomes	-Interview with experts	Review (1)drainage system, (2) land preparation, (3) water requirement, (4) irrigation method, (5) application of fertilizer. Conduct test planting of mungbean and sweet corn in a much smaller scale. Analyze the harvest results. Rrevised cultivation/irrigation techniques. In order to find out necessary inputs and expected outcomes, additional study is required.
		2.4	Important assumptions to achieve the Project Purpose	2.4.1	Stability in the market prices of the dry season's field crops	-Statistics -Interview with C/P and farmers	Additional study for the market is required.
				2.4.2	Changes in production costs	-Interview with C/P and farmers	Additional study is required. It is evident dry-season's field cropping is more costly than dry-season's paddy cropping.
				2.4.3	Unseasnability of the weather	-Statistics -Interview with C/P and farmers	In the 2002/2003 dry seasons, it had unseasnable heavy rainfall in December(50mm) and March (200 mm).
				2.4.4	Other important assumptions which affected the level of the achievement of the Project Purpose (e.g. vermin, harmful insects and etc.)	-Questionnaire to experts and C/P	"The crops are not damaged by rat."is to be included as the important assumptions.
		2.5	Perceptions of the achievement of the Project Purpose among project members	2.5.1	Experts	-Questionnaire to experts -Interview with experts	All have a common perceptions regarding the achievement level. It is somewhere at 60% of the achievement.
				2.5.2	C/P	-Questionnaire to C/P -Interview with C/P	
				2.5.3	Farmers	-Interview with farmers	

3	Efficiency	3.1	Adequacy of quantity, quality and timing of inputs to produce Outputs	3.1.1	Utilization of the inputs to produce the Outputs	-Interview with experts	Inputs (experts, counterparts, training in Japan, and equipment) have been fully utilized at their utmost potentials.
				3.1.2	Important assumptions to achieve the Outputs (e.g. cooperation and coordination among RID, DOAE, and IWUG, opposition from farmers in the upper stream)	-Questionnaire to experts and C/P	There were no negative effects. The important assumptions described in the PDM were fulfilled as follows. -Minimum irrigation water was assured in the Model Block. -Ditch and Dike program was implemented by Thai Budget. -RID, ROAE, and IWUG had good cooperation and coordination. -Counterparts are assigned continuously. -There was no opposition from upstream farmers.
				3.1.3	Understandings of the farmers toward the Project Cooperation of the farmers	-Questionnaire to experts and C/P	Farmers have good understandings and are very cooperative toward the Project . This is because the Project adopts participatory planning and management in all fields.
				3.1.4	The number of the C/Ps assigned Performance of the C/Ps	-Questionnaire to experts and C/P	Counterparts are assigned mainly from RID as well as DOAE, totaling to 50 at the beginning of the Project and 56 at the time of evaluation. They are committed and devoted to the Project to a great extent.
				3.1.5	Quantity, quality and timing of the experts, C/P training, and equipment	-Questionnaire to experts and C/P	Quantity of the long-term experts is not enough. Long-term experts to the field of farming were required to implement necessary activities. In other fields, quantity, quality and timing of the experts are generally appropriate.
		3.2	Supporting system for the Project	3.2.1	Adequacy of the assistance for local costs (timing, scale, and usage) by Japanese government	-Questionnaire to experts and C/P	There was no special problems on timing, scale and usage of the local costs.
				3.2.2	Joint Coordinating Committee	-Interview with experts, JICA	Joint Coordinating Committee was held at least once a year.

4 Impact	4.1	Expected and direct impacts of the Project (Achievement of the Overall Goal)			-Questionnaire to experts and C/P -Interview with experts, C/P	An average wet-season's paddy yield per rai increased from 354kg/rai in 1997 to 748kg/rai in 2002 due to more efficient use of irrigation water. In Ban Li, a downstream area of 18R lateral canal, dry-season's paddy yield per rai in 2002 was 750kg/rai from zero production before the project.
	4.2	Unintended/unforeseen and positive/negative impacts (1. policy, 2. economics, 3. regulation, 4. technology, 5. socio-economics, 6. environment)	4.2.1	Enhancement of the roles of RID and DOAE in policies (e.g. policy of the shift to high profitable field crops, crop diversification policy, participatory irrigation management policy)	-Interview with experts and C/P	There is no evidence in enhancing the roles of RID and DOAE in policies by the Project.
			4.2.2−1	Changes in farmers' living standards in the Model Area and its surrounding areas	-Interview with experts, C/P, and farmers	With increased income, some farmers in the Model Area diversified a source of income, such as chicken farming or fish farming. Farmers have easier and quick access to their farm fields by truck, consequently, saved time and labor costs.
			4.2.2−2	Changes in income disparity between upstream farmers and downstream farmers	-Interview with experts, C/P, and farmers	Income disparity was not observed between upstream farmers and downstream farmers in the Model Area.
			4.2.2−3	Transition of the paddy price (1997-2003)	Statistics	Under a request.
			4.2.2-4	Changes in a farmer's life style during dry seasons	-Interview with experts, C/P, and farmers	No available
			4.2.2-5	Changes in plowing rate by efficient irrigation and introduction of dry seasons' field crops	-Interview with experts, C/P, and farmers	No available
			4.2.2-6	Farmers' economic costs caused of the rehabilitation of the 18R lateral canal	-Interview with experts, C/P, and farmers	No available
			4.2.3	Development of legal system related Water Users' Organization (e.g. Land Improvement District in Japan)	-Interview with experts, C/P, and farmers	The Project introduced an outline of the Land Improvement District and Land Improvement Law of Japan to enact laws concerning the water users' group.
			4.2.4	Areas where U-shape pre-cast concrete flume have been extended near the Model Area	-Interview with experts, C/P, and farmers	After the Project activities, U-shaped ditches are seen in 19R lateral canal, Ban None Thammang and Irrigation Water Management Experiment Station 8 in Nakhon Sri Thammarat.
			4.2.5	Social changes by the Project (introduction of dry-seasons' filed crops, establishment of water user groups, collection of WUG fee, enforcement of water allocation management)	-Interview with experts, C/P, and farmers	There are positive impacts on communications among villages. Before the establishment of the IWUG, there were few communications, but later, villagers in different villages interact more. When weddings and funerals were held, guests from other villages join ceremonies.
			4.2.6	Negative impacts on environment (e.g. decrease of aquatic organisms, changes of water flows)	-Questionnaire to experts and C/P -Interview with experts, C/P and farmers	There is no negative impacts on environment. A part of data processing routines at RID has realized paper-free processing by employing e-mail data report system.
			4.2.7	Mitigation measures for the negative impacts	-Questionnaire to experts and C/P	No mitigation measures are necessary.
	4.3	Important assumptions to achieve the Overall Goal	4.3.1	Dissemination and extension activities of the Project effects to the left bank area of the Upper Chao Phraya River	-Interview with experts, C/P and farmers	Counterparts who attained new techniques diffuse them through presentations, informal meetings, and other.

5	Sustainability	5.1	Institutional aspects	5.1.3	System to continue and monitor the activities in RID and DOAE	-Interview with experts, C/P	When the Project ends, four working groups will dismiss. There is no concrete monitoring system at this moment.
				5.1.4	Management system in implementing agencies (MOAC,RID, and DOAE)	-Interview with experts, C/P	Management system to coordinate all related divisions is not enough. It is necessary to strengthen managerial capacity for administering and supervising three different divisions.
				5.1.5	Farmers' (IWUG) capacity of decision-making Farmers' participation Farmers' intention	-Questionnaire to experts and C/P	Most farmers participated in the activities very actively, some are not in O&M activity.
		5.2	Financial aspects	5.2.1	Efforts to secure the necessary budget at RID and DOAE to continue and develop the Project effects	-Questionnaire to experts and C/P -Interview with C/P	RID has secured the budget of 230 million baths for five years from the 2004 fiscal year to expand program of the telemetering system in the Chao Phraya River Basin. While, DOAE admits that it will make every effort to keep budgets for supporting crop diversification. In this year, DOAE has prepared budget to purchase hybrid seeds.
				5.2.2	Sustainable mechanism to collect fees for IWUG administration	-Interview with experts, O&M Project office, IWUG	IWUG has established a system to collect fees.
				5.2.3	Reasons for a low collection rate of the union fee		A collection rate is relatively high. However, there is minor problem in collectors. Collector changes often because of no incentives.
				5.2.4	Funds to cover operation and maintenance costs for agricultural machinery		Agricultural Machinery Users' Group rents a tractor, and collects 250 baht/rai for mungbean and 500 baht/rai for sweet corn.
		5.3	Technical aspects	5.3.1	Technical capacity of RID and DOAE (abilities to instruct new technique, any other required skills and knowledge)	-Questionnaire to experts and C/P	The number of the staff attained basic techniques in each field is 12 in on-farm facility development, 18 in water management, 6 in water users' organization, and 12 in farming. The number of the staff who has enough capability to instruct others is, 5, 7, 3, and 2, respectively.
				5.3.2	Mechanism to transfer and develop technique, skills and knowledge to technical staff and farmers by trained C/Ps	-Interview with experts, C/P	Through training and seminars, counterparts disseminate results of the project activities.
				5.3.3	Opportunities to obtain new technique	-Interview with experts, C/P	There is few opportunities to obtain new techniques.
				5.3.4	Operation and management of equipment	-Questionnaire to experts and C/P	Operation and management of equipment is very good. RID has already-have own O&M system.
		5.4	Development of policy, regulation, laws, and other legal system	5.4.1	Continuation of expansion policy of the telemetering system to all the Chao Phraya River area	-Interview with experts, RID	RID has a five-year plan from the 2004 to expand program of the telemetering system in the Chao Phraya River Basin.
				5.4.2	Continuation of the present water management policy (efficient use of water)		Even though water supply from both Bhumibol and Sirikit Reservoir Dams to the upper east bank during dry seasons improved at the volume of 220 MCM in 1999 to 1285 MCM in 2003. Because the situations change easily, the government continues its water management policy.
				5.4.3	Legal and regulatory framework for the irrigation Water User's Organization		It is under preparation. As the decentralization policy is proceed, the needs for legal framework will increase.
				5.4.4	Effect of the decentralization policy on the On-farm facilities development and management		Property rights will be transferred to Or-Bor-Tor, and O&M rights will be transferred to IWUG. Farmers have more responsibilities and power to make a decision. The costs which they need to bare may increase.
				5.4.5	Continuation of the policy to promote dry season's field crops		There was no clear stance. It depends on the price of rice, volumes of export, and other market conditions.

Activities and Outputs (On-farm Facilities Field)

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year)					Responsible persons	Activities	Outputs of activities		
1 Improvement of On-farm development method		1st	2nd	3rd	4th	5th					
1-1 Improvement of on-farm development methodology of On-farm level irrigation/drainage facilities	1-1-1 Making a plan of On-farm development method considering dry-season crops						Va-son Sompong Plait Nattavut Junrat	# The plan of On-farm facilities development for dry-season's field cropping was studied through farmers' participation from the pre-construction, by conducting a farmers' intention survey and so on. # The facilities development plan in the floating rice (deep-water rice) area was studied.	# For introducing dry-season's field crops into the paddy fields, drainage ditches and farm roads were needed and such development plan was made at the Model Block within the Model Area . # The Pilot Ditch was constructed for a test of suitable type of ditch and construction method in the deep-water rice area in April, 2003. But within the present project implementation period, the submerged condition is only one chance during the rainy season in 2003. For the establishment of a construction method, those ditches should be exposed another at least 2 times of water-submerge for verifying the subsequent condition.	# The On-farm facilities development plan for dry-season's field cropping is made based on farmer's participation. # An improvement/development plan is made for facilities in the floating rice (deep-water rice) area.	75
	1-1-2 Verification of improved On-farm development method in the model area						Va-son Sompong Plait Nattavut Junrat	# Based on the result of the above 1-1-1, the construction of On-farm facilities development was implemented in the Model Area.	# Ditch and Dike project of the Model Area (800ha) was completed with irrigation ditches 35,384m, drainage ditches 5,870m, farm roads 11,670m. # The record book of construction works and figures of the execution results were made.	# For more than 200ha in the Model Area, Irrigation /Drainage facilities for paddy fields are constructed.	100
	1-1-3 Study on appropriate on-farm development method in the future						Va-son Sompong Plait Nattavut Junrat	# The construction data on facilities development in the Model Block was collected and studied. # The guideline for the paddy field irrigation was already completed. Several C/Ps authored the Guideline for On-farm facilities development for dry-season's field cropping, which was used in the training courses for the C/Ps to lecture.	# The economic comparison between U-shape reinforced concrete lining canal and Trapezoidal-shape concrete lining canal and the cost benefit analysis about the Model Block in Khok Kathiam Project was carried out by the short-term expert for Economic Evaluation. # The Guideline for On-farm facilities development for dry-season's field cropping was made. However, the main reason that the dry-season's field crops did not succeed was the problem of the water logging sensitive. Therefore, improvement of the drainage system must be expanded and improved in future.	# Guideline for On-farm facilities development for dry-season's field crops is expanded as related guideline.	75
Prospects of sustainability	# Technical sustainability is expected on paddy field irrigation in on- farm level, as the guideline for paddy field irrigation was already completed. U-shape ditch that the MWMS project introduced has been used in other area on consideration of easier construction works, less maintenance labor needs, smaller water losses. Techniques of manufacturing and construction of U-shape have been transferred. However, the construction cost was higher than that of trapezoidal-shape ditches. Technology of economic comparison and cost benefit analysis was transferred to some extent in the project period. However the U-shape ditches should be appraised more appropriate verification and economic evaluation again by collecting the latest data. # While, facilities such as the drainage ditches and the farm roads that were constructed for promoting dry-season's field crops into the paddy field need to be monitored and should be declared an improvement in on-farm facilities toward dry- season's field crops . In establishing appropriate technology for the dry-season's field crops in paddy field, technical sustainability is expected. # Especially, for the study of drainage system for promoting dry-season's field crops, instructing about the location, size and density of drainage ditch and so on to farmers with the cooperation of farming section. # By establishing a construction method based on the result of the experiment, technical sustainability is expected on a development method of irrigation ditch in the floating rice (deep-water rice) area.										

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year)					Responsible	Activities	Outputs of activities		
1 Improvement of On-farm development method		1st	2nd	3rd	4th	5th					
1-2 Improvement of development methodology of lateral level irrigation facilities	1-2-1 Collecting the existing irrigation and drainage facilities data						Akkapong Apinon Sompong Prasit Patcharin Prinya	# The data of irrigation and drainage facilities in the upper east bank of the Chao Phraya delta was collected.	# Those collected data were recorded in the database system with the use of Microsoft Access program.	# The information of database system is used as the data for the maintenance and rehabilitation.	100
	1-2-2 Making a rehabilitation plan of lateral canal						Va-son Apinon Sompong Prasit Patcharin Parinya	# The rehabilitation plan of lateral 18R canal was made considering the effect of improvement of farm ditches that were constructed to take water easily to each plot in the Model Area. The result of study is as follows. (1)Setting the water level of check gates by hydraulic culculation for sending water from the lateral canal to the ditches suraly, and study on the location of the check gates. (2) The rehabilitation of decrepit appurtenant structures and concrete-lining of lateral 18R canal for distributing water smoothly to the end of lateral 18R canal.	# The rehabilitation plan of lateral 18R canal was made and implemented to 3.6km.	# The 18R canal is rehabilitated up to the management section Km.6.	75
	1-2-3 Study on the suitable operation and maintenance methodology						Va-son Akkapong Nattavut Prasit Apinon Sompong Piak Junrat Patcharin Parinya	# The facilities operation manual and documents about methods of maintenance management were collected and studied. # The drainage canal-cum-flood regulating reservoir that was constructed along the left bank of Chainat-Pasak Main Canal was studied as a function of an intermediate reservoir.	# The technology of the operation and maintenance methodology was transferred. And the draft of the Maintenance Plan for Lateral and On-farm Irrigation Facilities was made. # The study result on the necessity of intermediate reservoir and regulating reservoir was included in the progress report.	# The Maintenance Plan for Lateral and On-farm Irrigation Facilities is made. # The necessity of intermediate reservoir and regulating reservoir is studied.	100
Prospects of sustainability	# The following rehabilitation plan was made by C/Ps; therefore, technical sustainability is expected. (1) to set the appropriate water level and the location of the check-gates based on the hydraulic calculation for securing water delivery to the on-farm level irrigation ditches. (2) to rehabilitate decrepit appurtenant structures and the lateral 18R canal for distributing water smoothly to the end.										

Activities and Outputs **(Basin and Delta Level Water Management Field)**

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year) 1st	2nd	3rd	4th	5th	Responsible persons	Activities	Outputs of activities		
2. Improvement of basin and delta level water management											
2-1. Improvement of irrigation and drainage planning, and facilities' operation	2-1-1. Analysis of current situation, and examination for efficient water management						Virat K., Pongsak A., Sombat S., Pornchai P., Anurat T., Chatchom C., Phonchai K., Tanasak T., Somkid S., Sompob I., Chaiwut W., Chayanan V., Anusak M., Atthaporn B., Chairat K., Somnuk J., Athaporn P., Autthaporn T., Piphat S., Apinon, S., Phatcharin, P., Chatchai, B., Supot, P.	Current situations in irrigation and drainage systems in Thailand were reviewed and problems identified, on the basis of field surveys, interviews, reference materials and discussions.	# The following two major problems were identified: (1) most of water management operations were conducted by past experiences, and not accountable; (2) farmers did not obey target cultivation area set by RID, and demanded more water than the plan. # As one of the tools to solve these problems, we proposed the "Decision Support System (DSS)" which consisted of 4 subsystems of monitoring, database, analysis and reference. This proposal was succeeded to the Activity 2-1-2.	Problems to be tackled are identified for achieving efficient water management and water use.	100
	2-1-2. Examination of appropriate water resources utilization							The DSS was developed and applied to the Model Area (Upper East Bank of Chao Phraya Delta).	# Data-report and database systems were developed and completed by the C/Ps. In this system, the O&M and hydrology data in the Model Area are input at Project Offices and Hydrology Center 5, sent to RID Head Office by e-mail, and inserted into the database. The database is now open in the LAN of RID Head Office. # The "Database Menu Application" was developed which could summarize O&M data week by week and compare them with the plan. However, the Application is still underused at Project Offices due to the lack of expertise in computer technologies. # Computer networks were established between RID Head Office and local offices in the Model Area.	Digitized O&M data in the upper east bank of the Chao Phraya Delta and related hydrology data are arranged and opened daily throughout the network.	70
								# Dry-season irrigation was planned, monitored and summarized in the Model Area. # Water balance and runoff analyses and simultaneous discharge measurements were conducted in order to clarify the water use situations in the Model Area. # As a major summary of our activities, several C/Ps authored the "Guideline for Water Management Planning and Operation", which was used for the training courses under the MWMS Project.	# Before the dry seasons in 2002 and 2003, a water allocation plan was made at the lateral-canal level, but the plan was underused or almost neglected in actual operations. As a result, the gap between planned and actual water allocation still remained, according to the summary study after the dry seasons. # Although we have conducted simultaneous discharge measurements 4 times and water balance analysis, we are still unable to clarify actual situations of reused water in the Model Area due to the insufficient data. # Although we have conducted runoff analysis on the side-flow from the left bank of Chainat-Pasak canal, the result was not of sufficient quality for practical uses. # The 1st, 2nd and 3rd editions of the "Guideline for Water Management Planning and Operation" were compiled and used for the training courses under the MWMS Project. However, some of the contents of the Guideline need to be expanded or improved in the near future.	Weekly water allocation plan at the lateral irrigation canal level is made for the Chainat-Pasak canal command area and implemented.	
Prospects of sustainability	# Techniques regarding the components of the DSS, such as database, GIS and remote sensing, have been transferred to the relevant C/Ps so far. However, because those elements of techniques are possessed by individual C/Ps, it is rather difficult to develop an integrated system by combining those techniques. Intensive instruction by a computer specialist would therefore be necessary to construct such an integrated system. # Financial sustainability is expected regarding the improvement of computer networks, as RID has got necessary budget. # Additional instructions are necessary on water management planning and operation by RID Head Office and local offices, in order to lead their practices to more efficient use of water resources.										

Activities and Outputs **(Basin and Delta Level Water Management Field)**

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year) 1st	2nd	3rd	4th	5th	Responsible persons	Activities	Outputs of activities		
2. Improvement of basin and delta level water management											
2-2. Improvement of data communication system	2-2-1. Basic design of data communication system for the Chao Phraya river basin	———	———				Virat K., Pongsak A., Sombat S., Pornchai P., Anurat T., Chatchom C., Phonchai K.,	Technologies were transferred regarding the basic design of telemetering system in the Chao Phraya River Basin.	Outputs were summarized in three reports and utilized for the implementation of the Pilot Project under the Activity 2-2-2.	Basic design report for the telemetering system in the Chao Phraya River Basin is completed.	100
	2-2-2. Installation of telemetering system			———	———	———	Tanasak T., Somkid S., Anusak M.	C/Ps were instructed on design, procurement, installation and maintenance of the Pilot Project of the telemetering system in downstream of the Chao Phraya River.	The opening ceremony of the Pilot Project was held on 17th September 2003, and its operation started. However, such problems as equipment failures are expected to occur after some times have passed since the start of operation.	By the end of September 2003, the telemetering system of the pilot project starts operation.	100
	2-2-3. Application of R/S and GIS technology			———	———	———	Phonchai K., Tanasak T., Somkid S., Sompob I., Chaiwut W.	GIS and remote sensing technologies were transferred by analyzing land use and inundation conditions in the Model Area.	# GIS layers of the Model Area were developed, which included irrigation and drainage facilities, rivers, hydrological stations, project and provincial boundaries, and Isohyetal lines. These GIS layers are now open at the webpage of RID (English version). # Land use and inundation conditions in the Model Area were analyzed using remote sensing technologies.	GIS and remote sensing technologies were transferred to the C/Ps and utilized in routine works of RID.	100
Prospects of sustainability	# RID expects to obtain its own budget for expanding the telemetering system to the whole Chao Phraya Delta in the next few years, and will construct the telemetering system in a sustainable way. # The operation and maintenance techniques for the telemetering system need to be monitored continuously, in order to ensure a sustainable operation of the pilot telemetering system after the termination of the MWMS Project. # An organization for the operation and maintenance of the telemetering system should be established in the near future, according to the suggestion by the JICA expert. # Technical sustainability is expected on GIS and remote sensing technologies, as the basic technology has already been transferred to the C/Ps.										

Activities and Outputs (Water Users' Organization Field)

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year) 1st	2nd	3rd	4th	5th	Responsible persons	Activities	Outputs of activities		
3. Strengthening of water users' group											
3-1. Strengthening of water users' group	3-1-1. Analysis of existing water users' groups' activities						Poolsawat D., Kanching K., Wutthikral S., Urit R., Vipob T., Sompong B., Autthaporn T.,	Re-arranged information about existing water users' groups that was kept in the Khok Kathiam O&M Project. And studied the present condition of existing water users' groups in the Model Area. Also, investigated the activities of water users' groups in 3 areas in Thailand.	Based on the field survey, compiled the "Outline of Social and Economy in the Model Area (March 2000)". As result of our investigation, there were three water users' groups in the Model Area but they were hardly active.	Get a clear understanding of the organization and activities of the existing water users' groups in the Model Area. Clarify any problems for establishing the water users' groups.	100
	3-1-2. Establishment of water users' group in Model Area							To establish the water users' group, we did the following: conducted a survey to understand farmers ' intentions, trained farmers ' leaders, exchanged opinions with farmers ' leaders, had meetings to give explanation in each village, etc.	On June 26, 2001, a general meeting was held and IWUG composed of 21 WUGs, including 7 temporary WUGs, was then formally established.	Establishment of IWUG in Model Area.	100
	3-1-3. Strengthening of established water users' groups in Model Area							# The monthly meetings of IWUG have been held every month. (Total 36 times; from July 2000 – Aug 2003). # A meeting for explaining the detailed activities of WUG to the leader of each WUG was held. # A leaflet of the IWUG outline was made.	# The maintenance of the on-farm facilities by each WUG was implemented. (Total 28 times, 398 persons; from Apr 2002 – Mar 2003). # The collection of IWUG membership fee and O&M fee was begun. (On Jan 2002, the collection percentage was 71.68 %) # WUG could not make the rotational irrigation plan on the on-farm level. Therefore, the maintenance of the on-farm facilities is needed based on the strong guidance of the RID. Moreover, it is necessary to give guidance continuously to the IWUG for becoming a self-developing organization such as the IWUG can manage and operate smoothly according to the decentralization policy in Thailand.	RID and WUG operate and maintain irrigation / drainage facilities under the lateral canal level cooperatively.	80

	3-1-4. Arrangement of the result of activities, and start of its diffusion							# C/Ps made two kinds of guidelines for the water users' groups and the staff of RID based on the results of the activities. Then, those guidelines were utilized for the training where the C/Ps took charge of the lecturers. # Made a presentation to introduce an outline of the Land Improvement District and Land Improvement Law of Japan for examining to enact laws concerning the water users' group. # As for dissemination, it is the same as with 3-1-5.	# Made two kinds of guidelines for the water users' group and the staff of RID based on the results of the activities. Then, those guidelines were utilized for the training of the local technical staff. However, the contents of those guidelines need to be expanded and improved for the future. # Examined the selection of article in the Land Improvement Law of Japan concerning the enactment of laws for the water users' group in cooperation with the short-term expert. However, was not resulted for the making the main point plan of the law. # As for dissemination, it is the same as with 3-1-5.	Made the guidelines based on the results of the activities and they set about the dissemination of the results activities to the local technical staff of RID through the training. And, to examine the enacting of laws concerning the water users' group.	80
	3-1-5. Training for the technical staffs of RID and the leaders of farmers' groups concerning the strengthening of water users' group							# Conducted the advanced field visits to the water users' group in 3 areas in Thailand. # Held a seminar on the policy of strengthening the water users' group in the Model Area such as the role of irrigation water allocation of RID, WUG and IWUG, etc. # Made a video on the results of the activities of the IWUG in the Model Area for disseminating to the other area.	As for the IWUG, the activities such as holding the monthly meetings, the collecting membership fees and maintaining of the on-farm facilities have been improving. However, these activities were only possible through the strong guidance and support of the RID. Because of this, the IWUG has not yet become a fully self-developing organization. Therefore, it is necessary for the board members of IWUG to receive a training in Japan for studying the maintenance of the irrigation / drainage facilities, the management of the organization, the method of collecting of membership fees and the accounting management of the Land Improvement District of Japan.	Training for technical staff of RID and the farmers' leaders and strengthening the activities of the water users' group.	80
Prospects of sustainability	The decentralization policy was begun in Thailand. This system was started recently and clear rules have not yet been established, but we are property rights of the on-farm facilities will be transferred to Or-Bor-Tor and the maintenance rights are being transferred to IWUG. The roles of RID, Or-Bor-Tor and IWUG are now in the process of being formed, therefore it is still necessary for IWUG to be guided continuously for operating its smooth management under this new system.										

Activities and Outputs (Water Users' Organization Field)

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year)					Responsible persons	Activities	Outputs of activities		
		1st	2nd	3rd	4th	5th					
3. Strengthening of water users' group											
3-2. Improvement of water management method in on-farm level	3-2-1. Study of current on-farm water management performance	—	—	—	—		Poolsawat D., Kanohing K., Wutthikrai S., Urit R., Vipob T., Sompong B., Autthaporn T..	# From October 1997 to the present, the on-farm water management data in the Khok Kathiam O&M Project were recorded in a digitalized format. e.g. gate opening and discharge of Khok Kathiam regulator; gate opening, planned intake discharge and actual intake discharge of 18R canal; water level of down stream and upstream of Wat Manee Regulator; rainfal. # Necessary information regarding the water management activities was received from some Zone men who had responsibility for on-farm level water management. And the results of the field survey were compared and comfirmed with the information received from the Zone men.	As a result of field survey on on-farm level water management, it was found that there were no written regulations for operation. There were only irrigation ditches in the on-farm area and most of them were earth ditches which were destroyed or gone in most. Therefore, the on-form irrigation was done through "plot to plot irrigation"	Investigate the present condition of the on-farm level water management and clarify any problems for the on-farm level water management.	100
	3-2-2. Examination of method to improve on-farm water management in Model Area							Guided the rotational irrigation plan in the Model Area in cooperation with the short-term experts who were dispatched on the following dates: December 12~27, 2001 and December 1, 2002 ~ January 31, 2003. As for the results, compiled the manual of the rotational irrigation plan in the Model Area.	# The rotational irrigation plan of the irrigation ditch level in the rainy season in 2002 was made with the guide of RID. Also, the rotational irrigation plan of the whole lateral canal 18R and the irrigation ditch level in the rainy season in 2003 was made. # During the dry season of 2002/2003, due to the repairing of the lateral canal 18R, the rotational irrigation in the lateral canal level and the irrigation ditch level during that dry season has not been implemented.	Based on the guideline of the rotational irrigation plan of RID, the rotational irrigation plan was made.	70
	3-2-3. Guidance to the technical staffs of Khok-Kathiam O&M Project for efficient water management in Model Area							# Same as the above 3-2-2, guided to make the rotational irrigation plan in the Model Area, etc. # At the 2 places in the 18R canal, the bridges were installed to measur the water discharge. Bulletin boards to post the irrigation plan of 18R canal were set at the farm turn out of each ditch for the members of IWUG to know.	# Based on the rotational irrigation plan stated above, each plan was implemented during the rainy seasons in 2002 and 2003 with guidance of RID. # During the dry season of 2002/2003, due to the repairing of the lateral canal 18R, the rotational irrigation in the lateral canal level and the irrigation ditch level during that dry season has not been implemented.	To make the rotational irrigation plan of the lateral canal level in cooperation with RID and IWUG. The rotational irrigation plan of the irrigation ditch level is to be made by each WUG.	70

	3-2-4. Guidance to water users' groups for efficient water management in Model Area							Made the calendar for the year 2002 in order for famers to enable to write the rotational schedule themselves. Moreover, the calendar for the year 2003 was prepared showing the irrigational distribution plan of lateral canal 18R and the cropping schedule and distribute to IWUG members.	# At present, the rotational irrigation plan has been completed using original plan made by the RID with adjustments and input given by IWUG and WUG. # However, the goal defind within the MWMS Project which is the WUG to make the rotational irrigation plan of the irrigation ditch level has not yet been achieved.	The project will guide each WUG to make the rotational irrigation plan of irrigation ditch level by its own.	50
	3-2-5. Arrangement of the result of activities, and start of its diffusion							The same as with 3-1-4.	The same as with 3-1-4.	The same as with 3-1-4.	80
Prospects of sustainability	# The goal of making the rotational irrigation plan in the irrigation ditch level was the WUG to make the plan by themselves, however, it has not yet been achieved. As of now, an original plan was made by the RID then it was finalized with adjustments and input by IWUG and WUG. # During the dry season of 2002/2003, due to the repairing of the lateral canal 18R, the rotational irrigation in the lateral canal level and the irrigation ditch level during that dry season has not been implemented. # As for the maintenance of the on-farm facilities by WUG, based on the guidance of the RID, irrigation water will not be distributed if weed-cutting, de-silting, etc are not done. # At present, it is necessary to give continuous guidance to IWUG and WUG so that they may become self-develoing water users' organization in the future.										

Activities and Outputs (Farming Field)

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year) 1st	2nd	3rd	4th	5th	Responsible persons	Activities	Outputs of activities		
4. Strengthening of the extension activities for crop diversification and cropping ratio uplift											
4-1. Examination and extension of the dry-season's field crops and their suitable cultivation/irrigation technology	4-1-1. Survey and analysis of present farmhouse economy and land utilization condition	———					Arth I., Wanchai S., Surat S., Suchart O., Wutthichai C., Tanwit T., Arnat H., Somboon M., Charoen P., Somyod P., Chanchai A., Prasid P., Apichai W., Sompong B., Sunthorn R., Somrak B., Yaung K.,	The survey of farm household economy and land utilization in the upstream area of 18R canal was carried out.	Results of the survey are as follows: (1) Annual average of household gross income was B82,430, and non- agricultural net income was B22,400. 70% of net income has been obtained from agriculture sector. (2) Acreage of paddy planted per farm household is 20rai(3.2ha). Average land holding by households excluding landless farmers is 12rai(1.9ha). About 80% of household is holding the land. (3) Composition of farming by land owners, tenant farmers and mixed of owner and tenant farmers are 57, 21 and 22%, respectively. The highest qualified farmers are the above mixed farmers.	To know the fundamental data of socio- economic condition of farmers including land utilization.	100
	4-1-2. Survey and problem finding through detail farmers' cultivation technique in the Model Block	———						The survey of dry season croping, utilization of irrigation water and farmer's technology in the upstream area of 18R canal was conducted.	Results of survey are as follows: (1) The farming in the area was paddy mono-culture system. Only 2 out of all farmers had planted water melon, cantaloupe and pulses in the past five years. However, they could not continue the above crops due to shortage of irrigation water. (2) The method of planting was direct seeding without land preparation and ridging.	To know the problems of farmer's cultivation techniques through survey in every detail in the Model Block.	100
	4-1-3. Examination and draw up the land preparation method and dry-season's field crops introduction plan	———	———	———				# The first year of dry season: 5 kinds of non-rice field crops were examined for their adoptability at the demonstrational plot (2rai). # The second year of dry season: 6 kinds of non-rice field crops examined for their adoptability at the demonstrational plot (30 rai)in the Ditch 04, Model Block. # The third year of dry season: 15 rai of mungbean cultivation was carried out by 10 participated farmers at the demonstrational fields at Ditch 02 and 04. # Observation tour to 4-advanced crop diversification areas was conducted.	# 6 kinds of non-rice field crops were examined in the demonstrational fields in the past three years. However, the large scale of field crop cultivation in the dry season,2002/2003 implemented by farmers was completely failed (see 4-1-6). Therefore, the recommended crops and its cultivation technique for transfer to farmers are not confirmed yet. # The land preparation method for heavy clay soil was established such as 1st stage: deep plowing by tractor with 3- blade plow, 2nd stage: harrowing by tractor with 7-blade plow, 3rd stage: harrowing by tractor with rotary cultivator, Final stage: making higher bed by tractor with ridger. # One of the reasons for unsuccessful dry season field crop production was water logging in the field. Therefore, study on controling excess water after rainfall and irrigation is needed.	To study the appropriate cultivation techniques for the dry season crops and land preparation in order to introduce non-rice crops.	70
	4-1-4. Advice and guidance for strengthening of extension activity	———	———	———	———	———		# The core of agricultural extension is DOAE office in Lopburi province, and 11 district extension offices. Extension workers who are belong to the above extension offices implemented T & V periodically. # Field crop cultivation method, land preparation and the necessary guidance were given to farmers every dry season as follows: (1) Dry season 1999/2000: 5 kinds of non-rice field crops, 2rai (2) Dry season 2000/2001: 6 kinds of non-rice field crops, 30rai, 8 farmers. (3) Dry season 2001/ 2002: one of non-rice field crops, 15rai, 10 farmers. (4) Dry season 2002/2003: 2 kinds of non-rice field crops, 230rai, 25 farmers. # Training for tractor operators such as field operation and maintenance was carried out every dry season after recruit.	# The necessary guidance and advice of field crop cultivation, land preparation, establishment of agricultural machinery users' group, making self-regulation, etc, were given to the DOAE and farmers. However, field crop cultivation in the paddy field was not successful. # Therefore, further necessary guidance and advice for the field crop cultivation, land preparation, irrigation method etc, would be given to the extension officers.	To give advice and guidance for extension method to the extension office through planning and implementation of demonstrational field and training.	70

Activities and Outputs (Farming Field)

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year)					Responsible persons	Activities	Outputs of activities		
		1st	2nd	3rd	4th	5th					
4. Strengthening of the extension activities for crop diversification and cropping ratio uplift											
	4-1-5. Making guideline for strengthening of extension activity						Arth L., Wanchai S., Surat S., Suchart O., Wutthichai C., Tanwit T., Arnat H., Somboon M., Charoen P., Somyod P., Chanchai A., Prasid P., Apichai W., Sompong B., Sumthorn R., Somrak B., Yaung K.,	# Cultivation manual for crop diversification in the dry season was made from the data of two dry seasons. # Draft of guideline was made and used for training by C/P. # Guidance of soy bean cultivation method was given by Prof. Sanaan, Khon Khen University.	# The manual of cultivation method for dry season field crops (Thai version) was made on the basis of results of activity (dry season1999/2000-2000/2001). This publication was distributed to the project farmers. # Guideline on diversified cropping in rice-based system in Lopburi, Thailand also was made and used for farmer's training. However, this guideline was not completed, and further study is required. # A large scale field crop cultivation in the dry season by farmer themselves has not been successful. Therefore, it is necessary to continue further study for non-rice field crops such as appropriate crops and their varieties, improvement method of drainage and land preparation, the necessary amount of irrigation water and fertilizer application. Improvement of guideline will be made on the basis of the above results.	Strengthening of crop diversification program by guideline which consists of results of activity, and conducting of seminar.	70
	4-1-6. Introduction and examination of dry season's field crops and their cultivation technique, and their extension							# Demonstrational applied experiment for selection of field crops and land preparation were carried out in the dry season 1999/2000, 2000/2001 and 2001/2003. # The large scale dry season field crop cultivation in the paddy field was carried out by farmers themselves in the dry season 2002/2003. Dry season cropping was resulted 36.8ha(230rai)including Mungbean(33.6ha), Sweet corn(3.2ha) exceeded from the project purpose of 35ha(220rai). However only 0.3ha(1.8rai) of sweet corn field was harvested.	# It is evident that one of the farmers who succeeded in his sweet corn production. He is very eager in his sweet corn cultivation due to high return and an easy work such as control of excess water in the irrigation practice. # From the above, this review will focus on the identification of sweet corn cultivation, drainage control, land preparation, cultivation method and the extension.	To study for introduction of appropriate field crops and their cultivation technique, and extension to the farmers.	70
	4-1-7. Examination of water requirement of each crop							Instead of unsuccessful water requirement study in the paddy field in the dry season 2002/2003, the study of mungbean, sweet corn, soybean and groundnut was carried out in the upland field as a reference.	The necessary water requirement for each crop is described in the draft of guideline. However, further study is required in the various conditions of paddy field, especially together with improvement method of drainage because of too long distance (e.g. 300m) between inlet and outlet of irrigation water in the paddy field.	To know the water requirement of each non-rice field crop in the dry season.	50
	4-1-8. Draw up the irrigation water request plan							The necessary guidance and advice for non-rice field crops in the Model Area have been given to the farmers in the most favorable cultivating season due to cool and dry climate from December to the end of March.	Plan of distribution irrigation water should be made on the basis of results of study such as water requirement test for each field crop in the paddy field.	To make plan for distribution of irrigation water in the dry season's field crops.	70
Prospects of sustainability	# Crop diversification program in the paddy field of the dry season 2002/2003 was not successful in their production, Only 0.3ha(1.8rai) of one farmer's sweet corn was harvested. Applied study for crop diversification program was not confirmed and its technology transfer to the C/P and extension to the farmers are also indecisive. Therefore, there has been no future aspect of self development so far. # Further study of 1) selection of appropriate crops,2) improvement of drainage system, 3)land preparation, 4)water requirement, 5)irrigation method, 6)application of fertilizer, etc., will be necessary and follow up program of activities should be carried out. The confirmation of establishment of crop diversification technology which is more beneficial than paddy cultivation in the Model Area. Then evaluation study for the certain scale of farm fields and number of farmers should be done. Extension of the program should be in effect with completion guidelines.										

Activities and Outputs (Farming Field)

Activities according to the PO								Situations of activities		Final targets	Progress (%)
Items		Period (Year) 1st	2nd	3rd	4th	5th	Responsible persons	Activities	Outputs of activities		
4. Strengthening of the extension activities for crop diversification and cropping ratio uplift											
4-2. Establishment and strengthening of the farmers' groups for farming and their supporting system for them	4-2-1. Establishment and strengthening of the farmers' groups for farming	———	———				Arth I., Wanchai S., Surat S., Suchart O., Wutthichai C., Tanwit T., Arnat H., Somboon M., Charoen P., Somyod P., Chanchai A., Prasid P., Apichai W., Sompong B., Sunthorn R., Somrak B., Yaung K.,	# According to the survey of the present activity of farmers' group, a few water users' group in the Model Area was established. However, their activity is almost nothing so far. # Contents of self-regulation for agricultural machinery users group were approved at the general meeting after discussed more than ten times at the meeting Farming Woring Grioup, representative of farmers group and all farmers including provisional participants. # Training of tractor operators has been carried out every dry season. Total working hours of tractors for the dry season's field a more than 250hours updated. # Regarding the management of tractor operation for agricultural users' group such as accounting, maintenance and operation of tractor, the necessary guidance including accounting book and operation record book has been given to the managing staff.	# Establishment of agricultural machinery users' group and its self-regulation were decided. # Regarding the farmers organization in the draft of guideline, "Institutional development for machinery users' group/non-rice crops growers' group in the area of 18R" including developing commodity-wise group was described.	To activate farming activity by promoting crop divesification program after setting up and emphasis of farming ccoperration.	70
	4-2-2. Survey of present farmer/cultivation activity back-up system and its problem finding		———	———				The survey for the activity of government and private supporting organizations was executed.	# According to the results of survey, 50% of farmers joined as a membership of agricultural cooperatives. However, most of the members purchasing agricultural stuff from private shops not cooperatives. That is, cooperatives is not an important part of members. # Relationship between farmers and private supporting sector is nothing at all because private sector is not interested in rice commodities.	To find out the problem of the activity of government supporting organization and private supporting organization.	100
	4-2-3. Organization and strengthening of the back-up system for farming cored by RID and DOAE			———	———	———		Cooperation linkage between RID and DOAE is getting better from time to time by the joint activities such as farmers' intention survey, monthly meeting for Integrreated Water Users' Group, etc.	# The agricultural development committee which is cored by RID and DOAE has been set up for the purpose of supporting farming program in the Model Area. # Committee meeting was held only twice so far and does not function well. Because it is enough that distribution of fertilizer, seeds and the necessary guidance of cultivation by DOAE and provision of irrigation by RID.	To stimulate the farming activity by introducing crop diversification program through organizing and strengthening of the back-up system cored by RID and DOAE..	70
Prospects of sustainability	# Agricultural machinery users' group for the crop diversification program has been developed in the dry season in the past four years. However, the establishment of technology for the dry season non-rice field crops has not confirmed and not able to transfer technology to the farmers updated. Therefore, the above group is not able to achieve self-develop. Further necessary guidance to the above group through study of crop diversification program in the dry season, such as technology of cultivation, land preparation, irrigation and drainage, are required. # The meeting of agricultural development committee has been held twice since its establishment, and activity of this committee has not functioned well. However, as already mentioned in the above Outputs of the activity, there is no problems so far under the implementation of Model Area. However, an establishment of new development system will be desired in case of transfer of the project' results to the other area. That is to create a packages program such as joint of an infrastructure program by RID, and an agriculture extension program by DOAE and to establish a crop diversification promoting cooperation committe and to make a plan for promoting dry-season's field cropping.										

Activities and Progress (Training)

Activities in the PO								Activity Status		Final Objectives	Progress (%)
Item		Activity Period (Japanese Fiscal Year)					Responsible Persons	Activities	Outputs		
Main Item	Sub-Item	1st	2nd	3rd	4th	5th					
5-1 Implementation of training for the local technical staff of RID and extension staff of DOAE							Mr.Supanat P. Mr. Somsak, V.	-To the RID engineering staff and the DOAE extension staff in the neighboring areas of the Model Area, the 1st and 2nd training course were held on June 2002 and March 2003 respectively. -The training materials were prepared based on the draft of the guideline in each activity field. -The subjects of training course were the overview of the water management policy, guideline of each fields and group discussions where the counterparts delivered the lecturers.	-The number of trainees in the 1st and 2nd training was 34 and 29 respectively and 63 of them in total received their certificate. -The draft of guidelines summarized on each activity progress and outputs were evaluated through the training and the content would be modified for improvement.	-By the end of the project, the target number of trainees is over 100. In the year of 2003, more than 37 participants of training course will be realized.	100
	5-1-1 Planning training courses, curriculum and schedule			—	—	–					
	5-1-2 Compilation of training material			–	—						
	5-1-3 Implementation of training course				–	–					
	5-1-4 Evaluation and monitoring				–	–					
Prospect of Sustainability	-The lecturers are the counterparts who are working in the real duty and some of them are not good at lecturing to some extent. But, as the training continued, their lecturing technique would be improved. -The improvement of the drafted guidelines has been continued through modifying with the evaluation upon the training implementation and including the activity outputs; however, the completion of the guidelines by the counterparts themselves would have some difficulties. -The training course is targeting both RID and DOAE staff; thus, for the training course executed continuously, the collaboration of RID and DOAE will be required. -RID has the Irrigation Development Institute (IDI) which was previously the Irrigation College and now it conducts various training courses to the RID staff; therefore, this training course could possibly be handed over to this institute. But, for a training course which includes DOAE staff, the budget will be shouldered both RID and DOAE; therefore, for securing the budget, perspective plan and preparation is needed and the approval of MOAC, the Bureau of the Budget and other relevant Offices are also required.										
5-2 Dissemination of outputs of activities through seminar							Mr.Supanat P. Mr. Somsak, V.	-In 2002, to the participants of farmers group leaders, the 1st seminar was held. -Counterparts from each activity field lectured the activities and outputs. -At the end of the seminar, group discussion was done among the participants with the counterparts lecturers joined.	-In the 1st seminar, the number of participants was 25 farmers. -According to the questionnaire evaluation, all farmers participated responded that they could apply the seminar content to their real situation.	-By the end of the project, the target number of farmer participants is over 50. In the year 2003, more than 25 farmer participants of seminar will be realized.	100
	5-2-1 Planing seminar program and schedule				–	–					
	5-2-2 Compilation of seminar material				–	–					
	5-2-3 Implementation of Seminar				–	–					
	5-2-4 Evaluation and monitoring				–	–					
Prospect of Sustainability	-For the purpose of disseminating the project outputs, the seminar materials are continuously improved through the guidance of each field of Experts. -Through the seminar implementation, the improvement of the counterpart lecturers' presentation techniques will be expected. -Presently, RID has been implementing seminars to farmers on various topics that are executed upon MOAC's approval. Therefore continuation of seminar activities regarding the farmers participation will be anticipated.										


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