

	Location of District
	CENTRAL SULAWESI
	SOUTHEAST
	PARE-PARE UJUNG PANDANG
	LEGEND
	Capital Town of District
	Sub-District Town
	District Boundary
	Sub-District Boundary
	Provincial Road
	District Road
	Kiver
	Irrigation Scheme
	Technical Irrigation
	Irrigation Scheme
	Name of Scheme Registered Subject Area (Ha) Area (Ha)
Km	32. Maloso, Sekka2,991T2,35733. Lakejo1,265T96034. Gamo-Gamo4,820T4,743
	T : Technical Irrigation

Location Map of Irrigation Schemes in Polmas District

South Sulawesi Province 32. Maloso, Sekka Scheme

(1/4) I. PROJECT FUNDAMENTALS I.1 General (1) Code Number : 73190018 (7)Number of Farmers : 3,185 (2) Name of Irrigation Scheme Maloso, Sekka Maloso (8)Water Resource River (3) District (Kabupaten) Polmas (9) 808.00 Catchment Area (km²) (4) Sub-district (Kecamatan) Wonomulyo (10)Completion / Last Rehabilitation Year : 1937/1996 (5) Registered Area (ha) 2,991 (6) Technical Level : Technical I.2 Availability of Reports/Documents & References (A : Available, B : Available but partially, C : Not available/ No plan) d. Structure lists & diagram a. Design Reports of Existing System(Full set) b. Irrigation diagram c. As-built drawings В В A A h. WUAs data e. Rehabilitation plan & its references f. Crops and yield data g. Cropping Calender А 26 С A **II. SUBJECT AREA FOR REHABILITATION PLAN II.1 Present and Planned Land Use** Plan (ha) Present (ha) Increment (ha) Category a. Irrigated paddy field 1,911 2,357 446 b. Rainfed paddy field 446 0 -446 c. Upland Field 0 0 0 d. Uncultivated Land 0 0 0 e. Non-irrigable 0 0 0 Total 2,357 2,357 0 **III. AGRICULTURE** III.1 Present/Before Project Condition (1) Irrigation Performance and Crop Production Cropped Area in Irrigated Paddy Field Irrigated Paddy Yield Crop Production (ton) 1/ Annual Season Paddy (ha) Palawija Others (ha) Total (ha) Intensity (GKG ton/ha) Paddy Palawija Others Season I (wet) 1,911 100% 4.5 9,715 1,911 Season II (dry I) 1,911 1,911 100% 5.0 9,555 223 Season III (dry II) 0 0% Total/Annual 3,822 0 0 3,822 200% 4.8 19,270 223 1/: Irrigated & rainfed paddy & palawija (2) Problems and Constraints A. Irrigation & Agriculture Performances - High irrigation performances attained in irrigated area; however water shortage in dry season reported; existence of rainfed field (446ha) - Double cropping of paddy practiced in the entire irrigated area; paddy yield levels low to moderate; palawija not introduced yet B. Primary Constraint Identified through the Inventory Survey by the JICA Study - Irrigation & Drainage: Water shortage at on-farm level in dry season - Palawija Marketing: Low marketing prices - Agronomic Issues: Damage caused by rat - Farmers Organizations: Managerial capacity of KTs are limited - Paddy Marketing Low marketing prices - Extension Services: Implementation of extension programs is limited III.2 Development Plan (1) Development Approaches - Expansion of irrigated area & ensuring year round irrigation water supply at on-farm level through rehabilitation & upgrading - Expansion of double cropped area of paddy; productivity increase of paddy through intensification; introduction of palawija in dry season I - Extension activities toward improvement of post-harvest & marketing; empowerment of farmer groups (KTs) to establish agri-business oriented KTs (2) Planned Irrigation Performances and Crop Production Cropped Area in Irrigated Paddy Field Irrigated Paddy Yield Crop Production (ton) Annual Season (GKG ton/ha) Paddy (ha)PalawijaOthers (ha)Total (ha) Intensity Paddy Palawija Others Season I (wet) 2,357 2,357 100% 5.5 12,964 Season II (dry I) 2,121 236 2,357 5.5 1,180 100% 11,666 Season III (dry II) 0 Total/Annual 4,478 236 4,714 200% 5.5 24,629 1,180 0 Annual Increment 656 236 0 892 0% 0.7 5,359 957 IV. WUAs IV.1 Existing Condition 26 b. Established; (1) Number a. Target; 26 c. Not yet; 0 Registered Performance a. Developed; 4 b. Under developing 22 c. Not yet; 0 Not yet registered 26 (2) Problems and Constraints Operation Maintenance Management (3) Causes of Problems and Constraints (No information) IV.2 Development Plan (1) Proposed Countermeasures (2) Development Plan

	V. IRRIGATION FACILITY									
V.1 (1)	Existing Co Overall Irrig Water Resort	ndition ation System arces Facility	: C : B	(A: Functioni Main Ca	ng well, B: Pa nal System :	rtially deterior C	ated, C: Not fu	nctioning wel	ll, D: Serious condition for o anal System : D	operation) On-farm : D
(2) a.	Water Resor Type of faci	irces Facilty lity	: Free Intake		e. Scouring s	sluice gate	:-		i. Condition : B	
b. с. d.	Length of w Design intak	r eir e discharge	: - : - : 4.9 m3/s		f. Intake gateg. Settling bah. Inspection	e asin 1 bridge	: 1 nos. : not provideo : -	1	(A: Functioning well, B: Pa functioning well, D: Seriou (no info.: no information)	artially deteriorated, C: Not is condition for operation)
(3)	Irrigation Ca	anal and Inspection	ection Road Unlined (m)	Total (m)	Structu	re (nos)	Inspection	road (m)	Condition	(A: Functioning well,
	Main Secondary	6,714	18,723	6,714		23		6,/14	D	C: Not functioning well, D: Serious condition for
(4)	Major Probl Water Resou Insuffic Physica	ems and Cons irces Facility ient diversion il operational	strains n water due to problem on in	sedimentati ntake gate(s)	on in front of	ìintake				operation)
(5)	 Irrigation Canal and Related Structure Sedimentation or obstruction of water flow Impassable of inspection road along canal General O&M problems Difficulty on maintenance of earth canal Difficulty on O&M 5) Causes of Major Problems and Constraints Water Resources Facility Sedimentation in front of intake 									
V.2 (1)	 Irrigation Canal and Related Structure No provision of settling basin(sediments), improper management of canal (sediments, water plant) Improper routine O&M works due to no or narrow wide of road, slope erosion by rainfall then in flow into canal No kilo and hectometer post, no structure plate or mark on structures and no identification for repair/maintenance Fallen down and collapse of side slope, water plants or weed at inside of canal No provision or damage of inspection road, difficulty on passing of inspection road due to damage, broken V.2 Development Plan (1) Proposed Countermeasures for Major Problems Water Resources Facility Dredging or flushing of sediment, proper gate operation of headworks and intake Replacement of intake gate(s) 									
-	Irrigation Ca Remov Provisio Provisio Provisio Provisio	anal and Relat al of sedimen on of inspecti on of kilo, he on of concrete on or repair o	ted Structure t soil and fore on road both ct-m posts, m e lining f inspection re	ign material main and sec arking to eac pad with all	s from canal, condary canal ch structure w weather type/	grass cutting with pavement ith structure	ent name			
(2)	Water Resor Dam/Headw Settling basi	orks body n	: minor rehat : replacemen	oilitation t or new	Intake, civil	: minor reha	bilitation	Intake	e, mechanical : minor reha	bilitation
(3)	Irrigation Ca	inal and Relat orks	ted Structure No rehat	oilitation	Rehabi	litation	New cons	struction	Total]
	Canal (m)	Main Secondary		0		5,304		0	5,304	-
	Structure	Main		0		1		24	25	-
	(nos)	Secondary		0		18		4	22	
(4)	On-farm De	velopment	v field	1 911	d Non-noter	ntial naddy fi	əld	(Unit: ha)]	
	b. Potential	non-irrigated	paddy field	446	e. Non-poter	ittial non-pac	dy field	0		
	c. Potential 1	10n-paddy fie	ld	0	Total			2,357		
(5)	Rehabilitatio	on Cost (Dire	et Cost)	On-Farm	Project	(Uni	: Million Rp.)			
	W.R.F	Irrigation	Drainage	Develop.	Facility	Total	per ha			_
	3,112	24,344	2,434	5,060	1,570	36,520	15.5	(W.R.F: Wate	er Resources Facility, Devel	op.: Development)
VI 1	FIDD	13.3%			VI. PR	OJECT EV	ALUATION	J		
v 1.1	BINK	15.570								
VI.2	Prioritization Evaluation I	ndex			Full Score	Score	Evaluation In	dex	Full Score	Score Total Score
	Irrigation	Utilization o	f Irrigation Po	otential	10.0	5.0	Agricultural I	Productivity	20.0	11.0 63.4
1	System	Sustainabilit	у		25.0 15.0	19.6 6.8	Economic Im	pact	15.0	9.0
VI.3	Priority Gr	oup	Group III: Th	nird priority	group		VI.4	Priority Ra	nking in the Province	23

South Sulawesi Province 32. Maloso, Sekka Scheme (3/4)

Scheme Maloso, Sekka District **Polmas** Technical Level Technical 2,991 ha Year of Construction 1937/96 Registered Area Category 180 Irrigation (Headworks) Structure Weir Crest, Rear View Condition [Variable] 🗌 A ✓ B C 🗌 D Problems Crack or damage on weir crest; settlement of weir body. Category_ 183 Irrigation (Headworks) <u>Structure</u> Intake, Scouring Sluice Gate Condition ✓ B \Box C 🗌 D 🗌 A **Problems** Leakage from gate leaf; insufficient strength against design load due to rust, decay of steel material. Category Irrigation (Main Canal) 184 <u>Structure</u> Masonry Lined Canal **Condition** A □ B ☑ C D Problems Sedimentation; leakage from lined canal; crack on lined canal; deflection of lining toward inside of canal; less maintenance; and no inspection road.

South Sulawesi Province 32. Maloso, Sekka Scheme (4/4)

Scheme	Maloso, Sekka	District	Polmas
Technical Level	Technical	Registered Area	2,991 ha Year of Construction 1937/96
			Category Agriculture, On-Farm Structure Paddy Field Condition A B C D Problems Tranplanting
			<u>Category</u> Agriculture, On-Farm <u>Activity</u>
			Paddy Cultivation Condition Image: A matrix B matrix B matrix D
			Low density of on-farm canals and farm roads.
			Category
			<u>Activity</u>
			Condition A B C D Problems

South Sulawesi Province 33. Lakejo Scheme (1/4)

				L PROJE	CT FUNDA	MENTAL	S			
L1	General			I, I KOUL			6			
(1)	Code Number		: 73190019		(7)	Number of F	Farmers	: 837		
(2)	Name of Irrigation Scheme		: Lakejo		(8)	Water Resou	urce River	: Lakejo/Ris	0	
(3)	District (Kabupaten)		: Polewali		(9)	Catchment A	Area (km ²)	: 39.375		
(4)	Sub-district (Kecamatan)		: Wonomuly	yo/Tadango	(10)	Completion .	/ Last Rehabilitation Year	: 1969/1986		
(5)	Registered Area (ha)		: 1,265							
(6)	Technical Level		: Technical							
1.2	Availability of Reports/Docu	iments & Rel	Evil set)	h I	(A: Availab	le, B : Avai	lable but partially, C: N	d Strue	No plan) turo listo & d	ingram
	a. Design Reports of Exis	sung System()	run set)	0.1		lain	R	u. Suuc		lagraili
	e. Rehabilitation plar	h & its referen	ces	f. Cr	ops and vield	data	g. Cropping Calender	h	. WUAs data	ı
	C				A		A		12	
TT 1	Durant and Diamod Land I	Inc	II. SUBJI	ECT AREA	FOR REH	ABILITAT	TION PLAN			
11.1	Category	Jse	Prese	nt (ha)	Plan	(ha)	Increment (ha)	1		
	a. Irrigated paddy field		11050	960	1 Iuli	960	0	-		
	b. Rainfed paddy field			0		0	0			
	c. Upland Field			0		0	0			
	d. Uncultivated Land			0		0	0	-		
	e. Non-irrigable			0		0	0	-		
	1 otal			960	<u> </u>	960	0	1		
				III	AGRICUL	TURE				
III.1	Present/Before Project Cond	lition								
(1)	Irrigation Performance and Cr	op Production	1				T			
	Season	Cropp	ed Area in Ir	rigated Paddy	y Field	Annual	Irrigated Paddy Yield	Crop I	Production (t	on) 1/
		Paddy (ha)	Palawija	Others (ha)	Total (ha)	Intensity	(GKG ton/ha)	Paddy	Palawija	Others
	Season II (wet)	960			960	100%	4.0	3,840		
	Season III (dry I)	/61			/61	/9%	4.5	3,425		
	Total/Annual	1.721	0	0	1.721	179%	4.2	7.265	0	0
		-,,			-,,		1/: Irrigated	& rainfed pad	ldy & palawi	ja
III.2 (1) (2)	 Double cropping of paddy pi B. Primary Constraint Identifi Irrigation & Drainage: Agronomic Issues: Paddy Marketing Development Plan Development Approaches Ensuring year round irrigatio Expansion of double cropped Strengthening of extension a Planned Irrigation Performance Season 	water ced in mo ied through th Water shorta Farmers not Poor quality on water suppl d area of padd ctivities tailor tes and Crop F	ge at on-farm following rec of products y at on-farm y; productivi ed to area sp Production ed Area in Ir	level through ty increase of erificated Paddy	rea; paddy yre JICA Study season oractices n rehabilitatio f paddy throu empowermer y Field	- Palawija M - Farmers Oi - Extension gh intensifica tt of farmer g	ation; introduction of palar roups (KTs) to establish a	gaining power ation among k & experiences wija in dry sea gri-business c	et of farmers (Ts of PPLs are l ason I rriented KTs Production (imited ton)
	5685011	Paddy (ha)	Palawija	Others (ha)	Total (ha)	Intensity	(GKG ton/ha)	Paddy	Palawija	Others
	Season I (wet)	960	07		960	100%	5.0	4,800	11.7	
	Season II (dry I)	864	96		960	100%	5.5	4,/52	115	
	Total/Annual	1.824	96	0	1.920	200%	5.2	9.552	115	0
	Annual Increment	103	96	0	199	21%	1.0	2,288	115	0
					IV. WUA	\$				
IV.1	Existing Condition									
(1)	Numbera. Target;Performancea. Developed;	15 0	 b. Establishe b. Under dev 	ed; /eloping;	15 15	c. Not yet; c. Not yet;	0	Registered Not yet regis	tered	0
(2)	Problems and Constraints		Maintenance	e 🗸	Management	t				
(3)	Causes of Problems and Const - No collection of WUA memb	traints bership fee.								
۲V ۷	Development Plan									
(1)	Proposed Countermeasures - Improvement of administrati	on manageme	ent system							
(2)	Development Plan - WUA management tarining.									

	V. IRRIGATION FACILITY							
V.1	Existing Conditi	on						
(1)	Overall Irrigation	System : C	(A: Function	ing well, B: Pa	rtially deterior	ated, C: Not functioning we	ell, D: Serious condition for o	peration)
	Water Resources	Facility : B	Main Ca	inal System :	D	Secondary C	Canal System : D	On-farm : D
(2)	Water Resources	Facilty						
a.	Type of facility	: Headwor	ks	e. Scouring	sluice gate	: 1 nos.	i. Condition : B	
b.	Type of weir	: Fixed we	eir	f. Intake gate	e	: 1 nos.	(A: Functioning well, B: Pa	rtially deteriorated, C: Not
с.	Length of weir	: 36 m		g. Settling b	asin	: not provided	functioning well, D: Seriou	s condition for operation)
d.	Design intake dis	charge : 3.0 m3/s		h. Inspectior	n bridge	: not provided	(no info.: no information)	
(3)	Irrigation Canal a	nd Inspection Roa	1			1		-
	Canal Lin	ed (m) Unlined (1	n) Total (m)	Structu	re (nos)	Inspection road (m)	Condition	(A: Functioning well,
	Main	402	0 402		1	() D	B: Partially deteriorated,
	Secondary	7,307 1,40	00 8,707		24	() D	C: Not functioning well,
								D: Serious condition for
(4)	Major Problems a	nd Constrains						operation)
-	Water Resources	Facility						
	Fallen down	inclined, or wash	ed away of reta	ining wall of	weir			
	Insufficient of	liversion water due	e to sedimentat	ion in front of	intake			
	Physical ope	rational problem o	n intake gate(s)					
-	Irrigation Canal a	nd Related Structu	re					
	Impassable c	f inspection road a	long canal					
	General O&	M problems						
	Difficulty on	maintenance of ea	irth canal	1				
	Lower functi	on of regulating st	ructure on cana	11				
(5)	Difficulty on	D&M						
(5)	Water Resources	Froblems and Cons	straints					
-	Insufficient	vality of concrete	or maconry ma	terial over a	oting earth pr	essure more than design		
	Sedimentatio	in front of intak	or masoni y ma	iteriai, over at	ling cartin pr	essure more mail design		
	Improper des	ign installation at	d/or maintena	nce of intake	ate(s): break	down of hoist stem guid	le frame or leaf	
-	Irrigation Canal a	nd Related Structu	re	lee of make g	Sate(3), break	down of noist, stern, guit	te traine of fear	
_	Improper roi	tine O&M works	tue to no or na	rrow wide of	road slope e	rosion by rainfall then in	flow into canal	
	No kilo and l	hectometer post in	structure plate	e or mark on s	structures and	no identification for ren	air/maintenance	
	Fallen down	and collapse of sic	le slope water	plants or wee	d at inside of	canal		
	Deterioration	of regulating stru	cture on canal.	especially ga	te and metal	works		
	No provision	or damage of insp	ection road, di	fficulty on pa	ssing of insp	ection road due to damag	e, broken	
V.2	Development Pla	in i	,	5 1	0 1	C	,	
(1)	Proposed Counter	measures for Majo	or Problems					
-	Water Resources	Facility						
	Reconstructi	on of retaining wa	l of weir					
	Dredging or	flushing of sedime	nt, proper gate	operation of	headworks ai	nd intake		
	Replacement	of intake gate(s)						
-	Irrigation Canal a	nd Related Structu	re					
	Provision of	inspection road bo	th main and se	condary canal	with pavem	ent		
	Provision of	kilo, hect-m posts,	marking to eac	ch structure w	1th structure	name		
	Provision of	concrete lining						
	Browision or	rangi reconstruction	n road with all	structure on c	anai			
(2)	Provision of	repair of inspectio	n road with all	weather type/	pavement			
(2)	Dam/Headworks	body · minor re	abilitation	Intaka civil	· large rehab	ilitation Intak	e mechanical · large rehah	vilitation
	Settling basin	replacer	ent or new	intake, eivii	. large renac	intation intak	e, meenamear . large renad	intation
(3)	Irrigation Canal a	nd Related Structu	re					
(3)	Works	No re	nabilitation	Rehabi	litation	New construction	Total	
	Main	1	0		306		306	-
	Canal (m) Seco	ndary	0		6,617	(0 6,617	-
	Structure Main	1	0		1	0	1	
	(nos) Seco	ndary	0		18	4	22	
	<u>.</u>							
(4)	On-farm Develop	ment	1	T		(Unit: ha)	
	a. Potential Irrigat	ted paddy field	960	d. Non-poter	ntial paddy fi	eld 0		
	 b. Potential non-in 	rigated paddy fiel	1 0	e. Non-poter	nttial non-pac	ldy field 0		
	 c. Potential non-p 	addy field	0	Total		960		
	B 1 1995 0				· ·			
(5)	Rehabilitation Co	st (Direct Cost)	0.5	D	(Uni	t: Million Rp.)		
	W.R.F Irri	gation Drainage	On-Farm	Project	Total	COSt		
	2 5 9 7	5 907 50	Develop.	Facility	12 202	per na	tor Docourage Fasility D1	an · Davalanmart)
	2,307	3,071 39	1,908	1,200	12,302	12.0 (W.K.F. Wa	the resources racility, Develo	op., Development)
				VI. PR	OJECT EV	ALUATION		
VI.1	EIRR	16.5%						
VI 2	Prioritization Se	oring						
	Evaluation Index	B		Full Score	Score	Evaluation Index	Full Score	Score Total Score
	Irrigation Utili	zation of Irrigation	Potential	10.0	-	Agricultural Productivity	y 20.0	
	System Urge	ency		25.0	-	Social Problem	15.0	-
	Sust	ainability		15.0	-	Economic Impact	15.0	-
		<u> </u>	D 1			1		
VI.3	Priority Group	Group VI	Development	by other cates	gory	VI.4 Priority Ra	anking in the Province	-
L		(Subject a	rea is less than	1,000 ha)				

Scheme	Lakejo		District	Polmas		
Technical Level	Technical		Registered Area	1,265 ha	Year of Construction	1969/86
SS:33.156				<u>Category</u> Irrigation (F	Headworks)	
				<u>Structure</u> Stilling Bas	in, Ripraps	
	EX.	Aller .		Condition A	☑ B □ C	□ D
				<u>Problems</u> Washed aw or gabions a	ay of stilling basin; washec at downstream of stilling ba	l away of ripraps asin.
SS.33.148				<u>Category</u> Irrigation (I	Headworks)	
A.T.				<u>Structure</u> Intake		
	F 01 01	- Al	VITACI	Condition A	B C	✓ D
				Insufficient front of in	diversion water due to sed take; broken of gates.	imentation in
SS.33.158				Category Irrigation (S	Secondary Canal)	
			HALLING.	Division Str	ructure	
	It along			\Box A	B C	✓ D
				<u>Problems</u> Lower func sedimentati on structure	tion of division structure d on in front gate; physical o ; deterioration of steel gate	ue to peration problem ss

South Sulawesi Province 33. Lakejo Scheme

Scheme	Lakejo	District	Polmas
Technical Level	Technical	Registered Area	1,265 ha Year of Construction 1969/86
SS.33.152	a and		<u>Category</u> Irrigation (Secondary Canal)
09753 (9755			<u>Structure</u> Earth Canal
and the second			<u>Condition</u> □ A □ B □ C ☑ D
			<u>Problems</u> Sedimentation; collapse of canal; leakage from canal; difficulty on maintenance of earth canal; no inspection road.
			<u>Category</u> Agriculture, On-Farm
			<u>Activity</u> Transportation of Products
Williams.	denne at June		<u>Condition</u> □ A □ B □ C ☑ D
			<u>Problems</u> Bicycle transportation due to no farm roads.
			<u>Category</u> Agriculture, On-Farm
-			<u>Activity</u> Treshering by Power Engine
	had won a d	A.	Condition □ A □ B □ C ☑ D
			<u>Problems</u>

South Sulawesi Province 34. Gamo-Gamo Scheme (1/4)

				I. PROJE	CT FUNDA	MENTAL	S			
I.1	General Code Northeast		72100100		(7)	N I CI	· · · · · · · · · · · · · · · · · · ·	2.151		
(1) (2)	Name of Irrigation Scheme		: /3190198 : Gamo-Gai	mo	(7) (8)	Number of F Water Resou	armers irce River	: 2,151 : Sungai And	au	
(3)	District (Kabupaten)		: Polmas	ino	(9)	Catchment A	Area (km ²)	: 70.625	uu	
(4)	Sub-district (Kecamatan)		: Wonomuly	yo	(10)	Completion	/ Last Rehabilitation Year	: 1937/1996		
(5)	Registered Area (ha)		: 4,820 : Technical							
(0)	Teeninear Lever		. reennear							
I.2	Availability of Reports/Docu	iments & Re	ferences		(A : Availab	le, B : Avai	lable but partially, C : N	ot available/	No plan)	
	a. Design Reports of Exi	sting System(Full set)	b. I	rrigation diag	ram	c. As-built drawings B	d. Struct	ure lists & d	lagram
	e. Rehabilitation plan	n & its referer	nces	f. Cr	ops and yield	data	g. Cropping Calender	h.	WUAs data	ı
	C				А		А		28	
			II. SUBJ	ECT AREA	FOR REH	ABILITAT	TION PLAN			
II.1	Present and Planned Land U	Jse	Draca	nt (ha)	Dian	(ha)	In aromant (ha)	1		
	a. Irrigated paddy field		11050	2,371	1 ian	4,743	2,372			
	b. Rainfed paddy field			2,372		0	-2,372			
	c. Upland Field			0		0	0	-		
	e. Non-irrigable			0		0	0	-		
	Total			4,743		4,743	0			
				III.	AGRICUL	TURE				
III.1	Present/Before Project Cond	lition								
(1)	Irrigation Performance and Ci	Cropp Cropp	n oed Area in Ir	rigated Paddy	/ Field	Annual	Irrigated Paddy Yield	Cron P	roduction (to	on) 1/
	Season	Paddy (ha)	Palawija	Others (ha)	Total (ha)	Intensity	(GKG ton/ha)	Paddy	Palawija	Others
	Season I (wet)	2,367	<u>/1</u>		2,367	100%	4.0	15,398	515	
	Season III (dry II)	2,510	41		2,551	99/0	4.5	10,393	515	
	Total/Annual	4,677	41	0	4,718	199%	4.2	25,793	515	. (
III.2 (1)	 B. Primary Constraint Identified - Irrigation & Drainage: Agronomic Issues: Paddy Marketing Development Plan Development Approaches Ensuring year round irrigation Expansion of double croppered - Strengthening of extension and extensi	<i>ied through th</i> Water shorta Damage cau Low marketi	the Inventory S age at on-farm sed by rat ing prices ly at on-farm ly; productivi red to area sn	Survey by the n level in dry level through ity increase o eccific needs:	JICA Study season n rehabilitatio f paddy throu, empowermer	 Palawija M Farmers Ot Extension S n gh intensifica to f farmer g 	larketing: Low market ganizations: Managerial Services: Implementat ation; introduction of palar roups (KTs) to establish a	ing prices capacity of KT tion of extension wija in dry sea:	's are limited on programs son I riented KTs	l is limited
(2)	Planned Irrigation Performance	ces and Crop I	Production	minuted Dedd	- T:-14	A	Immented Dedder Wield	Creat	Due du etien ((4.9.17)
	Season	Paddy (ha)	Palawija	Others (ha)	Total (ha)	Annual Intensity	(GKG ton/ha)	Paddy	Production (Palawija	(ton) Others
	Season I (wet)	4,743	2		4,743	100%	5.0	23,715	,	
	Season II (dry I)	2,846	948		3,794	80%	5.5	15,653	2,986	
	Total/Annual	7,589	948	0	8,537	180%	5.2	39,368	2,986	(
	Annual Increment	2,912	907	0	3,819	-19%	1.0	13,575	2,471	(
IV.1	Existing Condition	-			1. W UA	3				
(1)	Number a. Target;	31	b. Establishe	ed;	31	c. Not yet;	0	Registered	1	(
	Performance a. Developed;	4	b. Under dev	veloping;	27	c. Not yet;	0	Not yet regist	ered	31
(2)	Problems and Constraints		Maintenance	e 🗆	Management	t				
(3)	Causes of Problems and Cons (No information)	traints								
IV.2 (1)	Development Plan Proposed Countermeasures									

	V. IRRIGATION FACILITY										
V.1	Existing Con	dition									
(1)	Overall Irriga	tion System	: C	(A: Functioni	ng well, B: Pa	rtially deterior	ated, C: Not f	functioning wel	l, D: Serious c	ondition for op	peration)
	Water Resour	rces Facility	: B	Main Ca	nal System :	С		Secondary Ca	anal System :	D	On-farm : C
(2)	Water Resour	rces Facilty	TT 1 1		a :		<i>(</i>		i o tre	D	
a.	Type of facili	ity	: Headworks		e. Scouring s	sluice gate	: 6 nos.		1. Condition	: B	tially deteriored of O.N.t.
D.	I spee of weir	i	: Fixed welf		a Sottling b	ecin	: / nos. : provided		(A: Functioning w	ell D: Serious	condition for operation)
d	Design intake	11 discharge	. 14 III $. 5.2 m^{3/c}$		h Inspection	asiii hridge	: provided		(no info : no i	offermation)	condition for operation)
u.	Design intake	uisenarge	. 5.2 115/5		n. mspectioi	i biluge	. provided		(110 1110 110 1	mormation)	
(3)	Irrigation Car	nal and Inspe	ection Road								
(-)	Canal	Lined (m)	Unlined (m)	Total (m)	Structu	re (nos)	Inspectio	on road (m)	Cond	lition	(A: Functioning well,
	Main	300	770	1,070		2		1,070	(2	B: Partially deteriorated,
	Secondary	3,614	26,376	29,990		43		7,389	Ι)	C: Not functioning well,
]	D: Serious condition for
(4)	Major Proble	ms and Cons	strains								operation)
-	 Water Resourt 	rces Facility									
	Insuffici	ent diversior	water due to	sedimentati	on in front of	intake					
	Inflow o	f bed loads i	nto canal and	decrease car	hal flow capa	city					
	Irrigation Car	al and Palat	ad Structure								
-	Sedimen	itation or obs	struction of w	ater flow							
	General	O&M proble	ems								
	Difficult	v on mainter	nance of earth	a canal							
	Lower fi	unction of re	gulating strue	ture on cana	1						
	Difficult	y on O&M									
(5)	Causes of Ma	ijor Problem	s and Constra	ints							
-	 Water Resourt 	rces Facility									
	Sedimen	itation in from	nt of intake								
	Insuffici	ent function	of settling ba	sin, no prope	er gate operat	ion of intake	during flood	I			
	Irrigation Car	al and Relat	ed Structure								
-	Insuffici	ent function	of settling ha	sin(sediment	s) improper	management	of canal (see	diments water	r nlant)		
	No kilo a	and hectome	ter post, no si	ructure plate	or mark on s	structures and	l no identific	ation for repa	ir/maintenanc	e	
	Fallen de	own and coll	apse of side s	slope, water	plants or wee	d at inside of	canal			-	
	Deterior	ation of regu	lating structu	re on canal,	especially ga	te and metal	works				
	No provi	ision or dam	age of inspec	tion road, dif	ficulty on pa	ssing of insp	ection road d	lue to damage,	, broken		
V.2	Development	t Plan									
(1)	Proposed Cou	untermeasure	es for Major I	roblems							
-	• Water Resour	rces Facility	. C 1				11.001				
	Dredging	g or flushing	of sediment,	proper gate	operation of l	headworks a	nd intake				
	Replacer	ment of setti	ing basin, pro	per gate ope	ration of inta	ke during no	od				
	Irrigation Car	nal and Relat	ed Structure								
	Removal	l of sedimen	t soil and fore	eign material	s from canal.	grass cutting	[
	Provision	n of kilo, hee	ct-m posts, m	arking to eac	h structure w	ith structure	name				
	Provision	n of concrete	e lining								
	Replacer	ment and rec	onstruction o	f regulating	structure on c	anal					
	Provision	n or repair of	f inspection r	oad with all	weather type/	pavement					
(2)	Water Resour	rces Facility	· min or robol	ilitation	Testalea aireit	· min or roho	hilitation	Intolog		· minor robob	ilitation
	Settling basin	orks body	: renlacemen	t or new	intake, civii	. minor rena	onnation	Intake	, mechanicai	. minor renau	onnation
(3)	Irrigation Car	nal and Relat	ed Structure	t of new							
(3)	Wor	rks	No rehat	oilitation	Rehabi	litation	New co	nstruction	То	tal	
	Canal (m)	Main		0		1,070		0		1,070	
	Canai (m)	Secondary		0		29,990		0		29,990	
	Structure 1	Main		0		2		0		2	
1	(nos)	Secondary		0		43		9		52	
	0-6-5	alament						(TT.:: 1)			
(4)	On-farm Dev	elopment	u field	2 271	d Nor	ntial no data "	ald	(Unit: ha)	1		
	a. Potential II	on-irrigated	y neiu paddy field	2,371	e Non-poter	itial paddy ii	ldy field	300			
	c. Potential n	on-naddy fie	ld	2,072	Total	ittiai non-pat	idy field	4 743			
	e. i otentiai n	on puddy ne	iu -	0	1 otur			1,713			
(5)	Rehabilitation	n Cost (Dired	ct Cost)			(Uni	t: Million Rp.)			
	WRF	Irrigation	Drainage	On-Farm	Project	Total	Cost				
1	···.	mganon	Dramage	Develop.	Facility	10101	per ha	4			
1	5,898	32,680	3,268	10,939	1,570	54,355	11.5	(W.R.F: Wate	er Resources Fa	acility, Develo	p.: Development)
					VI DD	OIECT EV	ALLIATIO	N			
VI.1	EIRR	18.8%			VI. I N	COLCI EV	MUANU				
VI.2	Prioritization	n Scoring			Full Score	Score	Evaluation	Index		Full Score	Score Total Score
1	Irrigation 1	Utilization o	f Irrigation P	otential	10.0	10.0	Agricultura	l Productivity		20.0	16.0 77.3
1	System	Urgency			25.0	19.0	Social Prob	lem		15.0	13.5
1		Sustainabilit	y		15.0	6.8	Economic I	mpact		15.0	12.0
1	I						1	-			
VI.3	Priority Gro	up	Group I: Firs	t priority gro	oup		VI.4	Priority Ra	nking in the	Province	3
L											

South Sulawesi Province 34. Gamo-Gamo Scheme

(3/4)

Scheme	Gamo-Gamo	District	Polmas
Technical Level	Technical	Registered Area	4,820 ha Year of Construction 1937.96
169			Category Irrigation (Headworks) Structure Fixed Weir □ A □ B □ C □ Problems Not in use at present
171			Category Irrigation (Main Canal) Structure Division Structure Condition □ A □ A □ A □ B ○ C □ A □ A □ B ○ C □ D Problems Lower function of division structure due to sedimentation in front gate; physical operation problem on structure.
170			Category Irrigation (Main Canal) Structure Division Structure Condition □ A □ B ☑ C □ D Problems Lower function of division structure due to sedimentation in front gate; physical operation problem on structure.

South Sulawesi Province 34. Gamo-Gamo Scheme (4/4)

Scheme	Gamo-Gamo	District	Polmas
Technical Level	Technical	Registered Area	4,820 ha Year of Construction 1937.96
	and the second sec		<u>Category</u> Agriculture, On-Farm
			<u>Activity</u> Paddy Cultivation
			Condition
			$\square A \square B \lor C \square D$
the second second second			<u>Problems</u> Low density of on-farm canals and farm roads.
the second			
-	Sally Transfer Sale and		
	A Calendaria		
100000-0.00	2		<u>Category</u> Agriculture On-Farm
1.20		1	<u>Activity</u>
2.55			Harvesting
1000		-	$\square A \square B \square C \square D$
			<u>Problems</u> Low density of on-farm canals and farm roads.
and the second	17 MAR MORE BUT SHE WAY - WAY - WAY	PARTY PT	
	Carlos and the second		
- Anne	Well and states		
			<u>Category</u>
			<u>Activity</u>
			Condition
			Problems