

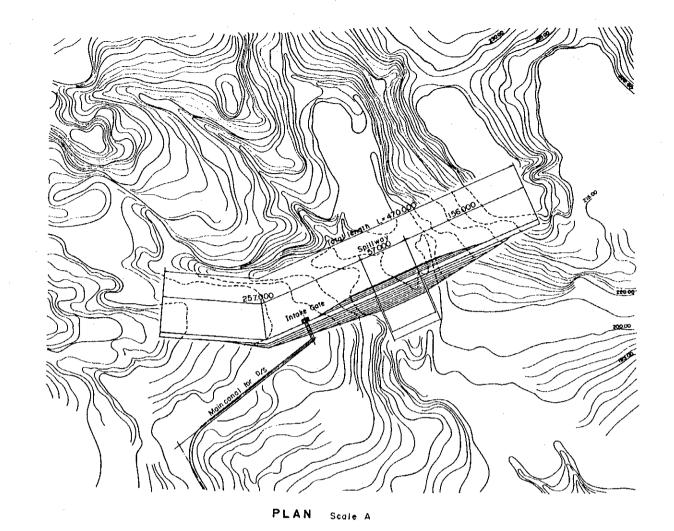
PLAN Scale A

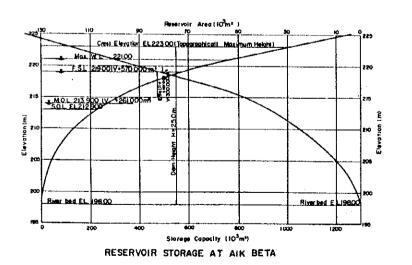
RESERVOIR STORAGE CAPACITY CURVE AT MONTONG KRARAK

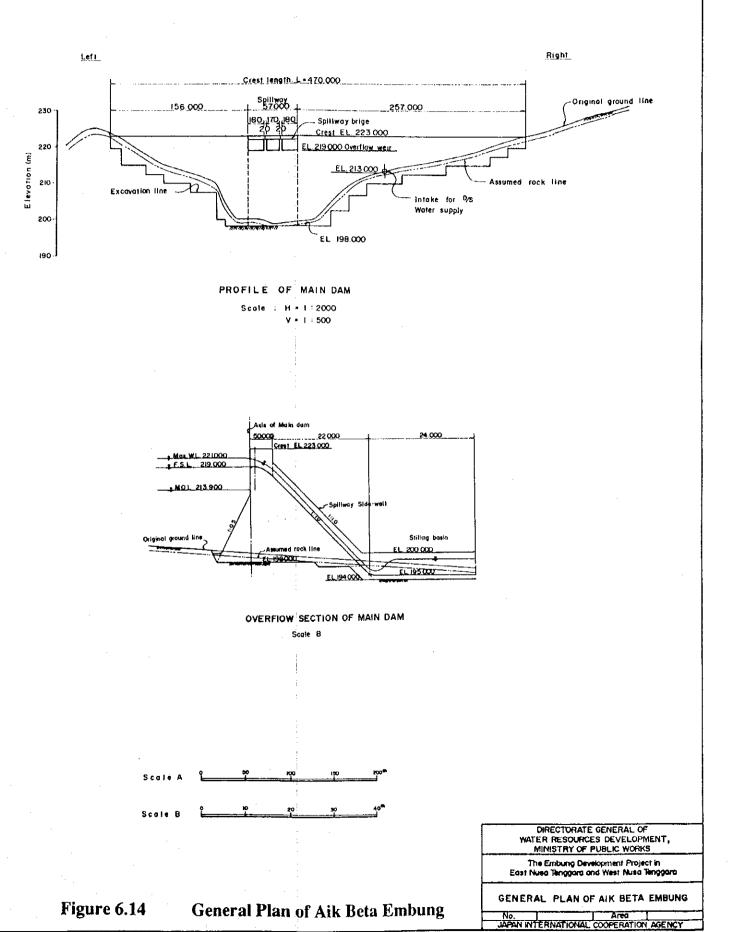
DIRECTORATE GENERAL OF
WATER RESOURCES DEVELOPMENT,
MINISTRY OF PUBLIC WORKS

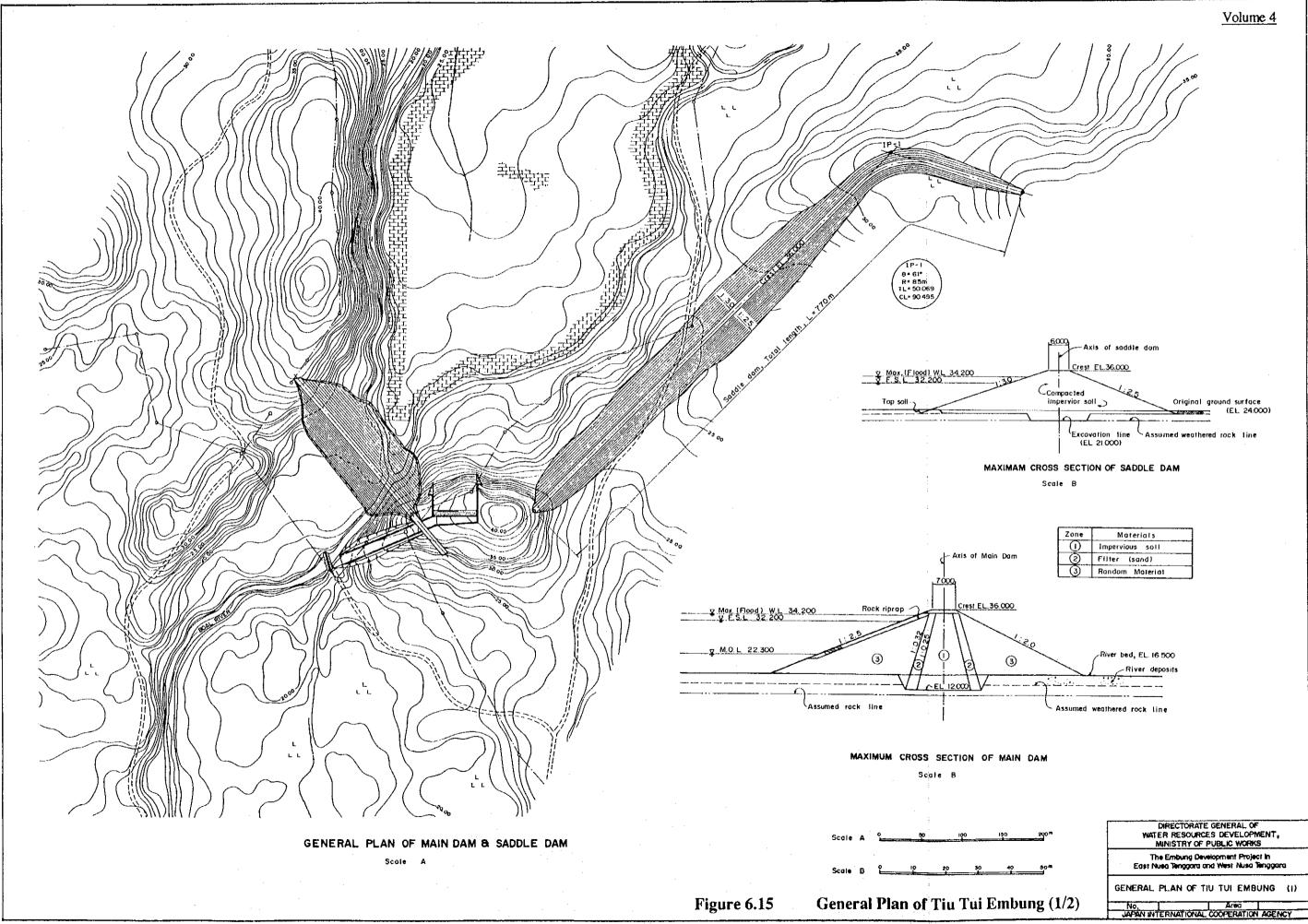
The Embung Development Project in
East Nusa Tenggora and West Nusa Tenggora

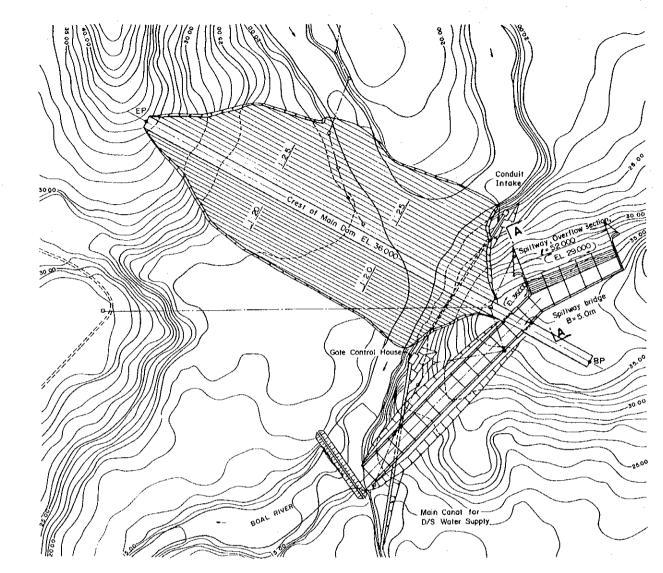
GENERAL PLAN OF MONTONG KRARAK EMBU



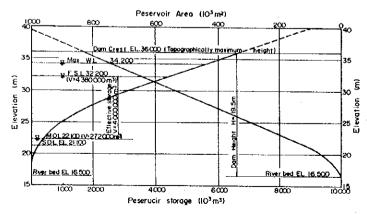




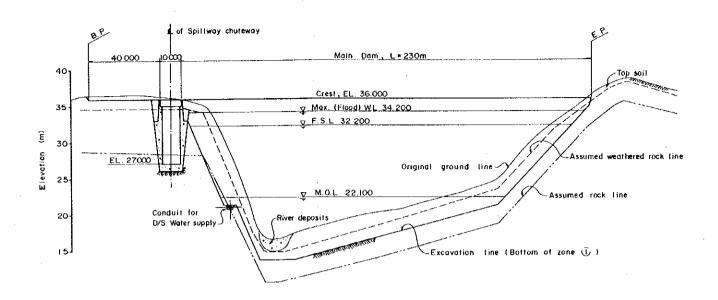


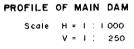


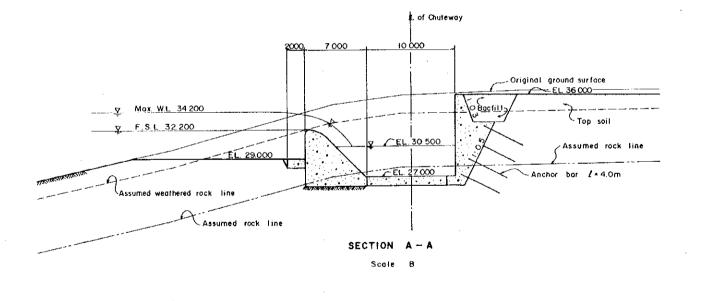
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RESERVOIR STORAGE CURVE AT TIU TUI







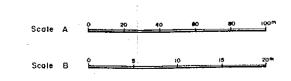
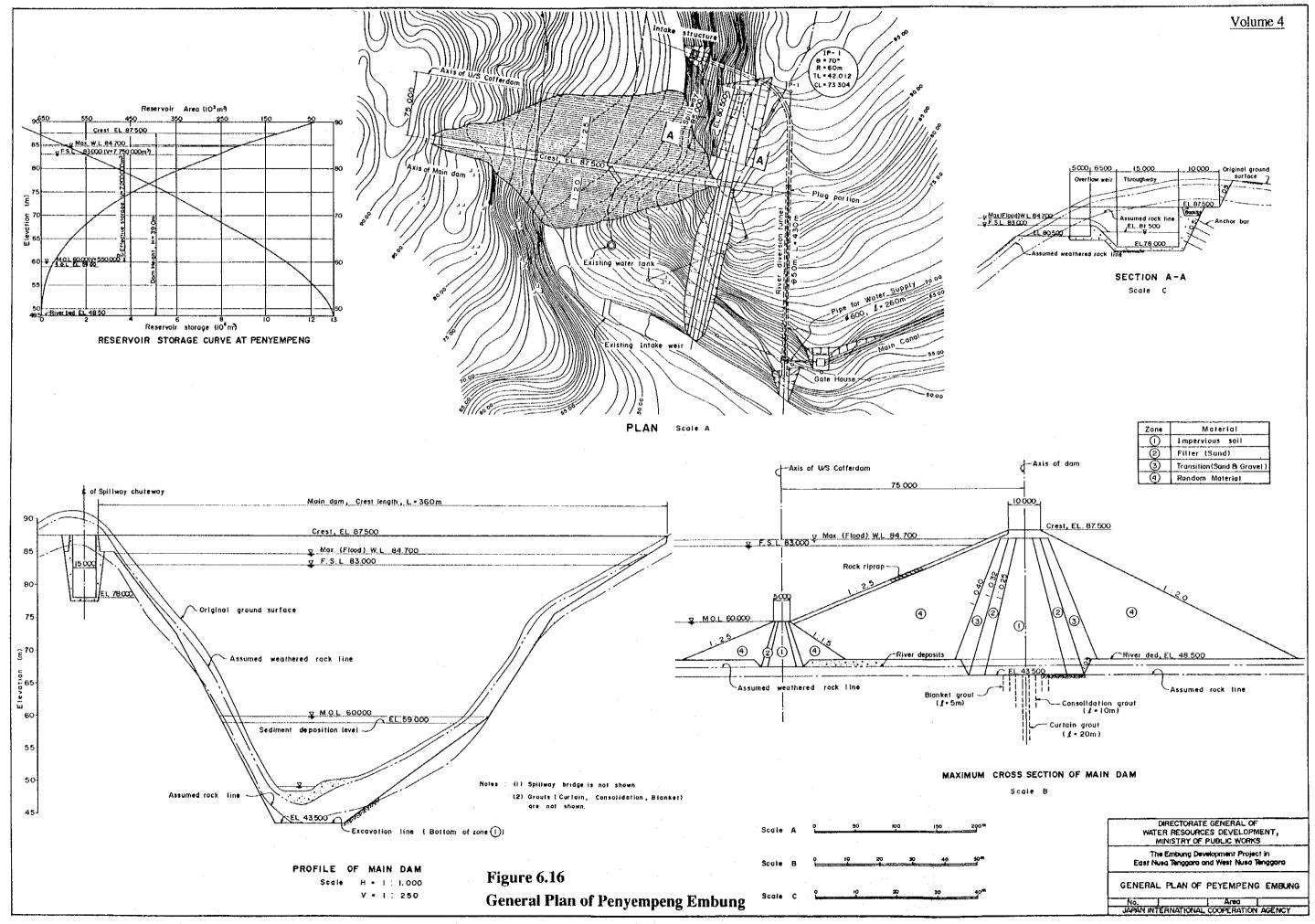


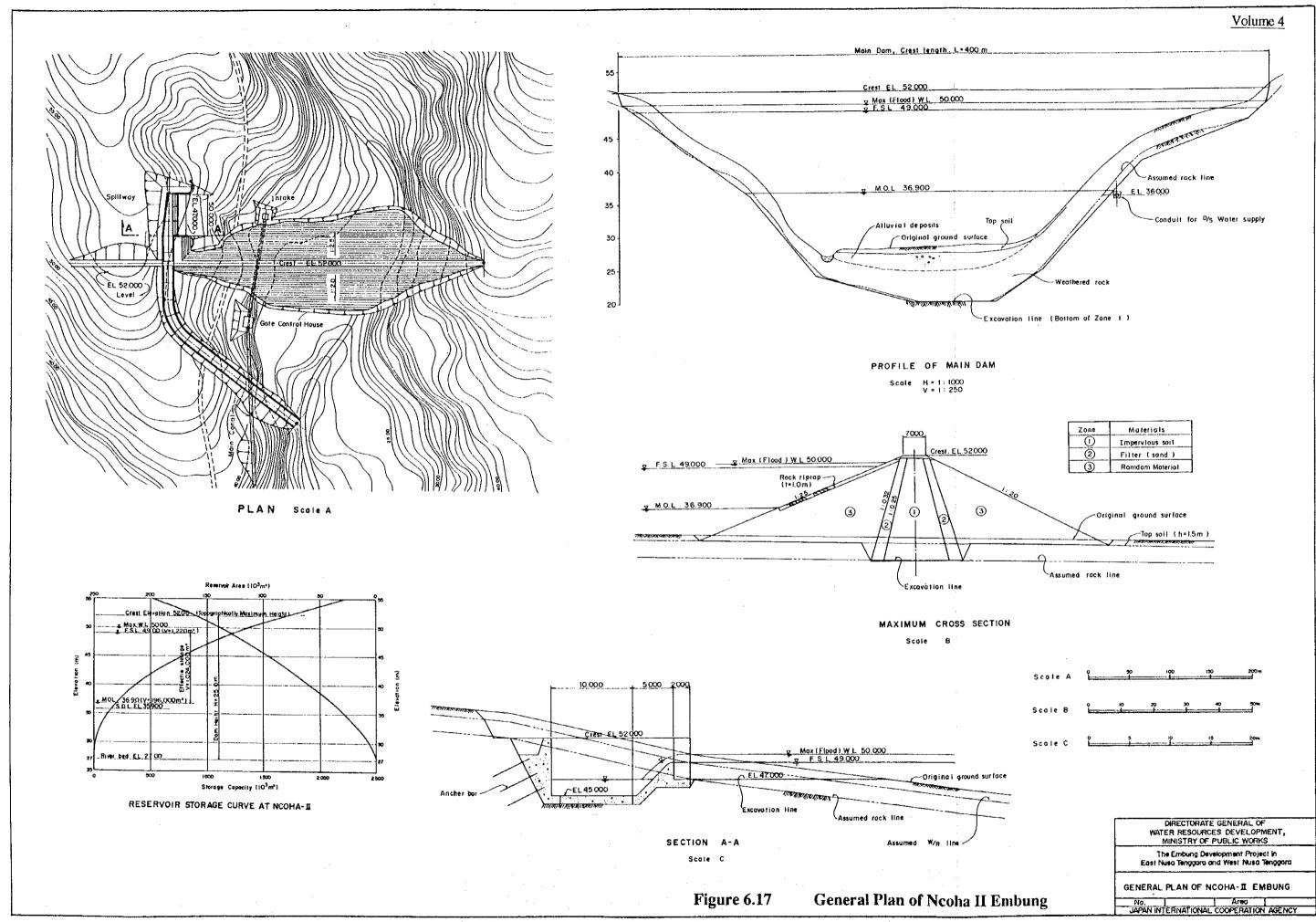
Figure 6.15 General Plan of Tiu Tui Embung (2/2)

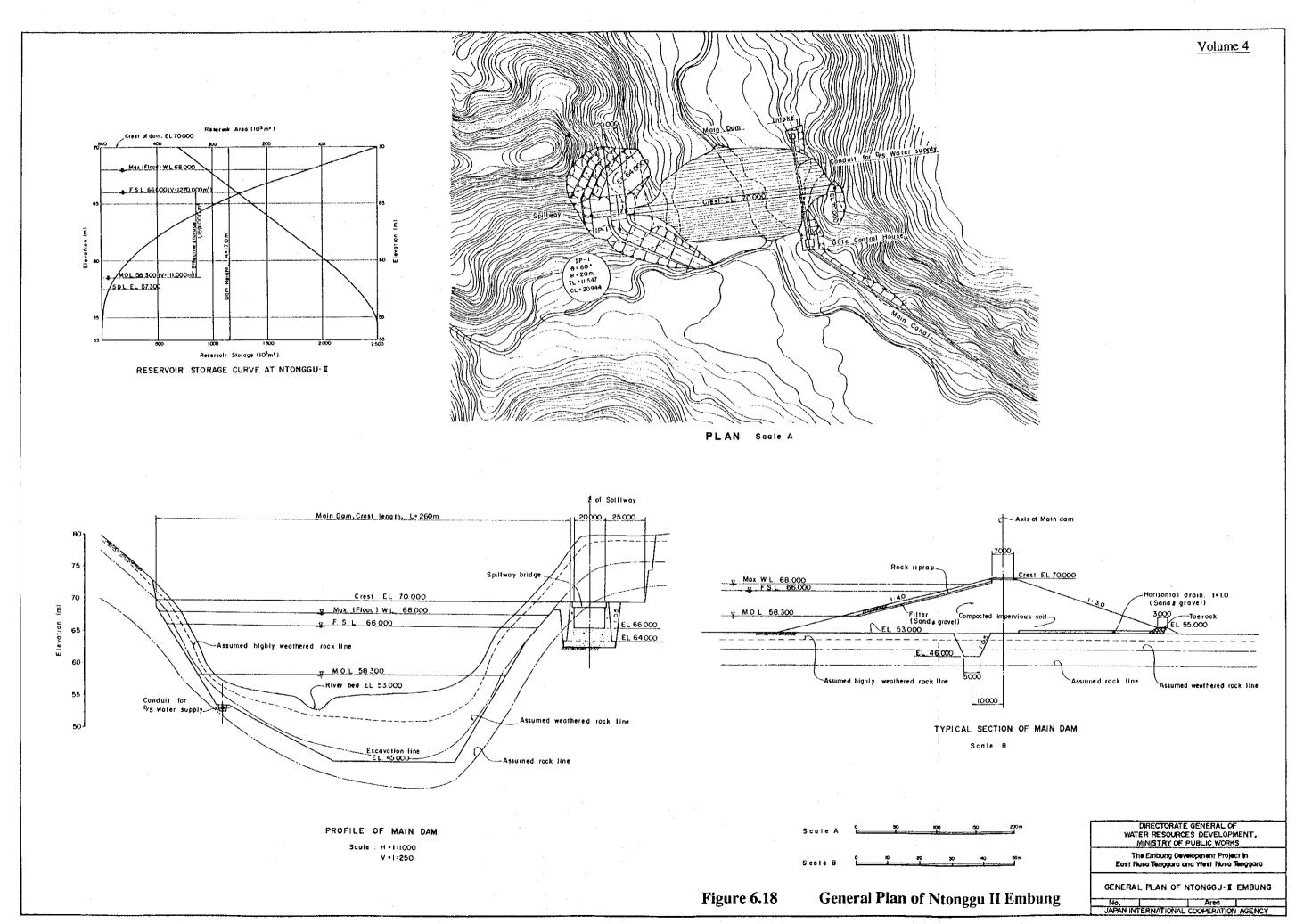
DIRECTORATE GENERAL OF WATER RESOURCES DEVELOPMENT, MINISTRY OF PUBLIC WORKS

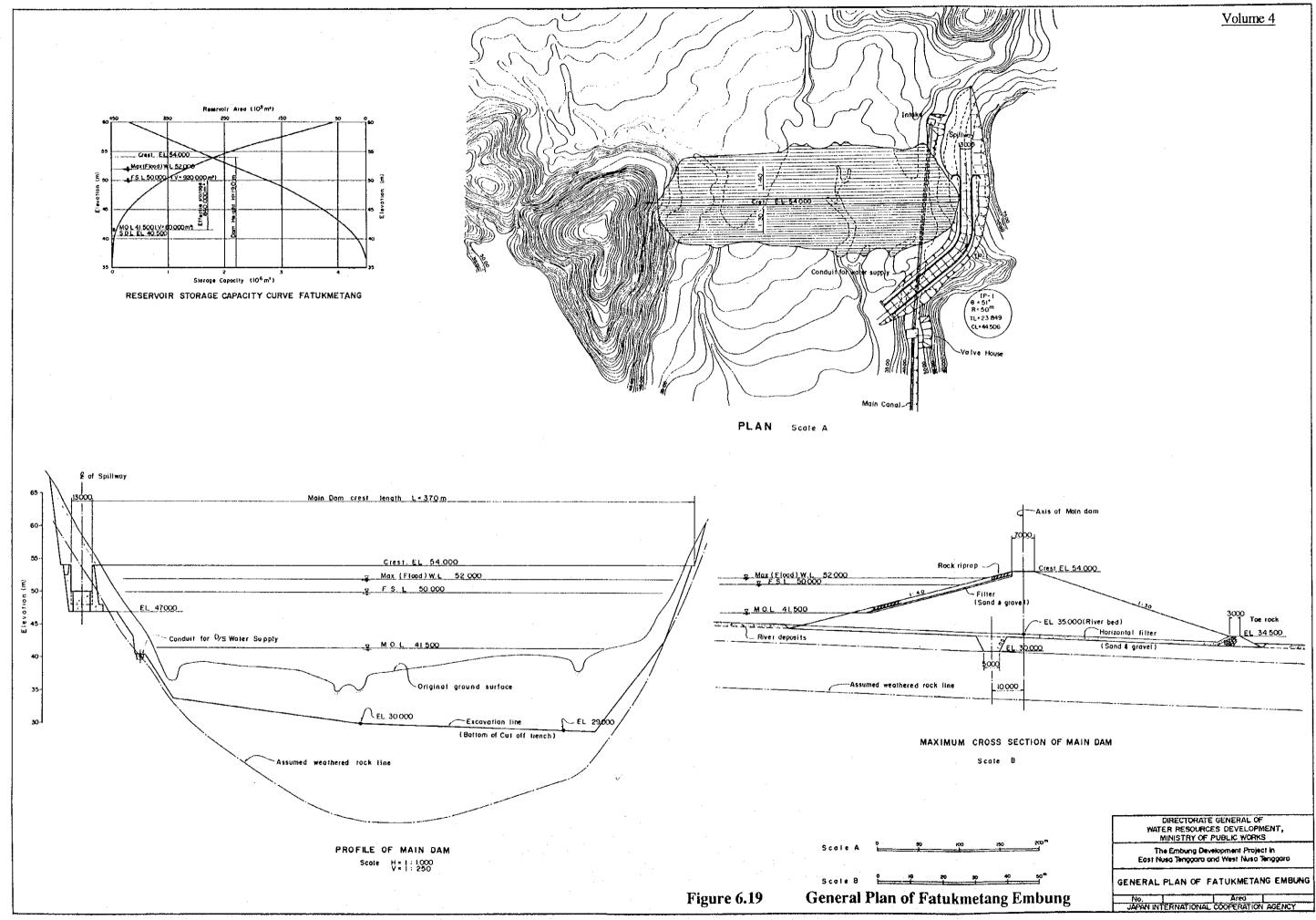
The Emburg Development Project in East Nusa Tenggara and West Nusa Tenggara

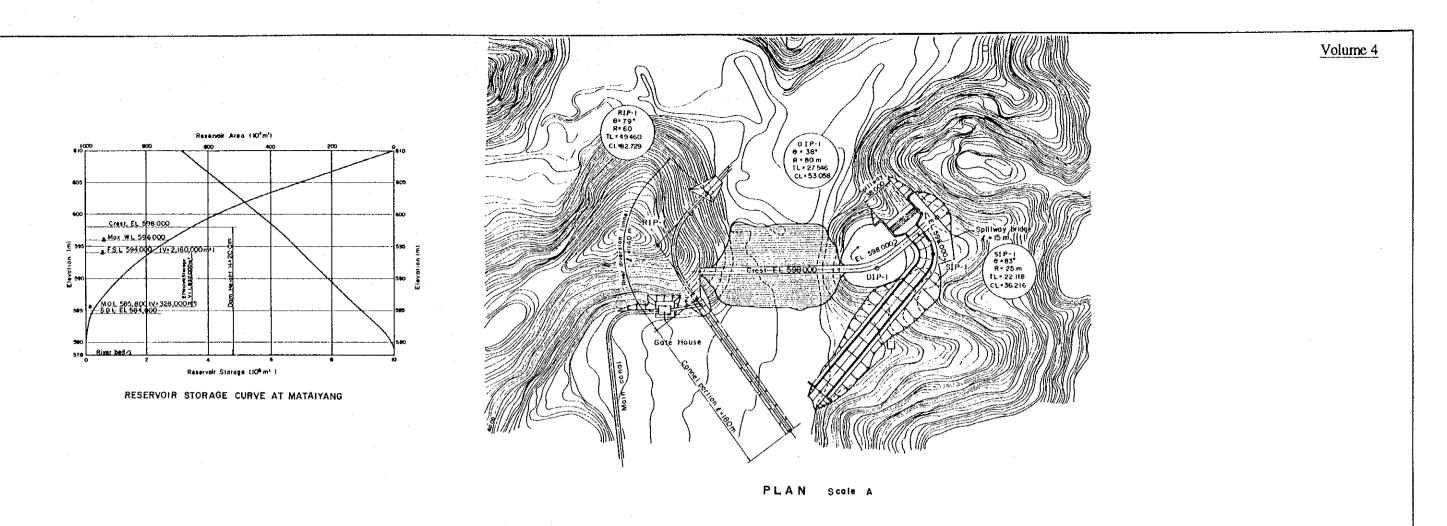
GENERAL PLAN OF TIU TUI EMBUNG (2) No. And JAPAN INTERNATIONAL COOPERATION AGENCY

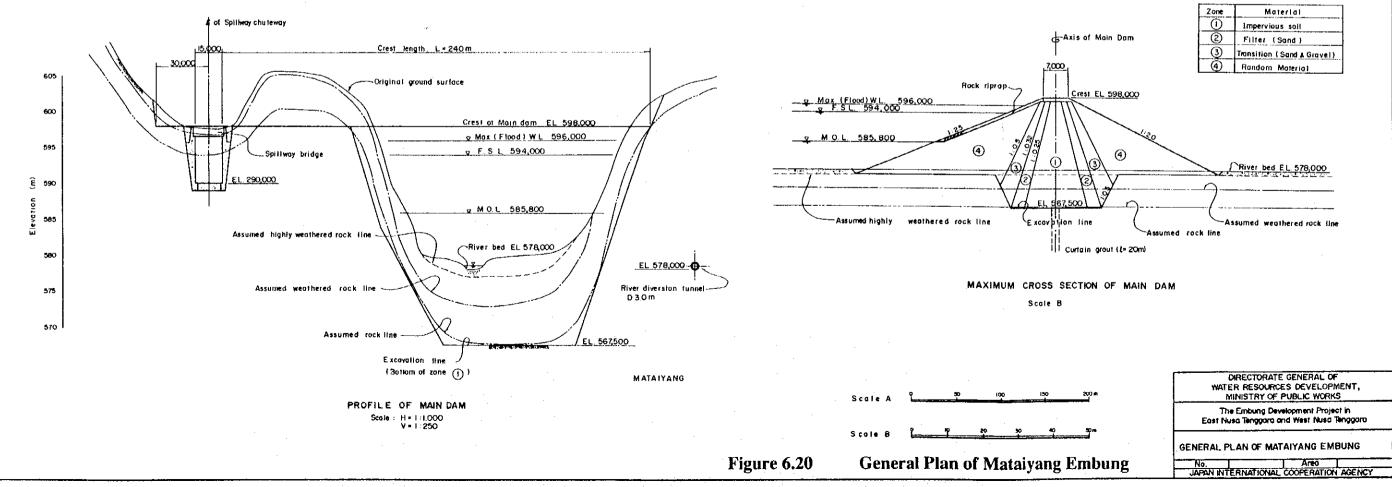












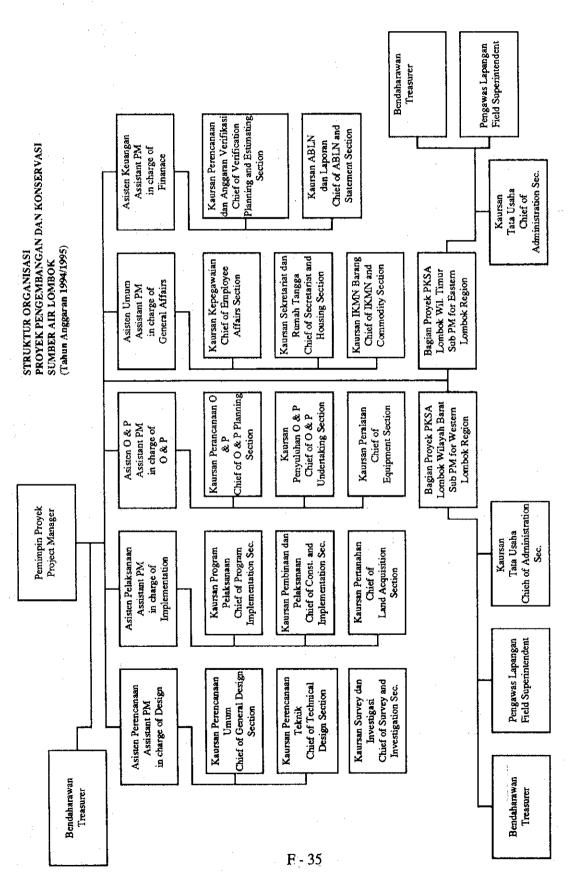


Figure 8.1 Organization Chart of PKSA Lombok, NTB

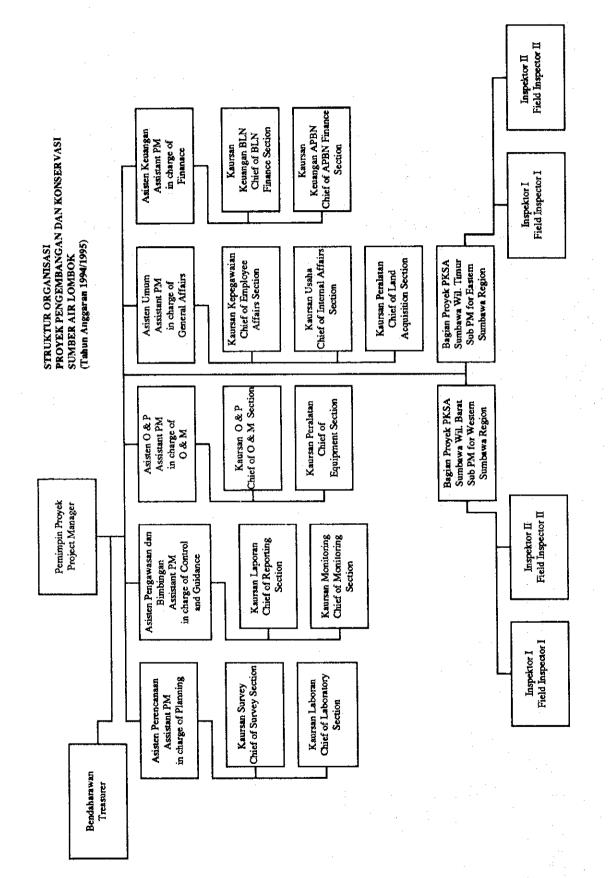


Figure 8.2 Organization Chart of PKSA Sumbawa, NTB

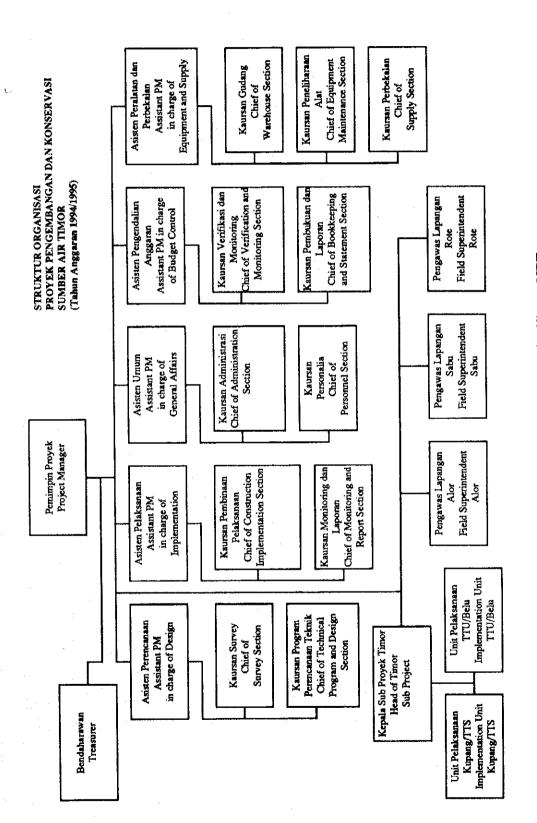


Figure 8.3 Organization Chart of PKSA Timor, NTT

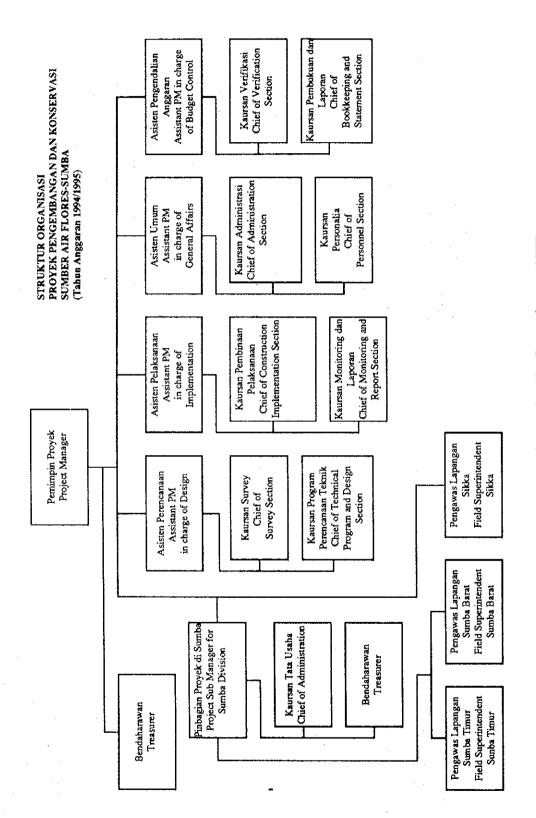
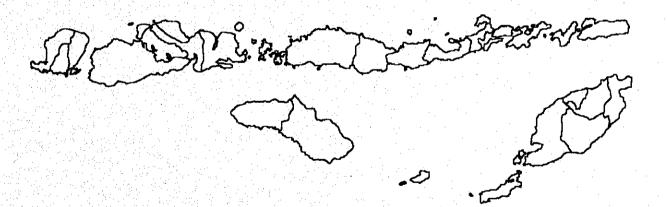


Figure 8.4 Organization Chart of PKSA Flores-Sumba, NTT

The Study on The Embung Development Project in East Nusa Tenggara and West Nusa Tenggara

Feasibility Study on Ten Embung Development Projects

Attachments



1. Physical Environmental Impacts

	Place V	Place IV : Riverside Place V : Beneficial area Place VI : Downstream area other than beneficial area	r than benesiscial area		5: Tiu Tui 6: Penyempeng 7: Nochall) 8: Nonggull) 9: Fatukmetang 10: Mataiyang	Negative Impact with Project	
Environmental Environmental component	Actual or Places E Potential Issu	Actual or Places Environmental Evaluation is Potential Issues Occur available or I II III IV V VI not available	is Actual and Potential Aspect	Actual and Potential Impact of Aspect	Places Environmental Impact Occur	Embung Site 1 4 5 6 7 8 9 10	Mitigatory
LAND Land use	Actual I	nof available					
	Potential I	not available					
Soil erosion Actual	Actual I	not avaitable					
	Potential I	not available					
Soil fertility	Actual I	not available					-
	Potential I	not					
Soil	Actual I	not available	***************************************				
	Potential 1	not available					
WATER River hydrology Actual		III available	Flush flows in short duration are observed during the wet season.	. It frequently causes floods.	ν νι 1ν ν	3 5 8 9 10	
		III available		 It causes frequently floods, scour and erosion of river bed. 	III IV V 1	4 7	
	Actual	III available	River flow discharge rapidly increase during the wet season	 It frequently causes floods. 	IV V 2	۰,	
	Potential	II) available		 There are no changes of actual impacts. 		3 4 5 6 7 8 9 10	·
River morphology	Actual	IV available	-	. There are no impacts.		4 7 8 9	
	Potential	IV available	-	· There are no impacts.	- :	4 789	
	Actual	IV available	Erosion and collapse of river banks e caused by floods and excess grazing are observed.	 Sedimentation in the river reduces flow area of the river. 	111 2	\$	
	Potential	IV available		· There are no changes of actual impacts.	101 2	S	

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		Miligalory					•					***************************************	; ; ;		***************************************						
Protitive Impact with Project Negative Impact with Project		Embung Site			***************************************	-	Of		***************************************		•		01 9	G		. 4		vc			4 5 6 7.8 9 10
Emburg Site: 1: Lokok Meniris 2: Pelangan 3: Montong Krarak 4: Aik Beta 5: Tiu Tui 6: Penyempeng	8: Neonggut II) 9: Fankmerang 10: Mataiyang	Places Environmental Impact Occur			***************************************				******			***************************************		er er		-	-		1		1 2 3
		Actual and Potential Impact of Aspect	There are no impacts.			 There are no impacts. 				There are no impacts.		***************************************	There are no impacts.	 There are no impacts. 		Erosion along the river banks is accelerated	by floods.	There are no impacts.		There are no impacts. There are no changes	of actual impacts.
plannod Pemeficial area		Actual and Potential Aspect	Erosion and collarse of river banks are	not observed owing to vegetation of			not observed owing to vegetation of	bushes around the revirside and	geological condition of limestone.	Erosion and collapse of river banks are . There are no impacts.	not observed owing to rich			Intensive flow induces floods	occurrence during the wet season	Intensive flow induces floods	occurrence during the wet season	Rapidly increasing flow during the wet	season induces flood occurrence.	Flood discharge is not reduced because .	Embungs have no flood control
: Cauchment area : Embung and reservoir area planned : River and riverbed : Riverside : Beneficial area : Bownstream area other than beneficial area		es Environmental Evaluation is Issues Occur available or	TOPOGRAP WHITE	available		•	availaht			•	available	***************************************	available	Alduliumo	available	. 17 1,	avanable	Adeliano	מימומטוג	•	available
Place I : Cark Place II : Emt Place III : Rive Place IV : Rive Place IV : Ben Place VI : Ben		품 -	1 11 11	2			Δ.				≥			VI 111			A	W III			VI III IV
	1	ntal Environmental		Actual			Dodougia	1970			Actual		Potential		Flooding Actual		Actual		ארנחשו		Potential
		Environme component																			

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	with Project	Embung Site Milgatory Measures 3 4 5 6 7 8 9 10				01		4	6	. .		\$	osc
Cincing Suit; 17 Chairt Products 2. Polangan 3. Montong Krarak 4. Aik Beta 5. Tiu Tui	6: Penyempeng 7: Ncoha(1) 8: Ntonggu(1) 9: Fatukmetang 10: Mataiyang	Places Environmental Impact Occur I II III IV V VI I 2	- >	v 2		^	,	^	۸	>	A	^	^
		Actual and Potential Impact of Aspect	To utilized well water as livestock supply in the dry season sometimes causes the shortage of domestic water supply.	Ditto and it affects unstable activities of cultivation.	To utilized well water as livestock supply in the dry season often causes the shortage of domestic water supply.	To utilized well water as livestock supply in the dry season sometimes causes the shortage of domestic water supply.	Supply or stable water supply for irrigation water bring the agricultural and related economic activities to positive. In addition, it mitigates the insufficiency of domestic water.	It affects low level of agricultural productivity.	It affects unstable agricultural productivity in the dry season.	It affects low level of agricultural productivity.	Supply or stable water supply for irrigation bring the agricultural and related economic activities to positive.	To utilized well water as livestock supply in the dry season sometimes causes the shortage of domestic water supply.	Ditto
plannod	: Downstream area other than beneficial area	Actual and Potential Aspect	Surface water is utilized for irrigation and livestock in the wet season. In the some parts, surface water ted from other water resource is utilized for irrigation.	 Surface water is utilized for impation and livestock in the wet season. In the dry season, both supply is insufficient. 	 Surface water is utilized for irrigation and livestock in the wet eason. 	Surface water is utilized for livestock in the wet season.	It is available to utilize surface water for irrigation and domestic.	 As surface water is utilized merely for livestock in the wet season, most of water runs to down. 	Although surface water is utilized for irrigation and livestock, irrigation water is insufficient in the some parts.	 Although being utilized for livestock, surface water runs to down without being utilized as irrigation water doe to unsuitable facilities. 	H is available to utilize surface water for irrigation	 Surface water is utilized for livestock in the wet season. 	Surface water is utilized for
: Calchinedi area : Embung und reservoir area planned : River and riverbed : Riverside : Reverside	m area (wher than	ntal Evaluation is available or VI not available	available	available	available	available	avaitable	available	available	available	avaitable	available	available
: Catchment area : Embung und reserv : River and riverbed : Riverside	: Downstream	es Environmental I Issues Occur		>	>	>	>	: : :	>	>	>	>	>
Mace I Place II Place II Place IV	Place VI	Actual or Places Environmental Evaluation is Potential Issues Occur available vi I II IV V V vi not available	Actual	Actual	Actual	Actual	Potential	Actual	Actual	Actual		Actual	Actival
		Environmental Environmental component Issue	Surface water availability			·							

olume 4	atory ures								· 			can. gh the	appropriate consideration for	the activities such as safety, control and fransportation management by the
	Mitigatory Measures			1								r nese impacts can: eliminate through the	priate con	the activities such a control and transport management by the
Positive Impact with Project Negative Impact with Project	Site 7 8 9 10	100 (180 5 0 100 100 100 100 100 100 100 100 100 1	6	: (A)							ř.	r nesc elimir	oudde	the ac contro manaj
	Embung Site 4 5 6 7	\$												7
Embung Site: 1: Lokok Meniris 2: Pelangan 3: Montong Krarak 4: Aix Beta 5: Tiu Tai 6: Penyempeng 7: Neohad(I) 8: Monggu(I) 9: Fautumetang 10: Mataiyang	Piaces Environmental Impact Occur I II III IV V VI 1 2 3	>	>	>									;	>
	Actual and Potential Impact of Aspect	Supply or stable water supply for irrigation bring the agricultural and related economic activities to positive. In addition, it mitigates the insufficiency of livestock water and reduces shifting the responsibility to domestic water supply.	Well water is always insufficient in dry season. In addition, level of agricultural productivity is very low.	it mitigates the shortage of water supply of all. It also bring the agricultural and related economic activities to slightly positive.								 It influences the inhabitants who lives nearby the construction site and their activities. 		
planned preneficial area	Actual and Potential Aspect	It is available to utilize surface water for irrigation and livestock.	As surface water is utilized merely for livestock in the wet season, almost of it rurs down.	It is available to utilize surface water for irrigation, domestic and livestock.								 During construction stage, some changes of atmosphere aspect are more 	prominent though most of them are	localized and temporary.
Catchment area Embung and reservoir area planned River and riverhed Riverside Beneficial area : Downstream area wher than beneficial area	Actual or Places Environmental Evaluation is Potential Issues Occur available or 1 II III IV V VI ons available	available	available	V available	not available	not available	not available	not available	not	not available	available			available
Catchment area : Embang and reserver : River and riverbed : Riverside : Beneficial area : Downstream area :	es Environmenta Issues Occur II III IV V V		>	>			>	>	· >	>				
Place Ji Place Ji Place Ji Place JV Place V	Paces Env Issues				· =	E			:		=	. *		= .
	Actual or Potential	Potential	Actual	Potential	Actual	Potential	Actual	Potential	Actual	Potential	Actual			Potential
	nal Environmental Issue		·	,	Surface water		Groundwater		Groundwater	<i>.</i>	Odor,	Noise		
	Environmenta component			4							ATMOSPHER			

Impacts
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		Environmental Environmental Actual or component Issue Potential	Fiuna FAUNA community/ Actual habitats	Potential	FLORA Forests/frees Actual	Potential	Actual	Actual	Potential	Actual	Potential
	Place V : Beneficial area Place VI : Downstream area	Actual or Places Environmental Evaluation is Potential Issues Occur available or It II IV V VI not evailable	II avai	П	11	Н		=	H		н
P	: Beneficial area : Downstream area other than beneficial area	ution is Actual and Potential Ne or Aspect alable	There are not notable habitats and communities. available	There are no changes of aspect. available	Any notable vegetation are not available recognized.	There are no changes of aspect. available	Vegetation of scattered open forests available and bushes are recognized.	. Vegeration of natural and open forests and bushes are recognized.	Logging induced by Embungs available construction is required in the reservoir area.		Logging caused by Embungs construction is required in the available reservoir area.
		Actual and Potential Impact of Aspect	There are no impacts.	. There are no impacts.	There are no impacts.	There are no impacts.	There are no impacts.	There are no impacts.	. There are no impacts.	It causes soil erosion.	Limitation of logging area by Embung construction accelerates logging activities in the catchment area of the reservoir.
3: Montong Krarak with Preject 4: Aik Beta 5: Tin Tui	peng 1) ctang ang	Places Environmental Embung Sire Impact Occur I II III IV V VI 1 2 3 4 5 6 7 8 9	123456756	1.23456789	0 8 7	1 8 9	2. 4. E.	•	3456		= -
with Project Negative Impact	· inject	Mitigatory Measures 10	10	10				01	10		Vegetations in the catchment area should be protected and managed by means of artificial remedy.

3. Human Environmental Impacts

	, sie De	Place III	: Catenment area : Embung and reservoir area planned : River and riverbed	voir area planned j	Entroung State		Positive Impact with Project	
	<u> </u>	Place (V Place VI	: Riverside : Beneficial area : Diwnstream area	Riverside : Beneficial area : Downstream area other than beneficial area		4: Afk Beta 5: Tiu Tui 6: Penyempeng 7: Neoha(I) 8: Nionggw(I) 9: Faukmetang 10: Mataiyang	Negative Impact with Project	
Environmental Environmental component Issue	Actual or P Potential	Actual or Places Environmental Evaluation is Potential Issues Occur available or 1 11 11 V V VI not excellable or	es Environmental Evaluation is Issues Occur available or 11 11 1V V VI not overlibite	Actual and Potential Aspect	Actual and Potential Impact of Aspect	Places Environmental Impact Occur	Embung Site 2 3 4 5 6 7 8 9 10	Mitigatory Measures
ij.	Human carying capacity		available	The capacity can be adapted to constant population growth due to agricultural activities in the whole	There are no impacts.	-	9	
	Potential		V available	Further expansion of the capacity is expected by means of the provision of sufficient trigation water supply all the waar round.	As it enables to employ a seasonal labour who will contribute to the division of agricultural work in this area.	#####################################		
-	Actual	>	available	in year roano. The capacity, which is attributed to low farm productivity due to imgalion during only wet season, can not afford.	Low employment opportunity in the dry season induces the outflow of labor force to town area.	>	arthur and a summary and a	
	Potential	>	available	Increase of the capacity is expected by means of the provision of sufficient irrigation water supply all the year round.	It controls the labor force outflow, and contributes to their settling in order to work in this area.	>		
•	Actual	>	available		Low employment opportunity induces the oufflow of much labor force to town area.	^	4 5 7 10	
	Potential	>	available	he capacity is of the pro r supply.	It controls labor force outflow, contributes to their settling in order to work in this area.	^		
-	Actual	>	available	As there are not any notable economic activities, the capacity is too much limited.	Low employment opportunity causes outflow of much labor force to town area.	>	6	
	Potential	>	available	Advance of the capacity is expected by means of the introduction of irrigated cultivation.	It controls the labor force outflow, and contributes to their settling in order to work in this area.	>		
!	Actual		available available	Involuntary resettlement will not	There are no impacts.		2 3 4 5 6 7 8 9 10 3 6 9	
-	Potential	=	available	occur. Although in the proposed reservoir area there are used land, which will be expropriated by means of the provision the recommended land in the	There are no impacts.		4 5 7	: · · · · · · · · · · · · · · · · · · ·
				beneficial area, involuntary resettlement will not occur because of living in the beneficial area.				

		PERCE	Catempon aca		6-14-14-14-14-14-14-14-14-14-14-14-14-14-			
		Place II	: Embung and reservoir area planned	oir area planned		2: Pelangan	Positive Impact	
	4		· River and riverbed			3: Montong Krarak	with Project	-
			District of			A. Aib Bets		
	-		: Navervioe					
	_		: Beneficial area			S: 18 18	Negative impact	
	_	Place VI	: Downstream area other than beneficial	ther than beneficial area		6: Penyempeng	with Project	
						7: Neorgeu(II) 8: Ntonggu(II)	,	
		٠				9: Fatukmetang 10: Mataiyang		
		A COLUMN TO THE	And The Control of th	Averal and December	Action and Potential	Places Environmental	Embung Site	Mirjentory
CREAL ENVIRONMENT		MCCS CHARGONE	ntel cyaldana is	Actual and t weather			0111	
ssnc	Potential	Issues Occur	available or VI not available	Aspect	Impact of Aspect	I II II IV V VI	123456789	01 01
				· The land transfer shall force the land	· It causes resistance or apprehension, and			An equivalent or better social
	Potential	=	available	users/owners to resettle nearby their	discord between resettled inhabitants and	> II		basis should be provided in
,					already fiving people in the beneficial area.			the beneficial area.
				 As the dwellings and lands are 	· Ditto and the changes of economic basis			Ditto and it is necessary to
	Potential	=	available	submerged, involuntary resettlement	result in resistance against shifting from	> =		train settlers in order to
				occurs.	traditional style to new one.			follow the activities.
	1			As the dwellings and lands are	 There are few impacts because resettled family 			
	Potential	=	available	submerged, involuntary resettlement	is only one.			20
				ent is not recommended among	· There are no impacts.		0 8 6 7 8 7 8 0	Q.
Settlement	Actual	>	avallatisc	indigenous social communities.				
	Description	>	aldelieur	 Settlement is not composed of the 	· There are no impacts.		1 1 4 5 6 7 9	
	Contract		i	project components.				
				 Planned settlement is carried out 	 It causes occurrence of discord between 			リズの実施に当たっては
				from proposed reservoir area.	resettled inhabitants and already living people			国内の出作理解を称るた
	Potential	>	available		in the beneficial area due to difference of	>		あの当位制度、成別公司
					own custom and religion.			の医液やこのにむなっか数がある。
	!			· Constant population growth can be	· Increase of water demand due to the			
Copulation	Actual	>	available	recognized.	population growth accelerates the shortage of	>	123 9	01
growth				•	domestic water supply.			
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	· Constant population growth will be	 Sufficient domestic water supply in 			
				further maintained by the medical	proportion to the population growth mitigates			
	Potential	>	available	and sanitary improvement of living	the shortage.	>	123 9	02
				condition due to stable domestic	•			
				water supply.				
		: :		· Constant population growth can be	· There are no impacts.			
	Actual	>	AVAITABLE	recognized.		•	c , o , t	
	Potential	>	avaikable	There are no changes of aspect.	. There are no impacts.	>	4 5 6 7 8	
:				 Although some people including 	 There are no impacts. 			
Demographic	•	:		young generation is likely to outflow			1	S
structure	Actual	>	available	to town area, structure is as same rate			123430189	2
				as nation's average.				
	***************************************			······································	化分配法 医骨骨 化多次原化 化阿特尔斯 中国的 化铁铁 医阿拉伯氏 医多克尔氏 医甲状腺 医多人氏征 医电子性性 医多元 医医疗 医克尔耳氏 计分类 医克耳耳氏 医二甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲甲	**************************************	*************************************	######################################

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		ā	Place IV	: Riverside : Beneficial area	•		4: Aix Beta 5: Tiu Tui	Negative Impact	
		Σ.		. Вомпянсов агел	Downstream area other than beneficial area		6: Penyempeng 7: Ncoha(II) 8: Niorggu(II) 9: Fatukmetang 10: Mataiyang	with Project	
Environmental component	Environmental Environmental component Issue	Actual or P! Potential	Actual or Places Environmental Evaluation is Potential Issues Occur available or 1 11 11 1V V Instructionals	es Environmental Evaluation is Issues Occur available or 11 11 1V V VI not available	Actual and Potential Aspect	Actual and Potential Impact of Aspect	Places Environmental Impact Occur	Embung Sile 2 3 4 5 6 7 8 9	Mitigatory Measures 10
	Livestock	Actual	>	available	As for water supply, Surface water is used during the wet season, ground water is used in the dry	Shortage of domestic water occurs in the dry season and women are compelled to heavy duties, such as water conveyance.	>	65 66 10	
		Potential	>	available	It is possible to supply stable water for investock and effective water distribution system is planned.	Water supply quantity for ilvestock is ensured and heavy duties of women, e.g. water conveyance, is miligated.	۸		
	Fisheries	Actual	=	available	 Fisheries activities are not conducted at downstream of reservoir and at estuary. 	There are no impacts.		6 7 8 9	01
	Afforestation	Potential Actual	= =	available available	There are no changes of aspect. Reforestation or regreening campaign is not implemented. Logging is conducted to maintain inhabitants. Aut I fife and economic activities.	There are no impacts. Deterioration of recharge of ground water is observed in the reservoir and catchment area, and logging accelerate soil erosion.	п	2 3 4 5 6 7 8 9	0
		Potential	=	available	Limitation of logging area contributes to excess logging in the reservoir catchment area.	Excess logging accelerate soil erosion and results in deterioration of ground water recharge capacity and increase of inflow of sediment into the reservoir.	1 11 111 17		Increase of recharge capacity of ground water and effect of erosion confror expected by effective watershed management in the catchingent area.
	Domestic water supply	Actual	>	available	Ground water is utilized for the domestic water supply. It is shortage because well water are not useful during the dry season because of the decline of water level.	en are compelled to hortage causes dete ny situation.	۸	1 2 3 9	
		Actual	>	available	Ground and spring water is utilized for the domestic water supply. It is shortage because well water are not useful during the dry season because of the decline of water level.	. Dirto	>		01
		Potential	^	available	Stable and sufficient domestic water supply shall be attained.	 Heavy duties of women are mitigated and health situation is improved due to increasing of preventive measures with using water. 	>	1, 2, 3, 9, 10	- : 2]. •

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	Mitigatory									
Positive Impact with Project Negative Impact with Project	Embung Site 4 5 6 7 8 9 10	oc.		œ	9				5 7 10	5 7 10
en Le	En En 2 3 4			_	7	8	e.	: 224 : 143	4	4
ic: 1: Lokok Menins 2: Pelangan 3: Montong Krarak 4: Ait Beta 5: Tin Tui 6: Penyempeng 7: Neoha(1) 7: Nooha(1) 9: Patakmetang 10: Mataiyang	Places Environmental Impact Occur I II III IV V VI	>	>	>	>	>	>	'>	>	>
Embung Site:	Actual and Potential Impact of Aspect	Women are compelled to water conveyance. The shortage causes deterioration of health and sanitary situation.	Heavy duries of women are mitigated and health and sanitary situation is improved due to increasing of preventive measures with using water.	· There are no impacts.	 Increase of farm productivity is not expected owing to the deficiency of investment (farm inputs) 	 Increase of investment incentive and improvement of living standard are expected with increase of farm income. 	Increase of farm productivity is not expected owing to the deficiency of investment (farm inputs).		 Increase of farm productivity is not expected owing to the deficiency of investment (farm inputs) at all. 	Increase of investment incentive and improvement of living standard are expected with increase of furn income.
Cauckment area Enhang and reservoir area planned Riverand riverhed Riverside Beneficial area Downstream area other than beneficial area	Actual and Potential Aspect	Ground water is utilized for the domestic water of which quantity is sometimes influenced livestock water demand in the dry season.	As stable and sufficient livestock water supply shall be attained, influence to domestic water use is mitigated.	The farmers get income by means of irrigated cultivation throughout the year.	Although the farmers get income by means of irrigated cultivation throughout the year, some parts are unstable income due to rainfed irrigation.	increase of farm income with improvement of farm productivity is expected by improvement of cropping intensity due to stable supply of irrigation water.	Although getting income by means of irrigated cuitivation in the only wet season, the farmers are compelled to get unstable income due to rainfed irrigation in the dry season.	Increase of farm income with improvement of farm productivity is expected by improvement of cropping intensity and expansion of cultivable land due to stable supply of irrigation water.	The farmers are compelled to get unstable income due to rainfed irrigation only.	Increase of farm income with improvement of farm productivity is
: Cauchment area : Enhang and reservoir area planned : River and riverhed : Beneficial area : Downstream area wher than benefic	ntal Evaluation is available or VI not available	available	avaílabic	available	available	available	available	available	available	available
	Actual or Places Environmental Evaluation is Potential Issues Occur available or 1 11 11 1V V 1 no available		Α	>	>	>	>	- >	>	, >
Place I Place II Place II Place V	Actual or Place Potential	Actual	Potential	Actual	Actual	Potential	Actual	Potential	Actual	Potential
	Environmental Environmental component Issue			Income			1 1			
	Environmenta component			ECONOMIC Income						
				•	AT - 10		•	•		

	ā, ā	Place 1	: Cutchment area - Embour and recommit area planned	banda mana ili	Emburg Sic:	Site: 1: Lokok Meniris 2: Pelangan	Positive Impact		
	<u>. 5.</u>		: River and riverhed	Total area produced		3: Montong Krarak			
	2 2 2	Place IV Place V	: Riverside : Beneficial area : Downstream area o	Riverside Beneficial area Downstream area other than heneficial area		4: Alk Deta 5: Tip Tui 6: Penyempeng 7: Neohatil)	Negative Impact with Project		
						8: Ntonggw(II) 9: Fatukmetang 10: Mataiyang			
sectol Federal	Actual or P	Actual or Places Environmental Evaluation is	ntal Evaluation is	Actual and Potential	Actual and Potential	Places Environmental	Embung Sile	Mitigatory	ı
lssie	Potential	Issues Occur	available or VI not available	Aspeut	Impact of Aspect	Impact Occur	2345678910	Меазитея	ı
	Actual	>	available	The farmers are compelled to get very low income due to limited shift cultivation and simple fishery.	It causes outflow to the town, and affects living standard of very low level.	>	Ġ.		
	Potential	>	available	Slight farm income with improvement of farm productivity is expected by irrigated cultivation due to	 It enable farmers to settle in this area, slight improvement of living standard are expected with farm income. 	^	* . 		
				stable supply of irrigation water.		444	F-127		i
Employment Actual	Actual	. >	available	Although employment opportunity is given by irrigated cultivation, positive employment can not be reconsized.	 It affects stagnation of farm income. 	^	2368		
	Potential	>	available	Stable employment opportunity is created by activation of farming practice on the strength of improvement of cropping intensity.	 Stability of farm income is expected. 	>	•• •• ••		ì
	Actual	>	avzilable	As employment opportunity is limited by unstable rainfed cultivation, positive employment can not be recognized and unemployment occurs in the dry season.	I affects instability of farm income, and outflow to work as casual labour to the town area is recognized.	· >	4 5 7 10		
	Potential	>	available	Stable employment opportunity is created by activation of farming practice on the strength of irrigated cultivation.	Stability of farm income is expected, and employment opportunity enables farmers to settle in this area.	>	*** = {***		
	Actual	>	available	 Employment opportunity is extremely limited by the bare shifting cultivation. 	It affects limited farm income, and outflow to work as casual labour to the town area is recognized too much.	>	6		į
	Potential	Potential	available	 Employment opportunity is created by activation of farming practice on the strength of irrigated cultivation. 	 Slight farm income is expected, and employment opportunity enables farmers to settle in this area. 	۸	•		ļ

<u>lume 4</u>	Mitigatory Mensures			It is necessary to shift to an appropriate place which is decided by Hindu believers in consideration of historical background of				
Positive Impact with Project With Project	Embung Site 2 3 4 5 6 7 8 9 10	٥	3 4 5 6 7 8 9 10.	-	2 6 8		e-	ing to ₹ the second
Embung Site: 1: Lokok Menitis 2: Pelangan 3: Montong Krarak 4: Aik Beta 5: Tru Tui 6: Penyempong 7: Neohell!) 8: Nonggu(II) 9: Fatukmetang 10: Mataiyang	Places Environmental Impact Occur I II III IV V VI I	-	-: >	>	-	\$. *- }}} ▶	>	* * * * * * * * * * * * * * * * * * *
Emburg	Actual and Potential Impact of Aspect	. There are no impacts.	There are no impacts. This attar has been revered by I findubelievers living in the beneficial area of head work as a protection of water and human.	 Hindu believer must have a fear against occurence of calamities. 	. Тhere аге по impacts.	Improvement of health situation is expected by repletion of food, clothing and dwelling environment, and inhabitants have an interest and positive view in education	Humble dwelling environment influences deterioration of health and sanitary situation. Inhabitants are not interested in education for family.	Improvement of health situation is expected by repletion of expecially dwelling environment, and inhabitants have an interest and positive view in education
Catchment area Embung and reservoir area planned Riverside Rownstream area Downstream area other than beneficial area	Actual and Potential Aspect	 Historic/archaeological sites, renains and cultural assets do not exist. 	There exists the Hindu attar, which is erected due to praying safety and success of head work located at the proposed Embung, at the right bank of just upstream from the proposed Embung.	This alter is submerged by the construction Embung.	-	 Improvement and stability of life is ensured by further increasing of farm income. 	 Although lower quality of life is maintained by farm income by means of irrigated cultivation in the wet season, improvement of quality is not recognized. 	Improvement and stability of life is expected by increasing of farm incomedue to improvement of cropping intensity and expansion of irrigated
Catchment area Embang and reservoir area planned River and riverbed Riverside Reneficial area Downstream area other than benefic	tal Evaluation is available or VI not available	available	available available	available	available	available	available	available
Place I Place II Place II Place II Place VI Place VI	Actual or Places Environmental Evaluation is Potential Issues Occur available or I II IV V VI net available	_	Potential II Actual II	12	>	>	>	>
sa, 6a, 6a, 6a, 6a,	Actual or P Potential	Actual	Potential Actual	Potential	Actual	Potential	Actual	Potential
	Environmental Environmental component Issue	Historic/ archaeological sites	Ades		Lifestyle (quality of life)			
	Environmental	CULTURAL			·	. *		

Embung Site: 1: Lokok Menits 2: Pelangan 3: Monong Krarak with Pruject 4: Aik Beta 5: This Beta 6: Peryempeng 7: Nechalili) 8: Niongpulli) 9: Fankmetang 10: Mataiyang	Actual and Potential Places Environmental Embung Site Mingatory Impact of Aspect Interest Occur Interest of Aspect Interest Inter	11umble dwelling and unclean clothing environment influences deterioration of health v A 5 7 10 and sunitary situation. Inhabitants are not interested in education for family.	Improvement of health situation is expected by me repletion of expecially dwelling and clothing V environment, and inhibitants have an interest and positive view in education.	•	Improvement of health situation is expected by repletion of living environment and inhabitants
Catchment area Embung and reservoir area planned River and riverhed Riverside Beneficial area Chywnstream area other than beneficial area	Actual and Potential Aspect	Rainfed irrigation compels inhabitants to be limited tower quality of life.		Bare shifting cultivation compels inhabitants to be limited the lowest quality of life.	Potential V available slight increasing of farm income due
Catchment area Einhung and reservoir area planned River and riverhed Riverside Beneficial area Chownstream area wher than benefic	il Evaluation is available or I not available	i	available	available	available
Place II : 6 Place III : 8 Place III : 8 Place IV : 8 Place V : 8 Place V : 10	laces Environmental Evaluation is Issues Occur available or It III IV V VI available	>	Potential V available	>	^
EEEEE	Actual or Pl Potential	Actual	Potential	Actual	Potential
	Environmental Environmental Actual or Places Environmental Evuluation is component Issue Potential Issues Occur available of 111 111 V V V na avadisho o		·		

