JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF INDUSTRY AND HANDICRAFTS OF THE GOVERNMENT OF LAO P.D.R.

FEASIBILITY STUDY ON THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II) IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

FINAL REPORT : VOLUME 3 SUPPORTING REPORT

Hydro Saves Lao Reduces Poverty



NOVEMBER 2002



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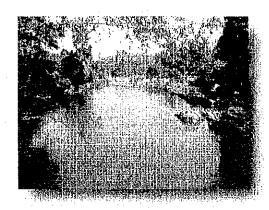
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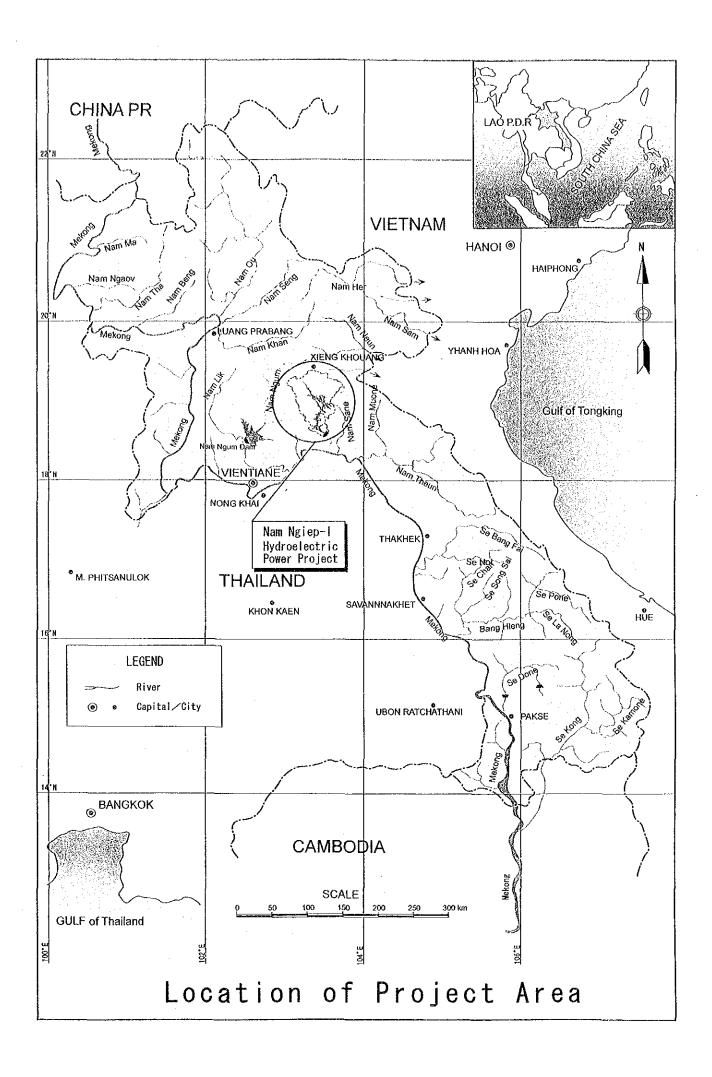
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FEASIBILITY STUDY.

ON

THE NAM NGIEP-I HYDROELECTRIC POWER PROJECT (Phase II) IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

FINAL REPORT

COMPOSITION OF REPORTS

Volume 1 Main Report
Volume 2 Executive Summary
Volume 3 Supporting Report

Front Cover Photos

Lovely Children River Stream View at Tahua Village at Sop youk Village

Promotion Slogan for Nam Ngiep-I Project

VOLUME 3: SUPPORTING REPORT

TABLE OF CONTENTS

Location of Project Area Main Abbreviation

1.	R	RESETTLEMENT AREA POTENTIAL SURVEY		
	1.1	General	1 - 1	
	1.2	Results of Field Survey	1 - 3	
	1.3	Information on Development Plan in Bolikhamsay Province	1 - 10	
	1.4	Comparison and Conclusion	1 - 14	
2.	G	EOLOGICAL INVESTIGATION		
	2.1	Summary of Investigation	1 - 1	
	2.2	Scope of Work	1 - 4	
	2.3	Method of Investigation	1 - 4	
	2.4	Schedule/Progress of Investigation	1 - 6	
	2.5	Implementation of Investigation	1 - 8	
	2.6	Conclusion	1 - 12	
	2.7	Annex (Factual Report on Seismic Refraction Prospecting)	1 - 14	
3.	SI	TUDY ON THAILAND POWER SECTOR MARKET OUTLOOK (1997-2016)		
•	3.1	Introduction	2 - 1/	
	3.2	Overall Energy Situation	2 - 2/	
	3.3	Electricity Supply and Demand	2 - 3/	
	3.4	Structure and Regulation of the Power Sector	2 - 4/	
	3.5	EGAT Power Development Plan	2 - 5/	

FRAME KELOK I (Supporting Report)		Contents	
	3.6	Private Power Generation and International Power Purchase	2 - 6/1
	3.7	Privatization and Restructuring of Power Sector	2 - 7/1
	3.8	Suggestion for Promotion of the Nam Ngiep-I HEPP	2 - 8/1

ABBREVIATIONS

	ABBREVIATIONS		ABBREVIATIONS		
Lao PDR agencies		Others	The state of the s		
DMH	Department of Meteorology and Hydrology	GMS	Greater Mekong Sub-region		
CDEP	Committee for Development of Electric Power	GPS	Global Positioning System		
CPC	Committee for Planning and Cooperation	HEPP	Hydroelectric Power Project		
DOE	Department of Electricity, MIH	ICB	International Competitive Bidding		
EDL	Electricite du Laos	IEE	Initial Environmental Examination		
FIMC	Foreign Investment Management Committee	IPDP	Indigenous Peoples Development Plan		
GOL	Government of Lao PDR	IPP	Independent Power Producer		
LNCE	Lao National Committee for Energy	Jĭ	Joint Implementation		
LWU	Lao Women's Union	LA	Loan Agreement		
MIH	Ministry of Industry and Handicrafts	LLDC	Least Less-Developed Countries		
STEA	Science, Technology & Environment Agency	MOU	Memorandum of Understanding		
Foreign org		NBCA	National Biodiversity Conservation Area		
ADB	Asian Development Bank	NEM	New Economic Mechanism		
ANCOLD	Australian National Committee on Large Dams	NGOs	Non Governmental Organizations		
EDF	Electricite du France	O&M	Operation and Maintenance		
EGAT	Electricity Generation Authority of Thailand	ODA	Official Development Assistance		
EVN	Electricity of Vietnam	PDA	Project Development Agreement		
IMF	International Monetary Fund	PDP	Power Development Plan		
IUCN	World Conservation Union (Switzerland)	PPA	Power Purchase Agreement		
JBIC ·	Japan Bank for International Cooperation	PRP	Preliminary Resettlement Plan		
JICA	Japan International Cooperation Agency (Japan)	RAP	Resettlement Action Plan		
MOI	Ministry of Industry	RC	Resettlement Committee		
MPI	Ministry of Medistry Ministry of Planning and Investment	RMU	Resettlement Management Unit		
NEPO	National Energy Policy Office	S/W	Scope of Works		
NTEC	Nam Theun 2(NT2) Electricity Company	SEP	Singapore Electricity Pool		
NTPC	Nam Theun 2(NT2) Power Company	SIA	Social Impact Assessment		
PEA	Provincial Electricity Authority in Thailand	SPC	Special Purpose Company		
PRGF	Poverty Reduction and Growth Fund	SPP	Small Power Producer		
SCS	Soil Conservation Service	TOR	Terms of Reference		
UNDP	United Nations Development Program	TPA	Third Party Access		
WCD	World Commission on Dams	VRC	Village Resettlement Committees		
Others	1 World Collingsion on Dates	<u> </u>			
		Unit/Technic			
AAU	Assigned Amount Unit	B-C, B/C	B: Benefit and C: Cost		
AGAC	Airborne GPS Aero Control System	CC	Combined Cycle Power Plant		
B.	"Ban" Village in Laotian language	CFRD	Concrete Faced Rockfill Dam		
BOT	Built-Operate-Transfer	DSCR	Debt Service Cover Ratio		
CA	Concession Agreement	ECRD	Earth Core Rockfill Dam		
CDM	Clean Development Mecah	EIRR, FIRR	Economic/Financial Internal Rate of Return		
CER	Certified Emission reduction	EL.() m	Meters above Sea level		
COD	Commercial Operation Date	FSL.	Full Supply Level of Reservoir		
DRWG	District Resettlement Working Groups	GDP	Gross Domestic Product		
EAC	Environmental Assessment Committee	GWh	Giga Watt Hour (one billion watt hour)		
ECA	Export Credit Agencies	IRR	Internal Rates of Return		
EIA	Environmental Impact Assessment	MAP	Mean Annual Precipitation		
EMMP	Environmental Management & Monitoring Plan	MAR	Mean Annual Runoff		
EPC	Engineering, Procurement and Construction	MOL.	Minimum Operation Level of Reservoir		
EPMs	Environmental Protection Measures	MW	Mega Watt (one million watt)		
ERU	Emission Reduction Unit	PMF	Probable Maximum Flood		
ET	Emission Trading	PMP	Probable Maximum Precipitation		
F/S	Feasibility Study	RCC	Roller-Compacted Concrete Dam		
FARD	Focal Area for Rural Development	ROE	Return on Equity		
GHG	Green House Gas	J US\$	US Dollar		

CHAPTER - 1

Resettlement Area Potential Survey

LAO PEOPLE'S DEMOCRATIC REPUBLIC

DETAIL REPORT ON RESETTLEMENT SURVEY



NAM NGIEP-1 HYDROELECTRIC POWER **PROJECT**



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Table of content

	ng tipong ang managang panggang ang managang panggang panggang panggang panggang panggang panggang panggang pa	age
- 3- 1		
Intr	oduction	
١.	General	1
	1. Objective of the Study	1
	2. Study areas	1
	3. The following main feature of Potential resettlement areas	2
	4. The Study Schedule	2
	5. The field survey were conducted with the following schedule	2 2
	Descrit of State annual	2
II.	Result of field survey	3
-	1. Xiengxlang-XiengLeu area	3
•	a VI and the found acres	2
	a.) Land use forest cover	3
٠	a.1) Rained Paddy Rice(RP)	3
	a.2) Agriculture Plantation(AP)	3
	a.3) Temporarily Unstocked Forest(T)	3 3
	a.4) Scrub forest (Sh) a.5) Mixed Deciduous Forest (MD)	3 4
	a.5) Mixed Deciduous Forest (MD) a.6) Ray / Shifting cultivation (Ra)	
		4
	b.) Land suitability for rice cultivation and other crops	4
:	c.) Soil type	.4 6
	d.) Irrigation possibility	Ð
	e.) Water source availability for domestic for domestic	e e
	consumption f.) Accessibility	6
		6 7
	g.) Electrification possibility	,
	2. Hatkham area	7
	2. Huttimin aroa	•
-	a.) Land use forest cover	7
	a.1) Rained Paddy Rice(RP)	7
	a.2) Agriculture Plantation(AP)	7
	a.3) Temporarily Unstocked Forest(T)	. 7
	a.4) Scrub forest (Sh)	7
	a.5) Ray / Shifting cultivation (Ra	7
		•
	b.) Land suitability for rice cultivation and other crops	8
	c.) Soil type	8
	d.) Irrigation possibility	9
	e.) Water source availability for domestic for domestic	9
	f.) Accessibility	9
	a \ Electrification possibility	g

				•
	1. Pakbuak area		9	
	a.) Land use forest cover		10	
	a.1) Rained Paddy Rice(RP)		10	
•	a.2) Agriculture Plantation(AP)	•	10	
	a.3) Temporarily Unstocked Forest(T)		10	. : 1
	a.4) Scrub forest (Sh) a.5) Mixed Deciduous Forest (MD)		10 10	
	a.6) Ray / Shifting cultivation (Ra)	Fig. 4.	10	
	b.) Land suitability for rice cultivation and other c	rops	11	
	c.) Soil type		11	
	d.) Irrigation possibility		13	
	e.) Water source availability for domestic for dom	estic	13	
	f.) Accessibility		13	
111.	Information on going and Planned development in			121
	Bolikhamsay province		13	
	a.) Lao-Luxembourg, Lao/006 -Support to Bolikham	kay Pro	vince	
	(Phase II) Project Description Summary		13	
	b.) Focal sites in the bolikhamxay province		13	
iV.	Comparison and conclusion		15	
	 a.) Comparison land is available for agriculture b.) Irrigation possibility c.) Land suitability for rice cultivation and other crod.) Soil type e.) Accessibility f.) Electrification possibility 	. (a	15 15 15 16 17 18	
				-
			14 14	
*			1	
•				
		garani.	Value of the second	
		Colonial Control		

List of Tables

table VI,	areas
Table 02 ;	Population in the potential resettlement areas
Table 03:	Infrastructure in the potential resettlement areas
Table 04;	Agriculture area in the potential resettlement areas
Table 05:	Bolikhamxay provincial roads database
Table P1:	Development plan for irrigation in the potential resettlement areas
Table P1:	Development plan for irrigation in the potential resettlement areas
Table P2:	Development plan for education in the potential resettlement areas
Table P3:	Development plan for Public health in the potential resettlement areas
Table P4:	Progress of the work end March 2002 of Lao- Luxembourg integrated Rural Development Project

List of Figures

Figure 01:

Location Map of Resettlement Potential areas

Figure 02:

Road Map of Bolikhamsay Province

Figure 03:

Location Map Water Source in the

Resettlement Areas.

Figure 04:

Population by Ethnic groups in Hat Kham

Village

Figure 04/01-02:

Population by Ethnic groups in Xiengxiane-

XiengLeu area

Figure 04/03-04:

Population by Ethnic groups in Pakbuak area

Figure L01:

Land use in the Xiengxiane-XiengLeu area

Figure L02:

Soil type in the Xiengxiane-XiengLeu area

Figure L03:

Land suitability in the Xiengxiane-XiengLeu

area

Figure L04:

Land use in the Hatkham area

Figure L05:

Soil type in the Hatkham area

Figure L06:

Land suitability in the Hatkham area

Figure L07:

Land use in the Pakbuak area

Figure L08:

Soil type in the Pakbuak area

Figure L09:

Land suitability in the Pakbuak area

List of Photo

XiengXiane-XiengLeu and Hatkham areas

Photo 01: Nam Mang Project in the Xiengxiane-XiengLeu area

Photo 02: Houay Mo irrigation Project

Photo 03: Houay Mouang Irrigation Project

Photo 04: Existing Houay Keun irrigation Project

Photo 05: Access road from B.Thasi to Xiengxiane-XiengLeu

area

Photo 06: Proposed potential resettlement area in Xiengxiane-

XiengLeu

Photo 07: Flat area in the resettlement sites along Nam Lat

vailey

Photo 08: Soil survey in the resettlement site

Photo 09: Xiengxiane village

Photo 10: Houay Soup Valley in the Hatkham area

Photo 11: Upland rice field in the Houay soup valley

Photo 12: Small river and spring

Pakbuak area

Photo 01: Upland rice field at B. Pakbuak

Photo 02: Forest status

Photo 03: Access road from pakbuak to Viengthong district

Photo 04: New construction dispensary

Photo 05: Secondary School at B. Pakbuak

Photo 06: Dam site for irrigation project

Photo 07: Upland rice field and forest status on the right of

Nam Poy

Photo 08: Upland rice field and forest status on the left of Nam

Poy

Photo 09: Unstock forest at B. PakPoy

Photoes of soil classification in the during field survey

XiengXiane-XiengLeu area:

Profile No. NK.P 01Location B. Vha XiengXiane-XiengLeu area

Profile No. NK.P 02 Location B. XiengXiane

Hatkham area:

Profile No. HK.P 01 Location near B. Hatkham

Pakbuak area:

Profile No. PB.P 01

Profile No. NK.P 02

Profile No. NK.P 03

Profile No. NK.P 04

Profile No. NK.P 05

Profile No. NK.P 06