

QUESTIONNAIRE

JAPANESE PREPARATORY STUDY TEAM

FOR

THE STUDY

ON

IMPROVEMENT OF ROADS

IN

THE SOUTHERN REGION

IN

LAO PEOPLE'S DEMOCRATIC REPUBLIC

AUGUST, 2 0 0 1

JAPAN INTERNATIONAL COOPERATION AGENCY  
(JICA)

Notes;

- Please mark ○ for the Data/Item in the "Availability" which is available
- Please mark × for the Data/Item in the "Availability" which is not available

I. ORGANIZATIONS CONCERNING THE IMPLEMENTATION OF THE STUDY

ITEM	DESCRIPTIONS	AVAILABILITY		NAME OF MATERIALS
		AVAIL- ABILITY	PLACE OF DATA AVAILABLE	
1. The Latest Government Organization Charts.		O	PTD	Note
2. Agencies which are responsible for the followings:	(1) For the National roads	O	PTD, RAD, PMD	PTD: Planning Technical Division. RAD: Road Administration Division. PMD: Project Monitoring Division.
	(2) For the Local roads	O	LRD	LRD: Local Road Division.
	(3) For the Municipality roads	O	DCTPC	MCTPC: Ministry of Communication, Transport, Post and Construction.
(A) Road development planning		O	MCTPC	STEPA: Science, Technology and Environment Agency.
(B) Road construction		O	MCTPC	WCS: Wildlife Conservation Society
(C) Road improvement /betterment		O	MCTPC	MIC: Ministry of Information & Culture.
(D) Road maintenance /management		O	MCTPC	
3. Organization to supervise and steer the management of the Study	(1) Necessity of the Steering Committee and proposed member institutions	O	MCTPC, PTD, STEA and others.	Mr. Soummala, DG of Cabinet, might be chair of this committee.
4. Organizations/Agencies to supervise environmental Issues.	(1) EIA evaluation process and license.	O		
	(2) Environmental management.	O	PTD, STEA Same as above.	

II. TECHNICAL DATA / INFORMATION

ITEM	DESCRIPTIONS	AVAILABILITY		NAME OF MATERIALS
		AVAIL- ABILITY	PLACE OF DATA AVAILABLE	
1. Maps to be used for field investigation	(1) Topographic maps covering the Study area			Note NGC: National Geographic Center MoAF: Ministry of Agriculture and Forestry. DMH: Dept. of Meteorology and Hydrology, MoAF  1/50,000 map might be available from Mekong GIS project funded by JICA.
	1/2,500	X		
	1/5,000	X		
	1/10,000	X		
	1/25,000	X		
	1/50,000	X		
	1/100,000	O	NGC	
Other scales	O	Same as above.		
2. Aerial photos	Aerial photos covering the study area	O	NGC	1:50,000 taken in 60s (by USA). 1:100,000 taken in 80s (by USSR). Better to contact Mekong GIS project funded by JICA (they took several photos in 99).
	Scale, the Year photograph Is taken.			
3. Geological data	(1) Soil maps	O	MoAF	Better to contact MoAF/or MCTPC.  Same as above.
	(2) Geological maps	O	MoAF	
	(3) Boring logs	Unknown		
	(4) Soil test results	Unknown		
4. Geodesic data	National Survey Control Network for Lao P.D.R.	O	NGC	
	(1) Triangulation point network	O	Same as above.	
	(2) Bench-mark network	O	Same as above.	
	(3) Points description (Control points, Bench-mark)	O	Same as above.	
	(4) Triangulation point data lists	O	Same as above.	

5. Meteorological data	(1) Meteorological Station Name, location, measurement period, parameters to be measured (rainfall, temperature, humidity, wind and others).	O	DMH, MoAF	Better to Contact Mr. Nishiyama, JICA Expert.
6. Hydrological data of rivers	(1) Gauging Station Name, location, measurement period, parameters to be measured (flow rate, water level, water quality and others).	O	DMH, MoAF	Same as above.
7. Hazard map and/or Natural Disaster Records.	(1) Record of past disaster (Year, Casualty) Flood, slope failure, landslide, seismological records and others.	X		
8. Data/information on related roads in the study area	(1) Road maps	O	MCTPC, PTD	
	(2) Road inventories (class, length, surface type, etc.)	X	MCTPC, PTD	Only simplified version is available.
	(3) Bridge inventories (location, type, length, width, conditions, etc.)	X	MCTPC, RAD	Same as above.
9. Traffic survey system	(1) Location of periodic traffic count stations in the Study Area	Δ	DoT, MCTPC	No survey done since Year 1990. But Y 2000 results done by JICA Expert (Mr. Tokumaru) might be available. Better to contact Mr. Tokumaru. Same as above.
	(2) Period (e.g., once a year, seasonal, etc.)	Δ		
10. Traffic data on the related roads	(1) Traffic volume by vehicle types	O	DoT, MCTPC	
	(2) Number of registered vehicles by province	O	MCTPC, DCTPC	
	(3) Record of traffic accidents	O	DoT, MCTPC	

	(types, causes, location, etc.)			
	(4) Decree on vehicle restriction (gross weight of the vehicle, width and maximum axle load , etc)	O	DoT, MCTPC PTD, MCTPC	Better to contact MCTPC for more detailed info.
	(5) Checking system of overload and inadequate use	Unknown		Same as above.
	(6) Vehicle registration records.	O	PTD, DCTPC	
	(7) O-D Table	X		
11. Specification and standard	(1) Highway Capacity Standard	O	PTD, MCTPC	
	(2) Geometric Design Standard	O	PTD, MCTPC	
	(3) Bridge Design Standard	O	PTD, MCTPC	
	(4) Pavement Design Standard	O	PTD, MCTPC	
	(5) Maintenance and Rehabilitation Standard	X		
	(6) Road Structure Standard	O	PTD, MCTPC	
	(7) Drainage Standard	O	PTD, MCTPC	
	(8) Others	X		
12. Transportation Network Map	(1) Network maps and capacity of national transport system roads, commercial flights, ship	O	MCTPC	
	(2) Traffic Flow data and forecasts of cargo/ passengers by each mode	Δ	MCTPC	
	(3) Transportation cost of each mode (by vehicle type)	X		
	(4) Development and/or improvement policies	O	MCTPC	
	(5) Related materials, if any (national transportation studies, etc.)	O		
	(6) Origin-Destination survey	Δ	MCTPC	Partially available.
	(7) Travel time of each mode (by vehicle type) between	X		

13. Transport Condition (public, private)	major cities				Cost categorized not by road (or location) but by project is available.
	(1) Parking Spaces (hospital, station, airport, market, factory, etc.)	X			
	(2) Bus (vehicle size, route map, fare, number of passengers)	X			
14. Reports/information of the road development projects closely related to the Study	(1) Improvement Plan for Road Network	O	PTD, MCTPC		
	(2) Widening plan for major road	X			
	(3) Bridge plan	O	PTD, MCTPC		
	-New construction	O	PTD, MCTPC		
	-Reconstruction	O	PTD, MCTPC		
15. Road related budget	(1) Road construction budget	O	DD, MCTPC		
	(2) Road maintenance budget	O	DD, MCTPC		
16. Road related cost	(1) Construction cost by type of road and location	Δ	DD, MCTPC		
	(2) Maintenance cost by type of road and location	Δ	DD, MCTPC		

III. SOCIO-ECONOMIC DATA/INFORMATION

ITEM	DESCRIPTIONS	AVAILABILITY		NAME OF MATERIALS
		AVAIL- ABILITY	PLACE OF DATA AVAILABLE	
1. Latest socio-economic indices of nation-wide/ province	(1) GNP and GDP	O	SPC	See Basic Statistics of the Lao PDR, 2000.
	(2) Population	O	SPC	See Results from the Population Census 1995.
	(3) Past and future population growth rate	O	SPC	Same as above
	(4) Industrial, agricultural and mining products (by main sort)	O	SPC	See Basic Statistics of the Lao PDR, 2000.
	(5) Foreign trade (quantity and value)	O	SPC	See Basic Statistics of the Lao PDR, 2000.
	(6) Tourism development plans	O	SPC	See copy of Socio-Economic Development Strategy (data collection ID#91)
	(7) Social discount rate of similar project	O	SPC	Same as above.
	(8) Average hourly wage	Unknown		Better to contact SPC for more detailed info.
2. Existing and on-going road development plans/projects	(1) Design, implementation schedule and current project status	O	CPC, PMD	
	(2) Coordination with neighbour country's project.	O	CPC, PMD	
3. Other relevant development project.	(1) Design, implementation schedule and current project status	O		See socio-economic development strategy for 2020, 2010 and Five Year Socio - Economic Plan (2001 - 2005) - data collection ID #91.
	1) Economic development plans	O	CPC	Same as above.
	2) Transportation development plans	O	CPC	Same as above.
	3) Industrial development plans	O	CPC	Same as above.
	4) Mining and agricultural development plans	O	CPC	Same as above.
	5) Forecast of socio-economic indicators	O	CPC	Same as above.
	(2) Coordination with neighbour country's project.	Δ	CPC	Better to contact with ADB, WB or other donors.

IV. ENVIRONMENTAL ISSUES

ITEM	DESCRIPTIONS	AVAILABILITY		NAME OF MATERIALS
		AVAIL- ABILITY	PLACE OF DATA AVAILABLE	
1. Environmental management system and policy.	<p>(1) Legislation Copy of following Items:</p> <p>1) The latest law/regulation/guidelines of EIA such as the draft entitled "Regulation on Implementing Environmental Assessment for Road Projects In Lao P.D.R."</p> <p>2) The latest law/regulation/guidelines of public participation programme.</p> <p>3) Land Law, 1995, and/or its latest revised code.</p> <p>4) Environmental Protection Law, 1999 and/or its latest revised code.</p> <p>5) MCTPC Environmental Guideline (April, 1999) and/or its latest version.</p> <p>(2) List of KPI (Key Performance Indicators to be evaluated within EIA evaluation)</p> <p>(3) Historical Background of Environmental Policy Development In Lao P.D.R.</p> <p>1) OSTE (est. 1993) PMD#63</p> <p>2) STEA</p>	<p>O</p> <p>O</p> <p>O</p> <p>O</p> <p>O</p> <p>X</p> <p>O</p>	<p>STEА, PTD</p> <p>PTD, MCTPC</p> <p>Min. of Justice STEА</p> <p>PTD</p> <p>PTD</p>	<p>See ADB TA No. 3133-Lao, Final report, volume 2-1-Annexes, July 2000.</p> <p>Ask for PI Guideline (not found but PTD reported).</p> <p>See Law Book (data collection ID# 95).</p> <p>See Manual of EIA procedures for road projects in Lao PDR, 1999.</p> <p>E.g., see Environmental Guideline, guidelines for reducing the environmental effects of road projects in Lao PDR, 1994.</p>
2. Environmental Monitoring Policy	<p>Environmental monitoring station Name, location, measurement period, parameters</p> <p>1) Water Quality</p> <p>2) Air Quality</p> <p>3) Noise/vibration</p> <p>4) Biodiversity/conservation area</p> <p>5) Effluent discharge</p> <p>6) Others (e.g., deforestation)</p>	<p>Unknown</p> <p>Unknown</p> <p>Unknown</p> <p>O</p> <p>unknown</p> <p>Unknown</p>	<p>MoAF.</p>	<p>Basically, no organized monitoring system is established, yet.</p> <p>Same as above.</p> <p>Same as above.</p> <p>Same as above.</p> <p>Same as above.</p>
3. Other relevant environmental codes/regulations/institutions.	<p>(1) Land-Take policy related with large-scale infrastructure development (code, compensation, resettlement measures, resettlement case In past</p>	<p>O</p>	<p>PTD</p>	<p>Laos Road Maintenance Program: Resettlement and Compensation Guideline (not obtained yet).</p>



	development projects and so on) (2) Environmental Standards Air quality, water quality, noise, vibration, visual resources, biodiversity and so on.	Δ	STEAs, PTD	Lao PDR version is under consideration (D/F finished).
4. Clean Fuel policy	(1) Type of fuel (lead/ed/non-lead/ed) (2) Emission Inventory (fixed/moving)	Unknown Δ	STEAs	Better to contact Min. of Trade & Commerce. STEAs did some studies for climate change.
5. International conventions on environmental conservation	(1) Bilateral convention (2) Multilateral convention UN Conservation on International Trade In Endangered Species of Wild Flora & Fauna (CITES)	Unknown Unknown		Better to contact MoAF or STEAs. Same as above.
6. Flora and Fauna	(1) Information of flora/fauna, rare and/or endangered species records. 1) Mammal 2) Reptile 3) Amphibian 4) Fish 5) Bird 6) Plant/Vegetation 7) Others (2) Information/study reports of following items: 1) NBCAs (National Biodiversity Conservation Areas) 2) PFAs (Protected Forest Areas) 3) National Wet Lands 4) PEPAs (Provincially Defined Areas) (3) Poaching	O O O O O O O O O O O O Unknown	STEAs, MoAF, IUCN, WCS Same as above. Same as above. Same as above. Same as above. Same as above. Same as above. Same as above.	E.g., see Wildlife in Lao PDR, 1999 Status Report for all items listed here. Also, they did or are doing several field studies separately.  Found many reports, but not organized. Same as above. Same as above Same as above Problem recognized but no counter measures.
7. Water Balance	(1) Regional water balance (2) Evapo-transpiration data (3) Groundwater level (4) Water quality of groundwater (5) Aquifer structure (strata, permeability coefficient, storage coefficient).	X O X X X	DMH	

8. Land-use	(1) Current and future land use condition and/or policy.	Unknown		Better to contact SPC or local provincial office.
9. Archaeological/Historical/Cultural/ or Monumental	Records/Information of any archaeological/ historical/ cultural/ or monumental sites.	O	MIC	
10. School, hospital and other public facilities.	Name, Location, Capacity and others.	Unknown		Better to contact local provincial office.
11. Water resources/water supply system.	(1) Water supply facility, pipeline network system. (2) Well distribution, pumping rate. (3) Irrigation records (network, flow rate and so on).	O O Unknown	Water Resources Authority, MCTPC Same as above.	Much better to contact local provincial office. Better to contact MoAF.
12. Inland waterway, ferry liner	(1) Port location, route, timetable, capacity (2) Impact of deforestation (e.g., rapid sedimentation within the channel), necessity of dredging.	O O	Inland Waterway Unit, MCTPC Same as above.	
13. Inland freshwater fishery	(1) Port location, annual catch. (2) Fish migration pattern, spawning area (3) Fishing ban period for fish resources conservation. (4) Impact of deforestation.	Unknown O Unknown O	MoAF MoAF	Better to contact Ministry of Trade & Commerce. Better to contact MoAF
14. Waste disposal site	Name, location, capacity, treatment method.	Unknown		Better to contact Ministry of Public Health or local provincial office.
15. Sewerage	Name, location, capacity, treatment method.	Unknown		Same as above.
16. Fuelwood	Fuelwood collection, Impact on deforestation	Unknown		UNDP did several socio-cultural surveys.
17. Noise, vibration	Records of roadside noise/vibration measurements.	X		
18. Air quality	(1) Records of roadside air quality measurement. (2) Vehicular emission policy (3) Total emission policy (e.g., CO2)	X X		
19. Visual Resources	(1) Distribution of important landscape or scenery for tourism	Unknown O	STEAMIC	STEAM did some studies for climate change.

V. SOCIAL ISSUES

ITEM	DESCRIPTION	AVAILABILITY		NAME OF MATERIALS
		AVAIL- ABILITY	PLACE OF DATA AVAILABLE	
1. Policy on WID (Women In Development), and poverty alleviation, and resettlement.	(1) Law/regulation/or guidelines related with WID, poverty alleviation and resettlement.	Unknown		Better to contact Lao Woman/Junior Unit for WID, & ADB for poverty reduction, respectively.
	(2) Relation with UNDP/ADB/or other donors	Unknown		Same as above.
	(3) Government agencies responsible for WID, poverty alleviation, and resettlement, and their responsibilities (Institutional capacity of the agencies)	Unknown		Same as above.
2. Illegal squatter	(1) Distribution of Illegal squatter's community	O	State Planning Committee	
	(2) Social Survey records of Illegal squatter.	O	Same as above	
3. Indigenous and/or minority people	(1) Distribution of indigenous/minority tribe.	O	Same as above	
	(2) Social Survey records of indigenous/minority tribe.	O	Same as above.	
4. Deforestation	(1) Law/regulation/or guidelines related with deforestation.	Unknown		Better to contact MoAF.
	(2) Current situation (e.g., statistics) of dforestation), impact of agricultural activity (swidden method).	Unknown		Better to contact CPC.
	(3) Secondary or long-term effect of deforestation.  Erosion, silt sedimentation of river, waterway, groundwater draw-down, destruction of spawning area of fish.	Unknown		Better to contact MoAF.
5. Target population in the project area at present.	(1) Target population	Unknown		Better to contact local provincial offices.
	1) Number of people to be benefited.	Unknown		Same as above.
	2) Number of people to be resettled/be expropriated.	Unknown		Same as above.
	(2) Geographic distribution of target people.	Unknown		Same as above.
	(3) Social structure of target population	Unknown		Same as above.

6. UXO	(1) Location of ex-war (e.g., Indochina war) battle zone, landmine or other remnant unexploded ordnance and/or explosive.	O	UXO Lao, MCTPC	MCTPC have most up-dated UXO info. PTD has "Map of Aerial Bombardment 1965-1975". Better to contact UXO Lao.
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VI. OTHER INFORMATION

ITEM	DESCRIPTIONS	AVAILABILITY		NAME OF MATERIALS
		AVAIL- ABILITY	PLACE OF DATA AVAILABLE	
1. Future budgetary plan for the implementation of the Project		X		
2. List of registered (or available) consultants.	(1) Topographic survey (2) Geological survey and soil investigation (3) Hydrological survey (4) Environmental study 1) Noise, vibration, air quality, water quality analysis 2) Vegetation, wetland, wildlife survey 3) Public opinion survey (5) Traffic count survey and analysis	X		No registration system for consultants. See "environmental consultant" or "engineer" sections of Yellow Pages.
3. List of registered (or available) construction company	Name and Address	O	DD, MCTPC	
4. Construction Materials Supplier/or location.	(1) Name and Address (2) Quarry, sandpit Name, location, quality, capacity	Unknown		Contact MCTPC for more detailed info.
5. The latest "Statistical Year Book of Lao PDR"		O		See Basic Statistics of the Lao PDR, 2000.
6. The latest "Lao PDR Road Statistics"		O	PTD	See Road Statistics 1999-2000

7. The latest Census data (Demography, Income and so on).		X		Population Ccnsus 1995 is the most up-dated one (so far).
8. The latest Environmental Statistics of Lao PDR.		X		Better to contact STEA or MoAF .
9. The latest "Lower Mekong Hydrologic Year Book".		X		Better to contact Lao National Mckong Committee

4. 収集資料リスト

収 集 資 料 リ ス ト

平成13年8月29日 作成

地域	東南アジア	調査国	ラオス国	調査の種類	S/W
地名	ラオス	等名称	南部地域道路改善計画調査	現地調査期間	2001年8月11日～2001年8月29日

番号	資料の名称	形態	ページ数	初版/改訂の別	部数	収集先名称又は発行機関	寄贈・購入 (価格)の別
1	Results from the Population Census 1995	図書	94	初版	1	SPC, NSC	購入
2	Basic Statistics of the Lao PDR: 1975-2000, 25	図書	162	初版	1	SPC, NSC	購入
3	Basic Statistics of the Lao PDR, 2000	図書	85	初版	1	SPC, NSC	購入
4	The Households of Lao PDR, Social and economic indicators, Lao expenditure and consumption survey 1997/98	図書	65	初版	1	SPC, NSC	購入
5	Lao Agricultural Census, 1998/99, Highlights	図書	62	初版	1	Agricultural Census Office	購入
6	Report on Multiple Indicator Cluster Survey (MICS)	図書	46	初版	1	SPC, NSC	購入
7	Resident Coordinator Annual Report, Lao PDR, 1999	図書	39	初版	1	United Nation	購入
8	Lao Geographic Atlas	図書	25	初版	1	National Geographic Department	購入
9	ラオス自行政区区域 (1/1,500,000)	図面	1	初版	1	National Geographic Department	購入
10	ラオス南部地域平面図 (1/500,000)	図面クリップ止め	3	初版	5	National Geographic Department	購入
11	The Projects on national roads in Lao PDR (including 2000-2004)	図面	1	初版	1	Dept. of Roads, MCTPC	寄贈
12	Lao PDR National Road Network	図面	1	初版	1	Dept. of Roads, MCTPC	寄贈
13	Lao PDR National Road Network ( with NBCA location)	図面	1	初版	4	Dept. of Roads, MCTPC	寄贈
14	Savannakhet 地区平面図 (1/10,000,000)	図面	1	初版	1	Dept. of Roads, MCTPC	寄贈
15	Saravan 地区平面図 (1/10,000,000)	図面	1	初版	1	Dept. of Roads, MCTPC	寄贈
16	Xekong 地区平面図 (1/10,000,000)	図面	1	初版	1	Dept. of Roads, MCTPC	寄贈
17	Champasak 地区平面図 (1/10,000,000)	図面	1	初版	1	Dept. of Roads, MCTPC	寄贈
18	Attapu 地区平面図 (1/900,000)	図面	1	初版	1	Dept. of Roads, MCTPC	寄贈
19	Sarawan Province Roadnetwork	図面	1	初版	2	Dept. of Roads, MCTPC	寄贈
20	Champasak Province Roadnetwork	図面	1	初版	2	Dept. of Roads, MCTPC	寄贈
21	Attapu Province Roadnetwork	図面	1	初版	2	Dept. of Roads, MCTPC	寄贈
22	Environmental Guidelines, 1999	報告書	不明	コピー	1	MCTPC	購入
23	Strengthening social and environmental management in LAO PDR, 2000	報告書	不明	コピー	1	STE, MIH & MCTPC	購入
24	Manual of Environmental Impact Assessment procedures for road projects in Lao PDR, 1999	報告書	不明	コピー	1	MCTPC	購入
25	Industrial waste discharge regulation (#180/MIH)	ネットキス止め	1	コピー	1	MIH	寄贈
26	Environmental Guidelines, Guidelines for reducing the environmental effects of road projects in Lao PDR, 1994	ネットキス止め	1	コピー	1	MCTPC	寄贈
27	Road 13s roughness from Namsan to Lak 35	図面	1	初版	1	Dept. of Roads, MCTPC	寄贈
28	Traffic Volumes 1995 & 1996	ネットキス止め	1	コピー	1	MCTPC	寄贈
29	Statistic of vehicles for whole country	A4 1枚	1	コピー	1	Dept. of Road, MCTPC	寄贈
30	Statistic of registered vehicles in Vientiane Municipality	A4 1枚	1	コピー	1	Dept. of Road, MCTPC	寄贈
31	Traffic Survey Lao PDR, April 2000	報告書	1	初版	1	Vientiane Municipality, DCTPC & MCTPC	寄贈
32	Infrastructure Basic Survey in southern region of Lao PDR	報告書	1	コピー	1	MCTPC	寄贈
33	ラオス南部地図 (縮尺不明)	図面クリップ止め	1	コピー	3	MCTPC	寄贈
34	Partial copy of "Rural access roads and the sixth road improvement projects"	クリップ止め	88	コピー	1	ADB	寄贈
35	県別自動車登録台数 (ラオ語)	A4 1枚	1	コピー	1	Dept. of Road, MCTPC	寄贈
36	DCTPC of Champasak Province組織図 (ラオ語)		1	コピー	1	DCTPC of Champasak Province	寄贈
37	2001年チャンパサック県自動車登録台数 (ラオ語)	ネットキス止め	2	コピー	1	DCTPC of Champasak Province	寄贈
38	チャンパサック県乗客・貨物輸送量 (1996-2000年, フォ語)	ネットキス止め	3	コピー	1	DCTPC of Champasak Province	寄贈
39	DCTPC of Champasak Province予算 (2001-2005, ラオ語)	ネットキス止め	5	初版	1	DCTPC of Champasak Province	寄贈
40	2001年チャンパサック県道路台帳 (ラオ語)	ネットキス止め	24	初版	1	DCTPC of Champasak Province	寄贈
41	サラワン県道路網	A4 1枚	1	コピー	1	DCTPC of Saravan Province	寄贈
42	Bidding document for proposed project: road maintenance project of 1G (ラオ語)	ビニール製本	1	初版	1	MCTPC	寄贈
43	Bidding document for proposed project: road maintenance project of 1H (ラオ語)	ビニール製本	1	初版	1	MCTPC	寄贈
44	Bidding document for proposed project: road maintenance project of 15 (ラオ語)	ビニール製本	1	初版	1	MCTPC	寄贈
45	調査設計提案書: セドン橋, L=170m (ラオ語)	ビニール製本	1	初版	1	MCTPC	寄贈
46	調査設計提案書: 15号線, サラワンベトナム国境 (ラオ語)	ビニール製本	1	初版	1	MCTPC	寄贈
47	Application for technical cooperation: Masterplan study on integrated development of the southern region in Lao PDR	ネットキス止め	13	コピー	1	SPC	寄贈
48	橋梁荷重条件 (ラオ語)	ネットキス止め	8	コピー	1	MCTPC	寄贈
49	サラワン県道路台帳(抜粋, ラオ語)	ネットキス止め	3	コピー	1	DCTPC of Saravan Province	寄贈

50	サワーン県国道資料 Location of referencing and road condition survey, Data handover final report	A4 1枚	1	コピー	1	DCTPC of Saravan Province	寄贈
51	1998,99年チャンパサック県統計資料(ラオ語)	報告書	45	コピー	1	MCTPC	寄贈
52	1998,99年サワン県統計資料(ラオ語)	図書	37	複製	1	SPC, NSC	購入
53	1998,99年サワン県統計資料(ラオ語)	図書	34	複製	1	SPC, NSC	購入
54	1998,99年セコン県統計資料(ラオ語)	図書	35	複製	1	SPC, NSC	購入
55	1998,99年アタブー県統計資料(ラオ語)	図書	37	複製	1	SPC, NSC	購入
56	Strengthening social and environmental management in LAO PDR, 2000, Annex	報告書	不明	コピー	1	STEAF, MIH & MCTPC	寄贈
57	Economic Development in Lao PDR: Horizon 2000	図書	322	複製	1	IMF	購入
58	5-year Investment plan (2001-2005)(ラオ語)	ホッチキス止め	8	コピー	1	MCTPC	寄贈
59	Maintenance unit cost from RAD (ラオ語)	A4 1枚	1	コピー	1	MCTPC	寄贈
60	Current project status and implementation schedule from RMD(ラオ語)	ホッチキス止め	13	コピー	1	MCTPC	寄贈
61	Design Standard (table 1.7)	ホッチキス止め	2	コピー	1	MCTPC	寄贈
62	Organization Chart of MCTPC	ホッチキス止め	2	コピー	1	MCTPC	寄贈
63	10-year maintenance programme	ホッチキス止め	60	コピー	1	MCTPC	寄贈
64	MCTPC資料提供一巻(部分)	A4 1枚	1	複製	1	MCTPC	寄贈
65	Photo report for present condition of national roads in southern provinces in Lao PDR, 2000	報告書	162	複製	1	大林組	寄贈
66	Dong Phou Vieng NBCA (DPV) Database Output	ホッチキス止め	7	コピー	1	MoAF	寄贈
67	Xe Bang Nouan NBCA (XBN) Database Output	ホッチキス止め	6	コピー	1	MoAF	寄贈
68	Xian Pian NBCA (XPN) Database Output	ホッチキス止め	10	コピー	1	MoAF	寄贈
69	Regulation on protected area, wildlife and fishery management, Decree#0524, 2001 (ラオ語)	図書	18	複製	1	MoAF	寄贈
70	MCTPC budget plan (2000-2001) (ラオ語)	ホッチキス止め	12	コピー	1	MCTPC	寄贈
71	DoR, MCTPC budget plan (2001-2002) (ラオ語)	ホッチキス止め	14	コピー	1	MCTPC	寄贈
72	図案別種別エンジニアリング・コンサルタンツセクション(抜粋)	ホッチキス止め	5	コピー	1	MCTPC	電話帳コピー
73	Economic and financial sector statistics, March 2001	図書	26	複製	1	Economic Research Dept.	購入
74	Economic and financial sector statistics, 1995 - 2000	図書	20	複製	1	Economic Research Dept.	購入
75	Annual report 1999 (ラオ語併記)	図書	27	複製	1	Bank of Lao	購入
76	Wildlife in Lao PDR, 1999 Status Report	図書	275	複製	1	IUCN	購入
77	Atlas of Laos: spatial structures of the economic and social development of the Lao PDR	図書	160	複製	1	NIAS	購入
78	Lao Geographic Atlas	図書	24	複製	1	National Geographic Department	購入
79	Environmental Protection Law of Lao PDR(ラオ語)	図書	25	複製	1	STEAF & Ministry of Justice	購入
80	Regulation on EIA of Lao PDR(ラオ語)	図書	58	複製	1	STEAF	購入
81	Living Aquatic Resources Research Center (LARReC) バンフレット	バンフレット	1	複製	1	MoAF	寄贈
82	水位観測記録サンプル (Vang Vieng, 84-99)	ホッチキス止め	16	コピー	1	DMH, MoAF	寄贈
83	自記気象水文観測所配置計画図	ホッチキス止め	2	コピー	1	DMH, MoAF	寄贈
84	河川水位測定期間一覧	A4 1枚	1	コピー	1	DMH, MoAF	寄贈
85	Technical Report-21: IEE for the Lao Road 9 Rehabilitation Eastern Section, May 1998	報告書	33	コピー	1	MCTPC	購入
86	Summary IEE of East-West Corridor Project in Lao PDR & SR of Viet Nam, July 1999	報告書	21	コピー	1	MCTPC	購入
87	Chapter 4 Initial Environmental Examination Study	報告書	77	コピー	1	MCTPC	購入
88	Decree on the preservation of cultural, historical and natural heritage.	図書	43	複製	1	Min. of Information & Culture	購入
89	Road infrastructure for rural development project, Final Report-Main Report, 2000	報告書	不明	コピー	1	MCTPC	購入
90	Road infrastructure for rural development project, Final Report-Appendices, 2000	報告書	不明	コピー	1	MCTPC	購入
91	Socio-economic development strategy for 2020, 2010 and Five Years socio-economic plan (2001-2005) - unofficial translation	クリップ止め	43	コピー	1	Committee for Planning and Cooperation	寄贈
92	Agricultural Statistics: 1975-2000	図書	172	複製	1	MoAF	購入
93	Yearly Statistics Report: 1999	図書	130	複製	1	MoAF	購入
94	ラオス国法提要(環境保護法、土地利用法、森林法、農薬法、水資源法、エネルギー法、鉱山開発法、出版法:ラオ語)	図書	195	複製	1	Ministry of Justice	購入
95	Road Statistics, 1998	報告書	不明	コピー	1	WB, SIDA	寄贈
	(注)						
	MCTPC: Ministry of Communication, Transport, Post and Construction						
	DCTPC: District Office of Communication, Transport, Post and Construction						
	MoAF: Ministry of Agriculture and Forestry						
	MIH: Ministry of Industry and Handicrafts						
	STEAF: Science, Technology and Environment Agency						
	DMH: Department of Meteorology & Hydrology						
	SPC: State Planning Committee						
	NSC: National Statistical Centre						



## 5. 事前評価表

事前評価表	
1. 対象事業名	ラオス国南部地域道路改善計画調査
2. 我が国が援助することの必要性・妥当性	<p>(1) 現状及び問題点</p> <p>ラオス国南部地域の道路整備水準は非常に低く、サラワン、セコン、チャンパサック、アタブ4県の国道舗装率は23%である。山がちな地形である上、渡河地点には全く橋梁がないか架かっているも狭隘な旧式橋梁であることが多く、雨期の増水により、一部の地区で排水不良、局地的な湛水、それに伴う道路寸断が発生し、住民生活に支障をきたしている。このため、経済発展及び社会開発が他地域と比較して遅れており、特に山間部に位置するアタブ県、セコン県、サラワン県における一人あたりGNPは\$100~150と、全国平均の\$300~350を大幅に下回る。</p> <p>また、同地域はタイ、ヴェトナム、カンボジアと国境を接し、ASEAN域内統合のための4国国際道路ネットワーク構想の要所となっており、国際道路網の整備も必要とされている。これを受けて、近年、ADB、世銀（IDA）、我が国の有償・無償協力等により、国道13号、国道9号、バクセ橋や第二メコン国際橋等の建設を進めている。これらの完成に伴い、交通量が大幅に増加することが予想されるが、上記の道路整備の現状から、国際交通のボトルネックとなることが懸念されている。</p> <p>このため南部地域全域において効率的な道路改善・整備を行うため、マスタープラン作成の必要性が高まった。</p> <p>(2) 国家開発計画、地域開発計画、分野別計画などの計画と当該案件の整合性</p> <p>ラオス国長期国家開発計画では目標年次の2020年までにLLDCからの脱却をめざし、同年における一人あたりGDPを1500ドルにすることを目標としている。その中に掲げられている8つの重点分野（食糧確保、農林業の安定、商業製品生産の向上、社会基盤インフラの整備、貧困対策、人材育成、外国資本の誘致、サービス業の活性化）のうち社会基盤整備は第4番目に挙げられている。</p> <p>なお、ラオス南部地域は国境を接するヴェトナム、カンボジアの経済社会インフラ整備にも歩調を合わせ整備を図る必要がある。</p> <p>(3) 他国機関との関連事業との整合性</p> <p>現在対象地域において進行中のプロジェクトとしては、ADBの資金協力によるアタブー・セコン間の国道1号I整備があり、2003年に完成予定である。ADBは1995年頃から同地域において国道20号線、16号線などの道路整備を行っている。今後の協力方針としては、地域的としては北部地域、道路整備の内容としては県道等コミュニティ道路を中心に整備を行うとのことである。</p> <p>また、国道18号線のアタブーからヴェトナム国境までの部分については、ヴェトナム国の資金協力で建設計画が進められている。</p> <p>(4) 我が国の当該プロジェクトへの基本的援助方針との整合性</p> <p>我が国は本件対象地域をラオス国内においても、大メコン川流域圏の中心としても高いポテンシャルを持つ地域としてとらえており、今後も積極的に協力を行っていく方針である。特に社会基盤整備については、2000年にバクセ橋が完成し、近年のうちには国道9号線及び第二メコン国際橋の整備も完了する予定である。これらの道路・橋梁を有効に活用する上でも、本件調査の必然性は高いと思われる。</p>
3. 事業の目的	南部地域の幹線道路の整備計画を立案し、これらを実施建設することにより、地域の社会サービスを向上させるとともに地域産業開発の促進、地域の生産性の向上、交易促進をはかり経済発展をはかる。
4. 事業の内容	<p>(1) 対象</p> <p>(a) 調査対象：南部5県（サラワン、セコン、アタブー、チャンパサック、サワナケート） 但しサワナケートは、国道1号Gに関する部分とする。主として国道を対象とする。</p> <p>(b) 技術移転の対象：公共事業省(MTCPC)道路局(Department of Road) 各県の公共事業省支局(DCTPC)</p> <p>(2) アウトプット</p> <p>(a) 計画策定：幹線道路網整備のマスタープラン策定（整備優先度の評価も含む。）、整備優先道路のF/S</p> <p>(b) 技術移転：道路維持管理、道路整備、橋梁整備、交通需要推計技術、プロジェクト評価手法</p>

(3) インプット：以下の投入による調査および技術移転の実施。

(a) コンサルタント (分野/人数)

分野	人数	分野	人数
総括/道路計画	1	環境	1
交通計画/交通需要分析	1	道路設計/積算	1
地域計画	1	構造物設計/積算	1
自然条件 (測量・土質)	1	経済財務	1
水文調査解析	1		1

(b) その他

(4) 総事業費

調査に要す費用：約 2 億 5 千万円

(5) 調査のスケジュール

2001年11月～2003年2月 (1年3ヶ月)

(6) 実施体制

(a) 協力相手国実施機関名：公共事業省 道路局

(b) 協力相手国実施機関の責任者：ソマッド氏

## 5. 成果の目標

(1) 提案計画の活用目標

策定された事業計画が実施される。

(a) ラオス南部地域の国道に関し、全区間について2020年までに年間を通じて走行できる舗装道路 (橋梁については二車線の永久橋) に改善する。

(b) 2020年に国道全線の改修が終了するまでの期間、現況国道のサービス水準を維持管理する。

(c) 優先度の高い区間について2007年までに年間を通じて走行できる舗装道路に改善する。

(2) 活用による達成目標

(a) 雨期において交通が遮断され、孤立する地域の解消。

(b) 地域内及び国際交通の増加。

(c) 交通所要時間の短縮。

## 6. 外部要因リスク

(1) 協力相手国内の事情

(a) 政策的要因：政権交代による開発政策の変更による提案事業の優先度の低下

(b) 行政的要因：隣接国との関係悪化による経済開発の低下

(c) 経済的要因：資金不足による整備不良道路区間の増大

(d) 社会的要因：対象地区における治安の急激な悪化、受益者ニーズの大幅な変化

(2) 関連プロジェクトの遅れ：

ADBによる国道11の整備 (2003年完了予定)、ヴェトナムの資金協力による国道18Bの整備の遅延

## 7. 今後の評価計画

(1) 事後評価に用いる指標

(a) 活用の進捗度

公共事業省 (MCTPC)から事業が優先案件として国家開発委員会 (CPC)に提出されたか

国家開発委員会 (CPC)が本件の国家プロジェクトとしての優先性を確保しているか

(b) 活用による達成目標の指標

ラオス南部地域の道路舗装率、道路改良率、通年通行確保率、交通量、所要時間の短縮

(2) 上記(a)および(b)を評価する方法およびタイミング

事後評価：調査終了時から5年後