

カンボディア国
バプノム地区農村総合整備開発計画

ラオス国
ポンサリ県農業総合開発計画

プロジェクトファインディング調査報告書

平成12年3月

社団法人 海外農業開発コンサルタント協会

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まえがき

本報告書は、財団法人海外農業開発コンサルタント協会（ADCA）から派遣された太陽コンサルタント株式会社、村田稔尚、田中忠雄、十津川淳、日本技研株式会社、湯川義光の4名によって、2000年3月に実施した「バプノム地区農村総合整備開発計画」に係る調査結果を取りまとめたものである。

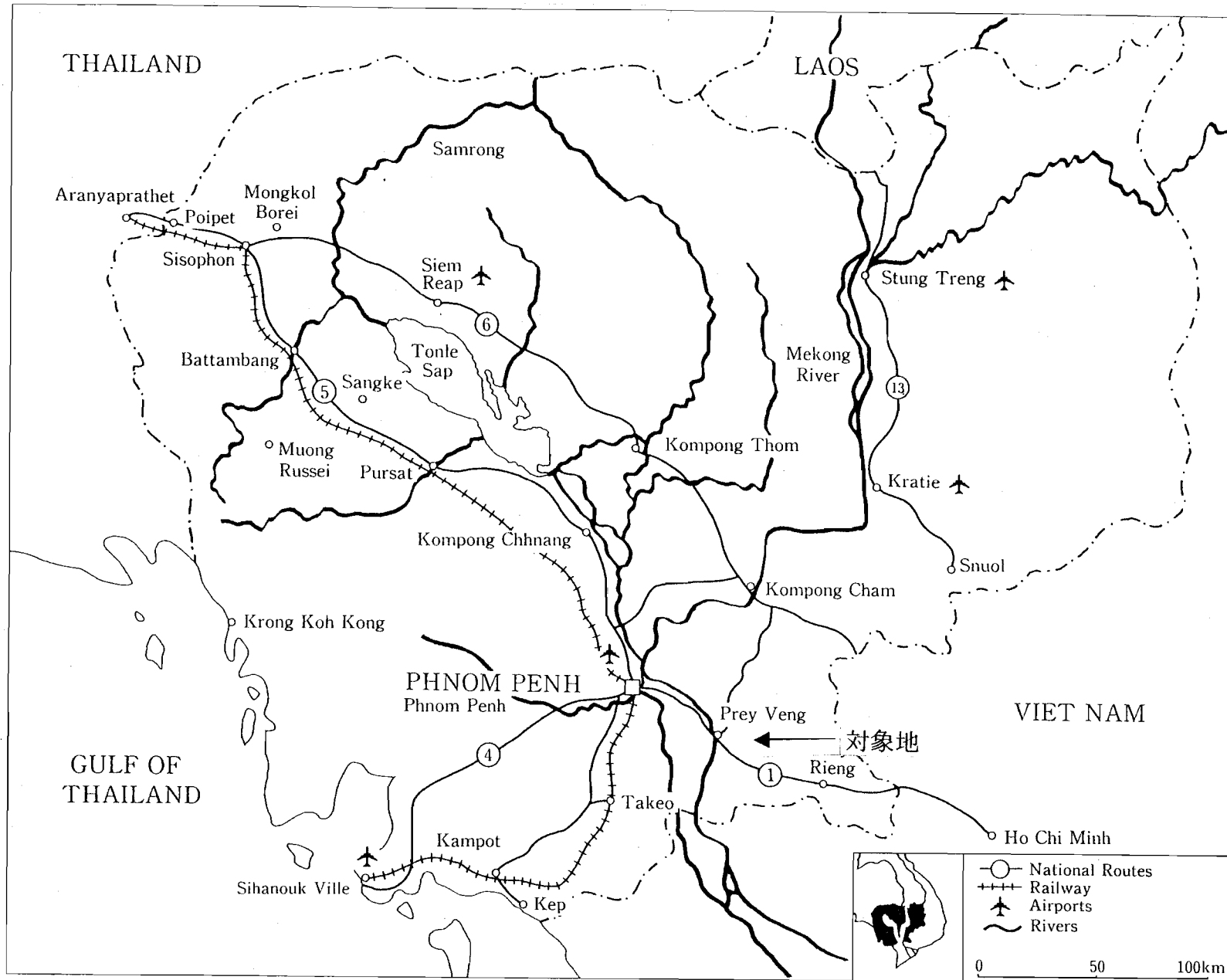
カンボディアは、1960年代後半からの長年にわたる内戦、政治的混乱により、国土は荒廃し、運輸、電力、農業等の経済基盤が深刻な打撃を受け、現在も緊急なりハビリが必要な状況にある。このうち主要な道路網については、我が国の無償資金協力、世界銀行、アジア開発銀行（ADB）を中心とした復興支援により徐々に改良されつつあるが、大多数の国民が居住する農村における開発は未だに後手に回っており、早急、かつ抜本的な改善が求められている。

本計画の対象地とされたプレベン州バプノム地区は国内有数の稲作面積を有しているにもかかわらず、灌漑施設等の未整備により未だに低い農業生産性におかれている地域である。しかしながら、対象地区は首都プノンペンに80kmと近く、なおかつ主要幹線である国道1号線等も整備されることが決定しており、農業生産の一大拠点となることが期待される地域でもある。そのため、カンボディア国農村開発省をはじめ、プレベン州政府も本計画に深い関心を抱いており、将来本事業が遂行されることが期待されている。

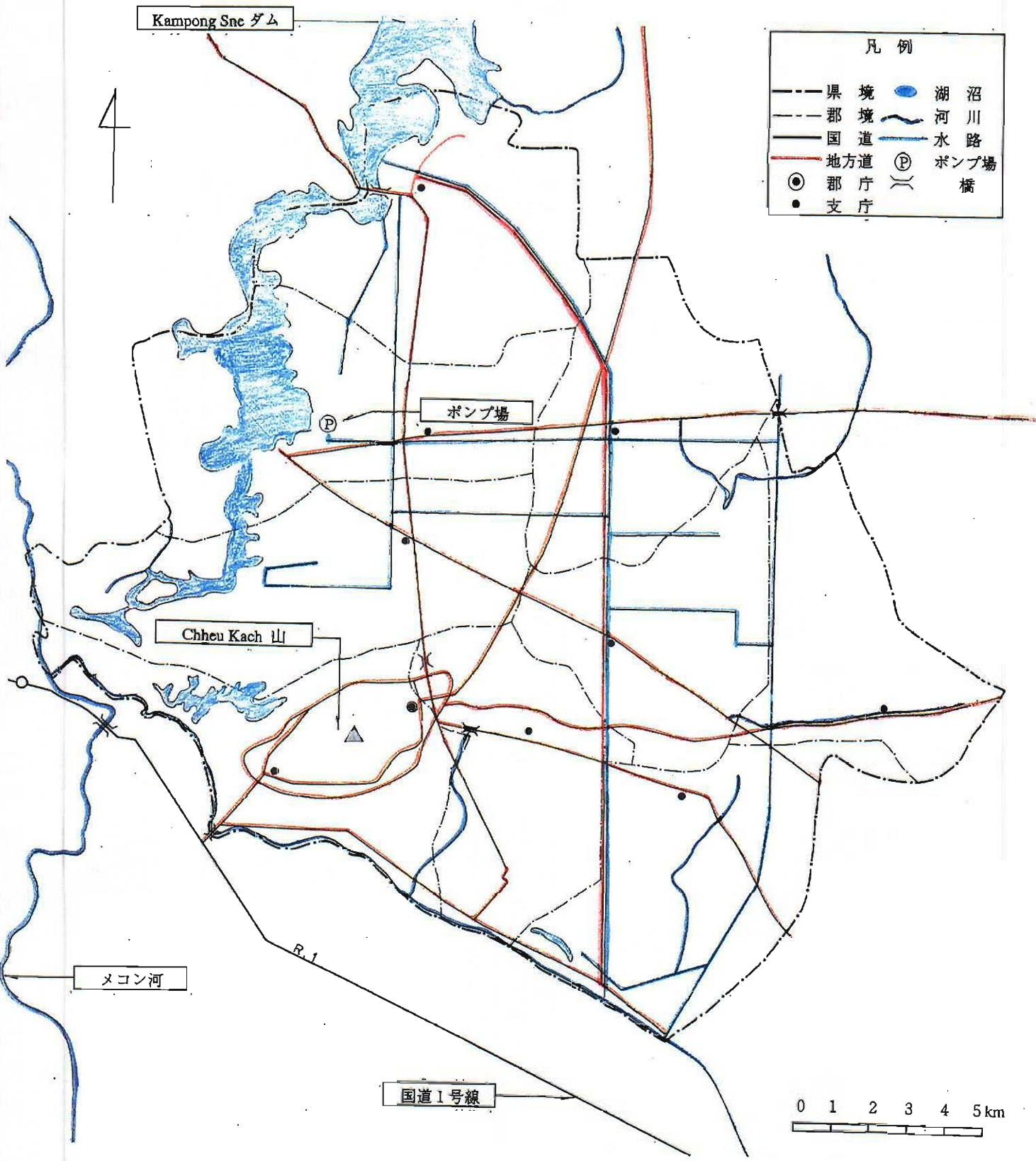
本調査の実施にあたり、カンボディア国日本国齋藤大使、柿田書記官、JICAカンボディア事務所松田所長をはじめ、多くの方々から調査のご協力をいただいた。ここに、これらの方々には深く謝意を表するとともに、本件計画が早期に実現されることを期待する。

平成12年3月
太陽コンサルタント株式会社

位置図

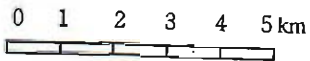


バプノム地区概要図



凡例

--- 県境	湖沼
- - - 郡境	河川
— 国道	水路
— 地方道	ポンプ場
⊙ 郡庁	橋
● 支庁	



S = 1: 100,000

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I. 背景

1. 社会経済状況

1.1 自然条件

1.1.1 国土

カンボディア国は北緯 10 度～15 度、東経 102 度～108 度に位置しており、北・西部はタイ、北東部はラオス、東部をヴェトナムと国境を接し、南西部はタイ湾に面している。国土面積は 181,305Km² であり、日本の国土のほぼ半分である。国土のおよそ 60% が森林であり、耕作地は 10% 程度である。

また、タイ、ヴェトナム国境周辺は標高の低い山地に囲まれており、国土の中心部にはメコン川、トンレサップ川流域には広大な平野部が広がっている。また国土の中央部には東南アジア最大の面積を誇るトンレサップ湖が存在する。

1.1.2 気候

カンボディアは熱帯モンスーン気候に属しており、雨期(5 月中旬～11 月)と乾期(12 月～5 月中旬)に大別される。雨期にはインド洋からの湿気を含んだ風が吹き、降水量のピークを 9 月および 10 月に迎える。その際にはメコン川の水量は乾期の約 20 倍にも増大し、トンレサップ湖への逆流減少も見うけられる。またその際のトンレサップ湖の面積は、乾期の 3 倍にも達し、メコン水系における水量調節機能の役割を果たしている。一方、12 月からは乾期を迎え、1、2 月は特に中央部、平野部では殆ど雨が降らない時期となる。

気温はプノンペンで 1 月平均 25 度、4 月平均 29 度であり、地域差は比較的少ないとされている。また相対湿度は 1～2 月は 65～70%、8～9 月に 85～90% となっている。

1.2 社会条件

1.2.1 人口

カンボディア国の人口は 1998 年の同国政府による国勢調査暫定結果によると 1,143 万人、人口密度が 64 人/Km² である。1960 年代の統計結果との比較では人口は倍以上に増加しており、近年の人口増加率は年 2.44% と試算されている。人口密度が最も高い地域はプノンペン

ンであり(3,441人/Km²)、政治経済の中心地である。ただし、カンボディアの都市人口比率は約15%であり、残りの約85%は依然として農村地域に居住している。しかしながら、現状では農村地域に人口が広く分散しているものの、今後は都市人口が急速に増加するものと予想されている。

1.2.2 民族

カンボディアではクメール族が全人口の約90%を占め、その他の民族としてヴィエトナム人、中国人、チャム族がそれぞれ約50万人、30万人、13万人居るとされている。中国人は主に都市部に居住しており、商業経済分野における中枢を担っているとされている。またヴィエトナム系もヴィエトナム国境周辺から南部地方全域に広がっている。さらに山岳地帯にはわずかながら高地クメール族をはじめとした少数民族も存在する。

1.2.3 宗教

宗教は小乗仏教が広く信仰されている(約90%が小乗仏教、3%がイスラム教、2%がキリスト教)。国民の多くは敬虔な仏教徒であり、仏教思想が人々の精神的基盤を形成している。この点は隣国のラオス、タイ、ミャンマーと同様である。

1.2.4 政治

1997年6月、人民党(フン・セン第二首相:当時)とフンシンペック党(ラナリット第一首相:当時)の二大政党勢力間の衝突が発生し、その結果フン・セン第二首相がカンボディア全土を掌握した。その後、連立政権の維持および選挙の実施を表明し、選挙は98年7月に無事実施された。現在は98年の選挙結果から上院が設けられ、従前の国会を下院とした新たな枠組みが構成されている。政党としては、上記の人民党、フンシンペック党のほか、サム・ランシー党、仏教自由党(BLP)等が存在する。なお、クメール・ルーージュ幹部が投降したことで、同派は事実上消滅しており、国内事情は安定化している。また、カンボディアは98年12月には国連代表権が回復されるとともに、99年4月にはASEAN加盟を実現した。

1.3 経済条件

1.3.1 経済概況

カンボディア経済は1970年代の内戦により経済は一時壊滅状態にあったが、85年以降市場経済化へ向けた政策を進めている。国家経済の立て直しは国際社会の支援を受けながら

進められてきたが、徴税制度が未整備なために国家財政は厳しい状態が続いている。しかしながら経済改革努力も徐々に実りつつあり、91年に150%であったインフレ率が99年予測値では9.0%にまで低下している。

国家経済の主要産業は農業部門であり、99年予測値ではGDPの41.7%を占めている。また労働人口比率では75%を占めており、GDPに占める割合こそ近年徐々に減少しているものの依然として国家の最重要産業となっている。一方、製造業分野はGDPの17.6%を占めている。業種としては、食品加工業(タバコ、飲料)や繊維産業(綿布、絹製品、タオル製造など)が中心であり、他には簡単な構造の農機具等の機械産業、ゴム製品等の化学工業、肥料生産がある。

1997年には政変があったことから、経済成長率は鈍化し、さらに東南アジアを襲った経済危機の影響から98年のGDPは特に製造業、サービス業を中心に成長率はさらなる低下に見舞われたが、99年には回復し始めている。

表1 主要経済指標

	1995	1996	1997	1998(推定)	1999(予測)
実質 GDP 成長率(%)	7.6	7.0	1.0	0.0	4.0
名目 GDP(百万ドル)	2,923	3,121	3,033	2,973	3,405
一人あたり GDP(US\$)	284	292	276	258	290
消費者物価上昇率(%)	7.8	7.1	8.0	12.0	9.0
為替レート(リエル/US\$)	2,463	2,643	3,000	3,700	3,700

出典：国別農業農村開発情報収集調査報告書 カンボディア王国，1999年

1.3.2 農業

前述したように、カンボディアの農林水産業は労働人口の約75%を占めていると同時に国家GDPの約40%を占める最大産業である。農林水産業部門の内訳は、1996年統計においては、農業が対GDP比18.9%、畜産が同7.7%、水産が8.7%、林業が4.1%となっている。

米の生産量は1960年代には約300万トンにものぼり、当時カンボディアは米の輸出国であった。しかしながら、内戦の激化によって生産高は減少しつづけ、79年時点では50万トン程度にまで激減したことから飢餓者を出すほどであった。その後は政治的な安定とともに米生産量も増加し、95年には米生産量も330万トンに達し、ほぼ自給を達成したとされている。

カンボディアにおける稲作の特徴としては、同国の稲作が雨期時の天水田に大きく依存

しており、自然条件に左右される粗放的な農業となっている点が挙げられる。そのためカンボディア国の米単収は周辺国との比較においても非常に低い数値となっており、雨期平均で1.6トン/ha、乾期平均で3.0トン/haとなっている。また、気候的には乾期と雨期の二期作もしくは三期作も可能である土地であるにもかかわらず、灌漑施設が殆ど未整備であるために、年に一度のみの収穫である地域が多い。カンボディアでの稲作状況は下表の通りである。

表2 カンボディアの稲作

項目	雨期	乾期	計	雨期割合(%)
計画面積(Ha)	2,128,000	230,000	2,358,000	90.2
耕作面積(Ha)	1,827,328	248,683	2,076,011	88.0
収穫面積(Ha)	1,684,904	243,783	1,928,689	87.4
単収(Ton/ha)	1.60	3.00	1.77	-
生産量(Ton)	2,672,597	742,321	3,414,918	78.3

出典：Agricultural Statistics, 1997-1998

またカンボディア国内の作物別の収穫面積は下表の通りである。

表3 作物別収穫面積 (1997年)

単位：ha

米	メイズ	キャッサバ	サツマイモ	野菜	緑豆
1,928,689	34,138	12,972	9,144	35,021	27,417
サトウキビ	大豆	落花生	ゴマ	タバコ	ジュート
8,035	32,739	9,502	15,898	14,944	1,950

出典：Agricultural Statistics, 1997-1998

1.3.3 林業

森林資源に恵まれたカンボディアでは、林業は国家の重要産業の一つとして認識されている。現存するカンボディアの森林は1,100万ヘクタール以上と推定されているが、近年の森林減少は著しく、過去20年間で約140万ヘクタールの森林が消滅したとされている。カンボディア国の森林管理は商業木材の輸出管理とともに、全人口の85%以上が生活用の薪炭材として利用している現状に鑑み、森林管理政策の充実・徹底を図る必要が内外で認識されてきた。その一つの結果として、世界銀行、UNDP および FAO が共同で行なった森林管理政策勧告をベースに97年には新森林法が国会に提出された。なお、1995年5月には木材の輸出禁止令が出されており、森林伐採量は減少している。

表4 日本の対カンボディア国 ODA 実績 (単位: 100 万ドル)

暦年	贈与			政府貸付		合計
	無償	技術協力	計	支出総額	支出純額	
1994	51.39	13.12	64.52	-	-	64.52
1995	134.90	17.14	152.04	-	-	152.04
1996	55.40	20.12	75.52	7.38	-4.18	71.33
1997	36.11	25.52	61.63	-	-	61.63
1998	58.35	23.05	81.40	-	-	81.40
累計	424.30	118.26	542.57	11.22	-0.34	542.22

出典: 我が国の政府開発援助 1999

表5 DAC 諸国の ODA 実績 (支出純額、単位: 100 万ドル)

	1位		2位		3位		4位		計
1995	日本	152.0	フランス	53.4	米国	33.0	豪州	25.8	341.2
1996	日本	71.3	フランス	52.1	豪州	28.2	米国	28.0	252.5
1997	日本	61.6	米国	30.0	フランス	27.1	豪州	24.0	226.0

出典: 我が国の政府開発援助 1999

1.4 社会経済開発計画

カンボディアは1999年に行なわれた第3次支援国会議に対して、以下に挙げる社会経済開発計画を策定している。

- マクロ経済目標

- 一 国家財政の健全化

- ：歳入を増加させ、公共支出を合理化する。
 - ：税負担の範囲を拡大し、新規の商品およびサービスに課税する。
 - ：石油およびガスの生産並びに材木、ガスおよび宝石などの天然資源利用に対して30%の課税を行なう。
 - ：投資法を改正するとともに各種優遇措置を廃止し、増加する租税収入を国家予算に組み入れる。

- 農林水産業

- ：現在の米平均収量1.64トン/haを2001年までに2.0トン/haに引き上げる
 - ：ゴム生産を現在の4.5万トンから50万トンへ、6.1万haから、33万haへ増大を図る。
 - ：林業は新森林法のもと、年一億ドルの国家収入を達成する。
 - ：畜産は動物の保健・衛生分野の充実を図る。

- 社会開発

- ：妊産婦死亡率473人(10万人あたり)を300人へ(2000年までに)
 - ：乳幼児死亡率115人(1000人あたり)を80人へ(同上)
 - ：児童の栄養状態40%栄養失調(5歳以下)を25%へ(同上)

2. 国際協力の現状

カンボディアへの国際社会からの経済援助は長期に亘った内戦の終結を契機に、再び活発化している。特に日本は92年6月に「カンボディア復興閣僚会議」を主催したことをはじめ、96年7月には新たな国際援助の枠組である「カンボディア支援国会合(CG)」の議長を務めるなど、カンボディアに対するドナー国の中で中心的役割を果たしている。支援国会合は第2回目のパリを経たのち、第3回目(99年)も東京で行ない、その際に日本は特に1)退役軍人支援、2)地雷除去、3)森林保全分野、4)基礎生活分野、5)インフラ整備等無償・技術協力を中心に総額約1億ドルの開発援助、および90万ドルの地雷除去支援を表明した。

II. バプノム地区農村総合整備開発計画

1. 開発計画地域概要

1.1 自然条件

1.1.1 行政

バプノム地区は首都プノンペンの南東 80km に位置し、プレベン州に属している。プレベン州には 12 のサブ・ディストリクトがあり、本地区は国道 1 号線から北方へ約 9km 隔たった地域にある。地区内にはメコン河以東の州における唯一の森林地帯として標高 143m の Chhoeu Kach 山がある。各サブ・ディストリクトの村落数、面積は下表の通りである。

表 6 プレベン州村落数

Sub-district	村落数	面積 (ha)
Peareang	11	55,987
Kompong trabek	13	50,625
Prey veng	14	64,494
Preah sdach	11	50,150
Me sang	8	39,247
Baphnom	9	34,160
Sithor kanodal	11	30,765
Kamchei nea	8	45,214
Kanchrieck	8	31,872
Peamro	11	27,312
Peam chor	10	39,654
Kampong leav	11	1,450
総計	115	470,930

出典：Possibilities de Planification et Zonalisation Agricoles de dela Province de Prey Veng, 1987

1.1.2 土壌・土地利用

メコン河はプレベン州の西部を南下し、その影響範囲は 57km に及ぶ。洪水時には 300mg/l の沖積土壌の沈殿物を運び、氾濫原に堆積する厚さは 1mm/年とされている。広大な氾濫原、浸水林が広がり、魚類の生息地として好条件となっている。1987 年に策定された土地利用計画によると以下のようにになっている。

バプノム地区一帯は沖積土壌に覆われている。地区の西側はメコン河の氾濫原・後背湿地で湖沼が多く、カオリナイト、石英、雲母を主とする粘土が多い。地区の中央から東部にかけては台地・段丘部となり、シリカ質粘土が多くなる。地区の総面積は 34,160ha、作付面

表 8 プレベン州米生産量の推移

	耕地面積 (1000ha)			作付け面積 (1000ha)	生産量 (1000T)	単収 (T/ha)
	計	乾期	雨期			
1984/1985	220	23	197	97	154	1.58
1985/1986	217	20	197	216	228	1.05
1986/1987	234	25	209	232	320	1.37
1987/1988	208	22	186	207	240	1.15
1988/1989	251	26	225	249	310	1.24
1989/1990	267	25	242	261	357	1.37
1990/1991	265	27	238	260	310	1.19
1991/1992	254	27	227	218	275	1.26
1992/1993	253.96	27	226.96	221.3	264.45	1.19
1993/1994	228.72	30	198.72	228.22	272.01	1.19

出典：Possibilities de Planification et Zonalisation Agricoles de la Province de Prey Veng, 1987

表 9 主要作物生産量

	生産量 (t)	作付面積 (ha)	単位面積当りの収量 (t/ha)	全国平均単位面積 当りの収量 (t/ha)
米	272,007	228,220	1.19	1.31
トウモロコシ	4,625	4,190	1.10	1.06
キャッサバ	1,860	465	4.00	5.23
サトウキビ	7,345	540	31.44	22.46
野菜	4,455	685	6.50	7.86
緑豆	525	1,076	0.49	0.52
胡椒	352	630	0.56	0.47
ピーナッツ	378	611	0.62	0.69
タバコ	1,090	1,790	0.61	0.57

出典：Bulletin of Agricultural Statistics and Studies, FAO, 1994

表 10 カンボディア国における内水面漁業(1993)

単位：トン

	漁獲量	水産養殖	合計
Phnom penh	5,200	1,000	6,200
Kandal	10,500	750	11,250
Kampong cham	5,900	357	6,257
Svay rieng	-	50	50
Prey veng	3,000	98	3,098
Takeo	1,800	150	1,950
Kampong thom	5,200	1,200	6,400
Siem reap	8,800	1,370	10,172
Battambang	5,200	1,000	6,200
Bantey meanchey	300	7	307
Pursat	7,800	650	8,450
Kampong chhnang	12,200	605	12,805
Kampong speu	-	10	10
Stung treng	600	5	605
Kratie	1,400	101	1,501
総計	67,900	7,355	75,255

出典：Bulletin of Agricultural Statistics and Studies, FAO, 1994

灌漑施設

プレベン州内には農業用水源として利用されている貯水池 Kompong Sne がある。貯水池表面積は 3,874ha であり、Prey Veng、Baphnom、Peamro の各サブ・ディストリクトにまたがっている。

表 11 Kampong sne 貯水池の面積比率

Sub-district	面積 (ha)	%
Prey veng	1,105	28.5
Baphnom	1,542	39.8
Peamro	1,127	31.7
総計	3,874	100

バプノム地区において、本貯水池を水源として乾期に重力灌漑を行なっている面積は 400ha 程度である。現況の幹線水路は総延長で 20km にも及ぶが、実際に使用されている水路は 4km 程度とみられている。

また、取水施設として Khsachsar Pump Station(北朝鮮の援助で建設された機場で口径 500mm のポンプを 5 基、支配面積は 4,000ha)があるが、1977 年から 2 年間稼動しただけでポンプ撤去後は壊れたままの状態に放置されている。現在では用水路も水路としての機能を全く果たせない状態のまま荒廃が進んでいる。

洪水の影響

プレベン州西部の氾濫原、低平地は洪水の影響が大きく被害も甚大である。洪水時の湛水深は 4-6m に達する。1983-84 年、85-86 年にはプレベン州だけでカンボディア全被害の 14%に当たる 5 万 ha の水田が被害にあった。雨期の洪水、乾期の水不足は地域における農業発展の大きな阻害要因となっている。

表 12 プレベン州洪水被害面積

単位：ha

	1981/1982	1982/1983	1983/1984	1984/1985	1985/1986	1986/1987
Peareang	2,610	1,611	-	8,744	-	2,590
Kompong trabek	6,000	4,000	-	8,103	-	3,620
Prey veng	2,000	1,532	-	1,788	-	1,060
Preah sdach	6,063	5,063	-	7,795	-	3,780
Me sang	-	-	210-	-	155	70
Baphnom	1,300	827	-	2,541	-	940
Sithor kanodal	3,409	2,449	-	13,218	415	3,900
Kamchei nea	844	244	-	1,218	-	460
Kanchrieck	1,806	806	-	1,723	-	870
Peamro	117	117	-	279	-	100
Peam chor	1,000	100	-	2,890	-	800
Kampong leav	-	-	-	1,271	-	250
総計	25,149	16,749	210	49,570	570	18,440

出典：Possibilities de Planification et Zonalisation Agricoles de dela Province de Prey Veng, 1987

1.3 社会インフラストラクチャー

道路

国道 1 号線から本地区にアクセスする道路は無舗装のため雨期には泥濘化する。また、村落間道路はさらにひどい状況となっている。ただし、近年海外からの援助等により一部の道路は整備されるようになってきており、本件対象地においても Kompong Sne から州東部の国道 15 号線に接続する総延長 15Km の道路が ADB の援助によって舗装道となっている。

飲料水

飲料水は浅井戸から得ているが井戸数も少なく、水は白濁している。乾期には空になる井戸も多く、深井戸のある家庭に水をもらいに行っているケースも多い。

保健施設

保健施設は 1990 年に UNHCR の援助で建てられた施設があるが、他に 2 箇所病院よりも小規模ないわゆる診療所が存在する。ただし、各施設は慢性的な薬品不足、医療機器不足に悩まされている現状である。

1.4 地域内 NGO 等の活動

NGO 等の活動は盛んであるが、統計が存在しないために正確な NGO の数および活動は把握しきれないのが現状である。しかしながら、一例では GREAT なる団体が家畜の健康状態、および治療を行なうなど、精力的な活動を行なっている団体も存在している。また、UNICEF が NGO の活動を資金面等からサポートし、極小規模な農民金融を行なっている例も存在する。

1.5 プロジェクトタイトル

バプノム地区農村総合整備開発計画

1.6 調査対象地域

本調査ではプレベン州バプノム地区約 4,000ha を調査対象地域とする。

積が雨期は 17,000ha、乾期は 4,300ha となっている。雨期は天水田の稲作を主とするが、他にトウモロコシ、キャッサバ、サトウキビ、野菜類を栽培している。

表 7 プレベン州土地利用計画

	1987		1990		2000	
	面積 (ha)	%	面積 (ha)	%	面積 (ha)	%
農耕地	282,485	59.98	282,485	59.98	586,590	60.86
森林	68,945	14.64	68,945	14.64	74,828	15.89
低木林	7,865		7,865		15,808	
モザイク林	10,170		10,170		8,110	
浸水林	50,910		50,910		50,910	
農業可能な低木林	10,018	2.13	10,018	2.13	-	
特別地	40,121	8.52	40,913	8.69	46,493	9.87
その他	69,361	14.73	68,569	14.56	63,019	18.38
総計	470,930	100	470,930	100	470,930	100

出典：Possibilities de Planification et Zonalisation Agricoles de la Province de Prey Veng, 1987

1.2 社会経済概況

1.2.1 人口

プレベン州の人口は 934,000 人であり、バプノム地区の人口は現在概ね 8 万人と推定されている。大半の人口は農業に従事しており、平均的家族構成は 7-8 人である。

1.2.2 農業

農業生産

プレベン州の稲作面積は 22.8 万 ha であり、全国作付け面積の 12% を占める全国で最大の作付け面積を誇る州となっている。しかしながら、農業インフラの未整備・農業生産資機材の不足などからその単収は 1.19 トン/ha(1994 年)と低く、全国平均の 1.31 トン/ha を下回っている。

米以外にはトウモロコシ、緑豆、タバコ等が栽培されている。また、バプノム地区においては下記の農作物とともに周辺の湖沼における内水面漁業も行なわれている。

1.7 責任機関

農村開発省

2 プロジェクトの目的

2.1 一般的目的

- 灌漑／排水施設の改修・整備をとおした農業生産量(稲作)の増大
- 農業発展・地域発展の礎となる住民組織の構築/整備
- 森林保護(焼畑面積の減少)計画の策定

2.2 最終目的

本プロジェクトの最終目的は、持続的かつ環境保護・生態系の面からも許容しうる範囲での農業開発によって、農民の収入増加とそれにともなう厚生面を含めた一般的生活水準の向上を本プロジェクトの最終目的とする。

3 調査計画

3.1 開発構想

計画地域内の農業生産基盤、農村生活基盤を総合的に整備改善し、農業生産の増大と地域住民の生活水準の向上を図り、農村活性化のモデルとする。また、カンボディアは、内戦時の混乱に端を発する土地所有問題が現在各地で起きており、本対象地域もその例外ではない。そのため土地所有問題およびその解決法を念頭に置きながら、地域の農村総合整備計画を策定することが肝要である。

3.2 開発計画の内容

前述の開発目的を達成するために以下に示す二期に亘る開発調査を実施する。特に以下のファクターに重点を置いた開発計画を策定する。

1) 道路

地区内支線道路の開発・整備

2) 灌漑排水施設

農業の多様化と生産性の向上を図るため既存施設のリハビリ及び乾期作の対応が可能な

施設の整備

3) 深井戸

年間を通して衛生的な生活用水の確保

4) 内水面養殖

ため池を利用した内水面養殖の実施による栄養改善と現金収入の獲得

5) 林業

防災、地域環境保全の観点から Chhoeu Kach 山の緑化、植林

6) 農業用施設

農産物の生産・加工・貯蔵・集出荷施設の整備

7) 組織／制度

農民組織・農民金融の実施、土地所有制度にかかる問題点抽出およびその解決法(土地登記の現状と課題)

8) 普及

農業の多様化、施設の維持管理をねらいとする普及、訓練施設の設立

9) 社会／教育施設

保健所、学校、集会施設等の改善・整備、および地区の環境に適応した地域住民のためのレクリエーション場の整備

3.3 活動内容

1) フェーズ I 調査 (マスタープラン・スタディ)

マスタープラン調査は開発基本構想と事業計画のガイドラインを策定するものであり、農村開発省をはじめとして、農業省、水資源省等の関係機関の協力を得て次の調査を行なう。

- 資料・データの収集

- 自然

- 気象・水文、地質・地形・土壌

- 社会経済

産業構造、雇用状況、経済インフラ状況、教育、保健衛生

農業

土地利用、作物、灌漑排水施設、農業生産、農業技術、農産物流通、農業施設、
農民組織、農民金融、

漁業・林業

環境

- 地形図の作成

スタディの過程で選定される開発優先地区については、5000分の1から10000分の1の地形図を作成する。地形図の作成はフィージビリティ・スタディ開始までに終了するものとする。

2) フェーズII調査

マスタープラン・スタディで選出された開発優先地区について、事業実施のためのフィージビリティ・スタディを実施する。

- 事業計画の策定

農村総合整備開発計画に関し、技術的、経済的側面からの調査を行ない、比較検討を行なう。そのうえで最適事業規模の決定を行なうものとする。

- 施設計画

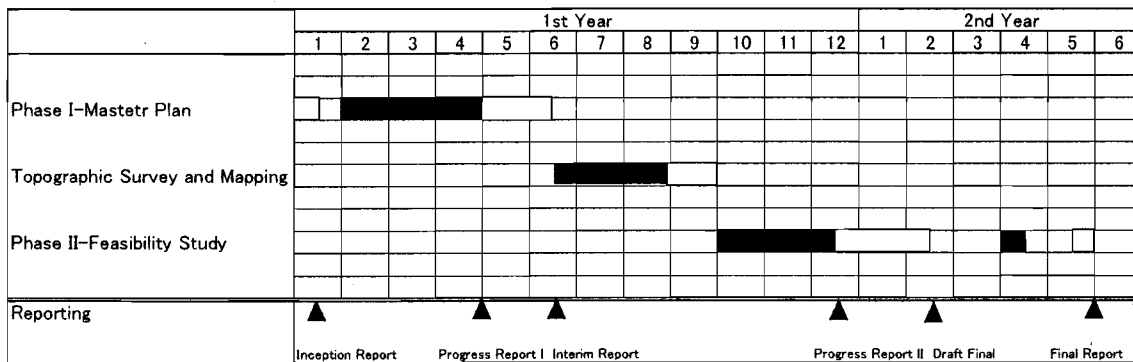
施設の設計、積算、実施行程を作成し、維持管理のための組織、費用、人員等について提言を行なう。


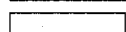
3.5 調査実施日程

本調査は以下の専門家によって編成された調査団により、下記のスケジュールで行なわれる。

専門分野	日本人専門家 (M/M)	カウンターパート (M/M)
総括／農村開発	10.5	10.5
農村社会／農民組織	10.5	10.5
灌漑排水	10.5	10.5
営農・栽培	8.5	8.5
農村インフラ	8.5	8.5
農業経済／マーケティング	7.5	7.5
施設設計／積算	6.5	6.5
環境	5.0	5.0
事業評価	4.5	4.5
測量	5.0	5.0

Working Schedule for the Project Study



 Work in Cambodia
 Work in Japan

4 総合所見

1) 技術的可能性

本対象地は全国有数の米の生産地であり、灌漑施設をはじめとした農村インフラ整備が進行することで、農業生産の飛躍的な増大が考えられる地域である。かつては乾期にポンプを利用して4,000haの灌漑を行っていた実績もあることから、水路敷も確定しているため、用地買収の必要性およびリハビリ実施上の技術的問題はほとんど存在しないものと考えられる。

また、灌漑施設の復旧とならんで、道路整備等のインフラ整備も重要であるが、その他安全な水の確保、保健衛生の問題等、BHNの側面支援も非常に重要であると考えられる。この点においてはUNICEF等のドナーが井戸供与等で散発的な援助を行ってきた模様であるが、現時点で住民のニーズを満たせる状況とはなっていない。

施設の維持管理をはじめ、住民自身による維持管理体制の構築が本計画遂行のために重要であるが、この点においては住民参加を促進してゆくことが何よりも肝要であり、現時点で農民組織の体制が脆弱であることは十分に認識した上で計画遂行を図る必要がある。

2) 社会経済的可能性

本地区は国道1号線が近くを通過していること、および首都プノンペンの大消費地まで約80kmに位置していることから、経済発展のポテンシャルを十分に有した地域である。また現在メコン河にはフェリーが運航しているが、メコン河に橋を架ける計画も存在しており、実現した場合にはプノンペンを視野に入れた一大生産拠点となることも期待し得る。

さらに、現在国道1号線もアジア開発銀行の支援を得て、整備されることが決定しており、このことから本対象地の発展・活性化は十分に考えられるものである。

ただし、現時点における本計画遂行の問題点は、かつての内戦の影響から中央のみならず地方政府においても中間管理職クラスの人材が極端に不足していることである。そのため、対象地区のバプノムをはじめプレベン州において住民参加をモデレートする官側の人材育成を計画遂行の一つのポイントとして注視する必要がある。

添付資料

調査者経歴

調査員並びに経歴	
調査員名	経歴
村田 稔尚 (むらた としひさ)	昭和9年2月4日生 66歳 昭和31年3月東京大学農学部卒 昭和32年4月農林水産省入省 平成元年4月太陽コンサルタンツ入社 平成4年6月同社代表取締役社長
湯川 義光 (ゆかわ よしみつ)	昭和18年12月7日生 56歳 昭和42年3月京都大学農学部卒 昭和42年10月(株)三祐コンサルタンツ入社 昭和48年8月日本技研(株)入社 平成元年8月同社専務取締役
田中 忠雄 (たなか ただお)	昭和26年10月16日生 48歳 昭和49年3月東海大学工学部卒 昭和49年4月前田建設工業(株)入社 平成9年6月同社海外事業部課長
十津川 淳 (とつかわ じゅん)	昭和42年9月4日生 32歳 平成4年3月早稲田大学商学部卒 平成9年7月コーネル大学院地域計画学部卒 平成9年9月海外経済協力基金ワシントン 平成10年5月太陽コンサルタンツ(株)入社

調 査 日 程

日 程 表				
年 月 日	日 数	出 発 地	宿 泊 地	備 考
平成12年				
3.2 木	1	成 田	バンコク	移動
3.3 金	2	バンコク	プノンペン	水資源省(Mr.Veng Sakhon)、首相府(Mr. Son Khon Thor)
3.4 土	3		〃	現地視察(バプノム、プレイベン州オフィス表敬)
3.5 日	4		〃	資料収集、整理
3.6 月	5		〃	農村開発省(Mr. Chum Seak Leng)、JICA(松田所長)、農業省、首相府
3.7 火	6		〃	大使館(斎藤大使、柿田書記官)、カンボディア開発委員会(梅崎専門家)
3.8 水	7	プノンペン	バンコク	移動、資料収集
3.9 木	8	バンコク	ヴィエンチャン	移動、JICA(青木所長)、農業省灌漑局(橋本専門家他)
3.10 金	9		〃	日本大使館(長野書記官)、ポンサリ県副知事、ラオス青年同盟
3.11 土	10		〃	ヴィエンチャン農業農村開発計画現地視察
3.12 日	11	ヴィエンチャン	バンコク	移動
3.13 月	12		〃	FAO事務所、資料収集
3.14 火	13	バンコク		移動(帰国)

面会者リスト

CAMBODIA

Ministry of Water Resources and Meteorology

- Mr. Veng Sakhon Under Secretary of State
- Mr. Mey Ly Huoth Director of Engineering Department
- Mr. Roeung Lhireen Deputy of Planning and Cooperation Department
- Mr. Tith Bone Deputy Chief of Planning and Cooperation Department
- 宮崎 雅夫 JICA 専門家

Ministry of Rural Development

- Mr. Chhim Seak Leng Senior Minister & Minister
- Mr. Leng-Tek Seng Under Secretary of State
- Mr. Mour Kim San Deputy General Director of Technical Affairs

Ministry of Agriculture Forestry and Fisheries

- Mr. Ten Lao Under Secretary of State
- Dr. Ly Sopoïr Mony Monitoring & Evaluation Officer for Project Support Unit
- Mr. Uy Rumnea Chief, Lecturer Farming System/Agro-Ecosystem
Management Advisor
- 工藤 浩 JICA 専門家

Prime Minister Office

- H.E. Var Huoth President of Economic, Social and Cultural Observation
- Dr. Kong Thay Deputy General Secretary
- H.E. You Khbang Thavoren Staff

Rural Development Bank

- H.E. Son Koun Thor Adviser to the Royal Government
President Director General

Council for Development of Cambodia

- 梅崎 路子 JICA 専門家

Prey Veng Provincial Office

- H.E. Lach Sam On Deputy Governor of Prey Veng Province
- Mr. Ros Rithy Chief of Irrigation Office
- Mr. Kim Savouth Deputy Director, Department of Water Resources and Meteorology, Prey Veng Province

Baphnom District

- Mr. Mao Eang Chief of Baphnom District

Food and Agriculture Organization of the United Nations (FAO)

- Mr. Hiek Som Chief of Statistical Development Service, Statistics Division

日本国大使館

- 齋藤 正樹 特命全権大使
- 柿田 洋一 一等書記官

JICA カンボディア事務所

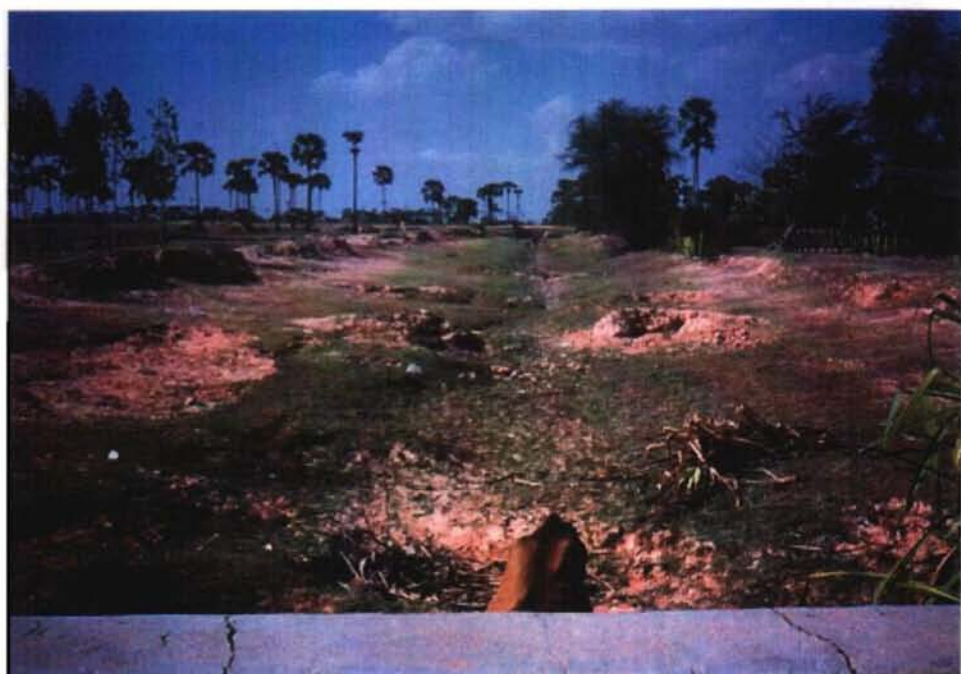
- 松田 教男 所長



水路跡



水路跡



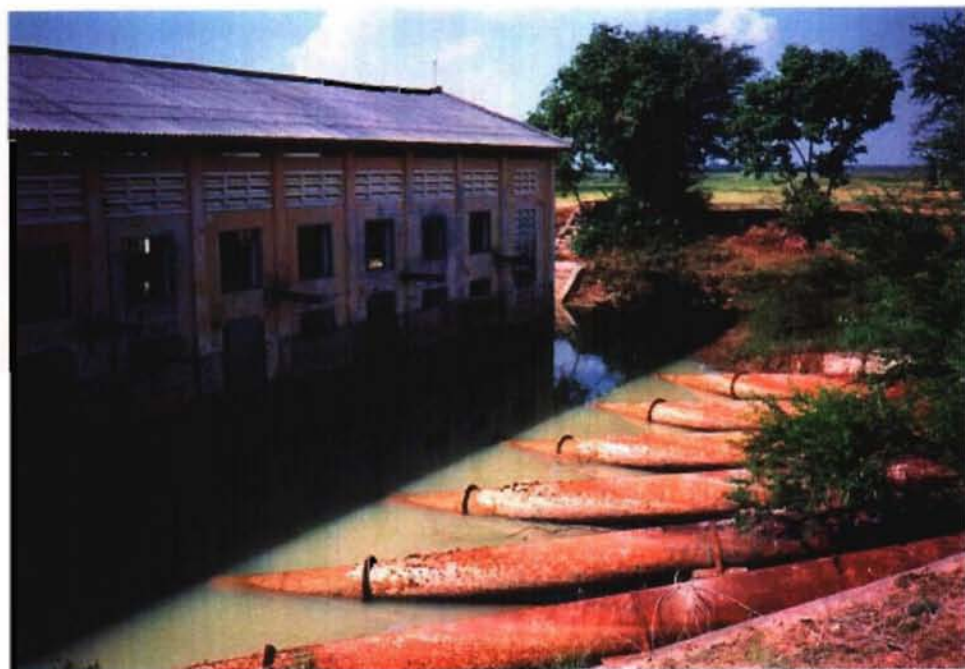
水路跡



地域内に存する井戸(UNICEF 寄贈)



ポンプ場—使用されていないまま、荒廃している



ポンプ場—使用されていないまま、荒廃している



地域内幹線—維持管理・補修がされていない



プレベン市(村)内



パブノム地区地方事務所



打合せ風景—プレベン州政府

ラオス国

ポンサリ県農業総合開発計画

プロジェクトファイナディング調査報告書

平成12年3月

社団法人 海外農業開発コンサルタント協会

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まえがき

本報告書は、財団法人海外農業開発コンサルタント協会（ADCA）から派遣された太陽コンサルタント株式会社、村田稔尚、田中忠雄、十津川淳、日本技研株式会社、湯川義光の4名によって、2000年3月に実施した「ポンサリ県農業総合開発計画」に係る調査結果を取りまとめたものである。

1986年の新経済メカニズムと呼ばれる経済改革の開始以降、96年迄ラオス経済は安定的に推移してきた。特に89年の世界銀行、IMFによる構造調整支援の本格化以降、経済は年率7%前後の成長を遂げ、財政収支、インフレ率とも改善を遂げた。こうした経済の好調は、GDPの約6割を占める農林水産セクターが安定成長を遂げる一方、貿易・投資の自由化を背景に、製造業、商業、運輸・サービスの各セクターが外国投資の導入を原動力に高成長を遂げたことで達成されてきたと考えられる。

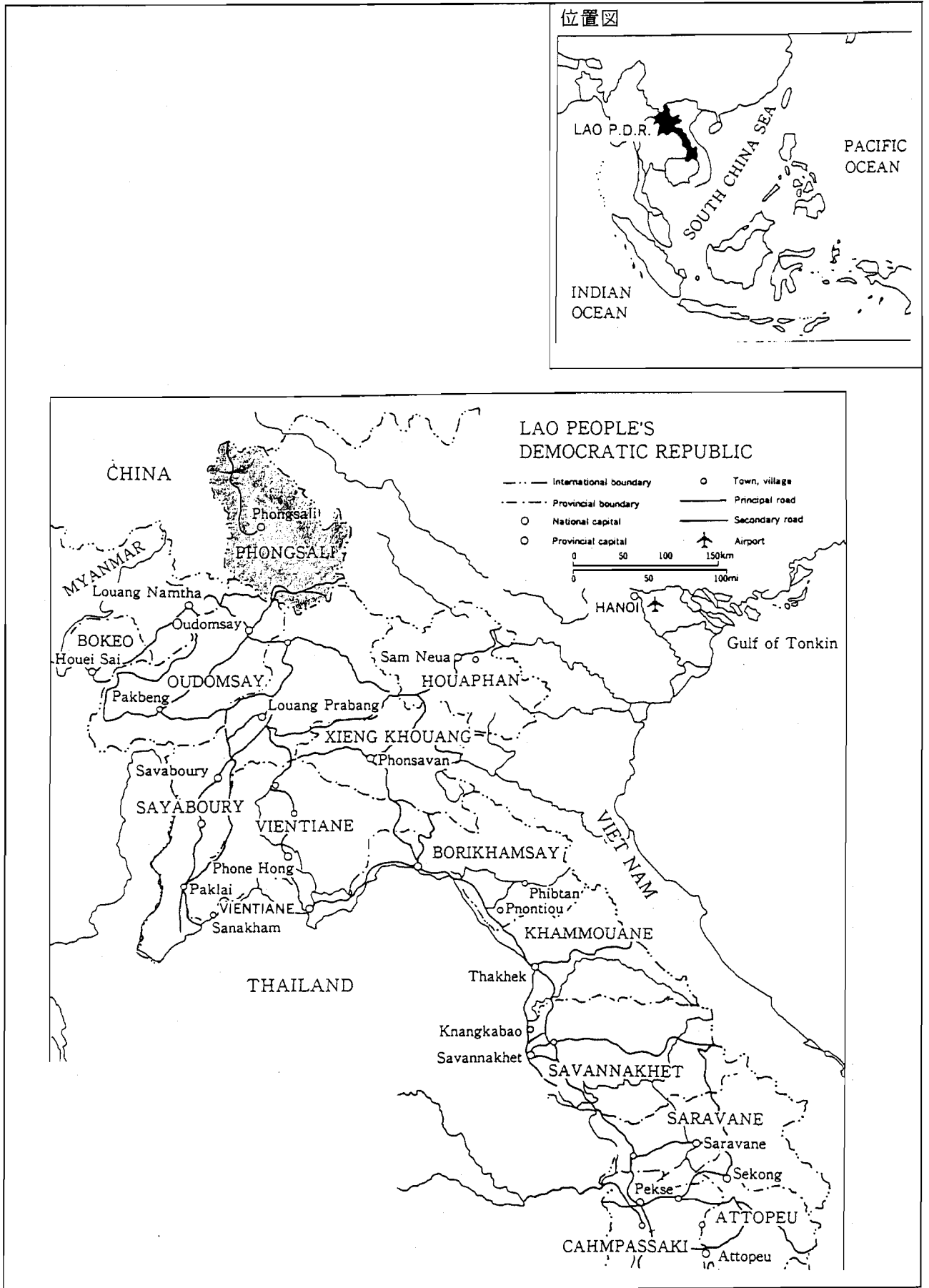
しかしながら、そのような近年の経済発展と並行しながら、国内における地域格差が進行してきたこともまた事実である。これまでの経済発展計画はヴィエンチャン周辺およびサバナケットを中心とした中南部地域に焦点が当てられてきており、そのため北部の山岳地帯は実質的に開発計画が後手にまわってきた。

本対象地であるポンサリ県は、北部山岳地帯における典型的な開発後進地域であり、対象地域には安定的な農業生産を求める声とともに、隣接県と地域をつなぐ道路網の整備や電気といった開発ニーズも非常に高い。本計画ではそのようなBHNの側面も重視した形態でのプロジェクト推進を図るものである。

本調査の実施にあたり、ラオス国日本国大使館長野書記官、JICAラオス事務所青木所長、農業省灌漑局橋本専門家をはじめ、多くの方々から調査のご協力をいただいた。ここに、これらの方々には深く謝意を表するとともに、本件計画が早期に実現されることを期待するものである。

平成12年3月
太陽コンサルタント株式会社

位置图



I. 背景

1. 社会経済状況

1.1 自然条件

1.1.1 国土

ラオス人民民主共和国は北緯 14 度～22.5 度、東経 100 度～107 度に位置しており、中国、ベトナム、タイ、カンボディアと国境を接している。国土はインドシナ半島の中央部に位置しており、国土面積は 23 万 6800Km²、日本の本州とほぼ同面積である。国土は細長く北から南に伸び、北部が山岳地帯となっている一方、中部から南部にかけてはメコン川沿いに平野が広がっている。

1.1.2 地形

ラオスの細長い国土は北部では山岳地帯が形成されている一方、中部に向けては折り重なった山地が続いている。主だった山脈は北東から南西に走り、山と谷はいわゆる V 字型をなし、峰は谷底まで 600m～1200m と屹立している。最高峰は Phou Bia 山(2820m)であり、北部のシェン・クアン(Xieng Kuang)県に位置している。山に囲まれた北部と異なり、中部では若干、海拔も低くなり隣国であるベトナムおよびタイとの往来もかなり頻繁に行なわれている。しかしながら南部にかけては再び山岳地帯となり、海拔 2000m 以上の山々が連なっており、カンボディア、ベトナム南部地方との往来の障壁となっている。

1.1.3 気候

ラオスは他の東南アジア諸国同様、明瞭な雨期と乾期の 2 つの季節を有している。これは主として東南アジアを吹く季節風の影響によるものであり、南西からの湿気を含んだ風が吹く季節—概ね 4 月から 10 月—には雨期となり、一方の 11 月から 3 月は北西部から乾燥した季節風が吹くために国土は乾燥し、乾期を形成する。降水量は、7 月から 8 月が最も多く、地域によっては月に 300mm を超えている。年間の降雨量は大部分の地域で 1500mm を超えるが、北部地域が若干少なく、南部が多いという傾向がある。また南部のボロベン平原のように年間降雨量が 4000mm を超える地域も存在する。

表1 ラオスの気象(1998年)

		1	2	3	4	5	6	7	8	9	10	11	12
Luangprabang	気温	21.2	23.1	26.5	26.9	27.8	27.9	26.8	27.6	26.8	25.4	22.8	21.4
	降雨量	27.0	2	33	178.1	160.9	138.2	179.4	265.4	99.4	47.1	25.5	7.5
Vientiane	気温	24.6	25.8	28.9	29.5	29.6	28.8	28.4	28.3	27.7	27.4	25.6	23.7
	降雨量	0	7.7	34.5	78.5	143.9	277.8	304.3	392.6	185.6	45.8	5.7	1
Savannakhet	気温	25.1	27	29.7	30.2	30	29.5	29.3	27.8	27.1	26.2	24.4	21.7
	降雨量	0	28.9	9.5	25.3	221.1	240.3	88	219.9	209.7	26.4	7.1	4.2
Pakse	気温	29.3	29.8	32.3	32.7	30.8	30	29.6	28.6	27.8	28	26.8	26.1
	降雨量	0	87.8	0.4	37.3	278.1	150.2	181.3	468	409.7	50.8	62	7.9

出所：Basic Statistics About the Socio-Economic Development in the LAO P.D.R, State Planning Committee

1.1.4 植生

ラオス国内の熱帯樹林は総計で約15万Km²に及ぶが、降雨量、気温、土壌の3条件の組み合わせによって地域により異なる様相を呈している。熱帯樹林のうち高温多湿な密林は5万5000Km²を占める一方、残りの9万5000Km²は乾燥した森林に覆われている。また草地および樹木の点在する草原が、国内に約1万5000Km²あると推測されているが、主にこれらは中部、南部のボロベン平原、ジャルズ平原に見られる。北部をはじめとした山岳地方や丘陵地帯に見られる多くの草原は、長期に亘って伐採、焼畑を繰り返し農業を行ってきた結果生じたものと考えられている。

1.2 社会条件

1.2.1 人口

ラオス国の人口は1998年の同国政府公式数値によると496万6900人、人口密度が21人/Km²であり、アジア地域で最も人口の少ない国の一つである。都市別に見るとヴィエンチャン特別市に145人/Km²、計56万9000人の人口が集中しており、第二、第三の都市としてはサバナケット、チャンパサックと続いている。また人口増加率は国平均で2.5%/年となっており、ウドムサイ県、セコン県において3%超えの人口増加率を示している（ヴィエンチャン特別市においては2.9%/年）。

1.2.2 民族

ラオスにおける民族構成はラオ・ルムと呼ばれるタイ系(ラオ、黒タイ、白タイ、タイ・ル一族等)が60%を占め、その他のラオ・トゥングと呼ばれるプロネシア系(カー族等)、ラオ・スーングと呼ばれるメオ、ヤオ、マン族等から成っている。またさらにはヴィエトナム人、中国人も全国的に分布しており、ラオス国全土ではその種族数は60種以上に達するものが見られている。民族の居住分布としては、タイ系は主にメコン川流域の低地に住んで農耕

を営んでおり、カー族は高度 1000m以上、メオ、ヤオ、マン族はさらに 1500m以上の高地に住んでいるといった大まかな分布がある。

1.2.3 言語・宗教

言語は一般にラオス語が用いられている。旧宗主国語であったフランス語は現在ではごく一部の政府職員等が使用できるといった範囲に限られている。

宗教は小乗仏教が広く信仰されており、国民の多くは敬虔な仏教徒である。人々の生活基盤および思想基盤も仏教に深く根ざしており、コミュニティには多くの寺院が見受けられる。

1.2.4 政治

ラオスは 1975 年のヴェトナム、カンボディアにおける政変の余波を受け、同年 12 月に王政を廃止し「ラオス人民共和国」を樹立した。以後、穏健な社会主義的政策を推進し、国内政治は比較的安定したまま推移してきた。しかしその一方で経済は社会主義的中央集権、計画経済の行き詰まりから十分な経済再建を果たせない時代がこれまで続いてきた。

それまでの反省から政府は 1986 年の第 4 回党大会で「新思考」政策を導入し、従来の親ヴェトナム・ソ連一辺倒の外交から西側諸国を含む全方位的外交を標榜する大転回が為された。また同時に政府は、市場経済原理導入を主内容とする経済改革「新経済メカニズム」を打ち出した。1991 年には新憲法が制定され、カイソーン大統領の後任に選ばれたヌーハック大統領は改革開放路線の踏襲、ラオス人民革命党を中核とする政治体制を堅持して行く旨を宣言した。現政権は 1998 年にヌーハック大統領が高齢により引退したことを受け、後任のカムタイ大統領が政権運営を行なっている。なお近年、政府は内閣改造を進めてきたものの、政治体制の根幹を成すラオス人民革命党が一党支配を続ける体制は当分の間、堅持されてゆくものと見られている。

1.3 経済条件

1.3.1 経済概況

社会主義型経済を堅持してきたラオス経済は、旧ソ連・東欧諸国、ヴェトナム等からの援助を受けつつ経済発展を目指してきたが、1980 年代半ばまでラオスの社会主義経済は不調なままであった。政府は 1986 年に「新思考政策」のもと、「新経済メカニズム(New Economic Mechanism)」を新たな経済政策目標として掲げ、経済発展に向けた努力が始められた。政策

の基本方針は 1)銀行制度の改変、2)税制改革、3)外国投資法の制定と外国企業の誘致、4)国営企業の民営化等であり、当初は急激なインフレの進行、財政赤字の拡大につながったものの、90年代に入り GDP、物価、為替等は安定した動きを見せるようになった。

また最近の経済指標は下表のようになっており、安定的な経済成長といえる状況となっている。しかしながら、97年7月のアジア通貨危機ではラオスの通貨であるキップも大幅に下落し、物価は急激に上昇に見舞われ、経済も一時、停滞を余儀なくされた。

表2 主要経済指標

	1993	1994	1995	1996	1997
実質 GDP 成長率(%)	5.9	8.1	7.0	6.9	7.2e
名目 GDP(十億キップ)	951.0	1107.8	1419.1	1725.7	2202.5e
一人あたり GNP(US\$)	298	330	333	374	413e
消費者物価上昇率(%)	6.3	6.8	19.4	13.9	19.3
為替レート (キップ/US\$)	717	719	910	939	2019
公定レート					

出典：Bank of the Lao PDR, Annual Report 1997

為替がこのように急激な下落をしている状況下では、実質 GDP 成長率は推定 7.2%を示しているものの、外貨(米ドル建て)で見た GDP 成長率はむしろ低下しているといった状況が生まれている。98年の GDP はさらに約 4 兆 2600 億キップ、GDP 成長率も 4.0%となっているものの、同様に為替レートが約 4000 キップにまで下落したために、経済力はむしろ低下したものと考えられる。

1.3.2 産業構造

ラオスの産業別 GDP は、一次産業が GDP 全体の約 50%以上を占めており、国家経済に占める割合は依然として高くなっている。また就業人口の点から見ると、国内就業人口の約 85%を占めており、典型的な農業国の様相を呈している。ただし近年では、第二次産業、第三次産業も堅調な伸びを示しており、一次産業が約 3-6%の成長率であるのに対して、第二・三次産業は年平均 10%程度の成長率を維持している。とはいえ、ラオスが依然として農業国であることには変わりなく、その農業が天候依存型であるかぎり、旱魃等で農業生産が著しく低下し破綻に近い状況になったときには、GDP 全体に大きな影響を与えるといった構図になっている。

表3 ラオス国産業別 GDP 比 (%)

	1993	1994	1995	1996	1997
農業部門	56.3	56.4	54.3	52.2	51.5
耕種農業	27.3	28.4	25.9	24.9	25.9
畜産・漁業	22.9	22.1	21.4	20.6	19.7
林業	6.1	5.9	7.0	6.7	5.9
工業部門	17.4	17.8	18.8	20.6	21.1
鉱業・採石業	0.2	0.2	0.2	0.3	0.4
製造業	12.8	12.7	13.9	15.4	16.0
建設	3.1	3.3	3.3	3.5	3.3
電気・ガス・水道	1.3	1.6	1.3	1.4	1.3
サービス部門	24.3	23.7	24.5	24.8	25.5
運輸・倉庫・通信	4.9	4.7	5.2	5.4	5.5
卸売・小売業	8.1	8.1	8.3	8.6	8.8
金融・保険・不動産	1.1	1.1	1.4	1.3	1.6
家賃収入	3.5	3.5	3.4	3.4	3.2
公務員賃金	4.3	3.7	3.3	3.1	2.9
非営利機関	1.5	1.3	1.2	1.2	1.3
ホテル・レストラン	0.8	1.2	1.5	1.7	1.9
その他	0.2	0.1	0.2	0.2	0.2
輸入関税	2.0	2.1	2.5	2.4	1.9
計	100.0	100.0	100.0	100.0	100.0

出典：Bank of the Lao PDR, Annual Report 1997

1.3.3 農業

近年5カ年間のラオスの農林水産業はGDP成長率約7%よりは若干低いものの、約5%程度の成長率で推移しており基本的に堅調である。

ラオスは、国土の約8割が山岳地帯であり、農耕可能地はメコン川およびその支流流域の低地に限られている。そのため農耕可能地は国土面積のわずか約4%であり、極端に限定されている。耕作されている農作物としては、米を中心にコーヒー、トウモロコシ、イモ類、タバコ等が挙げられる。そのうち特に米は全作物収穫面積の8割以上を占めており最重要作物となっている。

(8 優先プログラム)

- 1) 食糧増産
- 2) 市場価値のある商品生産
- 3) 焼畑農業の削減
- 4) インフラ整備
- 5) 人材育成
- 6) 地方農村開発
- 7) 外部経済との関係拡大
- 8) サービス部門の拡大

2. 国際協力の現状

ラオスへの経済援助は1975年に社会主義政権が誕生した際に、西側諸国からの援助がほぼ停止され、ソ連、ヴェトナム等東側諸国からの援助が中心となった。しかしながら、1986年に打ち出した「新経済メカニズム」を契機に西側諸国からの援助も再開されている。現在では、国際機関はじめ二国間援助もBHNを中心に経済協力資金は年々増大の一途を辿っている。

表5 経済資金協力支出純額 (単位: 100万ドル)

	1992	1993	1994	1995	1996
公的資金計	165.3	206.8	218.4	312.8	338.6
ODA計	165.3	206.8	218.4	312.7	338.5
DAC諸国計	76.9	92.2	123.8	170.0	147.5
国際機関	88.4	114.6	94.7	142.7	191.0
アラブ諸国	-	-	-	-	-
OOF計	-	-	-	0.1	0.1
民間資金計	0.5	0.1	0.8	1.0	-4.2
直接投資	0.4	-	-	0.3	1.6
証券投資	0.1	0.1	0.3	0.7	-10.5
輸出信用	0.0	0.1	0.6	-	4.7
合計	165.8	207.0	219.2	313.8	334.4

出典: OECD, Geographical Distribution of Financial Flows to Aid Recipients, 1992-1996, 1998

日本からの援助は下記表にあるように二国間援助においてはトップドナーとなっている。日本の援助項目は以下の4点を重点項目として掲げ、無償、プロジェクト技術協力等を行っている。

1) 人づくり

長引いた内戦の影響等からラオスでは、国造りを行なう実質的な中間層の人材が極端に

また、1995 年時における調査では、水田の多くは伝統的な灌漑施設を有しているが、その多くは貧弱な構造であり、約半分の施設は取水が困難な状況にある。ポンサリ県における既存灌漑施設の状況は以下表のようになっている。

表 8 ポンサリ県灌漑施設

灌漑水田	雨期	乾期
面積(ha)	5,340	1,030
面積率(%)	99	19
県全体水田面積(ha)	5,380	
施設の種類	伝統的施設	恒久的施設
施設数	2,961	10
面積(ha)	5,090	70
平均面積(ha/施設)	2	7

出典：JICA 専門家レポートから

1.1 プロジェクトタイトル

ポンサリ県農業総合開発計画

1.2 調査対象地域

本調査ではポンサリ県全域を調査対象地域とする。県内は地形、気候等の面において同質性が高く、県全域を対象とした農業総合開発計画の策定は可能と考えられる。

1.3 責任機関

農業林業省

2. プロジェクトの目的

2.1 一般的目的

- 灌漑／排水施設の改修・整備をとおした農業生産量の増大
- 農業発展・地域発展の礎となる住民組織の構築/整備
- 中国、ヴィエトナム等近隣諸国を含めた農産物物流の構築
- 森林保護(焼畑面積の減少)計画の策定

表 4 主要農作物生産高

		1993	1994	1995	1996	1997
米	生産高(千トン)	1,250.7	1,577.1	1,417.8	1,413.5	1,660.0
	収穫面積(千 ha)	538.4	610.9	559.9	553.7	598.7
トウモロコシ	生産高(千トン)	47.6	55.8	50.4	76.6	78.0
	収穫面積(千 ha)	27.1	28.1	29.1	37.4	38.0
サツマイモ	生産高(千トン)	112.9	159.5	99.2	92.5	94.0
	収穫面積(千 ha)	14.3	21.9	14.0	14.6	19.4
コーヒー	生産高(千トン)	7.6	9.0	8.6	10.0	12.3
	収穫面積(千 ha)	18.9	20.0	20.1	23.1	32.4
タバコ	生産高(千トン)	29.2	31.8	26.6	26.0	28.0
	収穫面積(千 ha)	7.1	7.3	7.4	7.2	7.5

出典：Basic Statistics 97, National Statistical Center

米の生産の大半は粗放的な天水農法に依存しており、そのために旱魃や水害によって生産量は大きく上下している。そのためラオスの食糧自給は1992年に名目上の需要量を満たしたとされたものの、翌年1993年には旱魃により生産量は15%減少し、米の輸入が必要な状態となった。

ラオスの米生産のうち65-70%が水稲、残りが陸稲となっており、その比率自体には近年大きな変化は無い。単位収穫量は雨期水稲で3.1トン/ha、陸稲1.6トン/ha、乾期水稲4.3トン/ha、全体では2.8トン/haとなっており、全世界平均の3.2トン/haを下回っている。陸稲栽培の約8割は山岳地帯を中心とした焼畑農法によって行なわれている。

また米の生産地はメコン川流域の低地に集中しているため、山岳地域では米が不足する一方、平野部低地では余剰米が発生するといった状態となっている。具体的には、平野部が広がる南部・中部地方では一人あたり米生産量が400Kgである反面、北部では同200Kgとなっており、一人あたり必要量の300Kgをはさみ、南北間で倍の差が生まれている。しかしながら、そのアンバランスな状態は国内交通網が未整備であるために、国内での米流通は現実的に困難であり、余剰米はタイなどの隣国に輸出されている一方、山岳地帯ではベトナム、中国などから米を輸入している状況にある。

米以外の食糧作物としては、トウモロコシ、イモ、野菜等が挙げられるが、生産はごく小規模であり概ねは自家消費用である。一部、南部のボロヴェン高原などではヴィエンチャン等に向けて生産・出荷されているものの、農家収入に大きく貢献するほどの規模ではない。

ラオス国内の換金作物としては、コーヒー、綿花、タバコ、サトウキビが挙げられるが、特にコーヒーは南部のボロヴェン高原をはじめとして盛んに栽培されており、生産高も近

年伸長している。タバコは主にメコン川及びその沿岸において生産されているが、病虫害の問題等を抱え、その生産量は不安定である。

1.3.4 林業

森林資源に恵まれたラオスでは、林業は国家の重要産業の一つとして認識されている。しかし、同国における森林伐採は近年の環境保護の観点から政策が目まぐるしく変わり、この政策変更の度に伐採量ひいては木材製品にいたる製造業生産高をも左右することとなっている。例を挙げると、1991年8月、森林保護、植林増進を図るために丸太の輸出を全面的に禁止する政策を導入するとすぐに、92年の実質GDP(部門)は前年比35%を越す大幅な減少に見舞われた。その後の93年には伐採者に再植樹の義務を課すことや伐採量の制限といった条件を加えたことで禁止令は解除され、生産は183%に急増している。なお、現時点では伐採可能地域がダム水没予定地と植林再生地域に限定されている。

1.4 経済開発計画

ラオスは社会主義経済からの脱却を中心課題に据え、1986年から市場経済化を図ってきた。1996年から2000年にかけては第4次5ヵ年計画を設定し、下記目標を掲げている。

主要数値目標

- 年平均実質GDP目標成長率：8～8.5%
- 農業部門年平均実質GDP目標成長率：5%
- 工業部門年平均実質GDP目標成長率：12%
- サービス部門年平均実質GDP目標成長率：10～11%
- 平均インフレ率を10%以内に抑制
- 歳入規模をGDPの16～16.5%へ引き上げ
- 財政赤字をGDPの10%以内に抑制
- 平均輸出増加率は12%、輸入増加率は10%とし、貿易赤字をGDPの12%以内に抑制
- 2000年での人口を520万人と想定し、一人あたりGDP500ドルを達成
- GDP産業構成比目標：農業48%、工業22%、サービス(含む輸入関税)30%
- 社会経済開発に対する投資額はGDPの25～30%。このうち政府支出はGDPの12%
- 5年間の海外直接投資額：20億米ドル
- 5年間の海外援助・融資獲得額：14～15億米ドル(過去5年の40%増)

2.2 最終目的

本プロジェクトの最終目的は、持続的かつ環境保護・生態系の面からも許容しうる範囲での農業開発によって、農民の収入増加とそれにとまなう厚生面を含めた一般的生活水準の向上を本プロジェクトの最終目的とする。

また、本プロジェクトはその裨益対象を少数民族を含めた零細農民としていることから、導き出される成果はラオス国内における他の少数民族地域の発展計画の一例を示すことができるものと思われる。

3. 調査計画

3.1 開発構想

計画地域内の農業生産基盤、農村生活基盤を総合的に整備改善し、農業生産の安定・増大と地域住民の生活水準の向上を図り、農村活性化のモデルとする。現時点ではポンサリ県における開発制約要因一特に交通・運輸をはじめとした経済インフラストラクチャーの未整備が重要視されているが、それらインフラの発展とともに基本的な生活水準の向上、BHN分野の充足が求められる。

3.2 調査の範囲と調査日程

本調査によって期待されうる成果は以下の通りである。

1) フェーズ I (マスタープラン・スタディ)

- 農業総合開発計画の立案

特に高地を対象とした持続的農業・農村開発のガイドラインを作成する。ガイドラインは以下の項目を取り込むこととする—貧困対策、焼畑撲滅、代替農作物の多様化、土壌および水質保全、農村域内軽工業・加工業の可能性。

2) フェーズ II (フィージビリティ・スタディ)

- フィージビリティ・スタディ実施

具体的な開発計画および戦略を包含したフィージビリティ・スタディを行なう。スタディは以下の項目から成る。

少ない。そのため a)行政官の育成、b)税関職員・徴税官吏の育成、c)公共企業および民間部門の実務者・技術者の育成、d)高等教育支援、e)銀行・金融部門の人材育成を行なう。

2) BHN (Basic Human Needs : 基礎生活分野)支援

初等教育の充実、医療・保健施設の整備・拡充を図る。

3) 農林業

国家の最重要産業である農林業の発展は非常に重要であり、特に以下の分野に注力した発展を図る。a)農業政策の企画・策定、b)灌漑施設整備、c)ポスト・ハーベスト、d)焼畑対策、e)森林保全

4) インフラ整備

環境を配慮しつつ、道路および橋梁等の経済インフラの整備が国家の発展にとって非常に重要である。

表 6 ODA 実績 (1996 年)

単位：100 万ドル

		贈与	借款	ODA 純額
DAC 二国間	日本	59.7	-2.3	57.4
	ドイツ	55.7	-32.8	22.9
	スウェーデン	17.7	0.0	17.7
	フランス	16.7	-0.3	16.4
	オーストラリア	12.4	0.0	12.4
	その他	20.8	-0.1	20.7
	小計	183.0	-35.5	147.5
国際機関	ADB	-	-	83.6
	IDA(世銀)	-	-	59.0
	CEC	-	-	12.8
	UNDP	-	-	11.5
	IMF	-	-	5.5
	その他	-	-	18.6
	小計	36.1	154.9	191.0
合計		219.1	119.4	338.5

出典：OECD, Geographical Distribution of Financial Flows to Aid Recipients, 1992-1996, 1998

II. ポンサリ県農業総合開発計画

1. 開発計画地域概要

中国、ヴェトナムの両国と国境を接するポンサリ県は、標高 1200m前後の山岳地帯に位置している。県内は平地が非常に少なく、かつ交通網が著しく未発達であり、そのため域内および他地域との交易活動は大きく制限を受けている。ポンサリ県の人口は 165,900 人(1998 年統計)であり、人口の大半が農業に従事している。ポンサリ県の農業生産は下表のようになっており、サトウキビや柿、ブドウなどの果物、および水牛等が隣国中国、ヴェトナムに輸出されている。

表 7 ポンサリ県農業生産 (1991-1995 年平均)

作物名	収穫面積(ha)	生産量(t)	単収量(t/ha)
米	26,247	39,714	1.51
雨期水稲	4,890	13,219	2.70
乾期水稲	17	59	3.58
陸稲	21,341	26,436	1.24
メイズ	1,647	3,850	2.34
イモ類	2,239	15,671	7.00
マングビーン	516	287	0.56
大豆	1,249	1,015	0.81
ピーナッツ	1,093	892	0.82
タバコ	321	1,579	4.92
綿花	490	349	0.71
コーヒー豆	79	47	0.60
茶	29	106	3.69
サトウキビ	50	1,219	25.92
野菜	410	2,938	7.17
計	3,450	-	-

出典：農業省農業統計資料

現在、ポンサリ県は農業開発計画として以下の 3 点を掲げている。

- 1) 4 郡(Yod Ou, Bounneua, Bountai, Muang Mai)における米生産増大
- 2) 焼畑代替としての商品作物栽培
サトウキビ、カルダモン、ブドウ、柿、ニンニク、ゴム、茶、
- 3) 畜産(水牛、鶏)

また同時に、ポンサリ県では未だに焼畑が盛んに行なわれており、焼畑民の移住促進を行なう必要がある。現在、焼畑面積は約 19,000 ヘクタールと推定されているが、県では 2005 年までに焼畑面積を 40%減少させたい意向である。

栽培作物多様化計画

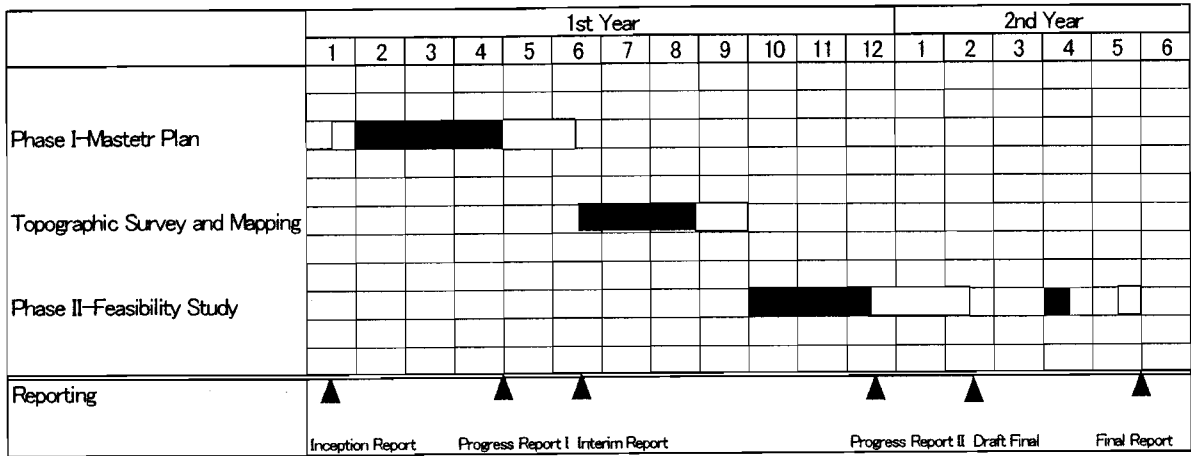
- 農村インフラ改善計画
- 灌漑開発計画
- 土壌・水質保全計画
- 地域共同体の強化計画
- 農村経済開発計画(収入向上と雇用機会の増進)
- 市場アクセス改善計画
- 農村域内工業・加工業開発計画
- 農業マーケティング開発計画
- 人的資源開発計画
- プロジェクト実施計画
- プロジェクト維持管理計画

3.3 調査実施日程

本調査は、以下の専門家によって編成された調査団により、下記のスケジュールで行なわれるものとする。

専門分野	日本人専門家 (M/M)	ローカルコンサルタント (M/M)
総括／農村開発	10.5	10.5
農村社会／農民組織	10.5	10.5
灌漑排水	10.5	10.5
栽培	8.5	8.5
農村インフラ	8.5	8.5
農業経済／マーケティング	7.5	7.5
施設設計／積算	6.5	6.5
環境	5.0	5.0
事業評価	4.5	4.5
測量	5.0	5.0

Working Schedule for the Project Study



4. 総合所見

1) 技術的可能性

現在、ポンサリ県における人的資源においては、人材不足である感は否めず、技術移転およびトレーニングを受けた人材の拡充が本計画遂行においては重要である。現在、農業分野を含め、他の生活の糧を得るべく農業以外の分野において、ラオス国にはいくつかの技術・職業センターが存在するが、農業技術訓練校はニーズを満たす状況とはなっていない。

だが同時に、農業技術の導入には、コミュニティベースでの技術移転の場も設ける必要がある。それはポンサリ県が幾つかの異なる言語を有する民族から成り立っているため、ローカルレベルでは言葉の壁が存在する可能性が高いためである。そのため、技術移転にはポンサリ県固有の条件に沿った視点および注意が必要である。

また、本レポートで強調してきたように、ポンサリ県は交通網の未整備が大きな開発障害要因となっており、道路整備ならびに農村電化をはじめとした経済インフラの整備が本計画と同時に、もしくはある程度先行する形で進行しない限り、開発効果は限定されてしまうものと考えられる。

2) 社会経済的可能性

ラオスにおける農業開発は依然として国家・地域発展の最重要項目として位置付けられており、本計画もまたラオス国政府の国家開発計画に合致している。そのため同国政府の本計画に対する開発ニーズは非常に高い。

また地域特性に視点を移すと、民族や文化といった側面をはじめ地域内における社会面においては、本対象地では特段の問題は発生しておらず、計画推進において社会的な阻害要因は無いものと判断できる。

添付資料

調 査 日 程

日 程 表					
年 月 日	日 数	出 発 地	宿 泊 地	備 考	
平成12年					
3.2	木	1	成田	バンコク	移動
3.3	金	2	バンコク	プノンペン	水資源省(Mr. Veng Sakhon)、首相府(Mr. Son Khon Thor)
3.4	土	3		〃	現地視察(バプノム、プレイベン州オフィス表敬)
3.5	日	4		〃	資料収集、整理
3.6	月	5		〃	農村開発省(Mr. Chum Seak Leng)、JICA(松田所長)、農業省、首相府
3.7	火	6		〃	大使館(斎藤大使、柿田書記官)、カンボディア開発委員会(梅崎専門家)
3.8	水	7	プノンペン	バンコク	移動、資料収集
3.9	木	8	バンコク	ヴィエンチャン	移動、JICA(青木所長)、農業省灌漑局(橋本専門家他)
3.10	金	9		〃	日本大使館(長野書記官)、ポンサリ県副知事、ラオス青年同盟
3.11	土	10		〃	ヴィエンチャン農業農村開発計画現地視察
3.12	日	11	ヴィエンチャン	バンコク	移動
3.13	月	12		〃	FAO事務所、資料収集
3.14	火	13	バンコク		移動(帰国)

面会者リスト

LAOS

Ministry of Agriculture Forestry

- Mr. Langsy Sayvisith Director General, Department of Irrigation
- 橋本 晃 JICA 専門家、Department of Irrigation
- 荒木 ヤスノリ JICA 専門家、Permanent Secretary Office
- 荒木 富美雄 JICA 専門家、チームリーダー：ウーエンチャン県農業農村開発計画フェーズ II プロジェクト

Phongsali Provincial Office

- Mr. Kham San Sovong Deputy Governor of Phongsali Province

Lao People's Revolutionary Youth Union

- Dr. Bounpone Bouttanavong General Secretary

日本国大使館

- 長野 誠司 一等書記官

JICA ラオス事務所

- 青木 真 所長

調査者経歴

調査員並びに経歴	
調査員名	経歴
村田 稔尚 (むらた としひさ)	昭和9年2月4日生 66歳 昭和31年3月東京大学農学部卒 昭和32年4月農林水産省入省 平成元年4月太陽コンサルタンツ入社 平成4年6月同社代表取締役社長
湯川 義光 (ゆかわ よしみつ)	昭和18年12月7日生 56歳 昭和42年3月京都大学農学部卒 昭和42年10月(株)三祐コンサルタンツ入社 昭和48年8月日本技研(株)入社 平成元年8月同社専務取締役
田中 忠雄 (たなか ただお)	昭和26年10月16日生 48歳 昭和49年3月東海大学工学部卒 昭和49年4月前田建設工業(株)入社 平成9年6月同社海外事業部課長
十津川 淳 (とつかわ じゅん)	昭和42年9月4日生 32歳 平成4年3月早稲田大学商学部卒 平成9年7月コーネル大学院地域計画学部卒 平成9年9月海外経済協力基金ワシントン 平成10年5月太陽コンサルタンツ(株)入社

Lao People's Democratic Republic
Peace Independence Democracy Unity Prosperity

(Final Draft)

National Rural Development Programme
1996 to 2000
Lao PDR

Volume I

Main Document

Prepared by

State Planning Committee, and
Leading Committee for Rural Development

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UNDP

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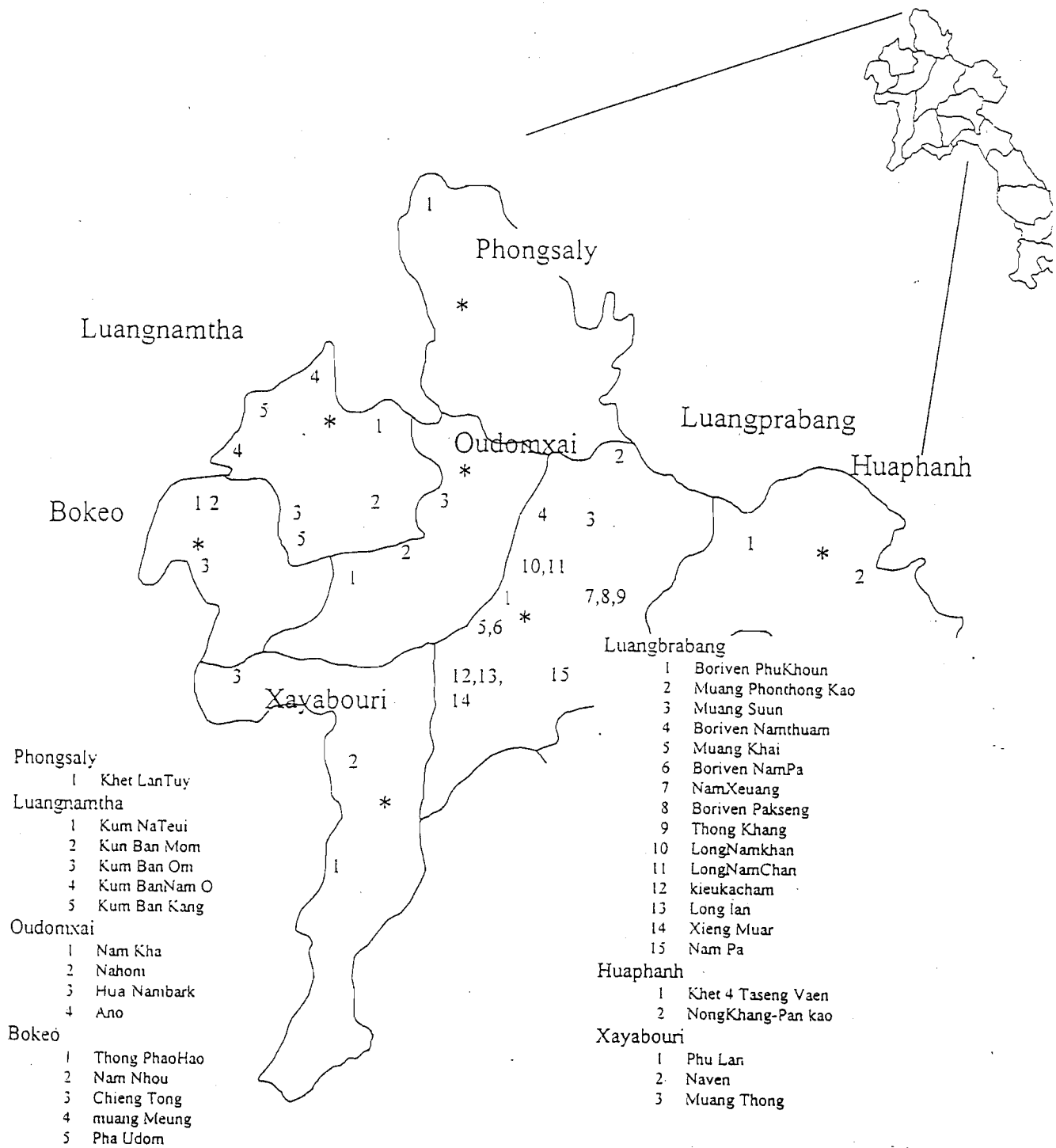
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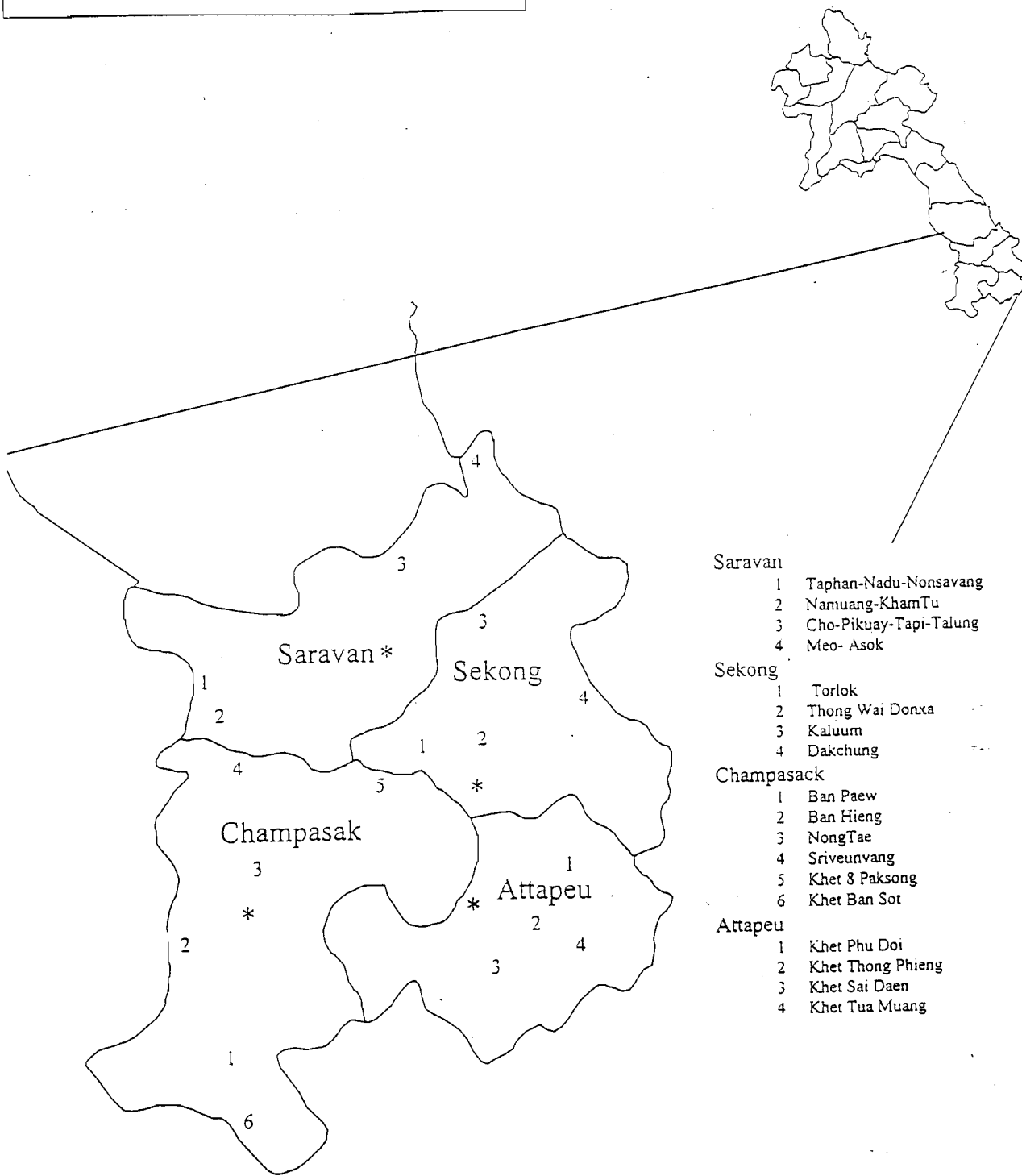
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Map 1: North Lao PDR
Focal Site Locations



Map 3: South Lao PDR
Focal Site Locations



(In Kcal)

LEVEL/YEAR	1996	2000	2010	2020
AVAILABILITY	2,300	2,500	3,000	3,500
REQUIREMENT	2,328	2,333	2,343	2,353

INVESTED REQUIREMENT

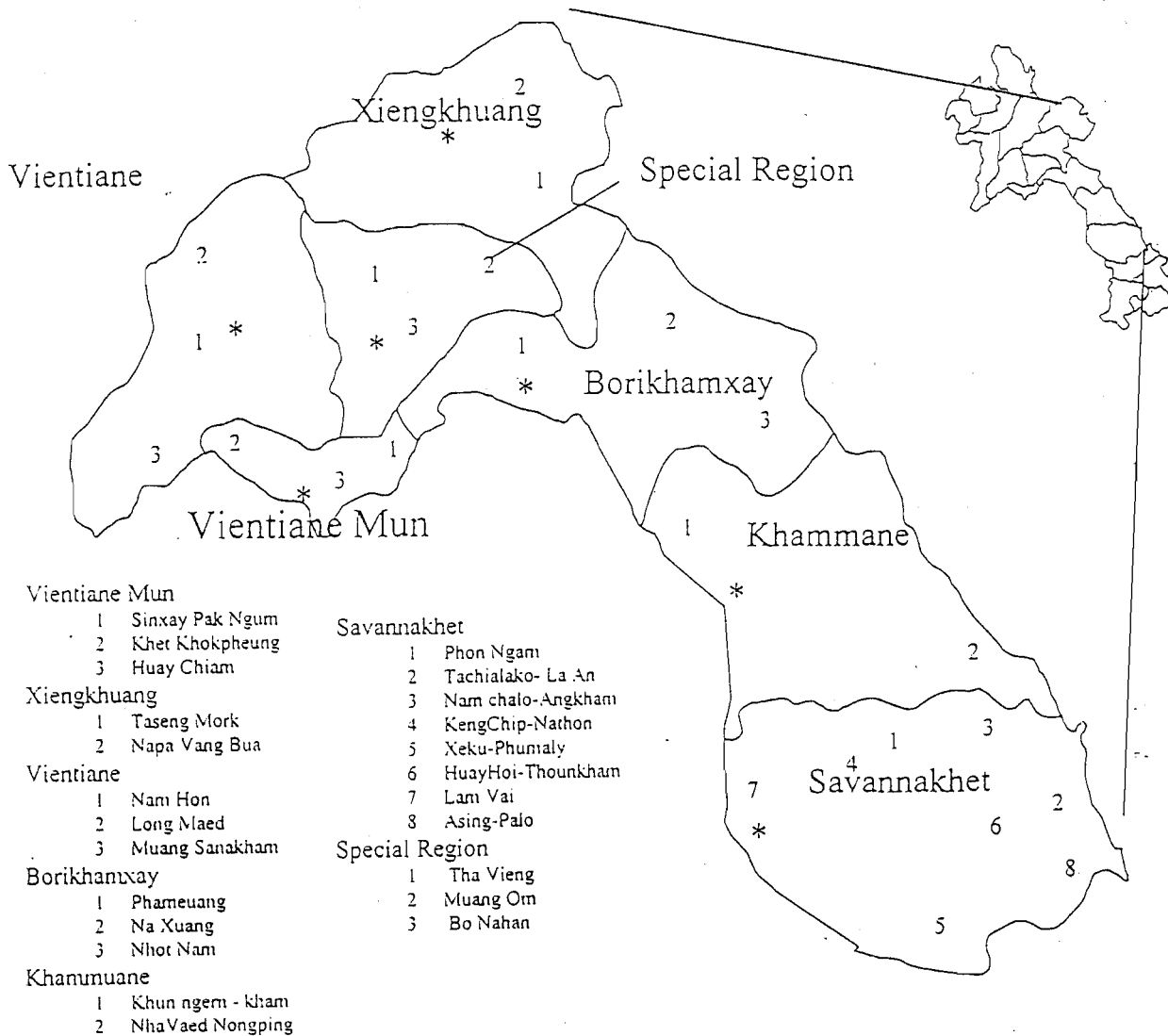
(In Thousand Million Kip)

ITEM/YEAR	1996	2000	2010	2020
1. INFRASTRUCTURE	124.35	349.00	45.70	225.20
• CULTIVATION	0.10	4.70	4.04	0.50
• IRRIGATION	122.65	252.00	5.20	207.00
• LIVESTOCK & FISHING	0.20	89.50	28.00	0.00
• FORESTRY	1.42	2.82	8.50	17.75
2. TECHNICAL SUPPORT	2.34	30.35	114.40	176.50
• CULTIVATION	0.15	17.00	85.20	85.20
• IRRIGATION	0.60	8.00	10.00	12.00
• LIVESTOCK & FISHING	0.17	2.00	5.00	58.00
• FORESTRY	1.42	3.55	14.20	21.30
3. INVESTMENT				
3.1 CREDIT	8.44	202.97	874.90	1,412.00
• CULTIVATION	-	108.00	228.00	163.30
• IRRIGATION	1.02	58.00	529.15	1,083.30
• LIVESTOCK & FISHING	6.00	32.00	102.00	137.00
• FORESTRY	1.42	4.97	15.75	28.40
3.2 FOREIGN FUND	4.55	20.10	75.65	115.65
• CULTIVATION	-	-	-	-
• IRRIGATION	-	-	-	-
• LIVESTOCK & FISHING	1.00	13.00	65.00	105.00
• FORESTRY	3.55	7.10	10.65	10.65

Remarks:

- All data is referenced to the basic statistics 1990 and exchange rate of 1 US\$=710 Kip
- The extension of GDP and investment structure is in correlation with the rhythm of the evolution of agricultural and forestry production in natural form to the commodity production linking with processing and exportation.
- Concerning the level of consummation, Availability means the capacity in production of food and food staff (including rice, crop food, meat, fish, milk fruit) and Requirement means food required to satisfy the minimum vital of Lao people.

Map 2: Central Lao PDR
Focal Site Locations



Executive Summary

Background

In 1986 Lao PDR began the transformation of its economy from a centrally-planned to an open market-based system. One decade on significant progress has been made. The economy has performed well in the early nineties, with growth rates averaging over 6 percent for 1990-94, and 6.4 percent over the past five years. For the most part, inflation has stayed in single figures and the exchange of the Lao currency, the kip, has been stable.

To date, the rural population has yet to receive adequate social services, whether in communication and transport, education, public health or others. The majority of the rural population follow livelihood systems based on the rhythm of nature, mostly live in poverty and suffer high mortality rates and a low life expectancy. They carry out largely subsistence production using traditional tools and techniques. Rural people lack knowledge on how to use their potential, and lack an appreciation of the value in preserving existing natural resources.

Rural Development Policy

In March 1994 the People's Revolutionary Party, Lao PDR, adopted a resolution on rural development. This resolution highlighted the strategic importance of rural development for Lao PDR and emphasised the need to establish focal zones. A Leading Committee for Rural Development was established in November 1994 to oversee implementation of the resolution.

During 1995 provincial leading rural development committees - assisted by newly established provincial rural development offices - went about identifying focal sites and preparing focal site development plans to the year 2000. These focal site plans are the basis for the National Rural Development Programme to the year 2000.

The Programme

The broad development strategy underlying focal sites is to bring together development efforts in an integrated and focused manner. As such a wide range of development activities are proposed in each focal site such as the improvement of infrastructure (improving roads and access), building schools, health care facilities and so on. The provision of such development services in an integrated and focused manner will have a positive impact on farm families. The exact mix of services provided in each focal site varies according to local conditions and capacities.

Another element in the focal site development strategy involves the promotion of permanent occupations. Resettlement is a development strategy which deals with several national objectives such as promoting rice production, commercial crops, stopping slash and burn and improving access to development services. Resettlement is proposed as a more feasible and cost effective way of making development services available to scattered and remote communities which could otherwise not be reached with the limited resources available. Government policy that resettlement be implemented only on a voluntary basis, and that clearly defined assistance and services be provided to resettled peoples. While about half of the focal sites included in the National Rural Development Programme include a component of relocation and resettlement, only 6 percent of the programme budget allocation is for resettlement.

The general process of involving focal site populations in the planning has been to post one or two rural development staff in the focal sites who then carry out household surveys through interviews and discussion. The focal site plans are then drafted on the basis of this survey and discussed with local leaders and villagers before completion.

The number of planned focal sites in 1996 is 58 and is due to increase to 82 in 1998 and 87 in 1999. No further expansion in the number of focal sites is then envisaged. There are a total of 1026 villages with a population of almost 320,000 in 62 focal sites for which information is available, giving an average of 16 villages and 5,200 people per focal site. The ethnic distribution of the population in focal sites is approximately, 46 percent Lao Loum, 37 percent Lao Tung, and 17 percent Lao Sung.

The total coverage of the national rural development Plan is estimated to increase to 450,000 by 2000, or about 12 percent of the total rural population.

The Budget

The total budget estimate for the National Rural Development Programme 1996-2000 is just over 151 billion kip. The highest proportion of expenditure in the proposed focal site budgets is for Infrastructure which accounts for about 41 percent of the total proposed expenditure, and is followed by about 28 percent for Agriculture. Proposed expenditures on Health and Income Generation - sectors which particularly concern women - are relatively low at 6 percent and 3 percent respectively.

Over two thirds of the proposed budget is on capital expenditure. As expected, the proportion is large for infrastructure, in which capital expenditure accounts for 37 percent of total expenditure and 58 percent of total capital expenditure. Only about 2.1 percent of the total proposed budget is for training, and almost half of this involved capacity building of the project management.

Mechanisms for Supporting Programme Implementation.

The following are some of the next steps which will be taken to implement the focal site programmes:

- * Develop procedures, systems and standards for planning, budgeting, approval, implementation and reporting for the national rural development plan.
- * Identify available funding resources and clearly specify which focal site proposals, or components within them have secured funding.
- * Assist Provincial Rural Development Committees to identify appropriate indicators and develop simple monitoring and reporting systems.
- * Assist in the capacity building of provincial rural development workers.
- * Promote wider participation of the Lao Women's Union in Provincial Rural Development Committees.
- * Ensure that successes and lessons learnt are identified and promote the replication of such experiences.
- * Ensure genuine participation of villagers in developing and implementing grassroots experiences.
- * Assess the cost effectiveness and impact of focal site experiences and shape national rural development on the basis of successful experiences.

Section 1: Background

1.1 General conditions in Lao PDR

In 1986 Lao PDR began the transformation of its economy from a centrally-planned to an open market-based system. One decade on significant progress has been made. The economy has performed well in the early nineties, with growth rates averaging over 6 percent for 1990-94, and 6.4 percent for 1991-95. For the most part, inflation has stayed in single figures and the exchange of the Lao currency, the kip, has been stable. However, during the first half of 1995, there has been some macro-economics instability due to the rapid expansion of money and credit and a trade and balance of payments deficit.

The national budget deficit is high. For most of the 1990-94 period, it has been in excess of 10 percent of gross domestic product. It has been financed largely through external assistance, which represents over half of the total government budget. Laos' wealth of natural resources, particularly its timber, minerals and potential for hydropower, offer the opportunity for greater reliance on domestic revenues.

In 1995, the Gross Domestic Product (GDP) growth was 7.1 percent and per capita GDP was \$350.

The structure of the Lao economy is predominantly agricultural. In 1995, the share of agriculture to total value added GDP was 54.3 percent; that of industry and services was 18.8 percent and 26.9 percent respectively. A good part of agricultural production is at the subsistence level, particularly in isolated communities where economic transactions are not monetised. Replacing subsistence farming with market-based production is a central Government policy. Over the medium-term, it is expected that industry will increasingly become an important source of value providing off-farm employment. Tourism and related services increased over 60 percent in 1995 and will likely provide more employment and income in the future. In their future development, all sectors will increasingly depend on private investment, both national and foreign.

Lao PDR's natural resources provide the dominant base for trade and investment. The sustainable use of natural resources for current and future generations represents a major pre-occupation of the Government. Concrete challenges include establishing and enforcing a consistent legal framework, creating awareness among the population, developing capacities, especially those needed to deal with large scale investment projects, and introducing viable alternatives to slash and burn (swidden) agriculture.

1.2 National Socio-Economic Plan

The Government has launched the National Socio-Economic Development Plan 1996-2000, to pursue an overall policy of growth with equity, focusing on eight national priority programmes: food production, stabilisation/reduction of shifting cultivation, commercial production, infrastructure development, improving socio-economic management and foreign relations, rural development, human resources development and services development.

The Public Investment Programme (PIP) projects an increase in public investment from \$147 million in 1995 to \$290 million in 2000, a doubling in real terms in five years. By the year 2000, the shares of health and education in public investment will increase to 9.7 and 8.1 percent respectively, while the share of investment in agriculture will decline to 11.3 percent. The largest allocation, 34.2 percent, is for the transport sector.

Table 1 gives a comparison between the public investment programmes for the periods 1991-1995 and 1996-2000.

Table 1 Comparison Between the 1991-1995 PIP the 1996-2000 PIP

	1991 - 1995		(Billion Kip) 1996 - 2000	
Agriculture, Forestry & Irrigation	82.2	15.4%	168.9	11.3%
Industry & handicrafts	92.9	17.4%	217.7	14.5%
Communication	273.5	51.2%	513.5	34.2%
Education	35.4	6.6%	145.3	9.7%
Public Health	18.8	3.5%	120.9	8.1%
Information & Culture	9.4	1.8%	30.4	2.0%
Social Welfare	2.3	0.4%	102.0	6.8%
Housing & Offices	13.5	2.5%	47.1	3.1%
Rural Development	6.4	1.2%	154.0	10.3%
Total	534.4	100.0%	1,500.0	100.0%

To sustain planned economic growth rates of between 8 and 8.5 percent, an annual public investment level of about 12.5 percent of GDP is programmed between 1996 and 2000. Due to the low level of domestic savings (estimated at 6 percent of GDP) and the fact that tax revenues are just enough to finance current expenditures, a budget deficit of around 10 percent of GDP is anticipated for the same period. In the financial year 1995, the total Government budget was approximately \$320 million.

As can be noted in Table 1, the proportion of total public investment in education is expected to increase from 6.6 percent to 9.7 percent, and in public health from 3.5 percent to 8.1 percent. In nominal terms, investments are expected to increase four fold on education and over six fold on public health between the two periods. This represents a strong commitment to invest in social development.

The proportion of public investment in agriculture over these two periods is expected to decline in proportional terms from 15.4 percent to 11.3 percent. However, in nominal terms PIP allocation for agriculture is to double. The proportion and amount allocated to rural development increases from 1.2 percent of the 1990-95 PIP, to 10.3 percent in the 1996-2000 PIP which represents the most significant change between the two periods.

The general guidelines for the socio-economic development for the forthcoming five years are to:

“firmly continue to build sectoral and regional economic structures along socio-economic development and in conjunction with the preservation of the natural environment;

regional socio-economic development must be linked to the development of ethnic mountainous areas and the gradual reduction of the gap between urban, rural and mountainous areas.”

(1996-2000 Socio-economic Development Plan, SPC, 1996)

Macro-economic targets set by the Government to be achieved by the year 2000 include:

- * The national economic growth target is to achieve an average economic growth of 8 to 8.5% per year, of which
- * Average annual increase of gross agro-forestry produce of approximately 5%
- * Approximate annual increase of gross industry and handicraft product of 12%
- * Annual increase of gross service product of 10-11%
- * Average inflation rate of no more than 10% by the year 2000
- * Reduction of the budget deficit to no more than 10% of the GDP
- * Annual increase of export and import by 12% and 10.5% respectively, and maintenance of external trade deficit to no more than 12% of the GDP.
- * By the year 2000, the population is expected to grow to 5.2 million with an average GDP per capita of approximately US \$500.

Sectoral and programme targets set out in the Plan include:

Agriculture

- * Paddy rice production of 2.0 million tons by 2000.
- * Expansion of rice cultivated area by 100,000 hectares by 2000, of which 25,000 hectares will be under irrigated rice cultivation. (including the existing of 50,000 ha)
- * Yields for rainfed rice are to increase by 26 percent to reach 3.6 tons per hectare and irrigated rice yields should increase by 10 percent to 4.76 tons per hectare.
- * Rainwater irrigation area is to increase to 200,000 hectares and dry season irrigation area is to increase to 50,000 hectares by 2000.

Market Oriented Production

- * 400,000 tons of rice, 200,000 tons of sugar cane, 66,000 tons of corn, 72,000 tons of tobacco and 12,000 tons of cotton will be available for sale by 2000.

Stabilising Shifting Cultivation

- * Sedentary occupation will be provided to 80-100,000 families, of which 25-30,000 families will plant trees, 15-20,000 families will be involved in animal husbandry, 40-50,000 families in rice and crop cultivation.

Education

- * The education strategy to the year 2000 focuses on education quality upgrading at all levels to get closer to international standards and the reduction of the gap between urban and rural areas.
- * Aims to realise compulsory universal primary education, develop public and private vocational schools to increase enrolment, establish ethnic boarding schools in focal areas, promote education for women and the disadvantaged.

Health

- * Public health will develop to the rural and mountainous areas with emphasis on disease prevention and health care promotion based on modern and traditional practices.
- * The public sector health care system will promote the use of clean drinking water and use of latrines, setting up of revolving funds, training workers and traditional practitioners in villages.

1.3 Past Rural Development

Based on the characteristics of the country, the Party and Government of the Lao PDR considers rural development a strategic matter of critical national significance. In the past, rural development was aimed primarily at ensuring national rice self-sufficiency and restricting shifting cultivation. To date, important sectoral and area development initiatives has been implemented bringing about material improvements in several aspects such as in road construction and maintenance, construction of schools, small reservoirs, maintenance and development of small scale irrigation schemes among others.

Past rural development has been divided into three types of projects, such as: integrated projects for specific areas or regions, sectoral projects and community development projects, with differing features as follows:

1. Integrated development projects: are managed by the central authorities and consist of strategic, large scale projects. Generally, implementation is managed by foreign technical experts with Lao staff as counterparts. The persons in charge of the projects have the duty to implement all activities, including the construction of infrastructure, sectoral and community activities. However, the bulk of such community works has not been effective.
2. Sectoral projects: are managed by the concerned line ministries and implemented by staff belonging to professional lines, such as: education, public health, agriculture and others, while using the vertical organisational line for the projects' implementation along the horizontal line. These projects cover all areas of the country. Past co-ordination with other sectors has not been effective as emphasis was placed more on technical and professional aspects than on community participation.
3. Community development projects: are managed by the localities or non governmental organisations which initiate development efforts and communities are fully involved at each level of the activities. Outsiders only mobilise and provide resources and support as necessary. This method aims at developing social as well as economic development. Such projects are mainly small-scale and use small amount of material and capital and receive support from many international private organisations.

1.3.1 Rural conditions in Lao PDR

The rural economy, which is dominated by agriculture, contributed more than 50 percent of the Gross Domestic Product and almost half of official export earnings in 1993 and employed about 80 percent of the labour force.

Paddy production is the basis of economic activity of most farmers in Lao PDR. Production and consumption of crops other than rice are still very limited. Most farmer households, typically cultivating between one to two hectares, are only just moving away from pure subsistence. Lowland rain fed paddy cultivation accounts for 70 percent of total rice production, upland paddy cultivation 25 percent, and dry-season irrigated paddy cultivation less than 4 percent. Almost all upland paddy is produced under slash and burn (swidden) cultivation which is becoming increasingly unsustainable both as a livelihood system and environmentally.

The rural people in Lao PDR live in villages in which traditional social structures continue to play an important role in such matters as the allocation and use of common property resources. There are also membership and mass organisations which operate extensively in the rural areas, such as the women's union, and to a lesser extent farmer, health and other groups promoted by various development initiatives.

In 1990, the net availability of rice, which provides about 75 percent of average energy requirement, was approximately 180 kgs. per person per year which is adequate. However, between 1991 and 1994, the net availability has ranged between 139 and 173 kgs per person per year, suggesting a worsening food security situation. The disparity in geographical distribution of rice production and transport difficulties makes the situation worse in the north. Even in the south, the majority of households are food insecure due to disparity in income distribution.

The 1994 Lao Nutritional Assessment Survey (LNAS) showed a significant problem of malnutrition. Among children under five years, 48 percent are affected by chronic malnutrition (stunting), while 10 percent are affected by acute malnutrition (wasting). Acute malnutrition is more prevalent in the southern region of the country (16 percent of children). Malnutrition of children is more frequent amongst socio-economically disadvantaged households in rural areas.

Infant mortality rates range from an estimated 117 to 147 per 1,000 live births, depending on the region. Half of the children under five years are affected by malnutrition and most of the population lack access to basic health and sanitation, birth spacing and nutritional services. The national maternal mortality rate is estimated at 653 per 100,000 live births. The rate in the mountainous north-eastern part of the country is more than twice the national rate and one of the highest in the world. Modern medical facilities are used by only 10 percent of those in the rural areas compared to 23 percent in urban areas.

Adult literacy is estimated at 50 percent for adults, 65 percent for men and 35 percent for women. Net primary school enrolment is about 55 percent in rural areas (58 percent of all boys, 52 percent of all girls) compared to 79 percent in urban areas. The mean years of schooling average 2.9 overall, 3.6 for males and 2.1 for females. Less than 1 percent of the population have been educated at the tertiary level. Performance varies dramatically by region, ethnic group, and rural and urban areas.

The national completion rate for primary school is about one-third of primary school entrants. Primary schools do not exist in some mountainous areas. The Lao Loum comprise about 55 percent of the population but 73 percent of primary school enrolment. In some rural areas, it is estimated that only 25 percent enrol in primary school.

While women make up 51 percent of the total work force, they are under represented in education. Girls comprise 44 percent of school children, women are 40 percent of teachers, 38 percent of students studying to be teachers, 28 percent of students of higher education, and 15 percent of polytechnic students.

To date, the rural population has yet to receive adequate social services, whether in communication and transport, education, public health or others. The majority of the rural population follow livelihood systems based on the rhythm of nature, live in unhygienic conditions, are illiterate and have low cultural awareness, particularly in the case of minority ethnic women. They carry out largely subsistence production using traditional tools and techniques. Rural people lack knowledge on how to use their potential, and lack an appreciation of the value in preserving existing natural resources. The environment and natural resources are destroyed by slash and burn cultivation and undifferentiated tree felling which are the cause of dwindling forests and water sources necessary for the rural population's living conditions. A survey conducted by the World Bank in certain provinces indicated that the Lao PDR has presently a population living in poverty, that is with an income of less than \$100 per year per person, of approximately 46 percent and 53 percent of the total and rural population respectively.

By contrast, urban areas are developing as social services, communication and transportation are improved. The economy is growing along with employment and higher income. However, the gap between urban and rural areas is increasing and putting pressure on migration towards the towns, particularly among the youth seeking higher income and opportunities for

self-development. The majority of students from the countryside in urban areas do not want to return to develop their rural homes on completion of their studies.

This situation is generating economic and social problems in both the urban and rural areas. The Government of the Lao PDR considers therefore rural development as an important element among the eight national socio-economic development programmes.

1.3.2 Past Weaknesses in Rural Development

Rural development activities in the past were first of all carried out randomly; lacked of master plans as well as detailed projects; lacked sound organisation and staff to be responsible for actual works. In a way, the implementation of rural development projects over the past years, were not in harmony with the improvement of social-political stability and national security defence; Moreover, those projects were characterised by such attitudes as follows: development oriented with lack of enthusiasm and efforts; the projects did not aim to develop the existing potentials to build strength by one's own force; things to be carried out were over ambitious and like a copy of lessons from foreign countries without thinking of one's own particularities and capability. A number of projects designs did not suit local conditions and could not be implemented, most of them lacked sufficient data and proper feasibility study. We have not felt the sense of mastership over projects preparations, we usually rely on foreign advisers; the preparation of some projects did not start from the grassroots level, lacked co-ordination or consultation with the party committee or administrative authority concerned. Therefore, many problems turned up during the implementation stage, they cost more than expected and were characterised by prolonged delay in operation but with subtle effectiveness. Follow up and inspection were loose.

There have been many initiatives and new factors in terms of rural development, but their multiplication and expansion have been slow due to lack a proper promotion; the capability to contribute with internal funds to the development co-operation projects was limited, and eventually resulted in discontinued operation. In many localities, the implementation of the guidelines that says "The state and the people work together" have been facing obstacles because the ethnic people in the mountainous areas lacked sufficient resources. Long ago, the central issued a resolution on establishing an organisation to be responsible for rural development activities, to date such organisation has not been established yet. Although the organisation and department nominated some staffs to be responsible for this component at Institution and ministry levels, they still cannot play the role as co-ordination and supervision centre.

In regard to the implementation of the measures of shifting into the grassroots, many localities only proceeded with general process, and more attention have been paid to the strengthening of political system and national security defence, while little efforts have been put to production support and promotion including the improvement of the people living conditions and village base development initiatives. In some localities, the task of shifting into grassroots is characterised by temporary process and campaign by recruiting staff from different agencies to work in the grassroots; the activities were discontinued; hence very little benefit has been brought to the villagers.

Arrangement of staff to work in various development projects in the grassroots neglected the importance of qualification and capability. The staff who were working in the grassroots were not provided with adequate incentives and promotion. Therefore, they did not fully develop their

creativity, enthusiasm and responsibility. In general, we have not had clear regulations or provisions for staff who had to work permanently in the grassroots (districts, villages) in rural areas; In the situation where the combination between vertical and horizontal line management was not in harmony, the nomination of staff belonging to the vertical line organisation to work in grassroots was complicated; staff working in the localities and grassroots did not have a chance to upgrade their knowledge; it was difficult for them to carry out their work due to the lack of necessary means of transportation as well as equipment, their living condition were difficult, their position in the society was not difficult from that of the villagers in general. Consequently, a number of such staffs left the government offices; otherwise they just played at work. In fact, staff formation for the grassroots was very limited especially very little amount of ethnic group staff are available.

In summary, we have paid attention and exerted considerable efforts to rural development, but little success that we achieved could not meet the invested efforts and expectations. In many aspects, the living condition of the rural people are still poor. The figure of rural areas, particularly in the mountainous areas of the ethnic groups (including former revolutionary base) have not change much. therefore, there is an urgent need to improve the past activities including the determination of figure prospects and guidelines to be served as basis so that rural development in our country achieves actual progress.

1.4 Rural Development Policies

In March 1994 the People's Revolutionary Party, Lao PDR, adopted a resolution on rural development. This resolution highlighted the strategic importance of rural development for Lao PDR, emphasised the need to establish focal zones, and called for the establishment of a Steering Committee to implement the proposed guidelines. The goals and objectives of rural development as laid out in this resolution are:

“Rural development in our country is the exploitation and utilisation of natural and social potentials of the rural areas, mobilising the sense of ownership by people of all ethnic groups in order to shift from primitive natural way of living to the new one according to the Party's guidelines for the improvement of the people's living conditions; change the features of rural areas by development activities so that they eventually become the firm basis for the task of national defence and construction of the new regime” (*Resolution on Rural Development, the People's Revolutionary Party, Lao PDR, 1994*).

Guidelines for future activities outlined in the resolution included the promotion of agricultural commodity production, introduction and transfer of advanced and more effective methods of production; provision of technical advice to farmers and to involve them in practical works such as intensive agriculture, animal raising, planting industrial and other cash crops.

The resolution further called for localities to be identified and established into focal areas, such as focal area for development of rice and food consumption; focal area for livestock development; focal area for commercial crops and industrial trees; focal sites for resettlement and farming stabilisation, and focal areas along the border in accordance with the particularities of each locality.

The resolution of the Sixth Congress of the Lao People's Revolutionary Party again stressed the strategic importance of rural development:

"Rural development is considered a task of strategic importance with a focus on establishing farmer's household economy, increase the number of model families and setting up economic-cultural groups in which goods production is expanded, people are educated and enjoy good health with gradually improved conditions, the localities enjoy tranquillity and the political system is solid at the village level. To achieve this, we must enhance the people's mastery through boosting family production and training developers on the spot. At the same time, the government must have a policy to support and promote the involvement of various economic sectors. As for remote mountainous and ethnic areas and the former resistance bases, the government must provide major assistance and support while mobilising the participation of the whole society." (*Resolution of the Sixth Congress of the Lao People's Revolutionary Party, 1996*).

I.5 Directives and Measures for Implementing Rural Development

In November 1994, Degree 40 was issued by the Party, which formally established a Leading Committee for Rural Development and outlined its roles and responsibilities. This decree also called for Provincial Rural Development Committees to be set up with the Vice-Governor as chair. The mandate and authority of the rural development committees was restricted to area-specific focal sites, within which the Provincial Rural Development Committees could co-ordinate the work of line ministries.

Planning and co-ordination outside the focal sites continues to come under the purview of Provincial Socio-economic Plan, co-ordinated by the State Planning Committee.

The Central and Provincial Rural Development Committees are assisted in their work by a rural development office at the centre and in each province.

In August 1996 Decree No.131 was issued by the Prime Minister re-establishing the central level Rural Development Committee as part of the Prime Ministers Office. The overall role of this Rural Development Committee is to:

"Study and summarise plans, projects and the overall rural development situation, to assist the government in supervising, monitoring, supporting and co-ordinating rural development activities implemented by the line agencies and local authorities harmoniously and effectively." (*Decree No. 131, Prime Minister, August 1996*)

The committee is chaired by the Deputy Prime Minister, and includes the President of the State Planning Committee, Minister of Agriculture and Forestry, Head of Personnel, Central Party Committee, Director of Logistics Division, ministry of defence, Vice-Minister of Education, Vice-Minister of Finance, and Vice-President of the National Front.

The Rural Development Committee is a government body incorporated in the office of the Prime Minister. Its duties are to:

- * co-ordinate, advise and encourage all institutions, including Party, Government and mass organisations, the State Planning Committee in particular, to formulate a Programme for rural development throughout the country,
- * monitor, control, encourage line agencies and local authorities to transform the Party Central Committee resolution and the rural development programme into detailed plans and projects at each stage.
- * to summarise, analyse the political strengthening of grassroots and socio-economic development in every aspect throughout the country and report to the Government for consideration and recommendation.
- * monitor, advise, encourage institutions and local authorities in implementing the socio-economic development plan in rural areas. Advise line agencies, institutions and local authorities to establish a fund for rural development and use it with focal aim and efficiency.
- * supervise the correct implementation of policy towards staff working for rural development projects.
- * study and work out policy for mobilising various economic sectors to contribute to rural development in all aspects.
- * advise line agencies who have projects related to rural development to work according to the overall plan and detailed development plans for each zone as well as those for focal sites.
- * work out detailed guidelines on the duties and working style of the rural development committees at provincial level and other institutions for the implementation for rural development plans at each stage.

1.5.1 Measures

- Grassroots activities shall focus on the education and mobilisation of the population to be aware of and implement their civil obligations, revolutionary duties, change their traditional production methods for new and more efficient ones, to transcend from backwardness, to generate wealth for their families and contribute to the national construction and development.
- Public servants will be trained for the grassroots, and leading and active staffs will be selected and trained to lead villagers in the implementation of the activities.
- Provincial rural development committees shall co-ordinate the activities of provincial services at the grassroots, while encouraging and monitoring the activities of districts at the grassroots and shall report on a permanent (quarterly, annual) basis to the central rural development committee.

- The provincial rural development committees shall study and formulate plans and projects specifically for their respective focal development areas with the assistance of technicians from sectors belonging to the vertical organisational line in their provinces. Any province not possessing sufficient technicians may request technical assistance from the relevant line ministries.
- National rural development planning must start from the grassroots and ensure that such plans are appropriate with the actual conditions of the socio-economic development, financial capacities and the national requirements.
- The central rural development committee shall study and compile plans, projects and rural development situations, lead, monitor and promote the implementation of the central level resolutions. In co-ordination with the State Planning Committee and the concerned sectors, it will establish global strategic rural development plans as guidelines for the localities to identify detailed plans and projects specifically for their localities.
- The central rural development committee shall summarise, analyse the plans and projects presented by the provinces which will be submitted to the State Planning Committee for inclusion into the national socio-economic development plans and approval by the National Assembly.
- As the plans and projects are approved, the central rural development committee shall hand over such plans and projects, together with their budget, to the provincial rural development committees which will efficiently direct the implementation of the plans and co-ordinate with the concerned sectors of the provinces and districts for the assignment of staffs to the projects. At the same time, the central rural development committee, in co-ordination with the district committee and the project management, may bring modifications to the projects if deemed necessary.

Section 2: Method for Plan Preparation

Following the adoption of the resolution on rural development and the establishment of provincial rural development committees, the central Leading Committee for Rural Development organised three regional workshops in October and November 1995 to discuss planning guidelines.

In late 1995 and early 1996, most provincial rural development committees had identified focal sites and submitted operational budgets. The general process of involving focal site populations in the planning has been to post one or two rural development staff in the focal sites who then carry out household surveys through interviews and discussion. The focal site plans were then drafted on the basis of this survey and discussed with local leaders and villagers before completion.

In May and July 1996, three regional workshops were jointly organised by the Central Leading Committee for Rural Development and the State Planning Committee, to share experiences and collect information for preparation of this National Rural Development Plan document. In each of these workshops, provincial rural development officials reported on their progress in identifying focal sites and in identifying projects within these focal sites. Common problems and critical issues were discussed in these workshops. The report on these workshops is included in Annex 1.

A questionnaire was also used to collect information about focal sites such as the location, size, number of people covered, criteria used in selecting focal sites, and how people have been involved in designing focal site projects. The returned questionnaires were subsequently analysed by the State Planning Committee.

The individual budget proposals from each province and focal site were combined into a single national budget. To assist in the analysis of this amalgamated budget, six sectoral classifications were applied relating to Agriculture, Income Generation, Health, Education, Infrastructure, Resettlement, Community Development and Management. Sub-sectoral classifications were also applied to further assist analysis and comparisons within each of these sectors. The confidence with which these classifications were made was not always high due to the lack of both sufficient information and use of any standard classification system in preparing the budgets.

Section 3: Overview of Plan

3.1. Definition of Rural Development and Focal Sites

Rural Development

Rural Development describe a set of national policies, programmes and projects whose broad goal is to alleviate poverty and to help develop the most deprived rural social strata. because poverty has many causes, rural development involves a wide range of interventions which seek to remove the constraints of rural poverty, the principal ones of which are:

- * the organisation of markets and stimulation of agricultural production;
- * the creation of non-agricultural employment through private and public investments;
- * the establishment of an effective system of credit, social services and productions;
- * investment in agricultural infrastructure;
- * measures aimed at eliminating the constraints on the innate dynamism of the target population;
- * the establishment of institutions designed to carry out development programmes that permit active participation of the target groups;
- * co-ordination with regional and national plans.

Urban Area.

In the Lao PDR, urban areas are defined by the following five criteria:

- 1 Administration centre of district or province;
- 2 Most of the households have access to electricity;
- 3 Most of the households have access to water supply/safe drinking water;
- 4 There is a permanent market(s); and
- 5 The area can be reached by truck throughout the year.

If the area meets three of these criteria it is deemed to be urban.

Rural Area.

If the area meets less than three of these criteria, it is to be rural area

Focal Sites

Focal sites are the strategy adopted by the Government of Lao PDR to achieve rural development.

Focal sites are defined geographical rural areas in which the government concentrates its development efforts to remove the constraints of poverty of the target populations within the focal sites. Specific focal site offices are established to co-ordinate the delivery of development services by different line agencies in the focal sites. Focal sites are to act as learning and growth centres in which to develop new methods and approaches and from which successful experiences will be replicated to extent the impact of rural development efforts.

3.2 Focal Sites Development Strategy

The broad development strategy underlying focal sites is to bring together development efforts in an integrated or focused manner within clearly defined geographical areas (area-based integrated rural development). As such there are a wide range of development activities which are proposed in focal sites such as the improvement of infrastructure (improving roads and access), building schools, health care facilities and so on. The provision of such development services in an integrated and focused manner will have a positive impact on farm families. As will be pointed out in this section, the exact mix of services provided in each focal site varies according to local conditions and capacities.

Another element in the focal site development strategy involves the promotion of permanent occupations. Resettlement is a development strategy which deals with several national objectives such as promoting rice production, commercial crops, stopping slash and burn and improving access to development services.

Resettlement is proposed as a more feasible and cost effective way of making development services available to scattered and remote communities which could otherwise not be reached with the limited resources available. It is Government policy that resettlement be implemented only on a voluntary basis, and that clearly defined assistance and services be provided to resettled people.

About half of the focal sites included in the National Rural Development Programme involve resettlement.

Focal sites are further proposed as a development strategy in which they represent centres of change and learning from which development will spread through the diffusion of technical and social innovations and by applying lessons learnt.

3.3 Staffing for Rural Development

Table 2 shows the number of Rural Development Committee members in each province and the number of staff in provincial Rural Development Offices and Department of Planning & Co-operation.

Table 2: Rural Development and Department of Planning Staffing

Province	Rural Development Committees Members	Rural Development Offices Staff	Provincial Departments of Planning Staff	DPC Female Staff
Vientiane Mun	5	6	14	6
Vientiane	5	6	9	3
Special Region	7	6	2	0
Borikhamxay	5	5	11	1
Xiengkhuang	13	4	9	2
Savannakhet	7	13	14	4
Khammuane	3	1	8	2
Phongsaly	5	3	11	1
Luangnamtha	5	3	9	0
Oudomxai	5	5	12	3
Bokeo	5	3	12	0
Luangbrabang	5	3	18	5
Huaphanh	4	3	15	1
Xayaburi	5	3	na	0
Saravan	3	3	12	2
Attapeu	5	4	na	0
Sekong	3	4	8	0
Champasack	4	2	22	1
Total Number	94	77	186	31

The average number of committee members in each province is 5, and ranges between 3 and 13. Membership varies from province to province. For example, some committee membership includes representatives from the finance and police departments, while others are drawn exclusively from technical line ministries such as agriculture, education or health departments.

There is only one female member in all the provincial rural development committees, who is the LWU representative in Xienghang. There are an average of 4 staff working for the rural development offices, ranging from 1 to 13. None of these RD office staff are women.

There are an average of 10 staff working in each provincial DPC. The largest number are found in Champasack province. There are 31 women out of the total 186 DPC staff.

3.4 Focal Sites

Table 3 gives the number of focal sites by province for each year from 1996 to 2000.

Table 3: Number of Focal Sites

Province	1996	1997	1998	1999	2000
Vientiane Mun	3	3	3	3	3
Phongsaly	1	1	4	4	4
Luangnamtha	5	5	5	5	5
Oudomxai	4	4	4	4	4
Bokeo	2	2	5	5	5
Luangbrabang	15	15	15	15	15
Huaphanh	2	2	2	5	5
Xayaburi	3	3	3	3	3
Xiengkhuang	2	2	2	2	2
Vientiane	1	3	3	3	3
Borikhamxay	1	1	3	3	3
Khammuane	2	2	4	6	6
Savannakhet	1	2	8	8	8
Saravan	4	4	4	4	4
Sekong	2	2	4	4	4
Champasack	5	5	6	6	6
Attapeu	2	3	4	4	4
Special Region	3	3	3	3	3
TOTAL	58	62	82	87	87

The total number of Focal Sites in 1996 is 58 and increases to 87 in 1999 after which no further expansion is currently envisaged.

Maps 1, 2 and 3 - given at the beginning of this report - show the location of focal sites in the northern, central and southern provinces respectively. Annex 1 lists the focal sites and the districts in which they are located.

3.5 Criteria for Focal Site Selection

A wide range of criteria has been applied in selecting focal sites. The maximisation of development opportunities was often given as a selection criteria. Only one province mentioned replication and lesson learning as an important selection criteria.

The selection criteria for focal sites broadly reflect the national socio-economic Plan objectives of promoting commercial production, stopping slash-and-burn, and food self-sufficiency.

There is a need to further study the question of focal site selection to ensure that all focal sites fall within the policy guidelines and that the most needy groups in each province are covered.

Annex 2 lists the criteria reported by 13 PRDCs which they used in selecting focal sites.

The following are some typical examples of the criteria reported by provincial authorities which have been grouped under broad categories:

Isolation/Poverty

Isolate area from town and still did not receive any aid from the international organisation.

Flooded during the raining season, lack of drinking water, during the dry season occurred diarrhoea Malaria and skin disease.

Living condition mostly connect directly with nature, they have no market at all.

Have difficulty on communication. Road access between villages are not connected. Able to travel only 1 season.

Minimise the poverty of the people who live in the isolate mountainous area.

Area where the majority ethnic people live and have no civilisation for their living condition.

Area less of opportunity for the development, poorer than the other areas.

Very isolate ethnic area and also border to the neighbour country.

Still under developed and people are waiting for the development.

Close to the border of Thailand and some provinces. It was located very far away and isolate without road, electricity, water supply, school, Health centre.

Their living condition are not developed as well. they are still very poor and not very healthy that means lack of health services.

Development Potential

Because of the border and suitable for tourism and services.

Able to produce as commercial products on agriculture & forestry.

Able to construct the roads, expand the market economic, construction the irrigation and Micro hydro power. Able to expand the agricultural land in a large area. very suitable for cropping and livestock and also for the sustainable farming system.

Rich in natural resources. Able to reorganise into a focal site by providing land for cultivating rice paddy and other crops. They are still as well develop Farmers are poor and not very healthy.

Able to produce as commercial products on agriculture & forestry.

Suitable for the development on Agriculture - forestry, handicraft, services, communication and tourism. Disorder area source of watershed and able to shift from slash-burn cultivation.

Stop Slash and Burn/Resettlement

Able to expand and clear the land for cultivating. Build the irrigation for the integrated farming system and able to provide facility to the new settlement, stop from slash & burn.

The majority of the people do the slash and burn. Much of natural resources and have possibilities for the development.

Land allocate to the farmer who do the slash and burn as permanent occupation. Have condition to produce commercial products.

Area where there is much destroying on the environment and natural resource very heavily.

Ethnic area where they are able to move from slash and burn to low land area.

Ethnic Area who are living very rare and relate to the nature. In each year they destroyed large of forest land. Therefore, it is the area very urgent need for resettlement that we can protect the environment as forest conservation.

Able to minimise the slash burning and lose of natural resources in each year. More facilities for the resettlement.

Allocate the sustainable cultivate land to the ethnic farmers who live in the project area.

Participation

Because of the former revolutionary base.

Where people more active on participation but they still have more difficulties.

Security

Isolate area and have many difficulties. To ensure the security along the border and problem on selling labour.

The area that have more difficulties such as social-economic and to ensure the security.

To ensure the security where there are still no safety.

These areas are situated along the national main road in the future but there is not safe enough as well.

3.6 Information on Focal Sites

Table 4 gives basic demographic information by province, while Annex 3 shows this basic demographic information by focal site for the 62 focal sites for which information is available.

Table 4: Basic Demographic Information on Focal Sites

	# Villages	Population	Loum	Tung	Sung
Attapeu	105	40,931	9,880	31,051	0
Bokeo	24	9,204	4,259	1,196	3,339
Borikhamxay	80	14,906	5,902	5,717	3,135
Champasack	58	24,047	18,373	5,674	0
Huaphanh	57	12,474	8,854	1,778	1,842
Khammuane	40	12,369	12,065	304	0
Luangbrabang	291	91,040	27,890	42,640	14,608
Luangnamtha	105	21,419	6,611	6,896	8,687
Oudomxai	76	18,216			
Phongsaly	37	7,140	0	0	0
Saravan	9	3,626	3,626	0	0
Savannakhet	12	5,513	0	5,513	0
Sekong	5	3,265	0	3,265	0
Special Region	34	9,846	3,955	863	5,028
Vientiane	24	12,343	2,992	2,889	6,462
Vientiane Mun	24	15,322	13,773	39	1,510
Xayaburi	30	13,997	10,330	2,113	1,653
Xiengkhuang	15	4,564	1,054	0	2,800
Grand Total:	1,026	320,222	129,564	109,938	49,064

There are a total of 1,026 villages to be covered in the 62 focal site proposals with a population of over 320,000, giving an average of 16 villages and 5,200 people per focal site.

The ethnic distribution of the population in focal sites is approximately, 46 percent Lao Loum, 37 percent Lao Tung, and 17 percent Lao Sung.

Based on the averages for 62 focal sites, the total coverage of the national rural development plan could be estimated at 300,000 people in 1996 increasing to 450,000 by 2000, or about 12 percent of the total rural population.

Annex 4 gives area information reported for 49 focal sites. The total focal site area for these 49 focal sites is over 950,000 hectares (approximately 3.7 hectares per focal site population). Reporting on agricultural and forest lands has not been consistent, and it is therefore difficult to gain an overall picture of land use within focal sites.

3.7 Participation

The general process of involving focal site populations in the planning of focal site development proposals has been to post one or two rural development staff in the focal sites who then carry out household surveys through interviews and discussion. The focal site plans are then drafted on the basis of this survey and discussed with local leaders and villagers before completion.

Annex 5 lists the replies from 13 provinces to questions about participation of villagers in planning and implementation arrangements. 11 out of these 13 provinces reported to have reached agreement with villagers about the focal site plans, and 5 of these have agreements in writing. While 11 provinces out of 13 reported to have set up village implementation committees, 9 provinces reported that these committees meet regularly.

Section 4: Detailed Analysis of Focal Site Proposals

4.1 Budgets

Table 5 gives the total national rural development Plan budget by province from 1996 to 2000.

Table 5: Total Focal Sites Budget by Province (million Kip)

Province	Total	1996	1997	1998	1999	2000	Note
Vientiane Mun	7,970	0	614	3,644	2,149	1,563	2
Phongsaly	5,803	0	119	1,990	2,491	1,203	2
Luangnamtha	6,185	1,231	1,546	1,377	1,636	395	2
Oudomxai	13,615	389	2,931	5,036	3,366	1,893	2
Bokeo	3,370	480	602	790	896	601	2
Luangbrabang	13,311	2,177	3,212	3,312	2,377	2,232	2
Huaphanh	8,452	1,664	1,643	1,481	1,660	2,004	1
Xayaburi	2,584	405	1,119	711	289	60	2
Xiengkhuang	2,402	0	922	780	340	360	1
Vientiane	4,080	385	1,561	1,125	675	333	2
Borikhamxay	8,396	85	182	1,562	3,406	3,161	2
Khammuane	3,625	545	916	826	696	642	2
Savannakhet	5,319	100	299	1,664	1,591	1,665	2
Saravan	13,329	467	1,539	3,091	3,498	4,734	1
Sekong	1,375	3	510	346	309	207	2
Champasack	4,871	0	2,349	1,127	846	549	2
Attapeu	9,464	129	1,801	2,998	2,793	1,743	2
Special Region	6,929	211	2,598	2,069	1,161	390	2
Total:	121,079	8,271	24,463	33,930	30,180	24,235	
New Focal Sites	30,000			5,000	10,000	15,000	3
Central Support	2,920			920	1,000	1,000	3
Grand Total	154,000	8,271	24,463	39,850	41,180	40,235	

Notes
 1 = Based on Provincial Totals
 2 = Based on Focal Site Budgets
 3 = Based on Estimates

Table 5 is built up from detailed focal site budgets in the case of 15 provinces and provincial totals submitted by 3 provinces (i.e. detailed but not indicating focal site allocations). Estimates have been made for the new focal sites planned to start from 1998 and are shown as a separate line. Another line is for central support to develop training, monitoring and supervision support for the programme.

The detailed budgets for 62 focal sites and 3 provinces are given by focal site in annex 7 and by sector and sub-sectors in annex 8.

The total budget estimate for the National Rural Development Programme is just over 151 billion kip. The total budget for ongoing focal sites increases from about 8.2 billion in 1996 to 24.5 billion in 1997 and 33.9 billion in 1998, and thereafter it reduces to 30.2 billion in 1999 and 24.2 billion in the year 2000. The overall programme budget, however, will continue to increase and new focal sites are started from 1998. It is estimated that new focal sites will require an additional 5 billion in 1998, 10 billion in 1999 and 15 billion in 2000. 2.9 billion is for central support.

4.2 Financing of the National Rural Development Plan

Table 6 shows the differences by provinces between the PIP budget allocations for 1995 and 1996 with the focal site budgets drawn up by the provincial rural development committees.

Table 6: Focal Site Budgets and PIP Allocations Compared

Province	1995/6	PIP - 96	Diff	(million Kip)		
				1996/7	PIP - 97	Diff
Vientiane Mun	0	76	-76	614	216	398
Phongsaly	0	97	-97	119	118	1
Luangnamtha	1,231	85	1,146	1,546	206	1,340
Oudomxai	389	290	99	2,931	383	2,548
Bokeo	480	139	341	602	331	271
Luangbrabang	2,177	396	1,781	3,212	163	3,049
Huaphanh	1,664	196	1,468	1,643	260	1,383
Xayaburi	405	224	181	1,119	186	933
Xiengkhuang	0	184	-184	922	464	458
Vientiane	385	228	157	1,561	307	1,254
Borikhamxay	85	180	-95	182	376	-194
Khammuane	545	107	438	916	356	560
Savannakhet	100	575	-475	299	300	-1
Saravan	467	93	374	1,539	110	1,429
Sekong	3	162	-159	510	198	312
Champasack	0	385	-385	2,349	501	1,848
Attapeu	129	156	-27	1,801	82	1,719
Special Region	211	263	-52	2,598	213	2,385
Total:	8,271	3,836	4,435	24,463	4,770	19,693

Table 7: PIP Allocations for Rural Development by Source of Funding

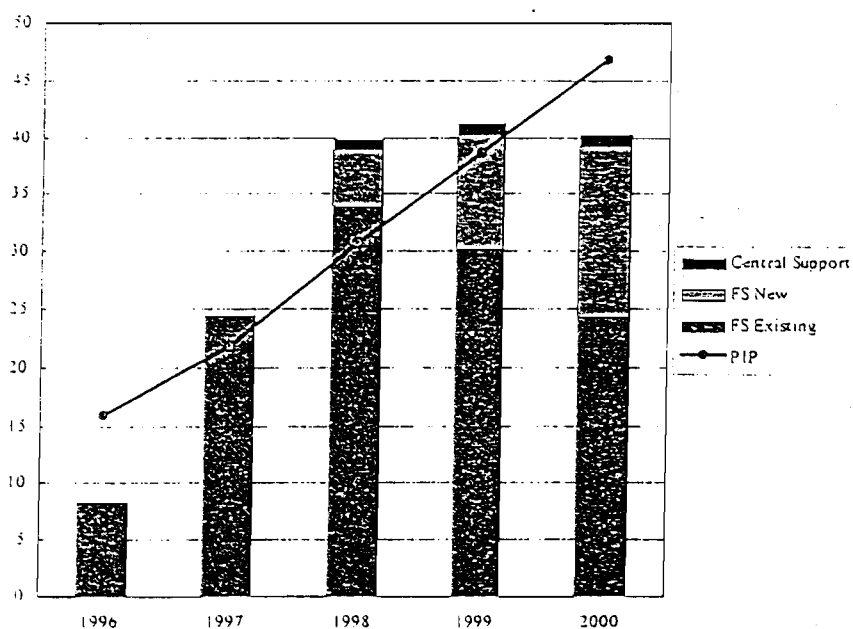
		(billion Kip)				
	Total	1996	1997	1998	1999	2000
Domestic	25.36	2.00	4.45	5.11	6.36	8.45
Foreign	128.64	13.80	18.40	25.68	32.21	38.45
Total	154.00	15.80	21.84	30.79	38.67	46.90

Table 7 shows the PIP allocations for rural development broken down by domestic and foreign sources of funding. 128 billion out of the total PIP allocation for Rural Development of 154 billion is expected to come from foreign funds. Securing foreign assistance to meet this funding shortfall will be critical to the implementation of the National Rural Development Programme. Capacity to better document focal site proposals, including technical aspects such as the cost-benefit, managerial and technical appraisal, will need to be developed, as well as the capacity to report and account for programme assistance received.

Chart 1 illustrated the overall difference between PIP allocations for rural development and focal site budgets for the period 1996 to 2000.

Chart 1: PIP and Focal Site Budgets Compared

(billion Kip)



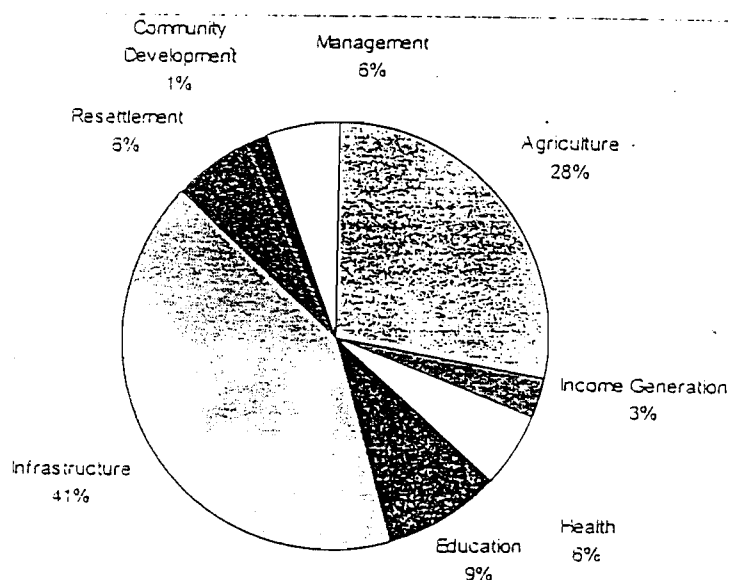
4.3 Sectoral Analysis of Focal Site Budgets

Table 8 gives the sectoral analysis of detailed budgets provided for 62 focal sites and 3 provinces. These detailed budgets amount to just under 112 billion Kip, or 92 percent of the total estimated budget of 121 billion Kip for ongoing identified focal sites, and are thus sufficiently representative of the overall plan.

Table 8: Sector Totals

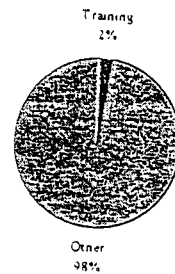
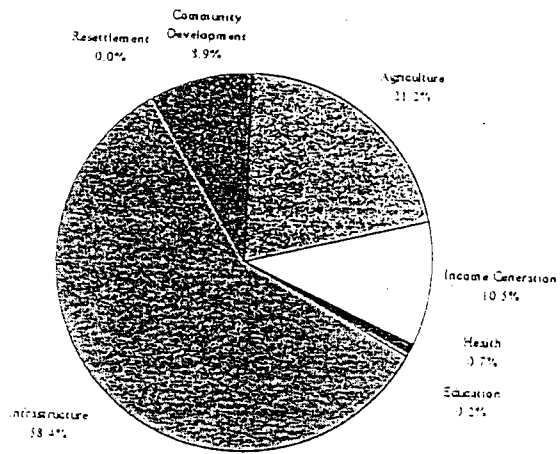
	Total	Percent	1996	1997	1998	1999	2000
Agriculture	31,413	28.1%	2,065	5,582	9,783	8,256	5,742
Income Generation	3,486	3.1%	199	1,033	1,274	529	449
Health	6,224	5.6%	307	1,029	1,845	1,637	1,405
Education	9,657	8.6%	379	1,586	2,844	2,749	2,099
Infrastructure	46,371	41.5%	2,612	9,183	12,918	11,975	9,683
Resettlement	6,750	6.0%	482	2,521	1,501	1,296	949
Community Development	1,602	1.4%	233	272	322	425	350
Management	6,286	5.6%	674	1,519	1,478	1,426	1,192
Grand Total:	111,789	100.0%	6,950	22,726	31,964	28,293	21,871

Chart 2: Sectoral Breakdown of Focal Site Budget Total



The highest proportion of expenditure in the proposed focal site budgets is for Infrastructure which accounts for about 41.5 percent of the total proposed expenditure, and is followed by about 28.1 percent for Agriculture. Proposed expenditures on Health and Income Generation - sectors which particularly concern women - are relatively low at 5.6 percent and 3.1 percent respectively.

Chart 5: Training



4.4 Sub-Sectoral Analysis of Detailed Budgets.

4.4.1 Infrastructure

Table 11.1: Infrastructure Sub-sector

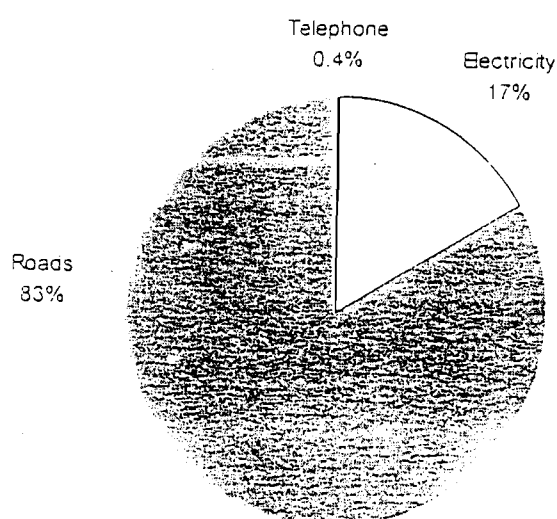
	Total (Amount)	Percent	No. of Projects	Capital (Amount)	Capital (Percent)	Training (Amount)	Training (Percent)
Electricity	7.786	16.8%	32	5.942	76.3%	6	0.1%
Roads	38.414	82.8%	130	35.655	92.8%	0	0.0%
Telephone	171	0.4%	7	171	100.0%	0	0.0%
Infrastructure	46.371	100.0%	169	41,768	90.1%	6	0.0%

The proportion of proposed expenditure on infrastructure in the focal site budgets is similar to that in the national socio-economic plan. 82.8 percent of the infrastructure budget is for roads. The construction of roads is an important element in many focal site development strategies to improve access to markets and services.

16.8 percent is proposed for the provision of electricity. These proposals generally involve connecting focal sites to grid systems, though some focal site proposals also include the generation of electricity.

As already pointed out, 90.1 percent of the proposed expenditure in the Infrastructure sector is on capital. There is a need to ensure that there is also sufficient funds or contributions available for maintenance costs on capital expenditure.

Chart 6: Infrastructure Sub-sector



4.4.2 Agriculture

Table 11.2: Agriculture Sub-Sector

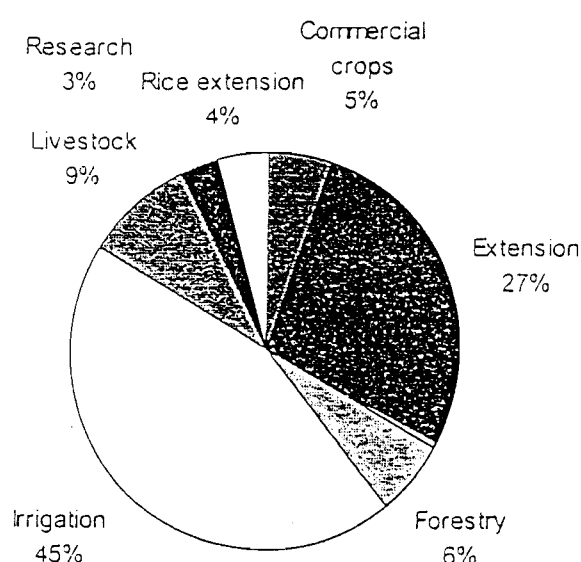
	Total (Amount)	Percent	No. of Projects	Capital (Amount)	Capital (Percent)	Training (Amount)	Training (Percent)
Commercial crops	1,690	5.4%	37			14	0.8%
Extension	8,611	27.4%	95	936	10.9%	92	1.1%
Fisheries	117	0.4%	5			0	0.0%
Forestry	1,874	6.0%	50	81	4.3%	2	0.1%
Irrigation	13,986	44.5%	147	12,089	36.4%	483	3.5%
Livestock	2,800	8.9%	60			57	2.0%
Research	1,058	3.4%	31	15	1.4%	0	0.0%
Rice extension	1,277	4.1%	38	8	0.6%	34	2.7%
Agriculture	31,413	100.0%	463	13,128	41.8%	682	2.2%

44.5 percent of proposed expenditure on agriculture is for about 147 irrigation projects or schemes. Plans and budget documentation submitted does not provide sufficient detail to indicate whether sufficiently detailed technical appraisals have been carried out on the proposed irrigation schemes. This will need to be verified as part of any disbursement procedure.

About 40 percent of proposed expenditure on agriculture is for various research and extension services, including 5.4 percent on extension for commercial crops and 4.1 percent on rice extension.

There are about 463 projects and schemes proposed in agriculture.

Chart 7: Agriculture Sub-sector



4.4.3 Education

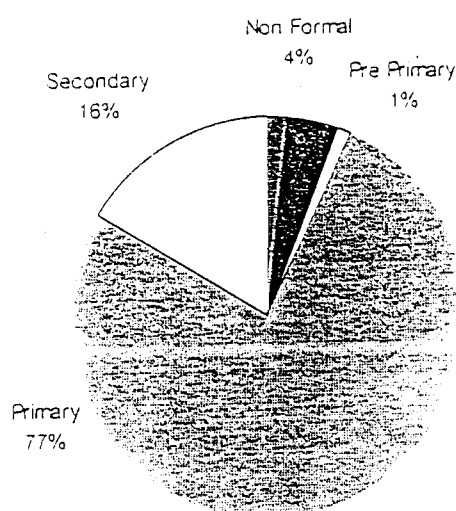
Table 11.3: Education Sub-sector

	Total (Amount)	Percent	No. of Projects	Capital (Amount)	Capital (Percent)	Training (Amount)	Training (Percent)
Management & Teacher Traini	169	1.8%	8	125	74.0%	6	3.6%
Non Formal	406	4.2%	10	370	91.2%	0	0.0%
Pre Primary	84	0.9%	5	41	48.8%	0	0.0%
Primary	7,426	76.9%	109	5,241	70.6%	0	0.0%
Secondary	1,573	16.3%	42	1,513	96.2%	0	0.0%
Education	9,657	100.0%	174	7,290	75.5%	6	0.1%

Focal site plans and budgets relating to education are among the weakest in terms of detail or precision. Where focal site budgets did not specify the level of education, the assumption was made that the proposed expenditure is for primary education. This is why much of the expenditure is for primary education. This assumption will need to be verified.

This is an area where further work and support is needed to better document the education approaches and strategies that are being developed in focal sites.

Chart 8: Education Sub-sector



4.4.4 Health

Table 11.4: Health Sub-sector

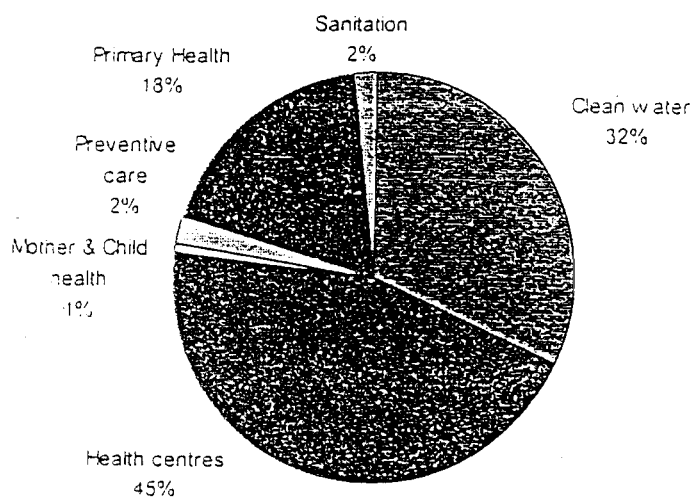
	Total (Amount)	Percent	No. of Projects	Capital (Amount)	Capital (Percent)	Training (Amount)	Training (Percent)
Clean water	1,966	31.6%	66	1,900	96.7%	0	0.0%
Health centres	2,821	45.3%	66	2,254	79.9%	10	0.3%
Mother & Child health	35	0.6%	2	33	94.3%	0	0.0%
Preventive care	146	2.4%	10	95	64.9%	3	1.9%
Primary Health	1,132	18.2%	23	133	11.7%	3	0.2%
Sanitation	124	2.0%	19	106	85.5%	8	6.5%
Health	6,224	100.0%	186	4,521	72.6%	23	0.4%

A high proportion of expenditure under health is for the provision of safe drinking water. The provision of safe drinking water is a highly cost effective way of improving the health and quality of life of villagers.

45 percent of the health sector expenditure is for health centres. While this is an important means of improving access to health services, it is important to ensure that adequate provisions are made for recurring costs and support for the proposed health centres. Insufficient information has been provided to ascertain what and how recurring expenditures for these health centres will be covered.

A number of development targets proposed for the National Nutrition Action Plan relate to health indicators such as immunisation rates, child and maternal mortality and so on. Attention will need to be given to this to examine the extent to which these targets can also be set for the focal sites and whether sufficient activities and resources have been given to this sector.

Chart 9: Health Sub-sector



4.4.5 Resettlement

Table 11.5: Resettlement Sub-sector

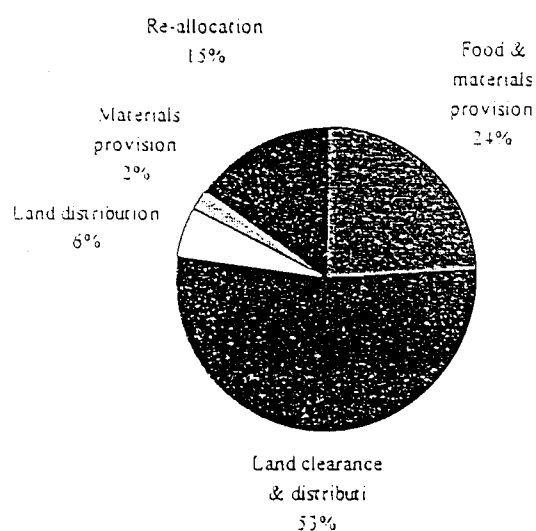
	Total (Amount)	Percent	No. of Projects	Capital (Amount)	Capital (Percent)	Training (Amount)	Training (Percent)
Food & materials provision	1,636	24.2%	5	1,227	75.0%	0	0.0%
Land clearance & distributi	3,554	52.7%	46	50	1.4%	0	0.0%
Land distribution	385	5.7%	17	30	7.8%	0	0.0%
Materials provision	149	2.2%	2			0	0.0%
Re-allocation	1,026	15.2%	17	0	0.0%	0	0.0%
Resettlement	6,750	100.0%	87	1,307	19.4%	0	0.0%

Resettlement is offered as part of a strategy which deals with several national objectives such as promoting rice production, commercial crops, stopping slash and burn and improving access to development services. Villagers have often relocated next to roads in order to improve their access markets and towns.

Resettlement proposals are included in 34 focal site budgets (out of the 62 focal site budgets). All three provinces which submitted provincial budgets (i.e. Phongsaly, Huaphan and Xienghuang) included resettlement activities. Annex 6 lists the focal sites in which resettlement is included.

Several focal site with resettlement activities involve only a few villages, or re-location within the focal site, such that in overall terms resettlement activities may constitute only about half of the National Rural Development Programme.

Chart 10: Resettlement Sub-sector



4.4.6 Community Development

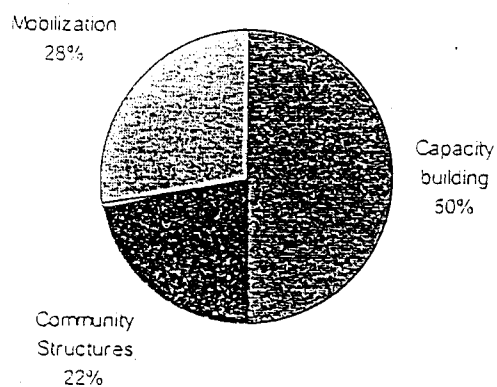
Table 11.6: Community Development Sub-sector

	Total (Amount)	Percent	No. of Projects	Capital (Amount)	Capital (Percent)	Training (Amount)	Training (Percent)
Capacity building	791	49.4%	39	76	9.5%	277	35.0%
Community Structures	356	22.2%	16	292	82.0%	0	0.0%
Gender training	6	0.4%	2			6	100.0%
Mobilisation	449	28.0%	25	15	3.3%	4	0.8%
Community Development	1,602	100.0%	82	382	23.9%	287	17.9%

About half of the proposed expenditure classified in the Community Development sector is for capacity building purposes. Activities included under this sub-sector include such things as promoting and preserving local culture and raising awareness and demand for development services.

Meeting halls, included in the Community Structures sub-sector are proposed in 17 focal sites.

Chart 11: Community Development Sub-sector



4.4.7 Income Generation

Table 11.7: Income Generation Sub-sector

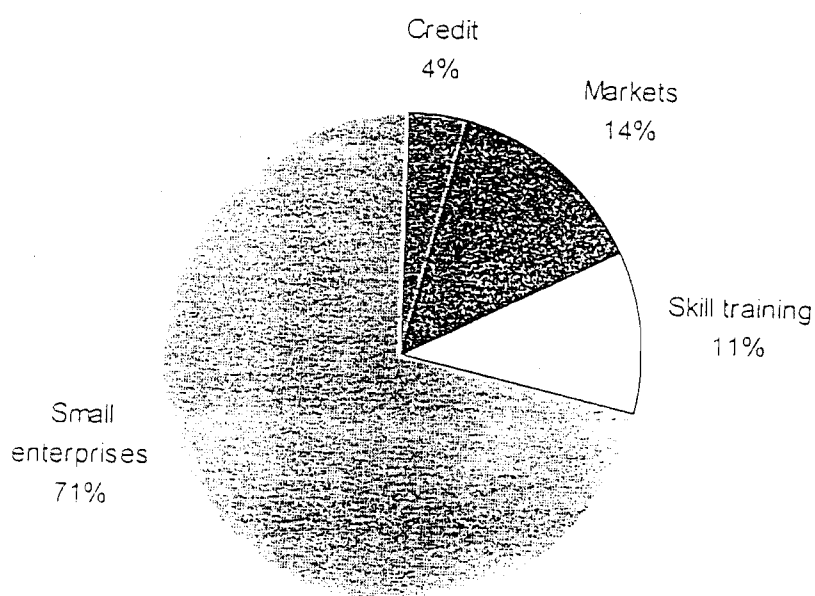
	Total (Amount)	Percent	No. of Projects	Capital (Amount)	Capital (Percent)	Training (Amount)	Training (Percent)
Credit	136	3.9%	6			0	0.0%
Markets	482	13.8%	23	310	64.3%	0	0.0%
Skill training	380	10.9%	18	50	13.1%	321	84.5%
Small business	2,488	71.4%	37	11	0.5%	17	0.7%
Income Generation	3,486	100.0%	84	371	10.7%	338	9.7%

71.4 percent of the proposed expenditure under income generation is for small enterprises which include such things as promoting local handicrafts. Different approaches are being adopted in supporting the development of small enterprises and this is an area which should be carefully monitored to help identify successful experiences and to inform policy on credit.

10.9 percent of the sector budget is for providing skills training in income enhancing activities. Skills training for non-farm income enhancing activities is likely to be an area where demand be strong, and support for developing good and appropriate training will be required.

Expenditure for markets are for building a covered market structure to attract small businesses and local trade.

Chart 12: Income Generation Sub-sector



4.4.8 Focal Site Management

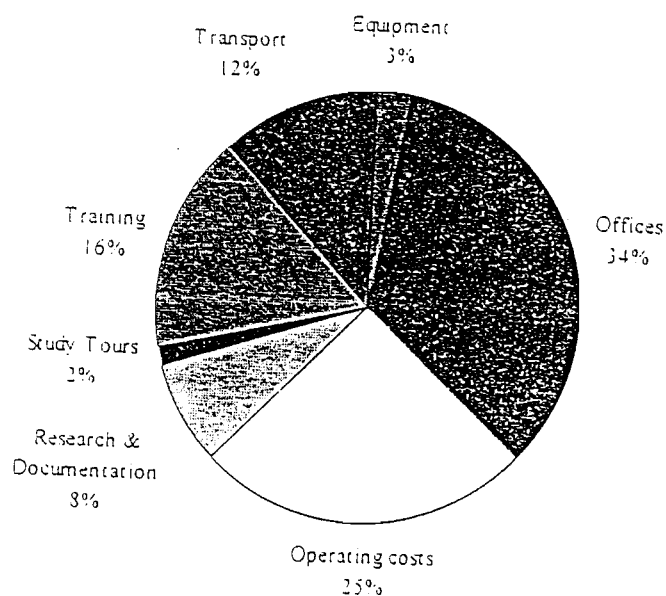
Table 11.8: Focal Site Management Sub-sector

	Total (Amount)	Percent	No. of Projects	Capital (Amount)	Capital (Percent)	Training (Amount)	Training (Percent)
Equipment	172	2.7%	14	135	78.5%	0	0.0%
Offices	2,140	34.0%	72	1,899	88.7%	25	1.2%
Operating costs	1,593	25.3%	35			0	0.0%
Research & Documentation	493	7.8%	15	90	18.2%	1	0.2%
Study Tours	96	1.5%	5			96	100.0%
Training	1,022	16.3%	43	8	0.8%	894	87.5%
Transport	770	12.2%	20	717	93.1%	0	0.0%
Management	6,286	100.0%	204	2,849	45.3%	1,016	16.2%

This sector covers overhead costs associated with the management of focal site development projects.

About one third of the management sector budget is for Offices which covers office buildings, dormitories, guest houses, and other such buildings. An further two thirds of the total for this sector is to cover the operational costs.

Chart 13: Management Sub-Sector



Section 5: Targets for Rural Development

Programming work on the focal site proposals has yet to cover monitoring and evaluation, and as such no Laotian specific impact have been set to date by focal site managers. Work on developing monitoring and evaluation systems will be a priority in further efforts.

5.1 Impact Indicators

The following are some national socio-economic targets which should be achieved within all focal sites by the year 2000:

- * Reduce the infant mortality rate to 50 per 1000 live births.
 - * Reduce under-five mortality rate to 70 per 1000 live births.
 - * Reduce maternal mortality to 300 per 100,000 live births.
 - * Reduce the rate of severe malnutrition among children under five year olds to 6 percent.
 - * Reduce the rate of moderate and severe malnutrition among under five year olds to 20 percent.
 - * Reduce the rate of low birth weight to less than 10 percent.
 - * Ensure household food security and rice availability of 430 gms per person per day.
 - * Access to safe drinking water for 80 percent of all focal site households.
 - * Under five immunisation coverage of 80 percent.
 - * Under one immunisation coverage of 90 percent.
 - * Reduction in the number of deaths due to diarrhoea.
 - * Reduction in the number of deaths due to malaria.
 - * reduction in the number of deaths due to acute respiratory infections.
 - * Net primary school enrolment rate of 80 percent.
 - * Increased adult female literacy rate.
-
- * Ensure household food security and rice availability of 430 gms per person per day.
 - * Limit and stop from slash & burns. Allocate land for cultivating.
 - * Ensure land allocation of about 80 %.
 - * GDP of about 300 US \$ / person / year.
-
- * Net primary school enrolment rate of 80 percent.
 - * Increased adult female literacy rate.
-
- * 80 % of the focal sites are able to travel in 2 seasons.
 - * Able to provide the electricity of 50 % .

5.2 Operational Indicators

It will be necessary to set clear operational targets such as financial disbursement targets, budget actual variances, project achievements and develop a management information system to track operational progress.

It will also be necessary to ensure that lessons learnt and successes can be efficiently identified, documented and disseminated.

Section 6: Strategies for Improving Plan Implementation.

The setting up of a national and provincial rural development committees and rural development offices under the leadership of the Lao Revolutionary Party, the identification of focal sites and multi-year planning of development activities for these focal sites, represent significant achievements. All this was done in less than two years without foreign assistance.

The planning process followed gives provinces the responsibility for developing focal site plans which are then build up into the national plan, in a 'bottom-up' manner.

There is, however, a need to further clarify the roles and responsibilities of the Provincial Rural Development Committees, and its relationship with line ministries on matters of planning and co-ordination. The limited mandate of these Committees to focal sites only is not generally understood by many provincial staff.

Although provincial committees have the responsibility to develop focal site proposals that reflect the local realities, there is little variation in the strategies proposed which, however, tend to reflect national policies. There is a need to ensure that there is genuine participation of villagers in developing and implementing focal site proposals.

There is no women's participation in Rural Development Committees which is further reflected in low women's participation in focal site plans.

Indicators and monitoring systems have yet to be put in place. This is particularly important if experiences in the focal sites is to provide the basis for further replication.

The greatest risk to the national rural development plan is the over the securing of external funding assistance. Most donors view rural development as a bottom-up process in which villagers actively and voluntarily participate in identifying development constraints and solutions.

The following are some of the next steps which will be taken by the Rural Development Department.

6.1 Short Term

6.1.1 Develop systems, procedures, and standards for appraisal, planning, budgeting, approval, implementation and reporting for the national rural development plan.

Systems and procedures need to be worked out and agreed between provincial authorities and the Rural Development Department on such things as:

- * Including new focal sites into the national programme as these are taken up in the future, or dropping focal sites which are found not to work.
- * How to inform the Rural Development Department when focal site funding is obtained by provincial authorities, and the inclusion of this assistance in the overall monitoring and budgeting systems.

- * Development of agreed criteria for the technical appraisal of project proposed in focal site budgets, and to carry out a more systematic appraisal of the projects before funds are disbursed.
- * The development of financial management systems for reporting on focal site budget and actual expenditures, and the reasons for any differences.
- * How focal site 5 year budgets will be modified to reflect actual implementation or new opportunities and priorities as these arise on a year to year basis.

6.1.2 Secure donor assistance for the National Rural Development Programme.

Donor assistance to the national rural development programme will be critical to the success of the programme. Donor assistance is expected to provide 84 percent or 128 billion of the total 154 billion allocated for rural development in the National Socio-economic Plan to 2000.

Donor support is already provided to some focal sites and one of the first short term tasks will be to clearly specify which focal site proposals, or components within them have secured funding.

To assist multiple donor assistance to the programme a funding consortium could be set up to share common costs for the reporting, auditing and evaluation requirements of donors.

6.1.3 Assist PRDCs to identify appropriate indicators and develop simple monitoring and reporting systems.

Programming work on the focal site proposals has yet to cover monitoring and evaluation, and as such no Laotian specific impact indicators have been set to date by focal site managers.

Work on developing monitoring and evaluation systems will be a priority and will start with an examination of national development targets and an appraisal of the feasibility of measuring these within focal sites given their sizes and capacities for measurement. Training will then be provided for carrying out baseline measurements.

Focal site managers will also be assisted in setting up simple management information systems which can track financial expenditures, the status project implementation, and the number of people benefiting.

6.1.4 Assist with the capacity building of provincial rural development workers.

The implementation of focal site projects requires the use of many new technical and management skills. Acquisition of these new skills through training will be important to the success of the programme.

One of three divisions of the Rural Development Department is to be a training extension division and there are plans to set up training centres.

6.1.5 Promote wider participation of the LWU in provincial RDCs.

Women have not been much involved in the development of the national rural development programme to date. None of the staff in the provincial Rural Development Offices are women. There is only one female member in all the provincial rural development committees, who is the Lao Women's Union representative in Xienghang.

Provincial Rural Development Committees will be encouraged to expand their membership to include representation from the Lao Women's Union.

6.2 Medium Term

6.2.1 Ensure that successes and lessons learnt are identified and promote the replication of such experiences.

Focal site coverage will extend to only 12 percent of the rural population by the year 2000 while attracting a significant proportion of public investment. It is expected, however, that the benefits of such investments will spread with focal sites acting as learning centres from which successful experiences are to be replicated.

Learning and the spreading of success will not take place by itself and capacity needs to be developed to evaluate focal site experiences, identify successful experiences and develop appropriate ways to disseminate such successes and technical experiences.

6.2.2 Ensure genuine participation of villagers in developing and implementing grassroots experiences.

The focal site plans are very ambitious and a key factor to their successful implementation and sustainability will be determined by the extent to which village communities within the focal sites participate in, and feel ownership of, the focal site programmes.

6.3 Long Term

6.3.1 Assess the cost effectiveness and impact of focal site experiences and shape national rural development on the basis of successful experiences.

The national rural development programme strategy is a very expensive one with public investments directed to focal sites covering 12 per cent of the rural population.

The overall cost effectiveness and success of the programme will be determined by the extent to which these focal sites act as learning centres in developing replicable ways of improving the life of rural people.

Vision

On

Agricultural – Forestry Development

Until Year 2020

I. GENERAL CONCEPTUAL FRAMEWORK FOR THE DEVELOPMENT OF AGRICULTURAL AND FORESTRY SECTOR UNTIL THE YEAR 2020:

1.1 SCOPE OF THE CONCEPTUAL FRAMEWORK

In accordance with guideline policy mentioned in the content and spirit of the VIth Party congress resolution as well as the related Decrees, the Government's national and regional socio-economic development plan until the year 2020 and agricultural of the concerned Ministry, the main aims concerning the research on the conceptual framework for the development of the agriculture and forestry until the year 2020, is the estimation process of the orientation and extension rhythm in agriculture and forestry sector from now to the year 2020.

Therefore the estimation of the strategic plan in agriculture and forestry development until the year 2020, is only the limitation of general guideline tasks concerning the concept and principle (approach) for agriculture and forestry development in conformity with the real situation and condition for the socio-economic and politic extension until the year 2020 set up in the VIth Party congress resolution and in accordance with the real, specific and natural potentiality in each sector (such as agro-forestry production, Tourism, electricity production) and in each region of Lao PDR (such as: large and small plain, plateau and mountainous). In other hand, the priority action programs shall be considered in the few years. And in the same time for creating suitable condition to the agriculture and forestry sector firmly take part in the realization of the national socio-economic development plan from now until the year 2020 and reach the general goal outlined, attention and effort must be placed on the support policies, measures and interventions of the macro-management level. And also to participate in the concept promotion for ASEAN centre of agro-forestry producer and supplier in ASEAN region, in ASIA and around the world, accordingly to the ASIAN vision 2020 statement and in accordance with ASIAN cooperation guideline agreement in agriculture and forestry sector outline in the 19th agriculture and forestry Ministry Conference held in Bangkok last October 1997.

In the realization of this concept firstly agreed upon, the strategical development concept in agriculture and forestry and actions plans shall be performed in special meeting of ASEAN's agriculture and forestry export held in JAKATA, INDONESIA during March 1998 (Special SOM.AMAF Meeting for Strategic Plan for Cooperation until the year 2020) in order to widely and deeply improve the performance of this conception by issuing detail policy from the Ministry of agriculture and forestry in which strategic plan, working regulation and detail guideline tasks between concerned technique sector its self (Infrasectorial program) which shall become the fundamental database for all activities in each realization period of ASEAN's general and detail action plan stipulated in ASEAN agriculture and forestry development plan until the year 2020

1.2 POLITICAL AND ECONOMIC CIRCUMSTANTIAL REFERENCES:

1.2.1. INTERNATIONAL AND ASEAN REGION CIRCUMSTANCES:

In general, the international circumstances constitute, in a great occasion and condition, and also it is challenge thing for the population of the world. some socialist countries such as PR China and SR Vietnam have achieved in realization of the new reformed policy and still in the position of firm extension as well as socio-economic and policy situations from now to 21st century. Started from 7th decade up to now, the world has developed through technique technology Revolution period, whereas technique and technology develop so rapid than before and it shall continue to develop strongly in the beginning period of the 21st century. The development of the economy, science and technology in the past has contributed into the internationalization process in the field of economy. Many group or associations of trade, finance and economy between countries in each continent of the world have been formed on the basis of cooperation and assistance each other, but in the same time, serious competition has been occurred and the tendency of nationalism and independence mass ideology in the world have been incited.

In Asia-pacific and Southeast Asia should have been formed a region which economy develop continuously and rapidly in the world, but some unstable factors has still hidden, whereas crisis in economy and finance are in expansion largely nowadays in some ASEAN capitalist countries (such as THAILAND & PHILIPPINE).

Nevertheless, based on the solid economic foundation of ASEAN countries, in addition with the rapid and financial assistance and the open trade relationship with the rapid economic developed countries in the region (such as CHINA, JAPAN, South KOREA, TAIWAN) it is, therefore logically estimated that the socio -economic development situation of ASEAN should strongly and continuously develop from now to the forecoming 21st century.

1.2.2 LAO PDR'S REAL ECONOMIC AND POLITIC SITUATION IN THE NEW POSITION OF ECONOMY AND POLITIC INSIDE ASEAN GROUP.

Lao PDR. is land-locked country with its geographical strategic position and its natural potential resources (such as large land for agriculture, rich of sources of water and dense forest) but are not yet fully exploited because the production force and mode of production are not yet applied, and in the same time, other potential economic sectors for example hydropower industry, heavy industries (cement plant), and services enterprises

(Tourism, transport, transit-trade...) are positively effected to the augmentation rate of agro-forestry production in close conjunction with processing industries for export to ASEAN and neighboring countries in the future. In fact LAO PDR shall become a so call land-linking country, whereas LAO PDR shall become center of agro forestry production and trade cross-route in southeast ASIA.

However, Lao PDR. is still being an economic undeveloped country not only of the world but also of ASIA and ASEAN countries. The Lao

people in general, especially those who live in the plain and mountainous area, are still very poor. The big different of living condition compares between city and rural area, plain and mountainous area. In conclusion of foundation of national economy is not yet solid enough.

- (1). Concerning the big and small focused area surrounding towns, the situation of development activities is still in the first phase, therefore its remains for the big part, an Economy based on natural, an Economy of archaic form of production such as cultivation and livestock using so call mixed technique of production with low capacity low productivity with constitute the main livelihood of the population.

The main part of the population who lives in the plain area produces only for self-subsistence. The production for storage and shall is still in the very low level. The application of semi intensive and intensive agrotechnique for plantation and livestock production linking or not with the processing procedure under the investment of the private sector, cooperative, farm or local and foreign enterprises are still limited and remained as the prototype form of the production.

- (2) Concerning the rural and in particular the mountainous area, the living condition of the population based upon the natural production form. The slash and burn cultivation and forest products harvesting for self-sufficiency are the main activities for self-subsistence. The minimum vital in every year cannot attain (means insufficiency of rice). The condition for regenerating revenue from the production is very few due to the archaic situation (very low level of education and public health), due to the very low productivity from the system of production which is base on the slash and burn cultivation and due to the limited and poor condition of communication, transport, shipping, science and technique, bank credit ... Therefore the population who live very far from the city in country has no idea and courage to find out suitable ways for upgrading their own living condition.

Whereas, the Government's guideline policy in the field of agriculture and forestry sector in particular, is oriented from natural economy to the intensive economy in large and deep aspect which the main production household unit for self sufficiency, for increasing storage and export quantity of agro-forestry products. But this fact has not yet promoted and supported by appropriate and detailed policies, measures and interventions in according with real and specific conditions, with characteristic and natural potentiality and with different weak points in each region. The main weak point which shall be the challenge thing from now the year 2000 is the food and food staff production for self-sufficiency and for storage really. Up to now , the countermeasures to limited the shifting cultivation and the resettlement program are not yet completed and are not

in conformity with specific biological system, method of production and level of socio-economic extension in each concerned region.

In the same time, the forest protection, reforestation and tree plantation activities are not yet a large procession of the mass. Surveying activities for collection necessary and fundamental data in order to perform the development programs of agriculture and forestry in each region and for each specific potentiality, have not yet undertake deeply and in detail manner so it cannot be used as fundamental database for realization of Master Plan in which the orientation and ability of the augmentation rate of food and commodity production in the field of cultivation, livestock, pisciculture and forestry, should be stipulated for long term period which specific production area zonification.

Based on the result of the study undertake on the specific international situation and circumstances, based on the geographic strategical position of the Lao PDR located in the South East ASIAN region and inside ASEAN group and base on the real situation inside the country its self which contains of many kind of potentialities and many kind of weakness mentioned-above, Lao PDR has enough ability to develop in stable rhythm.

II. AIMS, OBJECTIVE AND VISION ON AGRICULTURE AND FORESTRY DEVELOPMENT UNTIL THE YEAR 2020:

2.1 AIMS, GENERAL AND SPECIFIC OBJECTIVE:

2.1.1 AIMS:

In the new circumstances which improved the socio-economic and politic cooperation with strategical friendship countries; ASEAN, ASIA, and other continent, should widely strengthen. In order to basically ensure the continuation of the National Economy extension until the year 2020, The effort must be placed on the development of the agriculture and forestry sector aimed to make this ones leadership position in the national fundamental economy who efficiently contribute into the improvement of National Economy and achievement of macro economic objective set forth as followed:

- Make many attempts to ensure the annual average National Economic growth rate of 7-8%
- Highly contribute to the export commodity structure that direct involved in increasing of the GDP per capita at US\$500 in the year 2020.
- Firmly contribute in the creation of long term warranted opportunity for taking Lao PDR out of the undeveloped situation and for taking its population out of the poverty step by step.

2.1.2 GENERAL PERFORMANCE OBJECTIVE:

(1) GENERAL OBJECTIVE:

All effort must be concentrated for using all kind of rich natural resources and existing potentiality into the extension of agriculture and forestry production in correlation with conception of natural environment conservation, and also for using lands in each region based on the existing infrastructures system, appropriate technique and technology applied, specific and historic agroproduction expertise know in big and small plain area (such as: rice cultivation, crops commodity, livestock, pisciculture...) and base on some experiences in mixed technique for agriculture and forestry production applied in relation with forestry protection task in plateau and mountainous area and in correlation with the investment ability, the extension of socio-economic, science and technology as well in each region under the principle of consolidating the economy structure of agriculture and forestry which shall be linked just in the first moment with industry and services.

Many attempts shall be performed for achieving some important objective as the following:

- In the area of good condition of transportation, the problem of food shall be definitively solved in particular for self-sufficiency and storage to meet the demand of very far region which has no opportunity to undertake the production especially the shifting cultivation area.
- Open and promote the procession of agro-forestry commodity production to meet the local demand (big, medium and small towns) and increase the export quantity to meet the market demand in ASEAN, and in other countries of ASIA (in particular China)and other continent which have good relationship and trade cooperation with Lao PDR and AEAN. The kind of commodities which Lao PDR has comparative advantage in quality and economy should especially be considered and promoted as well.

(2) SPECIFIC OBJECTIVES:

1. USE THE LAND IN CORRELATION WITH THE CHARACTERISTIC OF BIOLOGICAL SYSTEM AND LAND CAPABILITY:

Aimed to apply intensive agrotechnique of production in plain area and apply mixed agrofresty-technique of production in the plain and mountainous area:

- (1). Undertake research for fully using agricultural lands (Cultivation, Livestock) by applying different scale of intensive agrotechnique of production in the plain area which has firstly organized.

Aimed to fully use the agricultural land in each region and especially flat land with sloped rate < 8%. Referred to initial survey data, for

the whole country it cover approximately an area 7,959,870 Ha. In which compose of:

- Plain area: 4,132,440 ha (Occupied 17,45% of the total superficy) In which the rich cultivation superficies located in 7 major plains of 8 main provinces (Vientiane Municipality, Vientiane, Bolikhamxay, Khammouane, Savannakhet, Saravan, champasak and Attapue) and also located in the small plains of the Northern provinces (around 87,000 ha.)
- Valley floor: 813,560 ha. of some provinces in the Northern Part: Luangprabang, Huaphanh and Sayaboury) in the middle part: (Vientiane, Bolikhamxay, Khammouane and Savannakhet) and in the Southern part (Saravane)
- Depression area: 554,700 ha. Located in some provinces in the Norhtern part: (Luangprabang and Sayaboury) and in the central part (Vientiane)
- Plateau Area: 2,459,170 ha. Located in some provinces in the Northern part: (Luangprabang, Huaphanh and special Zone) in the central part:(Xiengkhuang, special Zone and Khammouane) and in the Southern provinces.

Apart of this, the research for using complex agricultural land especially narrow valley which counted around 1,503,320 ha (6.35% of the total superficy) existed in some main Northern provinces which appropriately practice agricultural production on the sloped land.

(2) UNDETAKE RESAERCH FOR USING SLOPED HILL LAND WITH SLOPED RATE 8-30%.

This kind of land hold 29.46% of the total superficy or counted around 6,976,260 ha is properly used for practicing mixed agroforestry-technique of production aimed to produce food for self-sufficiency for some necessity and for regenerating personnel revenue which can be collected for increasing the investment fund in agriculture sector step by step.

(3) UNDERTAKE RESAERCH FOR USING STEEP MOUNTAINOUS LAND IN THE MOUNTIANOUS REGION.

This kind of land is counted around 7,148,200 ha. (Covered 30.19% of the total superficy) mainly located in the Northern provinces, in the eastern part of some middle and southern provinces. This part of land is expected to use for forest protection. And, in the same time, based on the appropriate measures entered in force, lower sloped land can be used by applying an appropriate technique and technology of production for self-sufficiency and for restriction of dangerous erotion.

2. USE THE AGRICULTURAL AND FORESTRY LAND BY ZONING SPECIFIC AND MIXED PRODUCTION.

(1) RICE CULTIVATION AREA AND AREA USED FOR PLANTATION, LIVESTOCK AND PISCICULTURE LOCATED IN THE PLAIN REGION TO MEET LOCAL DEMAND AND FOR EXPORT:

(For contributing into the implementation of some priority program such as: Food production, commodity production, restrict and finally stop the shifting cultivation by creating new and fixed job to the people involved and rural development program by creating fixed job in the field of agriculture)

Aimed to use with determination 7 big plains counted around 3,570,360 ha. in which 6 plains around 2 million ha (2,027,191 ha) have been undertaken initial survey already (except one plain at Attapeu Province).

- In which, surveyed rice cultivation area (376,000 ha) composed of plain of Vientiane (80,698 ha), plain of Paksan-Pakading (12,090 ha), Plain of Xebangphay(46,860 ha), plain of Xebanghieng(95,820), plain of Xedone (60,780 ha) and plain of Champasak (79,790 ha), and for the surveying area (Plain of Attapeu, and small plains of Northern Provinces) that should be completely survey in the year 2000, all those of land should be efficiently used by applying intensive agrotechnique of production in each level aimed to increase the productivity.
- The rice cultivation area is expected to extend until the year 2000 around 510,00 ha. And until the year 2020 around 800,000 ha. (from at the present time 420,000 ha.). concerning the irrigation area shall be extended to 100,000 ha. in the Year 2000 and 800,000 Ha in the year 2020.
- Apart of this, the research for using the rest of the land shall be continuously done. This part of land is compose of :
 - (1) Forest (mixed forest and mound forest) with meadow area counted around (474,860 ha) shall be used for increasing the rice cultivation area and for mixed and intensive agrotechnique of protection area such as plantation, livestock, pisciculture...
 - (2) Garden area located in Vientiane around 10,900 ha. shall be mainly used for increasing productivity.

The estimated quantity of agricultural product in the year 2020 that can get from the full usage of land mentioned above is aimed to ensure definitively the demand of necessary food and to collect the exceeded quantity for increasing the export value. The estimation of the attempted objective is calculated based on the result of studies concerning the agriculture extension rhythm of developed country in the last 20 years period, the agricultural production development system and the land development system, starting from the creation of specific production area until the round-circuit mixed production which can be applied in Lao PDR. Apart of this, the estimation should also take in consideration the theory and rhythm of expansion of the population in the municipality area as well.

The population of Lao PDR in the year 2000 is estimate 5,200,000 and around 8,700,000 in 2020. The augmentation of the citizen of the town is estimated at 20% of the total population in 1997, 25% in 2000 and 35% in 2020.

THE ATTEMPTED OBJECTIVE ARE AS FOLLOWING:

(1) RICE PRODUCTION:

The rice production shall definitively assure the minimum vital per capita and per year (average 350 kg in the year 2000 calculate as paddy weigh until and around 250 kg in the year 2020 due to the consummation of the meat for compensation) and regularly put in reserve 150 kg/capita/year in the year 2000 or around 30% of the total production of paddy per year. By this way the optimum vital could be assured and the storage quantity should be increased for higher export value.

(2) MEAT PRODUCTION:

It should make many attempts to produce 25.6 kg /capita/year in the year 2000 (as reference in the present time 22.2 kg/capita/year) and reach 60 kg/capita/year in the year 2020. In the 60 kg should compose of 4 kg of buffalo meat and beef, 10 kg of pig, 12 kg of poultry meat with 8 kg of eggs, 24 kg of fish and 2 kg of fresh milk. For achieving the objective mentioned above the production shall be intensified to reach in the year 2020, 33,000 tons of buffalo meat and beef, 82,000 tons of pig, 197,000 tons of fish, 98,000 tons of poultry, 66,000 tons of egg and 16,500tons of fresh milk.

Meat, egg, fish and milk are supplied from two main sources such as:

- specific production system and mixed production of plantation, livestock, and pisciculture by applying semi and intensive agrotechnique linking with processing industry and service enterprise located in the plains area mentioned above.
- Specific production system and mixed production of plantation, livestock, and forestry located in the specific focused of Plateau and mountainous region existing in northern, eastern of middle part and southern which aim to meet the demand of the dense population living in the plains.

(3) SPECIFIC CROPS PLANTATION AREA IN THE PLAIN, PLATEAU AND MOUNTAINOUS REGION FOR EXPORT:

(For contribute into the implementation of some priority program such as: Food production, commodity production, creation of new and fixed job for the people who practice shifting cultivation and participate into the realization of rural development program by creating fixed job as cultivator).

- Aimed to use efficiently the agriculture land of 7 big plains (located in central and Southern part) and small plain (Northern) for commodity production by applying semi and intensive agrotechnique of production.

- Aimed to modify the present rest of shifting area to crop and mainly fruit tree plantation area for export based on mixed agrotechnique in plantation, animal husbandry, pisciculture and forestry.
- Aimed to motivate the sloping hill land which not yet use for shifting cultivation to crop and mainly fruit tree plantation area for export.

FOR ACHIEVING THE OBJECTIVE OUTLINE ABOVE, SOME TASKS BELOW SHOULD BE ACCOMPLISHED:

- Use the above-proposed area in 7 plains into the commodity production specifically, mix with rice cultivation and mix with livestock. Focused on the plantation of potential crops for export such as maize, beans, root crop, industry crops (sugar cane, tobacco, oil crop, vegetable...)
- Use with determination the sloping hill land which has sloped rate 8-30% and some sloped rate 30-45% portion (high land crop) and in particular economic angular area for export commodity plantation area (such as beans, cotton, crop oil, flower and fruit).

The priority economic angular area are composed of:

- A. Quadrangular area in Northwestern (Lao-Thai-Myanma-China)
- B. Triangular area in Eastern (Lao-Thai-Vietnam)
- C. Triangular area in Central part (Lao-Thai-Vietnam)
- D. Quadriangular area in Southern (Lao -Thai- Cambodia- Vietnam)

Concerning Southern area, the effort should be concentrated for using agricultural land which still has good soil located in BOLIVEN Plateau with 0,3 Mil. Ha. for good price export commodity production (such as: Coffee, cardamom, Maize, Beans and fruits)

(4). SPECIFIC LIVESTOCK AREA LOCATED IN PLATEAUX AND MOUNTAINOUS REGION FOR EXPORT MAINLY:

(For contributing into the implementation of some priority program such as: commodity production, creation of new and fixed job to the people who practice shifting cultivation and participate into the implementation of rural development program by creating fixed job in the field of livestock and pisciculture).

- Aimed to produce the surplus and commodity to meet the consummation objectives per capita and per year in the big towns and in the country side mentioned above.
- Aimed to produce specific export commodity like animal and fish in total value around US\$50 million in the year 2020 in which compose of cow and its procession products (US\$20 million), Big animal secondary products (US\$5 million) food for animal (US\$5 million), Fish and its processing products (US\$15 million) and decorative Fish (US\$5 million).

FOR ACHIEVING THOSE OUTLINE OBJECTIVES, ALL KIND OF NATURAL POTENTIALITY CONCERNED SHALL BE STUDIED AND USED SUCH AS:

- Natural meadow: First estimation of superficies is around 7-8 million ha (1-2 million ha. situated in the Plains region and 5-6 million ha in Plateau and mountainous region)
- Natural water superficies: Is reached 723,000 ha (composed of Mekong river and its affluences counted around 254,000 ha, reservoir 57,000 ha, Muddy land 150,000 ha, Rice field for mixed production 406,000 ha. and fish pond 12,000 ha) which facilitate fishing and pisciculture in different scale.
- The remaining area from the plantation: located in the focused agricultural production area of the Plain region.

(5) PRESERVATION AND PRODUCTION FOREST FOR COMMODITY TO MEET THE LOCAL DEMAND, FOR EXPORT AND FOR FOREST PROTECTION:

(In order to contribute into the implementation of some priority program such as: Food production in form of forestry products for surviving, export commodity production , stop the slash and burn cultivation, creation of new and fixed job to the people who practice shifting cultivation and rural development program by creating fixed job by forest and land allocated and by promoting cultivation livestock, piscicultures, wood plantation)

- Aimed to reforest and extend the forest covered area from present time 47% of the total superficies of the country (11,168,00 ha) to 70% in the year 2020 by combination between natural enrichment and planting enrichment supported by local and foreigners, family, cooperative and enterprises.
- Aimed to manage and control the 20 national preservation area officially adopted which covered around 3 million ha or hold around 12.8% of the total superficies.

In the same time the provincial preservation forest and also some provincial and district protected forest counted around 5 million should be properly managed and improved. The population who lives inside or outside the preserved forest should strongly participate in the forest protection activities.

- To restrict the quota for logging from the natural forest to average 0.5 million meter cube per annum until the year 2020 for assuring the natural balance, in the same time the finished wood productions should be promoted and developed for higher value export commodity. And it is vital to assure the sustainability and the richness of natural forest.
- Remove the families of mountainous people who still practice shifting cultivation in the cathment and preserved forest areas undertake fixed agricultural production in focused rural development area of each province. The task on management of land, forest and land allocation is a method and a fundamental tool for the implementation of this objective in consideration with

the real situation of each region concerned. Apart the promotion of production in the form of agro-forestry system and the limitation of the forest area in order to transfer responsibility of the village in the task of protection, control and use of the forest in accordance with the good tradition of the forest mass management and this activities should combine with the usage of the technical and scientific methods.

FOR ACHIEVING THOSE OBJECTIVES MENTIONED ABOVE, SOME DUTIES SHOULD TAKE INTO ACCOUNT AS THE FOLLOWING:

- Fixed the objection for the reforestation of the deteriorated forest area covering an area of 2 million ha, in parallel with promotion of wood plantation of local and foreigner, family, cooperative and companies in the area of 0.5 million ha for commodity production.
- Find out the solution of the forest management in cooperation with the villager concerned to ensure the sustainability of the forest, in parallel with the development of wood processing industry in order to obtain the wood products as good quality commodity for local use and for export and for the regeneration of national income.
- Improve the system of forest preservation and protected forest under the principle of find out the suitable way for mountainous people who live in the concern area and stimulate them for real taking part in the forest protection process.
- Improve the system of land management, forest and land allocation process in an adequate from adapted to the real situation of the specific biological location, the real capability in the usage of agricultural and forestry land, the real socio-economic situation in each region. This improvement should undertake in parallel with the promotion for increasing the revenue and with the creation of fixed job for assuring the living condition and for definitively eliminating famine and poverty.

3. GENERAL MEASURES TO ENSURE THE IMPLEMENTATION OF AIMS AND OBJECTIVE OUTLINED UNTIL THE YEAR 2020

- 3.1. Undertake research for identifying measures and method of promotion to adapt the structure of protection, technique and technology for agricultural production system and method of production management to the specific location and specific condition of the biological system and to the potentiality of agricultural land and the capability to use this one in each region. That means appropriate principles and methods should issued for the usage of land in the plain and upland region in accordance with the real capability involved.

3.1.1 BIG AND SMALL PLAIN AREA:

The concentration of investment fund into the construction of infrastructure and into the purchase of fundamental and necessary material and technique of agriculture should be emphatically decide for stimulating the production in the intensive agrotechnique form:

(1). CONCERNING RICE AND CROPS PLANTATION FOR COMMODITY PRODUCTS:

(Remark: some measure below can be use also in the livestock sector)

Research on the potentiality of all kind of water for usage and for the construction of water supply system in order to facilitate the specific production and mixed production in diversified form between cultivation, plantation of crops for animal's food, livestock and pisciculture. In parallel with establishment of the management board for supervising all existing irrigation system (such as irrigation system in all level, reservoir system and water pump system) in order to guaranty, that, all those activities should work regularly and continuously though out the year.

Many attempts should be made to provide enough water for irrigation 70% of the total rice field in rainy season or around 636,000 ha in the year 2020 (from around 164,000 ha in 1997) and ensure supply irrigating water in dry season around 400,000 ha in 2020 (from around 45,000 ha in 1997 and 100,000 ha in 2000) and also for irrigating area 50,000 ha for plantation other crops for commodity. Beside that, irrigation system should protect the flooded area of 35,000 ha .

- Modification of cropping pattern system and productional season (in particular muddy land) and utilize of seed varieties up to 100% of total productor should use the good ones in the year 2020 from now 37% in the Plain of Vientiane and 29% in all other big plains.
- Usage the adequate structure of production technique (such as: recycling production system for preserving the quality of soil and mixed production system: plantation-livestock-pisciculture). Combination between fertilization using natural and scientific fertilizer and insecticides that should be properly use 100% in the year 2020. Now only 13%of agriculturist use fertilizer and only 6% use insecticides.
- Extension of rice and other crops plantation field to around 290,000Ha in the year 2020 in particular focused plains.
- Extension of the task in multiplying research centre and agricultural promotion centre in order to strongly improve the activities concerned in the important focused area. Firmly undertake research, experience, test and select the modern and appropriate technology and technique for increasing productivity and efficiency of the production. In parallel of this, the development of personnel for high skill and capacity in diversity subjects(management, research, developer)
- Continue to survey and to zone agricultural and forestry production area (plantation , livestock, forest management) for detail and complete manner in each region in order to set the strategy of agriculture and forestry development adapted with the local and foreign socio economic situations in each period.
- Promote the establishment of processing industry in the beginning by using potential agricultural products as raw material at the focused production area for producing commodity for local use and for export.
- Stimulate the establishment of chemistry and biomes fertilizer industry.

(2). CONCERNING LIVESTOCK AND PISCIULTURE:

- Construction of infrastructure and structure of livestock and pisciculture in specific and mixed for which link with plantation and irrigation in term of practicing intensive technique of livestock in conjunction with the promotion of the establishment of animal processing industry to meet local demand and for export.
- Establish and expansion system and experimentation centre in order to support the livestock and pisciculture for serving and stimulating the production at the specific location of biological system in each region. In parallel of this, the development of personnel for high skill and capacity in diversify subjects (management, research, developer).
- Achieve the improvement of efficiency of vaccine and medical factory in order to assure the augmentation rate of livestock until the year 2020. It should operate in parallel with the grill extension of pharmacy and with the large grill extension of epidemic detection acceptable in ASEAN region, neighboring and other countries in trade relationship with Lao PDR. The most important thing is the control of epidemic for assuring the export of animal and commodity produced from animal.

3.1.2 IN THE SLOPING LAND AND SLOPING LAND HILL LAND (8-12 to 30-45%)

Concentrate fund for purchasing necessary technical material and varieties in order to facilitate the application of mixed agrotechnique between plantation and/or livestock and pisciculture in parallel with the protection of forest and environment in the plateau and mountainous region which compose of :

- Creation of infrastructure and structure of mixed and appropriate production in the specific location and production in sloping hill area of each region in conjunction with the promotion of the establishment of processing industry in the Plain region of focused area mentioned in order to produce products from animal for local demand and for export.
- Creation of research and experimentation grill and specific promotion for serving and stimulating the production of agriculture and forestry in sloping hill area.
- Make decision in concentration of fund for moving the people who practice shifting cultivation in creating fixed job for them in combination with the allocation of land forest and also in combination with the land survey for zonation and usage in agriculture and forestry. And the concentration of fund shall also be placed on the promotion of agricultural and forestry production which assure the regeneration of revenue. And also the creation of other job out of the agricultural production system but good revenue (such as handy, craft, manufacture daily workers... for the reduction of population in the upland area) should be considered. In the archaic society, the promotion of agriculture and forestry shall be achieved only if the concentration of fund for rural development is firmly decide in order to create necessary and appropriate conditions.
- Construct the infrastructure and structure of the usage and the processing of wood in conjunction with the establishment of processing industry the focused

area of the plain region mentioned above in order to produce wood commodity for local use and for export.

Beside the specific measure mentioned above, in order to ensure the extension of the agricultural and forestry development in long term future, other measures which affect to the matter have to be studied and applied such as political measures for mobilizing all concerned parties to take part in this first level of battlefield, in parallel with the strong policy for promoting agriculture and forestry. In order to achieve the implementation of agricultural and forestry development program, the measures in form of regulations and laws shall be use strictly, Measures for promoting investment in all aspect (state fund, individual fund, local and foreign grant, loan, credit fund , private fund), Measure for opening local and foreign market, Measure for the assurance of communication and transport, Measures for the personnel development in parallel with agriculture and forestry development.

3. SOME PROPOSED COOPERATION PROJECT WITH ASAEN FOR SUSPORTING THE DEVELOPMENT OF AGRICULTURE AND FORESTRY UNTIL THE YEAR 2020.

- (1). Survey project for using irrigated water sources in particular on surface and underground water.
- (2). Project for cooperation and assistant in science, technique and formation of personnel for undertaking research, experimentation and promotion in some tasks as followed:
 - Intensive rice cultivation
 - Intensive of crops for export potential commodities.
 - Plantation of crops for export potential commodities
 - Intensive and mixed agrotechnique Livestock for commodities
 - Pisciculture for export
 - Cultivation and livestock in sloping hill land
 - Agricultural product Processing (Crop, animal, fish)
 - Survey to define agricultuer and forestry area by several method including satelite survey
 - Improvement of meteorological and hydrological system
- (3). Mobilization project of investment for:
 - Agricultural production as commodity(for advantage crops commodity such as coffee, maize, crop oil, sugar, cane, fruit, flower)
 - Processing of animal products and fish
 - Wood finished Processing
 - Producing and processing food for animal

5. ESTIMATION OF THE AUGMENTATION RATE OF AGRICULTURAL AND FORESTRY PRODUCTION UNTIL THE YEAR 2020

- * The strategy in agriculture and forestry development until the year 2020 mentioned above is issued on the basis of:
 - Real natural potentiality
 - Present real socio-economic situation
 - Estimation of the changement of the relationship policy in ASEAN region, Asia, and in the world which become good occasion and opportunity for Lao PDR to increase foreign assistant and grant, investment, commodity exchange and important of technology for affecting agriculture and forestry activities.
- * In the circumstance that, agricultural and forestry production can be properly development accordingly to the vision mentioned above, the estimation of:
 - AGDP augmentation rate (Agricultural Gross Domestic product)
 - Consumption rate (calculate in Calory unit)
 - Export income
 - National Budget regeneration
 - And agricultural sector investment need

Shall be stipulated in the tables as followed:

AGRICULTURAL GROSS DOMESTIC PRODUCTS VALUE (AGDP)

(In Thousand Million Kip)

ITEM/YEAR	1996	2000	2010	2020
TOTAL AGDP VALUE	524	730	1,156	2,003
• CULTIVATION	185 (35%)	332 (45%)	649 (59%)	1,346 (67%)
• LIVESTOCK & FISHING	280 (53%)	340 (47%)	433 (37%)	545 (27%)
• FORESTRY	59 (12%)	58 (08%)	76 (06%)	112 (06%)

AVERAGE AUGUMENTATION RATE OF AGDP

(In Per Cent, "%")

ITEM/YEAR	1996-2000	2000-2010	2010-2020
TOTAL AGDP	9.80	5.80	7.30
• CULTIVATION	19.80	9.50	10.70
• LIVESTOCK & FISHING	5.30	2.74	2.59
• FORESTRY	-0.42	2.59	4.74

LEVEL OF CONSUMMATION AVAILABLE AND REQUIREMENT

- The investment value is calculated based on the estimation of investment value during a period of some years (for example from the year 2000 to 2010)

6. ANNEX AND ADDITIONAL REFERENCE DOCUMENTS.

- Annex document is the map showing the natural potentially in Lao PDR (land, forest, water)
- Addition reference documents are the documents for the detail explanation on the orientation guideline and development plan of each agriculture sector until the year 2020 in which is included:
 - Figure of the important economic objective in macro level such as ADGP, consummation, export value etc... as mentioned above.
 - Strategic guideline in each sector including objectives, measures and major technique.
 - Real production plan in accordance with Role and capacity of each sector such as rice production, crop commodity, meat/milk/fish and egg production, wood production from natural and plantation forest, etc...
 - The estimation of the investment structure for ensuring the implementation of plans and projects outlined.
 - The clear zoning of specific production and mixed area in each focused area (including specific production area and conservation area) The GIS map is required if any)

The Identification of the development plan by sector is considered as the beginning step of collecting information and database to serve the intersectorial consultation and program in the next step, that means the development programs should base on the potentiality of each region.