

# カンボディア王国の農業と農村開発

1995

JICA LIBRARY



1123130(5)

国際協力事業団  
筑波国際農業研修センター

7  
ARY

筑農セ

J R

95-013







J 1123130 [5]

## 序文

本書は、筑波国際農業研修センターが1995年3月上旬より1ヶ月間実施したカンボディア国別特設コース「農村開発」の研修員カントリーレポートを基に、内外の関連資料を加え「カンボディア王国の農業と農村開発」として取りまとめたものである。

第1章で、カンボディアの独立後の経緯と現況を概観し、第2章では、農村部の現状と問題点を明らかにし、カンボディア政府の農村開発基本政策を述べた。第3章では、全国の農業事情と作物生産状況について述べ、最後に資料編として行政組織図、農業統計データ等を掲載した。

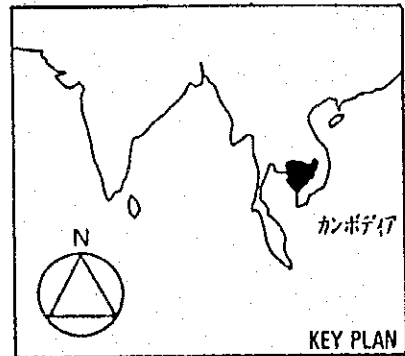
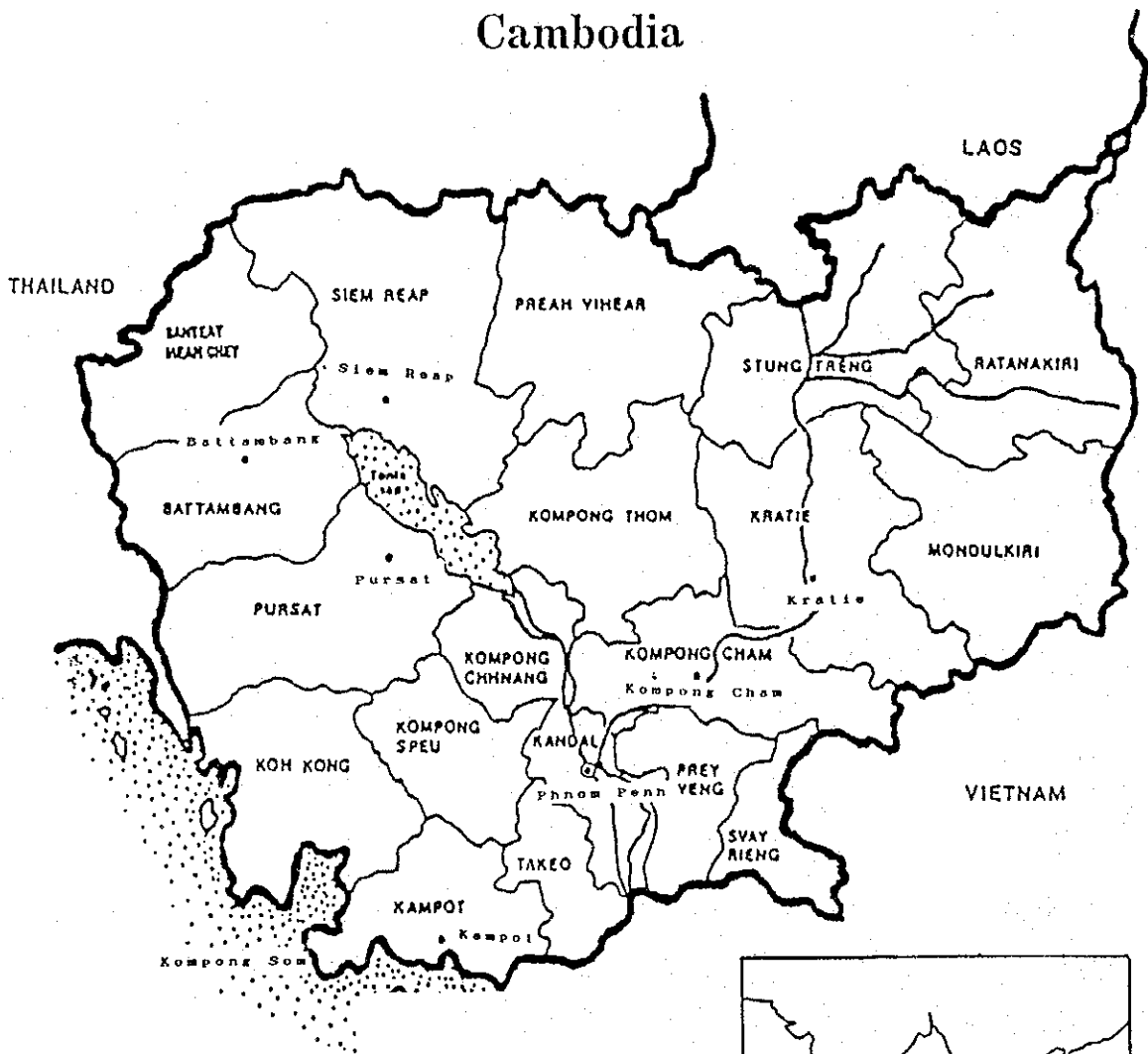
なお、本書は、研修員からの情報を中心に取りまとめたものであるため、正確なカンボディアの農業と農村の現状を伝えているかどうか、不安な部分もあるが、本書に類するような報告・レポート類が未だ少ないところ、関係者の業務の参考にしていただければ幸いである。

本書の取りまとめにあたっては、平成6年度カンボディア国別特設コース「農村開発」を担当した（財）日本国際協力センター 研修監理員 三浦浩子女史に多大なご協力を頂いた。ここに厚く感謝の意を表する次第である。

1995年4月

国際協力事業団  
筑波国際農業研修センター  
所長 山縣正安

# Cambodia



# 目次

## I. カンボディア王国概況

1. 一般事情
2. 国土の概要
3. 略史

## II. カンボディアにおける農村開発

1. 概要
2. 農村部の現状と問題点
3. 農村開発における優先課題
4. 基本政策
5. 農村開発担当組織

## III. カンボディアの農業

1. 国家における農業の役割
2. 主要作物の生産状況
3. 農業インフラ
4. 農業投入資材
5. 農業生産のための社会インフラ
6. 農業開発計画

## 参考資料

1. 行政組織図
2. 統計データおよび図表
3. 参考文献抜粋
4. 平成6年度カンボディア農村開発コース研修概要





## I. カンボディア王国概況



1. 一般事情

|                |  |
|----------------|--|
| ①正式国名          | (和文) カンボディア王国<br>(英文) Kingdom of Cambodia  |
| ②独立年月日<br>旧宗主国 | 1953年11月9日<br>フランス   |
| ③政 体           | 立憲君主制  |
| ④元首の名称         | ノロドム・シハヌーク国王   |
| ⑤位置・面積         | 北緯10～15度 東経 102～ 108度<br>18万 1,035平方キロメートル   |
| ⑥首 都           | プノンペン  |
| ⑦総 人 口         | 10,100 千人 (1994年) (注 1)  |
| ⑧民 族 等         | クメール族、他に中国人、ヴィエトナム人、チャム族と山岳少数民族  |
| ⑨公 用 語         | クメール語  |
| ⑩宗 教           | 仏教 (小乗仏教)  |
| ⑪暦             | <p>&lt;日本との時差&gt; -2時間</p> <p>&lt;祝祭日&gt;1994年 (注2)</p> <p>1月1日 新年</p> <p>2月25日 メアカポーチア</p> <p>3月8日 国際婦人デー</p> <p>4月14～16日 カンボディア正月</p> <p>5月1～2日 メーデー</p> <p>5月24日 ヴィサカポーチア</p> <p>5月25～27日 田植祭</p> <p>6月1日 子供の日</p> <p>9月24日 建国記念日</p> <p>10月4～6日 プラチュンベン (盆祭り)</p> <p>10月23～24日 パリ平和合意の日</p> <p>10月31～11月2日 シハヌーク国王誕生日</p> <p>11月9日 独立記念日</p> <p>11月17～19日 水祭り</p> <p>12月10日 人権デー</p> |

出所 (注1) Country Report 1st quarter 1995 EIU

(注2) 「カンボディア王国概要と日・カンボディア関係」 1994 外務省

## 2. 国土の概要

地形的にカンボジアは大きく二つに分けられる。一つは中央に位置する湖沼とメコン平野からなる凹地であり、もう一つは平野部を取り巻く山地および高地である。南西と南にはエレファン山脈とカルダモン高原が、北にはダングレックの山々が、東にはアンナメティック山脈に連なる高地がある。ラタナキリ(500m)とオー・クロン(1100m)の高原に阻まれて赤色土の広大な土地が今なお未開のままである。北から南に長さ540kmに渡ってメコン川が流れ、その支流、及びグラン・ラック(大湖)が重要な水資源となっている。

気候はモンスーン熱帯性気候である、ほぼ年間を通しての高温と雨期(5月から11月)と乾期(11月から5月)の二つの季節によって特徴づけられる。(巻末参考資料2.表1,図1,2参照)

コンボン・チャム,ラタナキリ,モンドゥルキリ(赤色土),バタムバン(水成茶色土)の肥沃な土地を除けばメコン川流域のほとんどの土壌はやせている(砂・泥土質土壌,酸性土壌,塩分濃度の高い土壌)。

## 3. 略史

1953年11月,カンボディア王国として仏から独立。

70年3月,シハヌーク殿下追放。ロン・ノル政権発足。

75年4月,民主カンボディア政権(ポル・ポト政権)成立。都市住民の大下放。恐怖政治。

78年12月,越の武力侵攻,翌年1月プノンベン政権樹立。

82年7月,ポル・ポト+シアヌーク+ソン・サンで民主「カ」連合政府(90年「カ」国民政府に改称。以降,プノンベン政権・越と3派連合との間で戦闘。

89年8月,和平を目指し,「カ」各派+18カ国参加でパリ国際会議。

91年夏「シ」殿下を中心に「カ」人の和解が急進展。

91年10月,パリ和平協定調印。停戦。「暫定期間」開始。4派の合議体である「「カ」最高国民評議会」(SNC)(議長:「シ」殿下)が対外的に「カ」を代表。

91年11月,「シ」殿下祖国帰還。自派 FUNCINPEC 党総裁職を子息ラナリット殿下に譲り、中立に。

92年3月,国連「カ」暫定機構(UNTAC)活動開始

93年5月,制憲議会選挙(「ポ」派は不参加。投票率90%)

93年7月,国家元首シハヌーク殿下の主導にて,拮抗する2大政党中心の「カ」暫定国民政府が発足。ラナリット,フン・セン共同首相。

93年9月,新憲法公布=「カンボディア王国」発足。制憲議会は国民議会に移行。シハヌーク国王即位。国王,ラナリット第一首相,フン・セン第二首相任命。王国政府発足。

UNTACは任務終了。

## II. カンボディアにおける農村開発

この章では、カンボディア王国復興開発計画 ("NATIONAL PROGRAMME TO REHABILITATE AND DEVELOP CAMBODIA" 1994 The Royal Government of Cambodia)とカントリーレポートからの抜粋により、農村開発計画について述べる。



## 1. 概要

カンボディア王国では農業はもっとも重要な生産活動であり、国民総生産（GDP）の約2分の1を占め、80-85%の人口が農村部に住んでいる。そのため王国政府は、農村開発を国家復興開発計画の中心課題にすえ、農村部と都市部の収入の格差をなくし、機会の均等を保障し、ひいては国民和解と国内の安定の実現をめざしている。さらに、農村経済の発展を助長することが、GDPの成長と雇用の拡大を生み出し、農産物の加工や輸出の可能性を広げることになる。また、それが輸入に頼らない食物の安全供給（食糧安全保障）につながり、持続的なマクロ経済のバランスの重要な要素である長期にわたる食糧価格安定の基礎を築くとしている。（巻末参考資料 2.統計データおよび図表の表2,3,4、図3 参照）

この観点にたち王国政府が打ち出した農村開発計画は、単に農業生産技術の向上を目指すものではなく、もっと広範囲な分野に目を向けたものになっている。そして、その計画に国家予算の約25%を使い、5つの主要関係省庁がその実施にあたっている。数々の援助国およびその機関、100を越えるNGOもこの計画に参加している。

## 2. 農村部の現状と問題点

農村開発には多くの側面があり、それらが有機的に絡み合っているため、計画の策定、実施が難しいものになっている。ここでは、農村部の現状と農業、教育、医療などの農村開発の主要な構成分野別に簡潔に述べるものとする。

### (1) 農業

- 農業生産：カンボディアにおける米の収量は世界でももっとも低いものであり、その原因として、生産技術の低さ、適切な普及活動の不足、優良品種の不足、土壌・作付方式の問題などがあげられる。
- 水利施設：ほとんどの田が天水田であり、毎年不規則な降雨量、干ばつ、洪水による生産量の低下が著しい。約2,000,000 haの稲作付け面積のうち、乾期・雨期を合わせた灌漑延面積は約380,000 haにすぎず、増産のためには灌漑水路網の拡充が必要である。
- 投入資材：もっとも広く分布している砂質土壌を始め、多くの土地がやせていて米の収量は1 t/ha以下というたいへん低いものとなっている。そのため、化学肥料や緑肥が必要であるが、ほとんどの農民はそれを買う余裕がない。
- 畜産：現金収入源としても栄養源としても畜産は奨励されるべきものであるが、防疫体制の不備が農家における家畜飼育の障害になっている。

カンボディアの農業については、次のⅢで詳しく述べる。

### (2) 教育

農民の知識レベルが農村開発の鍵であるが、カンボディアの成人の非識字率は約37.8%と非常に高く、また、29%は就学せず、50%が初等教育を完全に終えていない。この低就学率の原因としては、貧困、農村部での学校不足、教育に対する理解の不足などがあげられる。

### (3) 医療

医療・保健衛生に関連する問題は数多くある。その主たるものをあげると：

- 基礎知識の欠如（衛生・栄養に関するもの、迷信の存在）
- 医療施設の不足
- 低所得や負債による貧困
- 安全な飲料水の不足
- 人員養成システムの不足
- 家族計画と出産間隔の未調整
- 早婚

### (4) インフラストラクチャー

- 農村部道路の未発達、未整備
- 学校と教育資機材の不足など

## 3. 農村開発における優先課題

上記の農村部における現状・問題点をかんがみ、王国政府は、農村開発に関する17の最重点優先課題をあげ、調整のとれた計画実施とより遠隔地への開発の広がり力を注いでいる。その17の最重点優先課題とは：

- ・ 適切な研修と研修施設、資料センターとワークショップの開設
- ・ 飲料用、家事用および灌漑用の水の供給
- ・ 統合と雇用に力点を置きつつ難民帰還プログラムの継続
- ・ 地雷撤去キャンペーンの継続、あるいは資金が許す範囲での拡大
- ・ 食糧安全保障のための自家用消費食料生産プログラムの実施
- ・ 農村部の道路の修理修復と建設
- ・ 基礎医療の整備
- ・ 農村金融の拡大
- ・ コミュニティセンターと女性開発センターの設立
- ・ 簡単な研修の実施
- ・ 小規模企業と現金収入につながる活動の創造
- ・ モデル農村の設立
- ・ 代替エネルギー源の開発
- ・ 環境と天然資源の保護および再植林の奨励
- ・ 社会-経済調査の実施
- ・ 家畜衛生と家畜病院のレベルアップ
- ・ 情報の拡散と情報システムの構築



#### 4. 基本政策

上述のように農村開発には多くの要素が含まれ、これら互いに関連しあった課題に対処するために、王国政府は2つの平行する戦略を打ち出した。第一は、開発パートナー国間の協議と調整を円滑に進めて、農村開発計画のマネージメントを改善することである。これは、カンボディア農村部で活動するさまざまな機関や組織の計画立案と移管の能力およびメカニズムを増強する事を主たる目的とし、短期間のうちに効果をあげなければならない。第二には、(農村部人口)直接参加の方法論と農村開発のより総合的なアプローチを奨励し、開発計画の計画立案と実施のリンケージを強めることをめざす。

そして、この戦略とそれに沿った多くの計画を成功に導くために、政府は2つの基本政策をかかげた。

- ・農村開発計画の立案と実施に際しては、関連する国内あるいは国際的な組織と機関に相互に、または王国政府と連携協力するように要請する。
- ・住民参加を通じより継続的で、男女(gender)差を意識した総合的かつより人民志向型の農村開発アプローチへの移行を確実に行う。

住民参加が、農村部における全ての活動の成功の鍵となる。加えて、農村開発戦略では、国民の信頼を築くこと、国民を新しい考えに触れさせることが必要であり、なされるアプローチは、より開かれた社会と相いれるものでなければならない。そうなることにより、住民の参加もより意味のあるものとなる。このために以下の住民に対する働きかけが必要となってくる。

- ・開発の過程においての役割と責任を自覚させる。
- ・独立独行の精神をやしない、互いの寛容に頼らない。
- ・市場経済の基本的な考えを普及、啓蒙する。

また、王国政府は躍動する民間の活力にもおおいに期待を寄せるものである。それらの活動を支援するために、以下の措置を採る。

- ・農村部から市場へあるいはシアヌークビル港へのアクセスを含むインフラ整備
- ・ゴム園の民営化
- ・現実に則し、しかも商業的な利率での適切な金融システムの確立
- ・新しく登場した市場経済への農村部住民の参入を助長し、増えつづける商業チャンスを彼等が活かせるようにするための援助
- ・土地保有制度の確立、地雷処理、国内の治安の回復

## 5. 農村開発担当組織

1993年11月に、内閣付属機関として農村開発庁(Secretariat of State for Rural Development)が設立され、現在では省に格上げされた。同省は農村部住民の生活水準向上に係わる全ての活動を組織する任を負う(村落における家庭用水の供給、衛生施設関連の土木工事、コミュニティー開発活動、技術部門の生産活動への住民の動員など)。

一方、1994年には、農林水産省内に農業普及局が創設され、それまで同省内の関連部局の調整のもとに行われていた普及活動が一本化された。同局は、オーストラリアの援助機関であるAIDAB等の支援を受け、近代的で改良された生産技術・手段を農村部に導入し農業生産を助長する活動を、カンボディア全土で繰り広げてゆくことになる(肥料の使用法、灌漑水路網の整備、水路・コリマタージ水路建設、養殖、家畜への予防接種、森林管理共同体計画の立案、農業機械化、農民組織・農村青年組織の編成等)。

巻末の参考資料の中に、農村開発省の中央と地方(州・郡)の組織図および農林水産省の組織図をのせる。

### III. カンボディアの農業

農業はカンボディアの基幹産業であり、農村開発の中でも農業開発が占める割合は非常に大きい。この章では、カントリーレポートを基にしてカンボディア農業の現状をまとめる。



## 1. 国家における農業の役割

カンボジアは本質的に農業国であり、人口の85%が農業で生計を立て、その大部分が米を生産しており、1991年に第一次産業が国内総生産に占める割合は47%となっている。しかし20年間に及ぶ内線、特に75年から79年までのクメール・ルージュ体制下において農業関連のインフラは完全に破壊され、80年以降からの修復も人的資源や社会主義国からの国際援助の不足、通商停止、等によって遅々としたものだった。表5は87年から91年までの農業国内総生産に占める各部門の割合を示しており、米作40%、畜産27%、漁業10%、林業3%となっている（林業の3%は実際の数字を反映しておらず、違法あるいは確認不可能な伐採がかなり行われている）。また89年の統制経済から市場経済への移行により、農民の生産活動は促進され、農産物も市場でより有利な値段で自由に売買できるようになった。（巻末参考資料2 表5参照）

## 2. 主要作物の生産状況

プノンペン政権による第1次5カ年計画（1986～90年）では食糧、ゴム、木材、水産の生産を向上させることを目標にしたが、ゴム園面積、漁獲、木材生産等が計画目標をほぼ達成あるいは上回ったが、全体としては計画は達成されなかった。

その他食糧としてトウモロコシ、さつまいも、キャッサバ、ココナッツ、豆類、野菜等を生産する。

工芸作物としてはゴム、ジュート、ラミー、綿花、ココナッツ、サトウキビ、桑、タバコ等が栽培されている。特にゴムは重要輸出品で1970年の内線の始まる前は輸出の3分の1を占めていた。90年にはゴム園の面積は85年で3万5千トン、90年は3万トンであった。（巻末参考資料2 表6参照）

農業の主体は、食糧生産で特に米の生産に重点が置かれている。稲は全耕作面積の84%で栽培されており、1960年代後半には250万ヘクタールで栽培され246万トンの粳を生産していた。69年には50万トンを出した実績もある。しかしながら70年代の混乱で79年には、耕作面積77万ヘクタール、生産量56.5万トンにまで激減した。80年代に入り急速に回復に向かい、91年の栽培面積は163万ヘクタール、生産量は223万トンとなった。しかしながら、91年8月には大洪水にみまわれ稲作が被害を被った。91年の粳耕作面積は雨期・乾期米を合わせて、180万ヘクタール前後と、同年の計画目標210万ヘクタールより下回った。潜在可能耕地は256万ヘクタールと推定され、まだ30%が未利用の状態である。米の年間必要量は280万トンとされ、91年は240万トンと生産量は未だ不足している。現在5万ヘクタールが二期作を行い16万ヘクタールが高収量品種・肥料を導入した集約農業を行っている。

生産地域はトンレーサップ湖周辺からメコン川下流に集中し、5～10月の雨期作（早生、晩生、浮稲）が中心であるが、乾期にも若干生産されヘクタール当たりの収量は雨期作の約2倍の2.5トンである。北部のバタンバン州及びメコン川上流デルタ地帯のコンボンチャム、カンダル、コンボンズプー、プレイヴェン、タケオの諸州でカンボディアの全米生産の3分の2を占めている。大部分は、低地の天水田で生産されている。（巻末参考資料2 表7参照）

家畜の頭羽数は1980年には内線開始前の1968年の牛42%、水牛56%、豚16%、家禽類80%まで減少したが、91年には68年の牛121%、水牛107%、豚142%、家禽類147%になった。しかしながら防疫体制の未整備、飼料作物の不足・研究生産施設や機材の不足により食肉生産はもちろん役畜も必要量を満たしていない。（巻末参考資料表8参照）

### 3. 農業インフラ

#### (1) 灌漑

クメール・ルージュ体制下において多くの灌漑用水網が建設されたが、堰、用水路等、適切な技術をともなつたものではなかった。220万haの稲の耕作地の内、25万haの耕地のみに補助的な灌漑を行っている。耕作地は毎年、洪水や早魃の被害を受け、94年の場合15万から30万トンの米が不足している。

国連開発計画は灌漑施設に関する調査を行い、ニ基のダムがアジア開発銀行の資金援助の対象となっている。プレッタ・トノット水力発電ダムのプロジェクトでは約5メガワットの電力供給と70万haの土地に灌漑をすることになるが、このプロジェクトは日本政府によって資金調達のための調査が行われた。

地下水は灌漑用にはほとんど開発されておらず、穴や井戸が飲料用に掘られている。(巻末参考資料3(4)参照)

#### (2) 交通

州や市町村間をつなぐ交通網は劣悪な状態であり、国は資金不足のため94年までほとんど修復を行えなかった。このため農作物の市場への輸送、また農業資材の農村部への輸送は大変な影響を受けている。交通費が大変に高いため農作物はととも高く、農業資材の値段も高くなり農民の購買力を上回っている。米国、日本、アジア開発銀行の援助により、国道1、2、3、4、5号線が修復されている。

北部のラタナキリ、モンドゥルキリといった肥沃な土地への交通手段がないため未開発の雑木林のままである。

#### (3) 貯蔵

農作物と農業資材の貯蔵は現在の所プノン・ペンでも地方の州でも満足できるものはない。肥料、農薬、米については農業省は容量が1万トンの倉庫を所有するのみである。地方では倉庫は数も少なく、収容力もずっと小さくなる。

現在のところ、解決策はプノン・ペンと県との間の定期的な物流路を確保することであるが、これは県から村までの流通状況に影響をうけることになる。また地方では作物をビニールを被せて外に放置することもしばしばあるが、雨期にはこうしたことはできない。

また、農民各自の持っている納屋にも貯蔵性に問題があり、ネズミなどに米を食べられたり虫やカビの被害を受けている。

### 4. 農業投入資材

今まで農民は堆肥、腐葉土、緑肥といった有機肥料を使用してきたがその量はわずかであり、また外資不足で国は化学肥料を買えないため、有機肥料の生産開発が望まれる。今まで4万から5万トンの化学肥料が米作用に使用されているが、これは先進国からの無償援助に依るものである。化学肥料を併用しないと生産性を上げられないことが報告されている。(巻末参考資料2 表10参照)

トラクターは大型(60~80 HP)の旧ソ連製のものが多く、約1,000台が稼働中で浮稲圃場(47万ヘクタール)の耕起に使用されている。しかしハンドトラクターはNGO等により約1,200台が導入されたが、十分に利用されていない。ハーベスター・コンバイン等はヴィエトナムやタイ等から輸入されている。(巻末参考資料2 表9参照)

## 5. 農業生産のための社会インフラ

### (1) 農民金融

農民が農業資材を購入したり、年収を増やすため養殖、養鶏などを行うための資金をかりられるようにするためにも貸付は重要である。しかしカンボジアではNGOの主導で実験的に行われている段階であり、国が大規模に組織するまでにはいたっていない。但しNGOの活動は良好な成果をあげており大変有望である。(巻末参考資料3(3)参照)

同様に洪水や旱魃のあとすぐに耕作をできるよう種子銀行の設立も望ましい。また家畜育種(受精卵移植)も検討されるべきである。

従来からの高利貸しに借金をすると月10~20%と高利の負債をおり、天災で作物に被害を被ると父から子や孫までが負債を負うこともある。

最近、政府により農村貸付国家委員会が設立され、中央や地方のレベルで機能する貸付の組織を設立するための調査が実施された。またNGOによって始められた活動を統合しようとしている。

### (2) 農業協同組合

79年に農民の連帯組織が廃止され、またその後の市場経済への移行後、先進国におけるような農業協同組合は設立されていない。しかしいくつかの県では貸付、灌漑、種子銀行、家畜銀行といった目的を持った農民の団体がある。クメール・ルージュ体制下での農協に対する弾圧の経験があるため政府は農協を組織するのを躊躇していたが、農協の機能を取り入れた「農民団体」の設立が取りざたされている。(巻末参考資料3(4)-2参照)

### (3) 農業普及機関

94年に農業省は正式に農業普及局を設立したが、それ以前は農業普及部、農業庁、動物保健生産部、林野局など関係各局の調整によって行われていた。

農業普及局の活動計画としては：

- 共同体の住民の抱える問題や要求を調査・分析し、生産の増大を企る
- 農業普及員の教育プログラムおよび農業普及制度のプログラムを作成する
- 経済の原動力、教育戦略についての研究・調査を行い農業生産を推進する
- 関係省庁、国際協力組織などと協力して応用可能な農業技術に関する資料を収集し、農村の啓蒙活動のための広報、雑誌、ビデオなどを準備、作成する
- 講習会の活動を準備し、現地で実演を行い、地域住民の知識を高める
- 共同体の農民のための貸付制度を管理し、彼らの生活を安定させる
- 定期報告書を農林水産省に提出し、農業普及活動とその成果の監理と評価を行う

### (4) 商業制度

自由経済体制において農産物は市場で自由な値段で販売されており、国は商品の価格決定に一切関与せず、また特定の農産物の生産促進のための補助金も出していない。これにはよい面も悪い面もあり、特に生鮮食品が悪い影響を受け、木材のように保存性のある製品は影響を受けにくい。こうした問題に対処するため市場を組織化(木材価格の国による決定、生産食品のための冷蔵施設、等)する必要がある。また作物の取引の管理は商業省の管轄であり、農業水産省は農業生産に携わっている。(巻末参考資料3(4)-3参照)

### (5) 教育制度

農民を対象にした教育制度はこれまで存在しなかったが、農業普及局の設立と農村開発省によってこ

の制度は組織されていくことであろう。農水省ではさまざまな技術局と協力して技術的問題（肥料、農薬の使用法、水田での魚の養殖、等）についての講義や短期セミナーを農業開発センターや農業試験場で行っている。こうした講義は技術局やNGOによって外国の専門家の協力を得て実施されている。将来は理論だけでなく農業試験場などの農場で実習、実演、見学などを行いたいとしている。

#### 6. 農業開発計画

巻末参考資料 3(1)カンボディア王国復興開発計画より抜粋した

V. セクター別プログラム A.(i)農業の項を参照。



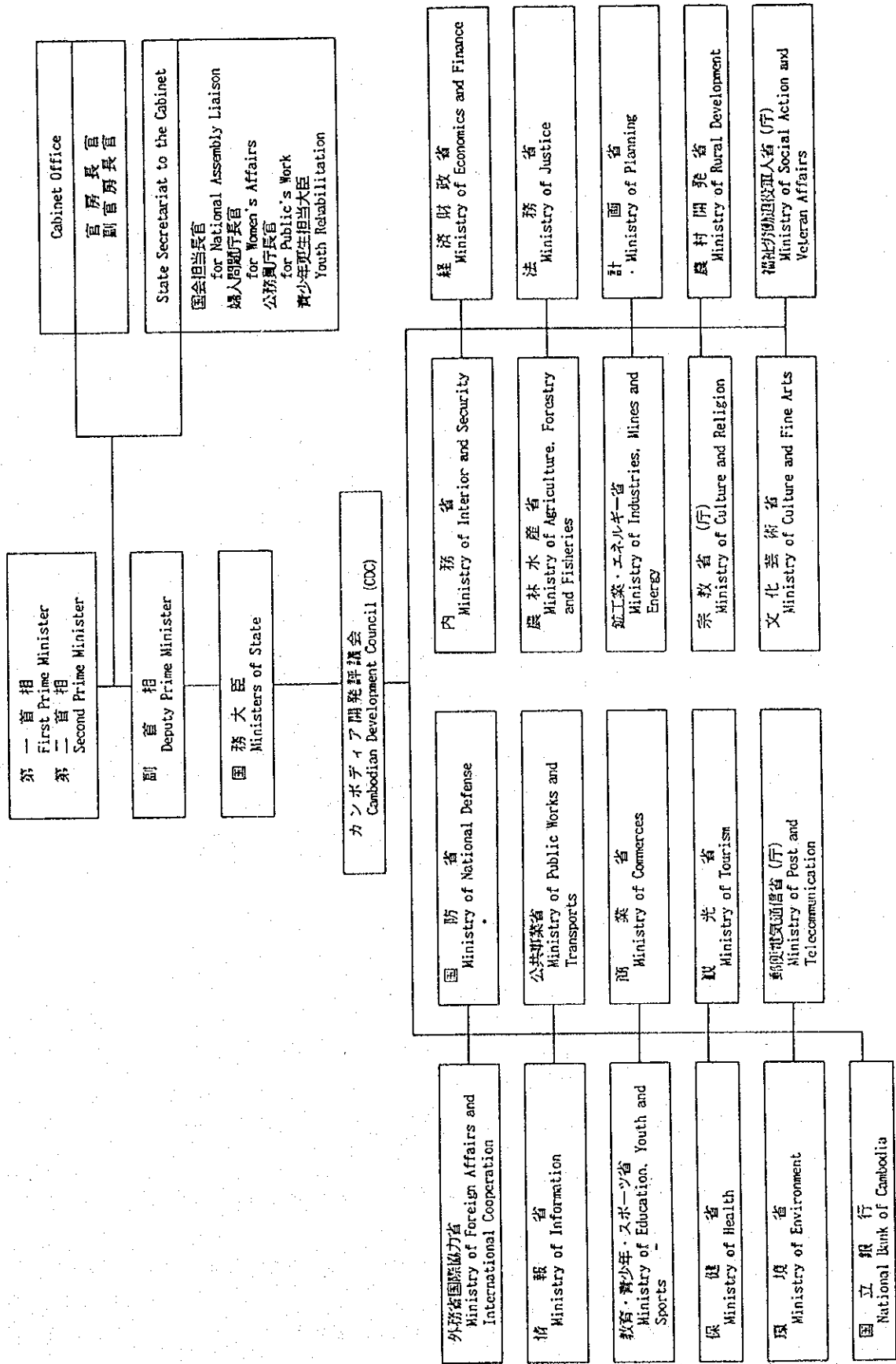
## 参考資料

### 1 行政組織図

- (1) 国家行政組織図
- (2) 官僚名簿
- (3) 農林水産省組織図
- (4) - A 農村開発調整メカニズム
- (4) - B 農村開発省組織図
- (4) - C 農村開発省管轄州組織図
- (4) - D 農村開発省管轄郡組織図
- (5) 援助受入体制



(1) 国家行政系統図(カンボディア) - 1995年1月現在 -



## (2) 閣僚名簿

閣 僚 名 簿  
(カンボディア)

1994年12月7日現在

|              |                                    |
|--------------|------------------------------------|
| 国 王          | ノロドム・シハヌーク (Norodom Sihanouk)      |
| 第1首相         | ノロドム・ラナリット (Norodom Ranariddh) (F) |
| 第2首相         | フン・セン (Hun Sen) (CPP)              |
| 副首相          | イン・キエット (Ing Kieth) (F)            |
| 観光大臣         | ウェン・セレイウット (Veng Sirivuth) (F)     |
| 国防大臣         | ティア・バン (Tie Banh) (CPP)            |
| 〃            | ティア・チャムラット (Tie Chamrath) (F)      |
| 内務大臣         | サル・ケン (Sar Kheng) (CPP)            |
| 〃            | ユー・ホックリー (You Hokry) (F)           |
| 外務大臣         | (Ung Huot) (F)                     |
| 法務大臣         | チェム・スグオン (Chem Snguon) (C)         |
| 情報大臣         | イエーン・ムーリ (Ieng Moly) (B)           |
| 経済・財政大臣      | (Keat Chhon) (CPP)                 |
| 計画大臣         | チア・チャント (Chea Chanto) (CPP)        |
| 農林水産大臣       | (Tao Seng Hour) (F)                |
| 公共事業・運輸大臣    | イン・キエット (Ing Kieth) (F)            |
| 工鉱業エネルギー大臣   | プー・ソティラック (Pou Sothirak) (F)       |
| 福祉・労働・在郷軍人大臣 | スイ・セム (Suy Sem) (CPP)              |

(次頁に続く)

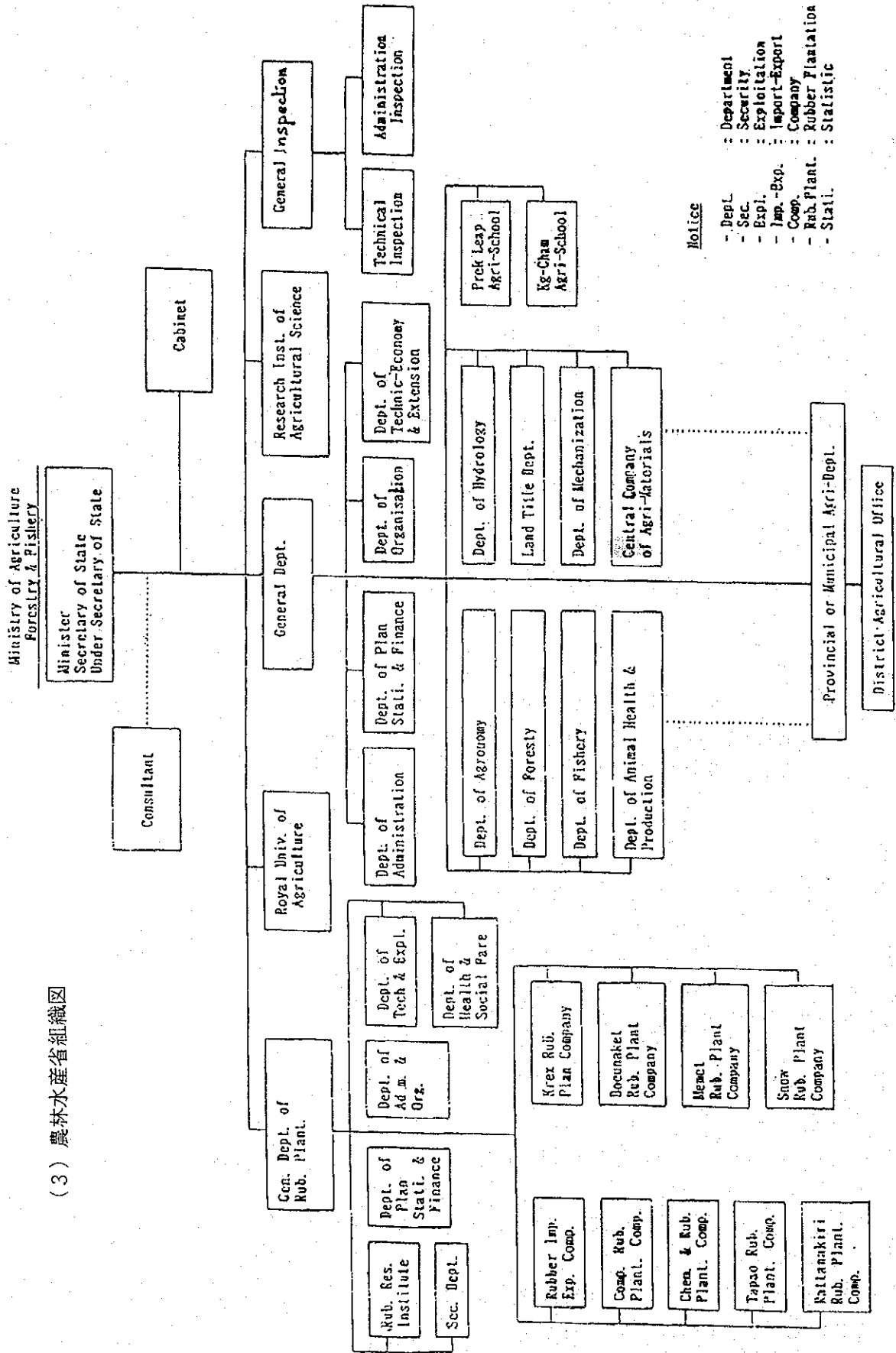
|                    |                                |
|--------------------|--------------------------------|
| 宗教大臣               | ヘアン・バンラット (Hean Vanrath) (CPP) |
| 文化・芸術大臣            | ヌット・ナレン (Noith Narang) (CPP)   |
| 商業大臣               | チャム・ブラシット (Cham Prasidh) (CPP) |
| 教育・青年問題・<br>スポーツ大臣 | (Toi Lcah) (F)                 |
| 郵便・電気通信大臣          | ソ・クン (So Khun) (CPP)           |
| 保健大臣               | チア・タン (Chhea Thang) (CPP)      |

出所 Country Report: Indochina 4th quarter 1994 EIU

『世界年鑑』 1994 共同通信社

J I C Eカンボディア連絡所資料 1995年1月13日

(3) 農林水産省組織図



Notice

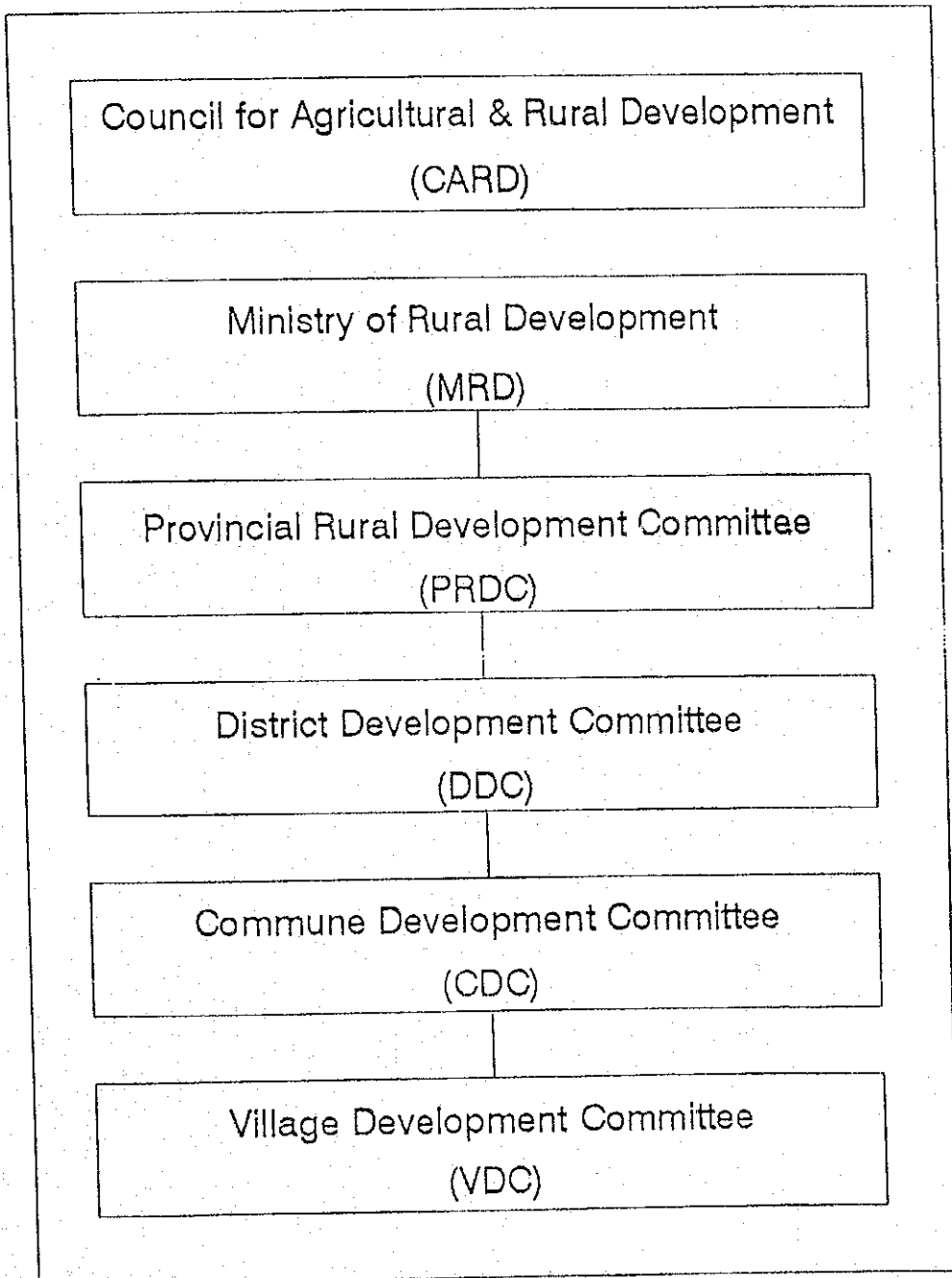
- Dept.
- Sec.
- Exp.
- Imp.-Exp.
- Coop.
- Rub. Plant.
- Stati.

- = Department
- = Security
- = Exploitation
- = Import-Export
- = Company
- = Rubber Plantation
- = Statistic

(4) - A 農村開発調整メカニズム

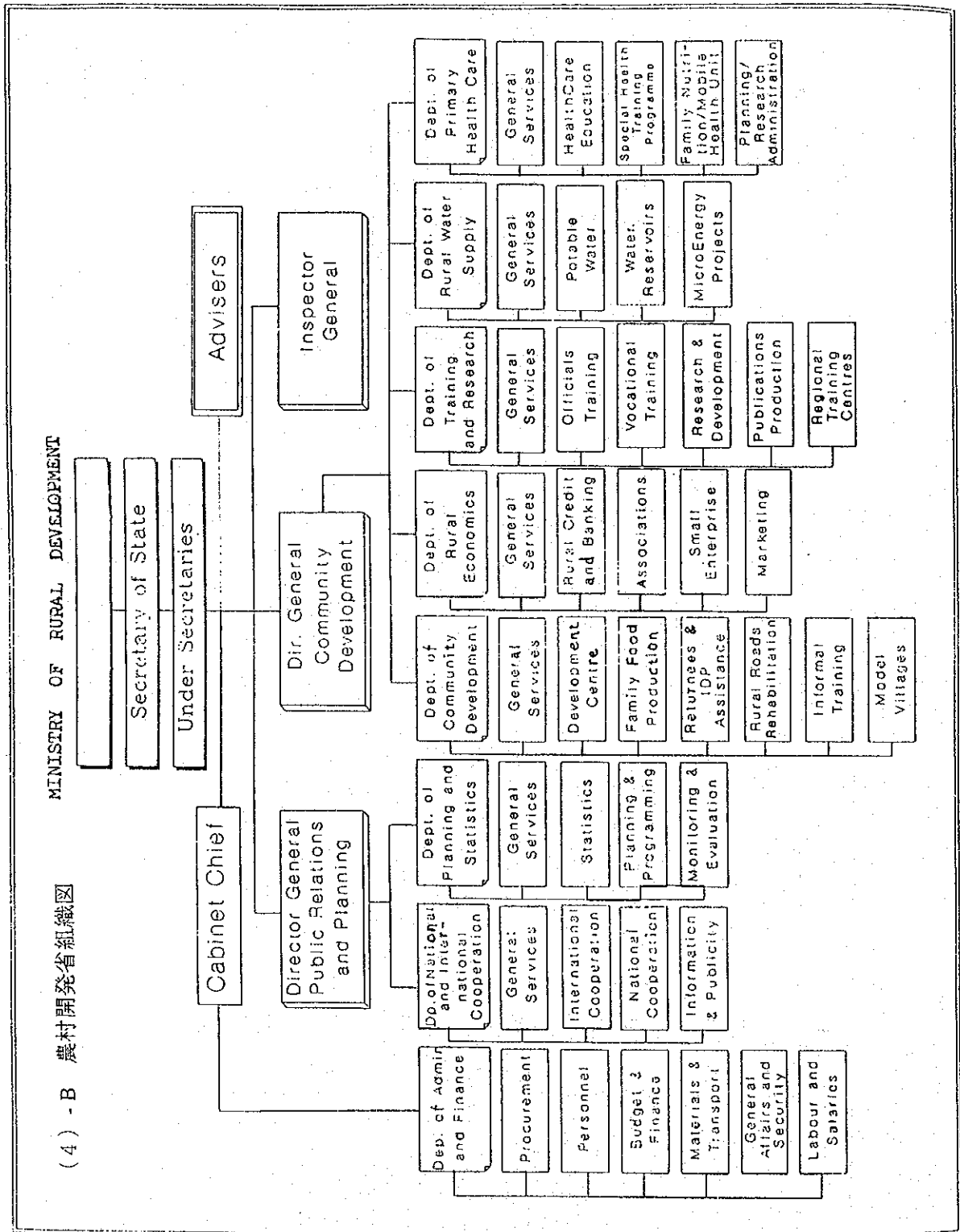
ORGANIZATION FOR RURAL DEVELOPMENT

**Rural Development  
Coordination Mechanism**



MINISTRY OF RURAL DEVELOPMENT

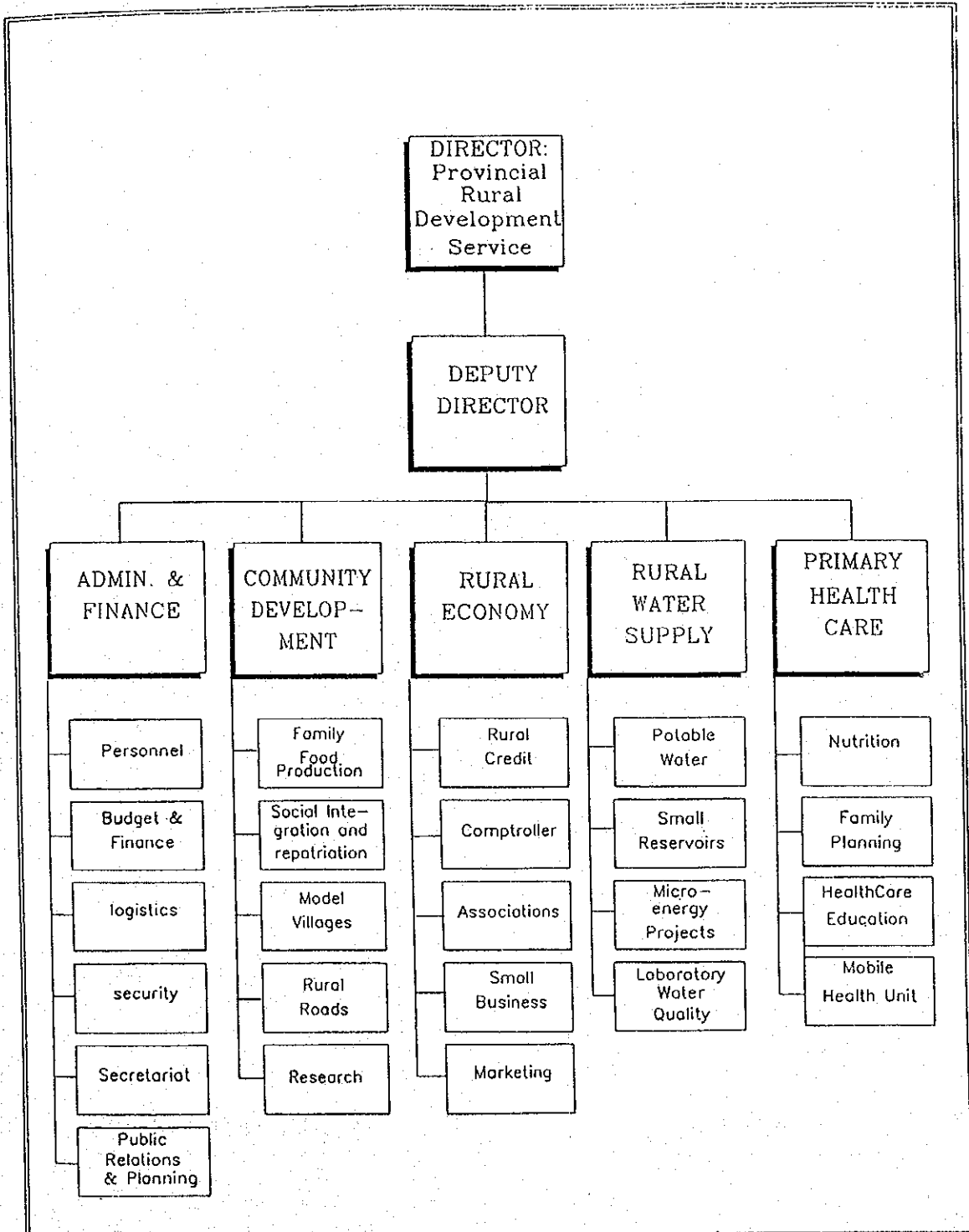
(4) - B 農村開發省組織圖





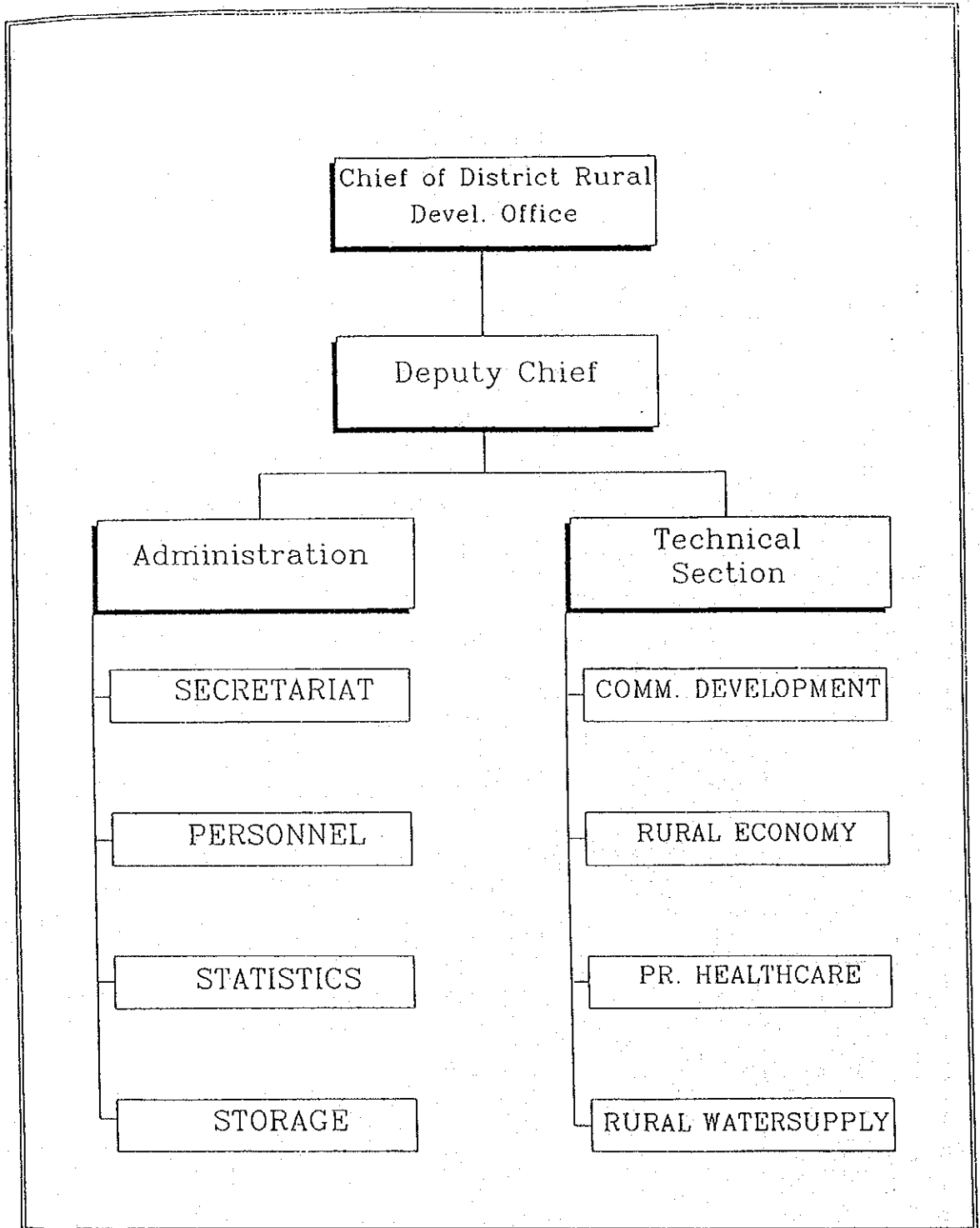
(4) - C 農村開発省管轄州組織図

PROVINCIAL RURAL DEVELOPMENT CHART



(4) -D 農村開発省管轄郡組織図

DISTRICT RURAL DEVELOPMENT CHART



## 参考資料

### 2 統計データおよび図表

- 表1 気象データ
- 表2 産業別GDPの割合
- 表3 雇用関係指標
- 表4 農産物輸出入
- 表5 農業国内総生産の構成
- 表6 品種別／州別稲作付面積
- 表7 作物別／州別作付面積
- 表8 畜産・漁業・林業生産
- 表9 農機具の台数
- 表10 化学肥料と農薬の使用量

- 図1 カンボディアの地形図
- 図2       〃       地形断面図
- 図3       〃       産業



表1 気象データ

上段：平均気温 (°C)  
下段：降水量 (mm)

| 観測地             | 1月          | 2月           | 3月           | 4月           | 5月            | 6月            | 7月            | 8月            | 9月            | 10月           | 11月           | 12月          |
|-----------------|-------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|
| Snoul           | -<br>6.0    | -<br>12.0    | -<br>31.0    | -<br>67.0    | -<br>139.0    | -<br>282.0    | -<br>309.0    | -<br>217.0    | -<br>331.0    | -<br>277.0    | -<br>75.0     | -<br>24.0    |
| Stung<br>Treng  | 24.3<br>2.4 | 26.5<br>12.4 | 29.0<br>32.4 | 29.8<br>80.5 | 28.0<br>192.8 | 27.2<br>272.9 | 26.5<br>364.0 | 26.4<br>313.6 | 26.2<br>323.4 | 26.3<br>188.5 | 25.5<br>55.2  | 24.1<br>14.0 |
| Konpong<br>Thom | 25.3<br>2.0 | 28.0<br>18.0 | 29.1<br>48.0 | 29.3<br>71.0 | 28.4<br>178.0 | 27.8<br>222.0 | 27.7<br>228.0 | 27.6<br>185.0 | 27.3<br>324.0 | 27.1<br>214.0 | 26.4<br>149.0 | 24.8<br>20.0 |
| Siem-Reap       | 24.3<br>3.2 | 26.2<br>13.0 | 28.2<br>28.0 | 28.9<br>66.0 | 27.3<br>155.0 | 27.4<br>183.0 | 27.1<br>206.7 | 27.3<br>201.8 | 26.7<br>284.3 | 26.6<br>236.0 | 25.7<br>86.3  | 24.1<br>15.9 |
| Phnom Penh      | 26.0<br>7.0 | 27.1<br>10.0 | 28.2<br>40.0 | 29.4<br>77.0 | 28.9<br>124.0 | 28.5<br>155.0 | 27.8<br>171.0 | 28.2<br>160.0 | 27.8<br>224.0 | 27.4<br>257.0 | 26.2<br>127.0 | 25.9<br>45.0 |
| Battanbang      | 25.0<br>6.0 | 27.3<br>17.0 | 29.1<br>47.0 | 29.8<br>87.0 | 29.1<br>155.0 | 28.7<br>147.0 | 28.0<br>155.0 | 28.0<br>158.0 | 27.6<br>202.0 | 26.9<br>228.0 | 26.1<br>98.0  | 25.1<br>25.0 |

出所 『カンボディア国かんがいおよび森林開発計画調査報告書(森林編)』 1964 海外技術協力事業団

表2 : 産業別のGDPの割合

(単位：%)

|         | 1987  | 1988  | 1989  | 1990  | 1991  |
|---------|-------|-------|-------|-------|-------|
| 農業      | 51.4  | 44.0  | 45.8  | 45.4  | 46.9  |
| 作物+ゴム   | 27.8  | 27.8  | 28.9  | 26.4  | 29.4  |
| 米       | 18.0  | 17.7  | 19.0  | 17.9  | 17.6  |
| 他の作物とゴム | 9.9   | 10.1  | 9.9   | 8.5   | 11.7  |
| 畜産      | 17.1  | 10.4  | 11.9  | 12.6  | 11.2  |
| 漁業      | 4.5   | 4.1   | 3.8   | 5.0   | 4.8   |
| 林業      | 2.0   | 1.6   | 1.2   | 1.4   | 1.5   |
| 工業      | 15.3  | 16.9  | 16.7  | 16.3  | 15.6  |
| サービス業   | 33.4  | 39.1  | 37.5  | 38.3  | 37.5  |
|         | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

出所 Cambodian Authorities and Staff Estimates

(Country Profile: Laos, Cambodia 1992-1993 1992 EIUより引用)

表 3 : 雇用関係指標

(単位: %)

|                | カンボディア          |           | 東南アジア           |           |
|----------------|-----------------|-----------|-----------------|-----------|
| 全人口に占める就業人口の割合 | (1990~92)<br>43 |           | (1990~92)<br>47 |           |
| 全就業人口に占める女性の割合 | (1990~92)<br>56 |           | (1990~92)<br>41 |           |
| 産業別就業人口の割合     | (1965)          | (1990~92) | (1965)          | (1990~92) |
| 農業             | 80              | 74        | N. A.           | 58        |
| 工業             | 4               | 7         | N. A.           | 14        |
| サービス業          | 16              | 19        | N. A.           | 28        |

出所 Human Development Report 1994 UNDP

(参考文献)

Human Development Report 1994 UNDPCountry Profile 1994-95 Indochina: Vietnam, Laos, Cambodia 1994 EIU

表 4 農産物輸出入

|  | Unit               | 1980    | 1988     | 1989     | 1990     | 1991     | 1992               | 1993<br>(first six months) |
|--|--------------------|---------|----------|----------|----------|----------|--------------------|----------------------------|
| <b>Exports</b>   |                    |         |          |          |          |          |                    |                            |
| Kapok  | tons               | 225.0   | 252.0    | 210.0    | 155.7    | 123.7    | 206.4              | 0.1                        |
| Rubber   | 000 tons           | 1.4     | 26.7     | 32.9     | 23.8     | 30.5     | 27.7               | 13.6                       |
| Car tires  | 000                | 0.0     | 2.9      | 3.5      | 5.3      | 3.5      | 0.0                | 0.0                        |
| Timber   | 000 m <sup>3</sup> | 0.0     | 52.6     | 91.1     | 96.9     | 234.3    | 273.0 <sup>a</sup> | 0.0                        |
| Tobacco  | 000 tons           | 0.0     | 0.1      | 0.4      | 0.3      | 1.5      | 0.1                | 0.0                        |
| Pepper   | tons               | 0.0     | 13.6     | 90.0     | 49.0     | 0.0      | 40.0               | 0.0                        |
| Soybean  | 000 tons           | 0.0     | 0.0      | 16.3     | 13.7     | 49.1     | 9.7                | 0.1                        |
| Maize  | 000 tons           | 0.0     | 18.6     | 15.4     | 5.5      | 26.4     | 6.7                | 0.0                        |
| Fish   | 000 tons           | -       | -        | -        | -        | 2.5      | 1.9                | n.a.                       |
| <b>Imports</b>   |                    |         |          |          |          |          |                    |                            |
| Rice   | 000 tons           | 0.0     | 5.7      | 0.0      | 0.0      | 15.1     | 16.6               | 0.0                        |
| Condensed milk   | 000 cans           | 1,597.0 | 1,437.0  | 0.0      | 0.0      | n.a.     | n.a.               | 0.0                        |
| Sugar  | 000 tons           | 0.0     | 1.0      | 0.0      | 0.0      | n.a.     | n.a.               | 0.0                        |
| Beer   | 000 bottles        | 0.0     | 93.4     | 0.0      | 0.0      | 2.0      | 2.3                | 0.4                        |
| Fabric   | 000 metres         | 5,418.0 | 13,976.0 | 15,122.0 | 13,259.0 | 21,010.2 | 22,783.3           | 10,526.9                   |
| Cotton fiber   | tons               | 0.0     | 1,500.0  | 928.0    | 295.5    | n.a.     | n.a.               | 0.0                        |
| n.a.: not available  |                    |         |          |          |          |          |                    |                            |
| Official sawnwood exports were 25,455 m <sup>3</sup> in 1991, 21,464 m <sup>3</sup> in 1992 and 25,186 m <sup>3</sup> in the first six months of 1993 (133,000 m <sup>3</sup> for the whole year according to some sources). Plus 11,800 tons to Thailand. |                    |         |          |          |          |          |                    |                            |
| Sources: WB/Ministry of Planning, 1988-90. Ministry of Commerce, 1991-93.  |                    |         |          |          |          |          |                    |                            |

Tableau N° 5. La part réelle du PIB agricole par sous-secteur, 1987-1991 (a)  
 (表 5 小区分別農業国内総生産の実質割合)

|  | 1987 | 1988 | 1989 | 1990 | 1991 |
|--|------|------|------|------|------|
| Sous secteur (小区分)                         | %    |      |      |      |      |
| Cultures (耕作)                              | 54   | 63   | 63   | 58   | 68   |
| -Riz (稲)                                   | (35) | (40) | (41) | (39) | (38) |
| -Caoutchouc (ゴム)                           | (19) | (23) | (22) | (19) | (25) |
| Elevage (畜産)                               | 33   | 24   | 26   | 28   | 24   |
| Pêche (漁業)                                 | 9    | 9    | 8    | 11   | 10   |
| Forêts (林業)                                | 4    | 4    | 3    | 3    | 3    |
| Total en Agriculture (計)                   | 100  | 100  | 100  | 100  | 100  |
| Part de l'Agriculture dans PIB<br>(国内総生産中) |      |      |      |      |      |
| -World Bank                                | 51   | 44   | 46   | 45   | 47   |
| -ADB/ UNDP                                 | 52   | 51   | 52   | 52   | 52   |

a/ Relevé de l'Appendix statistique, WB's Agenda pour la Relabilitation et construction, juin 1992  
 (復興と建設のための世銀記録; 統計付録一覽表, 1992年7月)

b/ Les Comptys Nationaux de Royaume de Cambodge, 1987-1993 AsDB/ UNDP Project, Mimes, 1993.  
 (カンボジア王国国民会計, 1987~1993 アジア開発銀行/国連開発計画プロジェクト)

Table 6 Area of Rice Culture Types by Provinces in 1993

(表 6 品種別 / 州別稲作付面積)

Unit. 1000ha

|    | Provinces        | Total | Rainy Season |       |        |      |          | Dry Season |
|----|------------------|-------|--------------|-------|--------|------|----------|------------|
|    |                  |       | Subtotal     | Early | Medium | Late | Floating |            |
| 1  | Phnom penh       | 10    | 9            | 1     | 3      | 5    | —        | 1          |
| 2  | Kandal           | 81    | 47           | 6     | 10     | 30   | 1        | 34         |
| 3  | Kompong Cham     | 180   | 161          | 16    | 50     | 91   | 4        | 19         |
| 4  | Svay Rieng       | 165   | 164          | 19    | 8      | 134  | 3        | 1          |
| 5  | Prey Veng        | 254   | 227          | 29    | 55     | 132  | 11       | 27         |
| 6  | Takeo            | 216   | 176          | 44    | 70     | 42   | 20       | 40         |
| 7  | Kompong Thom     | 133   | 131          | 16    | 34     | 51   | 30       | 2          |
| 8  | Siem Reap        | 159   | 154          | 20    | 52     | 70   | 12       | 5          |
| 9  | Battambang       | 144   | 143          | 9     | 18     | 109  | 7        | 1          |
| 10 | Banteay Meanchey | 122   | 122          | 8     | 19     | 79   | 16       | —          |
| 11 | Pursat           | 56    | 56           | 10    | 20     | 20   | 6        | —          |
| 12 | Kompong Chhnang  | 80.8  | 74.8         | 8.8   | 22     | 33   | 11       | 6          |
| 13 | Kompong Som      | 10    | 10           | —     | 5      | 5    | —        | —          |
| 14 | Kampot           | 102.9 | 101.9        | 3.9   | 53     | 45   | —        | 1          |
| 15 | Koh Kong         | 5.3   | 5.3          | 1.3   | —      | 4    | —        | —          |
| 16 | Kompong Speu     | 69    | 68           | 14    | 31     | 23   | —        | 1          |
| 17 | Preah Vihea      | 9     | 9            | 1     | 3      | 5    | —        | —          |
| 18 | Stung Treng      | 11    | 11           | 4     | 2      | 5    | —        | —          |
| 19 | Ratanakiri       | 5     | 5            | 1     | 1      | 3    | —        | —          |
| 20 | Mondulkiri       | 4     | 4            | 1     | 1      | 2    | —        | —          |
| 21 | Kratie           | 27    | 22           | 2     | 6      | 14   | —        | 5          |
|    | Grand Total      | 1,844 | 1,701        | 215   | 463    | 902  | 121      | 143        |



Table 7 OTHER CROPS IN 1995  
(表 7 作物別 / 州別作付面積)

Unit ha

|    | Provinces        | Corn   | Cassava | Sweet potato | Vegetable | Bean   | Peanut | Soy bean | Sesame | Sugar can | Jute  | Tabacco | Other |
|----|------------------|--------|---------|--------------|-----------|--------|--------|----------|--------|-----------|-------|---------|-------|
| 1  | Phnom Penh       | 220    | —       | —            | 485       | 110    | —      | —        | 60     | —         | —     | —       | —     |
| 2  | Kandal           | 15,700 | 76      | 70           | 2,400     | 700    | 35     | —        | 700    | 450       | 160   | —       | —     |
| 3  | Kompong Cham     | 10,261 | 1,421   | 188          | 1,396     | 11,000 | 1,903  | 22,745   | 6,110  | 623       | —     | —       | —     |
| 4  | Svay Rieng       | 28     | 716     | 67           | 593       | 12     | 10     | —        | —      | 188       | —     | —       | —     |
| 5  | Prey Veng        | 5,430  | 410     | 200          | 850       | 410    | 300    | —        | 1,340  | 320       | —     | —       | —     |
| 6  | Takeo            | 410    | 635     | 535          | 3,163     | 1,000  | 145    | —        | 18     | 995       | —     | 19      | —     |
| 7  | Kompong Thom     | 783    | 453     | 2,428        | 704       | 1,620  | 100    | 2,019    | 147    | 168       | 21    | —       | —     |
| 8  | Siem Reap        | 730    | 990     | 320          | 1,380     | —      | —      | —        | 315    | 270       | —     | —       | —     |
| 9  | Battambang       | 712    | 62      | 205          | 880       | 1,319  | 530    | 76       | 2      | 95        | 927   | 5       | —     |
| 10 | Banteay Meanchey | 712    | 240     | 103          | 644       | 392    | 38     | —        | 99     | 194       | 472   | —       | —     |
| 11 | Pursat           | 320    | 90      | 100          | 350       | 100    | 70     | —        | 60     | 160       | —     | —       | —     |
| 12 | Kompong Chhnang  | 1,234  | 408     | 401          | 875       | 600    | 305    | —        | 251    | 227       | 37    | 3       | —     |
| 13 | Kompong Som      | —      | 85      | 10           | 50        | —      | —      | —        | —      | 35        | —     | —       | —     |
| 14 | Kampot           | 1,637  | 1,127   | 2,105        | 4,349     | 497    | 233    | —        | 19     | 908       | —     | —       | —     |
| 15 | Koh Kong         | 115    | 100     | 45           | 105       | —      | —      | —        | —      | 40        | —     | —       | —     |
| 16 | Kompong Speu     | 568    | 310     | 82           | 2,725     | 845    | 580    | —        | 8      | 380       | —     | —       | —     |
| 17 | Preah Vihea      | —      | —       | —            | —         | —      | —      | —        | —      | —         | —     | —       | —     |
| 18 | Stung Trong      | 527    | 326     | 472          | 750       | 468    | 250    | 7        | 95     | 400       | 1     | 21      | —     |
| 19 | Ratanakiri       | 960    | 562     | 410          | 360       | 86     | 35     | 10       | 660    | 260       | 146   | 146     | —     |
| 20 | Monduliri        | —      | —       | —            | —         | —      | —      | —        | —      | —         | —     | —       | —     |
| 21 | Kratie           | 2,139  | 121     | 65           | 319       | 434    | 26     | —        | 1,500  | 69        | —     | —       | —     |
|    | Total            | 24,486 | 8,132   | 7,806        | 22,388    | 19,973 | 4,560  | 24,857   | 10,907 | 5,782     | 1,711 | 194     | —     |

Tableau N° 8 Production de l'Élevage, Pêche, Forêts, 1987-1993  
 (表 8 畜産, 漁業, 林業生産 1987~1993)

| Sous-Secteur<br>小区分     | Unité<br>(000) | 1980  | 1987  | 1988  | 1989  | 1990  | 1991  | 1992  | 1993   |
|-------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|--------|
| - Elevage (畜産)          | Têtes (頭数)     |       | 1.817 | 1.935 | 2.096 | 2.182 | 2.324 | 2.468 | 2.542  |
| Boeufs (牛)              | -              | 772   | 686   | 721   | 740   | 737   | 776   | 804   | 824    |
| Buffles (水牛)            | -              | 375   | 1.434 | 1.542 | 1.737 | 1.516 | 1.600 | 2.042 | 2.122  |
| Porcs (豚)               | -              | 131   | 8.052 | 8.850 | 8.717 | 8.163 | 8.376 | 9.900 | 10.692 |
| volaille (家禽)           | -              | 2.442 | 865   | 908   | 934   | 1.015 | 1.090 | 1.160 | 184    |
| Boeufs de Trait (農耕用牛)  | -              | 562   | 439   | 500   | 465   | 481   | 494   | 522   | 520    |
| Buffles de Trait(農耕用水牛) | -              | 277   |       |       |       |       |       |       |        |
| - Pêche (漁業)            | Tonnes (トン)    |       |       |       |       |       |       |       |        |
| D'eau Douce (淡水)        | -              | 66    | 62    | 61    | 50    | 65    | 75    | 69    | nd     |
| De Mer (海水)             | -              | 3     | 17    | 21    | 26    | 40    | 36    | 34    | nd     |
| Aquaculture (養殖)        | -              | nd    | 3     | 5     | 5     | 6     | 7     | 9     | nd     |
| - Forêt (林業)            | M³             |       |       |       |       |       |       |       |        |
| Bois en grume (丸太)      | -              | -     | 306   | 283   | 257   | 247   | 322   |       |        |
| Bois debites (製材)       | -              | 13    | 27    | 19    | 16    | 16    | nd    |       |        |

nd : non disponible (資料ナシ)

a : Production de l'année 1982 pour le s/secteur Pêche (1982年度の漁業生産)

表 9 : 農機具の台数

|        | 1980  | 81    | 82    | 83    | 84    | 85    | 86    | 87    | 89    |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| トラクター  | 1,350 | 1,350 | 1,350 | 1,350 | 1,355 | 1,355 | 1,360 | 1,360 | 1,365 |
| ハーベスター | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    | 20    |

出所 Statistical Yearbook for Asia and the Pacific 1991 United Nations

表 10 : 化学肥料と農薬の使用量

| 種 類                                   | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 |
|---------------------------------------|------|------|------|------|------|------|------|------|------|
| 1. 化学肥料<br>合計 (:1,000トン)              | 50.0 | 25.0 | 15.0 | 29.0 | 35.0 | 35.0 | 60.9 | 29.2 | 13.2 |
| 硫安<br>( Amorphos/8-44-0 )             | N.A  | N.A  | N.A  | 10.0 | 13.0 | ..   | 18.0 | 13.0 | 6.7  |
| 16-20-0                               | N.A  | N.A  | N.A  | 6.0  | 3.0  | 12.0 | 2.4  | 2.0  | 4.2  |
| 尿素                                    | N.A  | N.A  | N.A  | 13.0 | 18.0 | 21.0 | 35.4 | 14.0 | 2.4  |
| 15-15-15                              | N.A  | N.A  | N.A  | ..   | 1.0  | ..   | 0.2  | neg. | neg. |
| その他                                   | N.A  | N.A  | N.A  | ..   | ..   | 2.0  | 4.9  | neg. | neg. |
| 2. 農 薬                                |      |      |      |      |      |      |      |      |      |
| a. 水和剤 (:1,000リットル)                   | 65.0 | 72.0 | 57.0 | 32.0 | 44.0 | 51.0 | 42.1 | 35.1 | 33.2 |
| マラソン ( Malathon )                     | N.A  | N.A  | N.A  | 7.0  | ..   | ..   | ..   | ..   | N.A  |
| メタホス ( Metaphos )                     | N.A  | N.A  | N.A  | 25.0 | 44.0 | 35.0 | 21.0 | ..   | N.A  |
| メリバル ( Melipall )                     | N.A  | N.A  | N.A  | ..   | ..   | 2.0  | ..   | 7.1  | N.A  |
| ディクロフォス<br>( Dichlorphos )            | N.A  | N.A  | N.A  | ..   | ..   | 9.0  | ..   | ..   | N.A  |
| A S D N' N                            | N.A  | N.A  | N.A  | ..   | ..   | 5.0  | 21.1 | 14.0 | N.A  |
| その他                                   | N.A  | N.A  | N.A  | ..   | ..   | ..   | ..   | 14.0 | N.A  |
| b. 粉剤 (:1,000トン)                      | ..   | ..   | ..   | 13.0 | 4.0  | 12.0 | 10.7 | 30.3 | 0.1  |
| アンドリン ( Andrin )                      | ..   | ..   | ..   | 2.0  | ..   | ..   | ..   | ..   | ..   |
| D D T                                 | ..   | ..   | ..   | ..   | ..   | ..   | 0.6  | ..   | ..   |
| りん化亜鉛 ( Phosphoric<br>in Zinc : 殺鼠剤 ) | ..   | ..   | ..   | 11.0 | 4.0  | 5.0  | 4.1  | 9.0  | neg. |
| Buic Chlore                           | ..   | ..   | ..   | ..   | ..   | 4.0  | 3.0  | 0.1  | neg. |
| その他                                   | ..   | ..   | ..   | ..   | ..   | 3.0  | 3.0  | 21.2 | neg. |

出所 Central Company of Material Supply ( C O C M A )

図1 カンボディアの地形図

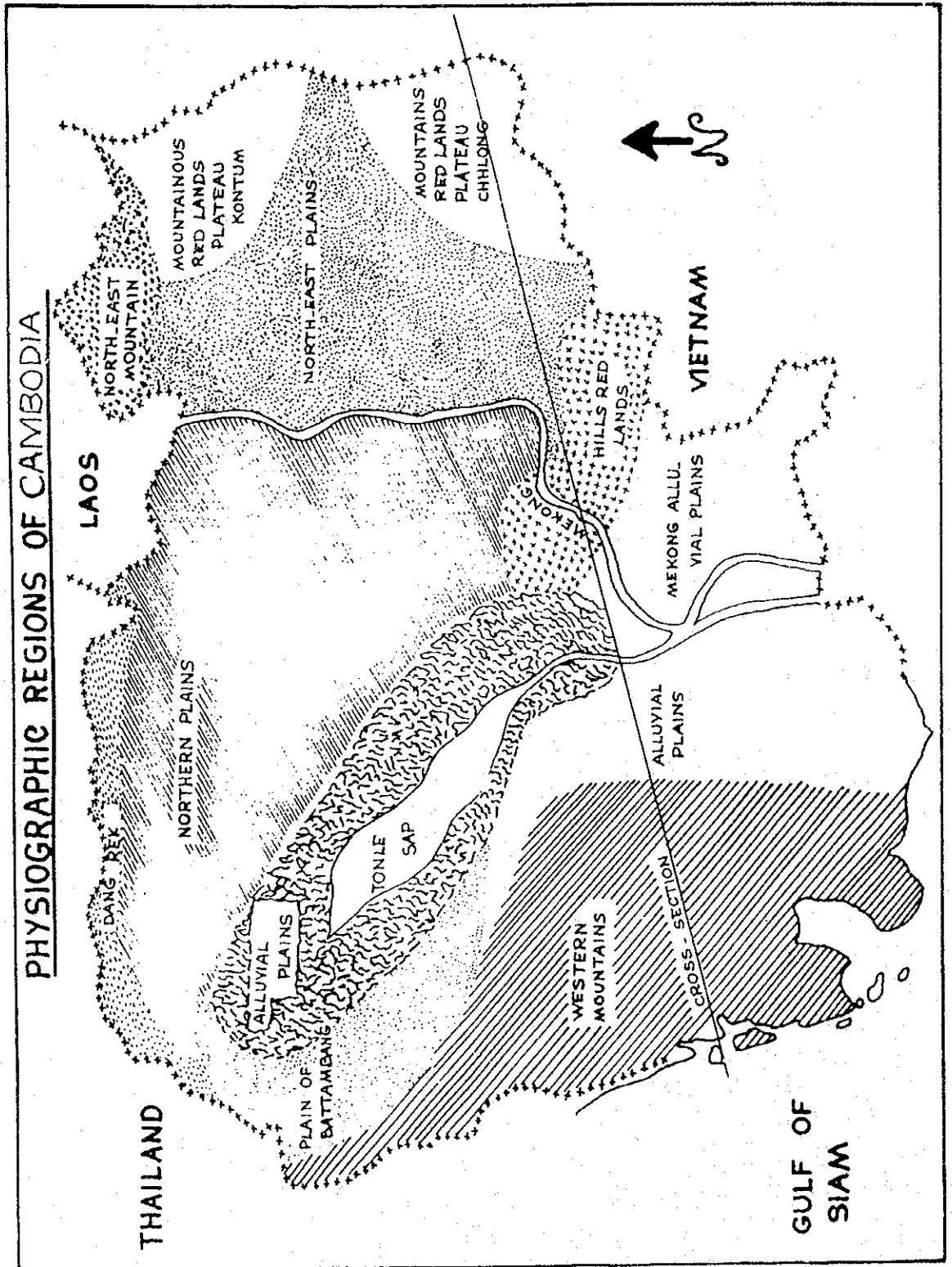
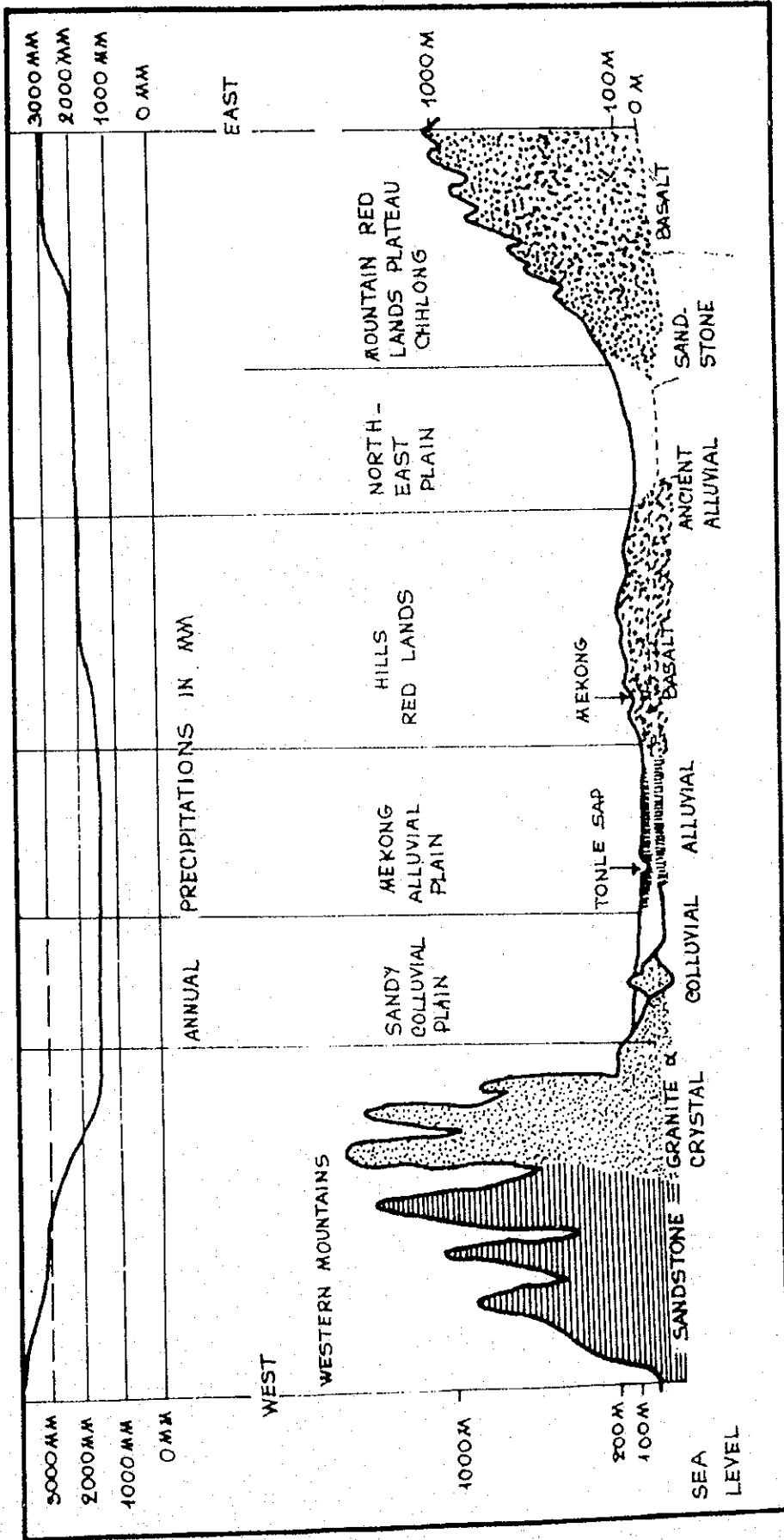
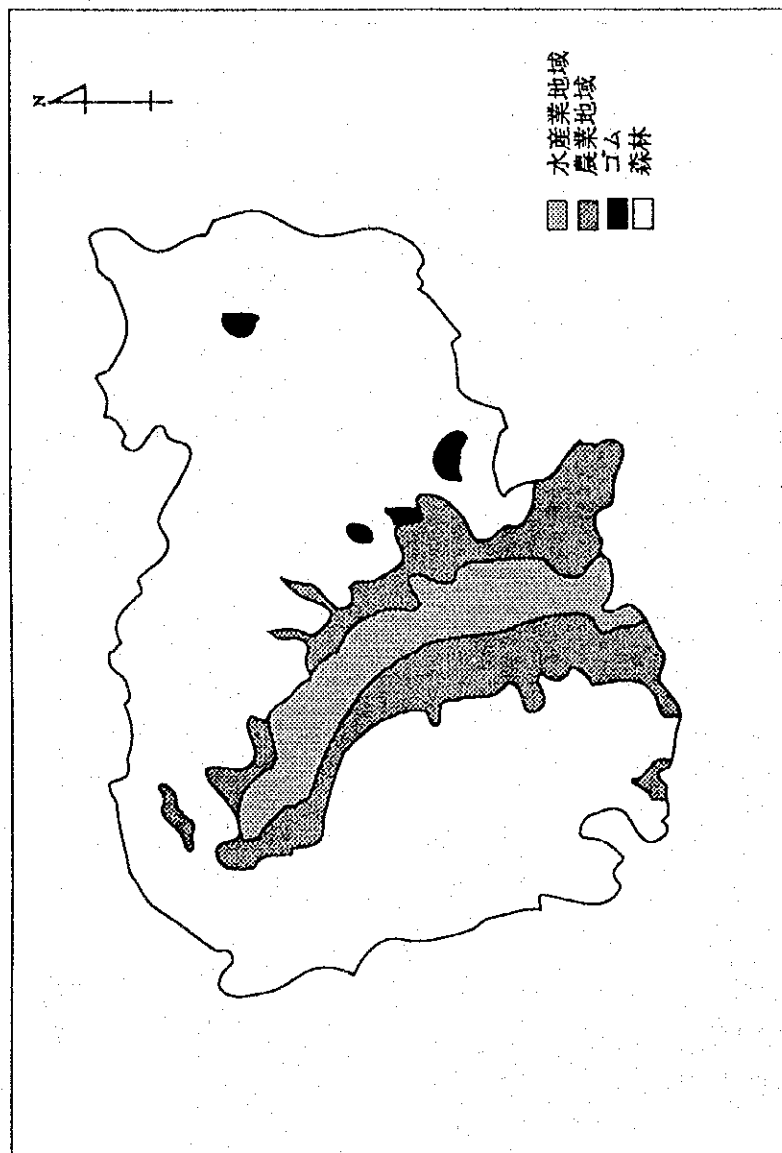


図2 カンボディアの地形断面図



PHYSIOGRAPHIC CROSS-SECTION OF CAMBODIA  
FROM KOH KONG TO MONDOL KIRI

図3 カンボディアの産業



出所 Atlas of Southeast Asia 1989 Macmillan Publishing Company

## 参考資料

### 3 参考文献抜粋

- (1) NATIONALE PROGRAMME TO REHABILITATE AND DEVELOP CAMBODIA  
(The Royal Government of Cambodia 1994)
- (2) UNDP in Cambodia / Status and Perspective (UNDP 1994)
- (3) The Development Context of Cambodia / Sectoral Position Papers  
(Cooperation Committee for Cambodia : CCC 1994)

\*CCCは、1991年にカンボディアで活動するNGOにより組織された。

- (4) JICA 国別協力情報ファイル



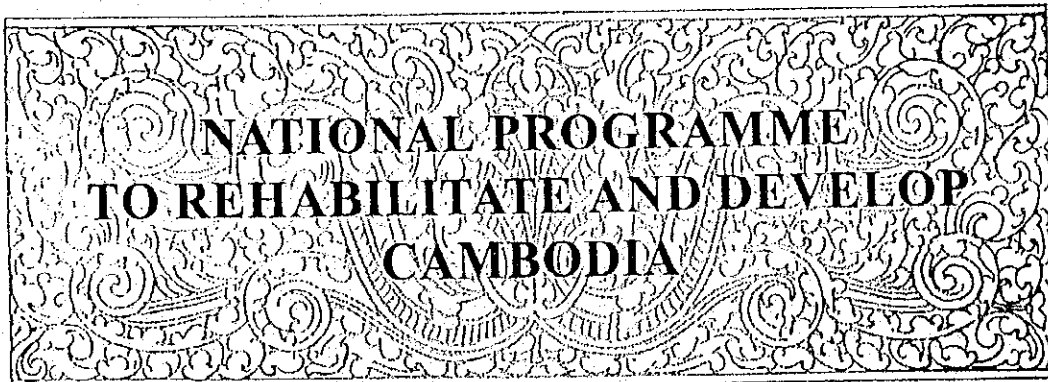
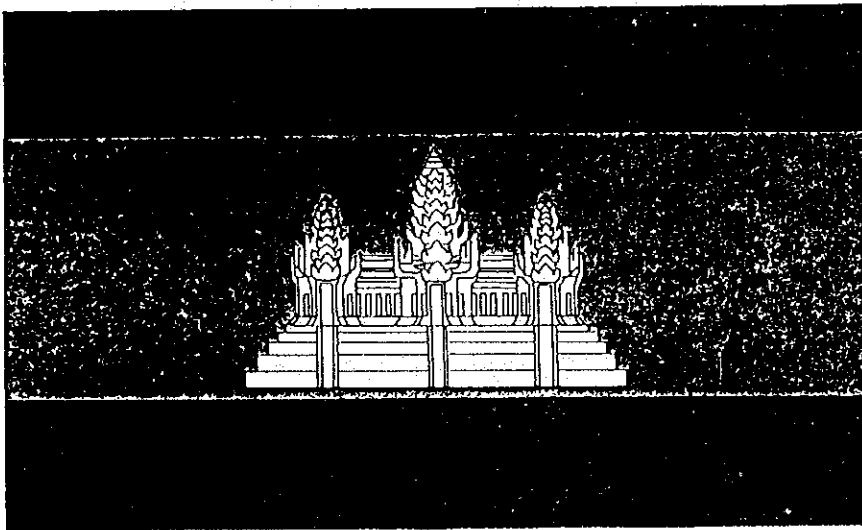




**KINGDOM OF CAMBODIA**  
Nation Religion King

\*\*\*\*\*

**The Royal Government of Cambodia**



**February, 1994**

## ACRONYMS

|        |  |
|--------|--|
| ADB    | Asian Development Bank                                     |
| AIDS   | Acquired Immune Deficiency Syndrome                        |
| APPEAL | Asia Pacific Programme of Education for All                |
| CDC    | Council for Development of Cambodia                        |
| FAO    | Food and Agriculture Organisation                          |
| FFP    | Family Food Production                                     |
| GDP    | Gross Domestic Product                                     |
| HIV    | Human Immunodeficiency Virus                               |
| ICORC  | International Committee for the Reconstruction of Cambodia |
| ILO    | International Labour Organisation                          |
| IMF    | International Monetary Fund                                |
| NCRD   | National Committee for Rehabilitation and Development      |
| NFE    | Non-formal education                                       |
| NGO    | Non-governmental organisation                              |
| NIC    | National Investment Committee                              |
| NPRD   | National Programme to Rehabilitate and Develop Cambodia    |
| UNDP   | United Nations Development Programme                       |
| UNTAC  | United Nations Transitional Authority in Cambodia          |
| WB     | World Bank   |

## EXECUTIVE SUMMARY

The overriding objective of the Royal Government is to achieve a fair, just and peaceful society and, through accelerating the rate of economic growth, to raise the living standards of all Cambodians. In short, the Government is striving to achieve sustainable growth with equity and social justice. This will be reflected in a relatively high rate of growth which:

- \* optimizes the utilization of the Kingdom's domestic resource base in the generation of that growth and;
- \* allows wide and equitable access of the population to the fruits of that growth.

The Royal Government is committed to achieve a full-fledged market economy. As a strategist and manager of development, the Government intends to work with the private sector as a full partner in the rehabilitation and development of the Country. Capacity-building is a major undertaking which can only be realised in full cooperation with private investors and the international community.

### The Vision

The Royal Government's vision could best be described as a commitment to :

- \* reform the State, its institutions, and its Public Service so as to attain political and socio-economic priorities;
- \* rely on private entrepreneurship and the market as engines of growth;
- \* double the present level of GDP by 2004 in real terms, and place heightened emphasis on harnessing Cambodia's agricultural, industrial and tourism potentials;
- \* extend health, educational and social services to the entire population so as to ensure, within the decade, a substantial improvement in the standard of living;
- \* improve rural living by promoting rural development as a central feature of the Government's development priorities;
- \* ensure that the pattern of development is sustainable socially, politically, fiscally and environmentally;
- \* strengthen domestic self-reliance and thus reduce the current dependence on external financial and technical assistance.

The overall objectives are national reconciliation, social justice and economic growth. The approach must be therefore comprehensive.

To achieve these objectives, the Royal Government's National Program to Rehabilitate and Develop Cambodia (NPRD) recognises that the human resources of the Nation, men and women, represent the most important asset in the quest to rehabilitate and develop the country.

## V. SECTORAL PROGRAMMES

### A. Agriculture and Rural Development

Agriculture accounts for almost half of GDP, and Cambodia's rural areas accommodate 80- 85 per cent of its population. Given this, the Royal Government regards rural development as being central to its plans for raising the living standards of all Cambodians; for reducing the disparities in incomes and opportunities between rural and urban areas; and, crucially, for strengthening national reconciliation and internal security. It is considered by the Royal Government that coordinated rural development holds the key to the short- term need to satisfy immediate expectations and, in the longer term, to affirm democratic participation in the rural areas, and thus in the country as a whole.

Moreover, fostering the development of the rural economy would generate growth in GDP and productive employment; provide a wider base for agro- processing and exports; contribute to greater food security and efficient import replacement; and underpin the long- run stability in food prices, an important element in sustaining macroeconomic balance over time.

To these ends, the Government is pinning considerable hope on the initiatives of an increasingly dynamic private sector. For its part, however, the Government will support the flowering of such initiatives through:

- \* improving infrastructure and rural access to markets and to Sihanoukville port
- \* privatising the rubber estates
- \* maintaining liberal trade, distribution and exchange rate systems
- \* ensuring an adequate supply of credit at realistic but commercial rates of interest
- \* assisting the rural population take advantage of the growing commercial opportunities by continuing to assist their integration into an emerging market economy
- \* addressing land tenure, land mines and internal security

#### (i) Agriculture

The Government's plans for agricultural development rest on the efficient exploitation of the country's considerable resource potential, including:

- \* soil and topographic diversity, and the potential for growing a wide range of crops and livestock
- \* forest resources, both in terms of their biodiversity and their productive potential
- \* fisheries resources, notably in the Mekong, Tonle Sap, coastal mangroves and Gulf of Thailand

- \* a rural labour force that is weary of war and intent on prospering through farming and commercial activity
- \* a large group of motivated local and foreign NGOs

Exploiting the potential of this resource base, however, is hindered by a large number of intractable constraints, such as:

- \* acute shortages of key inputs (water, fertiliser, farm machinery, credit and transport) which limit productivity gains, production prospects and marketing opportunities
- \* persistent uncertainties over land tenure
- \* insecurity, banditry and land mines
- \* inaccessibility, poor communications and a fragmented domestic market
- \* an inadequate data base to underpin rational agricultural planning, particularly at local levels
- \* a paucity of trained manpower resources in government and agricultural research institutions, thus limiting official technical capacity to:
  - \* absorb external assistance
  - \* undertake adaptive research, and
  - \* disseminate results to farmers

A scarcity of budgetary resources which serves to:

- \* limit the availability of counterpart project funds (thus aggravating absorptive capacity problems); and
- \* restrict funding for legitimate support activities (infrastructure, research, animal health, etc.)

The effects of the scarcity of budgetary resources on project selection and execution cannot be overstressed. While the Royal Government's fiscal performance and control have improved over recent months, it will take time before its domestic revenue-generation capacity can provide all the counterpart funds and resources that would normally be required to support externally-assisted projects. Accordingly, the Royal Government requests contributing countries and agencies - to the extent possible and permitted under their own regulations - to provide 100 per cent financing for priority projects and quick-disbursing programme or structural adjustment lending, as means of accelerating reconstruction and development even in the face of domestic revenue constraints.

Each of these various constraints will have to be tackled over time but, perhaps the most serious obstacle to a rapid increase in food production is the shortages in inputs, particularly in

water and fertiliser but aggravated by those in transport, credit and farm machinery. Resolving water problems is the most complex, given the cost of rehabilitating irrigation schemes, the time it often takes to do so, the expense of operation and maintenance, and their doubtful economic viability in several instances.

Nevertheless, it is the Royal Government's intention to become self-sufficient in basic foodstuffs, hopefully for rice in 1994 but no later than 1995. Resolving the water issue in selected areas will play a critical role in this but, more particularly, it will remain crucial to agricultural growth over the long run. However, before binding itself to a particular long-run water policy now, the Government would first prefer to consider the findings of a number of ongoing studies which update previous ones.

Without prejudice to the decisions that will be made, the Royal Government's interim strategy for agriculture involves a number of important thrusts, and the Government requests contributing countries and agencies to focus their support on them, such as on:

achieving rice self-sufficiency as an immediate goal but with limited capital-intensive investment, largely by:

- \* rehabilitating selected irrigation/drainage systems and physical infrastructure facilities
- \* promoting greater fertiliser use but through the market mechanism
- \* fostering an expansion in rural credit facilities
- \* accelerating demining to encourage the cultivation of abandoned land as well as for obvious humanitarian reasons

promoting a growing market orientation in order to foster:

- \* agricultural diversification into activities that offer higher returns than rice, eg upland rainfed crops and livestock, especially near urban centres, the cultivation of rubber and other tree crops, possibly oil palm where soils and climate are suitable
- \* the growth of agro-processing/agro-industries
- \* exports of raw and processed agricultural produce
- \* the search for "niche" products, such as jasmine rice, garlic, flowers, etc.
- \* addressing land tenure and accelerating the process of providing land titles
- \* ensuring more rational and sustainable exploitation of the country's forest resources and wood processing

improving the efficiency of the livestock sector by:

- \* vaccination and disease control programmes

- \* improved nutrition programmes
- \* upgraded breeding programmes
- \* improved meat processing facilities

updating sectoral and subsectoral studies to:

- \* assess long- term needs and strategies, especially for irrigation, drainage, fisheries and forestry
- \* form the basis of long- term investment priorities

### (ii) Rural Development

As noted earlier, the Government's plans for rural development involve programmes wider than technical advances in agriculture alone, vital though these are. Five principal ministries and secretariats are currently involved in rural development, and collectively appropriate some 25 per cent of the national budget on rural development programmes. Several contributing countries and agencies are also involved in rural development activities of various kinds, together with over 100 NGOs.

There are some 17 priority areas that are seen as being critical to rural development, and the Royal Government attaches great importance to pursuing a coordinated programme approach to rural development, and to making a major thrust towards bringing development to the more remote areas. The priority areas are:

- \* providing adequate training and training centres, documentation centres and workshops
- \* providing adequate water supply for drinking, domestic use and irrigation
- \* continuing the Repatriation Programme, with emphasis being placed on integration and employment
- \* continuing with - and, if funds permit, accelerating - the Mine Awareness and Clearance campaign
- \* implementing the new intergrated Family Food Production Programme, for food security
- \* repairing, rehabilitating and constructing rural roads
- \* providing primary health care
- \* fostering an expansion in rural credit
- \* establishing Community and Women's Development Centres

- \* providing informal training
- \* establishing small enterprises and income-generating activities
- \* establishing model villages
- \* developing alternative energy sources
- \* protecting the environment and natural resources, and encouraging reforestation
- \* undertaking socioeconomic surveys
- \* upgrading animal health and veterinary services
- \* disseminating information and establishing information systems

To address these inter-connected priorities, the Royal Government pursues two parallel strategies. First, it is seeking to improve the management of rural development programmes, primarily by supporting greater consultation and better coordination among the development partners. The principal objective is to strengthen the planning and delivery capacities and mechanisms of various agencies and organisations working in rural Cambodia, which should be made effective in the short term. Second, it is seeking to improve and to increase the linkages between the design and implementation of development programmes, mainly by promoting participatory methodologies and an integrated approach to rural development.

To pursue these strategies and its many programmes successfully, the Government has identified two key policies to accelerate rural development:

- \* to invite all national and international organisations and agencies involved in rural development to cooperate with one another and with the Royal Government when planning and implementing rural development programmes
- \* to ensure a shift towards an integrated and more people-orientated approach to rural development, in order to reinforce sustainability through people participation and gender sensitivity

People's participation is crucial to the success of any rural initiative. In addition, rural development strategies must build people's confidence and expose them to new ideas and approaches consistent with a more open society, so that their participation becomes even more meaningful.

There is a need to :

- \* instill a greater awareness about their roles and responsibilities in the development process
- \* encourage self reliance and lesser dependance on generosity
- \* inform, educate people about the basic tenets of a market economy



institutional strengthening and upgrading of managerial and technical skills; participation by beneficiaries in development planning and implementation; and use of national human and other resources in implementing development programmes. Nevertheless, during the period of implementation of the NPRDC, realism should prevail in designing external cooperation because of the financial and capacity constraints still being experienced at the national level.

Reflecting the evolution of the relief-to-development continuum, UNDP's support to Cambodia will shift away from the "downstream" emergency and humanitarian actions that were essential in the past, and more towards building sustainable human development and national capacities. This will be achieved by gradually diminishing our interventions in the emergency and humanitarian areas, and concentrating our resources more fully on the other components of our ongoing programme, namely, grassroots interventions, key technical activities and policy advice.

## **B. National Priority Areas for UNDP and Donor Support**

### **Grassroots Interventions**

#### **Rural Development and Reintegration**

The internal conflict which has plagued Cambodia for the past two decades has had its largest impact at the rural level. Improvements in food security at the household level, access to adequate health and education facilities, employment opportunities, and social development have all been constrained by insecurity, infrastructural deficiencies, lack of investment, and low human resource capacity. To support the Royal Government's efforts to improve the quality of life at the rural level, UNDP will significantly expand its contribution to the management and technical assistance necessary to operate the CARERE programme. By significantly increasing the ability of the international community to reach the most needy in remote areas, UNDP will thus make it possible for bilateral and other multilateral donors to contribute their own funds to the actual implementation of the area development schemes through the CARERE structure. In this regard, it is essential that the large contributions that donors have already made to the repatriation process, through UNHCR and WFP, be appropriately followed up, through mechanisms such as the CARERE programme, with assistance for reintegration.

Likewise, UNDP will continue its support to the UNDP/ILO Employment Generation Programme; collaboration with NGOs, particularly national NGOs; strengthening of the Cambodian Mine Action Centre (CMAC) for which a dedicated Trust Fund has been

established; and the establishment of a rural credit programme in collaboration with UNICEF, GRET and Caisse Française de Développement. Increased attention will be given to improving the capacity at provincial levels and strengthening of the newly created State Secretariat for Rural Development. Furthermore, in order to facilitate the transition to a more sustainable development focus, rural development activities will concentrate even more on fostering local participation and decision making.

### **Key Technical Activities**

#### **Natural Resources Management**

The Royal Government has identified the need to utilize the vast natural resources (agricultural land, forests, oil reserves, gems, fisheries, inland water ways) in a sustainable and ecologically sound manner, since the potential for economic growth relies heavily upon the appropriate exploitation of these resources. UNDP proposes to complement its ongoing activities beyond the present Cambodia Environmental Advisory Team with more focused interventions, in collaboration with other UN Agencies and donors. Areas for possible assistance include: Remote Sensing/GIS, institutional and legal reform, policy-formulation on protected areas, integrated pest management, sustainable rural energy sources, such as Bio Gas, support for Environmental Impact Assessment capacity, and support to an environmental framework for foreign investment.

#### **Agriculture**

With 85% of the population living in rural areas and depending mainly upon agriculture for their livelihoods and representing the largest share of GDP, agriculture is a top priority for the Royal Government. UNDP will further pursue its collaboration with FAO in finalizing the Agricultural Sector Review. Emerging priority areas for technical cooperation, which may warrant UNDP support in conjunction with UN and other donor agencies, include land titling and cadastre; rural banking; research and extension; water management; agricultural education and training, from university to village levels; and support to the establishment of legislation and regulatory frameworks in selected agricultural subsectors. Forestry will also be a subject of UNDP intervention with, as a first step, the reconstitution of a national forest inventory to serve as the major planning and management tool.

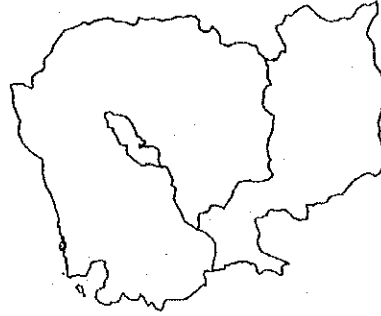
#### **Health**

The poor health of Cambodia's population -- as evidenced by a relatively short life expectancy, high maternal and child mortality, and a high incidence of communicable diseases -- has a direct impact on the country's economic potential as well as the population's well-being. The Royal Government's Policy and Strategy Guidelines and the National Health Plan (developed with assistance from the UNDP/ODA/WHO project "Strengthening Health Services Management") aim at improving the health system through skills-upgrading of health care workers; the



**UNITED  
NATIONS  
DEVELOPMENT  
PROGRAMME**

**CAMBODIA OFFICE**



UNDP in Cambodia  
Status and Perspective

JICA LIBRARY



1111372(7)

March 1994

## Policy Advice

Conscious of the capacity constraints to national development and the increasing availability of foreign assistance to Cambodia, UNDP, in keeping with its mandate, has targeted interventions to develop local technical and managerial capacity at all levels. Assistance has been provided to prepare fundamental reforms and to formulate policy frameworks in the areas of Human Resource Development; Macroeconomic Management; Agricultural and Irrigation Policy; Health Sector Management; and Environmental and Natural Resources Management.

## UNDP Programme Commitments in Cambodia to date

|                                    | IPF               | Cost-sharing      | Other Funds*      | Total             | %           |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------|
| Emergency and Humanitarian Actions | 4,970,000         | 3,556,000         | 18,899,000        | 27,425,000        | 31%         |
| Grassroots Interventions           | 15,978,000        | 14,393,000        | 2,835,500         | 33,206,500        | 37%         |
| Key Technical Activities           | 8,831,500         | 3,546,000         | 0                 | 12,377,500        | 14%         |
| Policy Advice                      | 15,316,500        | 640,000           | 201,700           | 16,158,200        | 18%         |
| <b>Totals</b>                      | <b>45,096,000</b> | <b>22,135,000</b> | <b>21,936,200</b> | <b>89,167,200</b> | <b>100%</b> |

\* includes management service agreements, special programme resources, and contributions of UNCDF

## III. FUTURE DIRECTION OF UNDP'S PROGRAMME IN CAMBODIA

UNDP's Programme in Cambodia will aim to support the policies and priorities contained in the NPRDC. The eventual strategies, areas, and implementation arrangements will be finalized as part of a programming exercise in 1994 between Government and UNDP, in consultation with the agencies of the UN Development System and other development partners.

### A. Principal Orientations

In pursuing the goal of sustainable human development, UNDP has a mandate for building national capacities and strengthening international cooperation. In addition, UNDP has a critical role to play in improving coordination within the UN Development System.

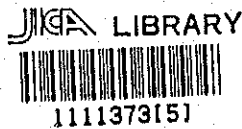
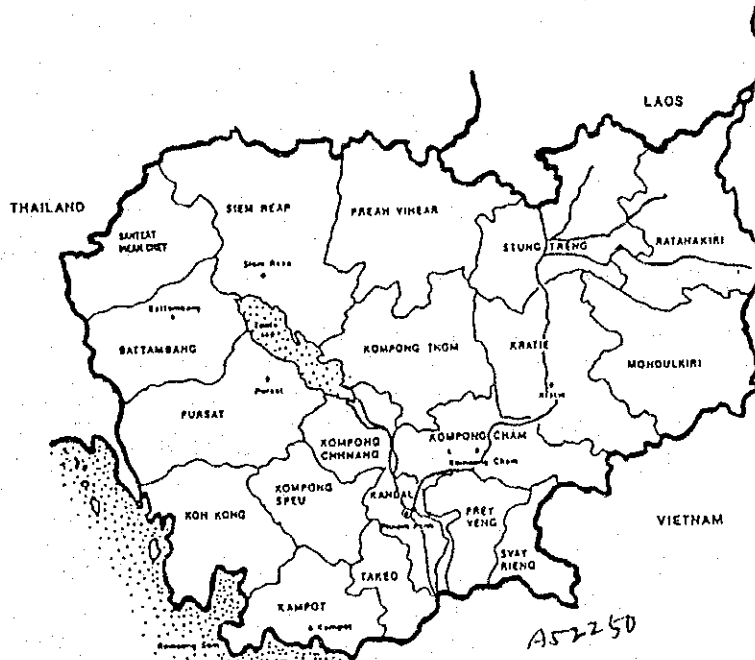
In Cambodia, the agencies of the UN Development System stand ready to assist the Royal Government in the preparation of a Country Strategy Note to serve as a common framework for planning and implementing their respective activities.

A major emphasis in country programming will be to improve the national capacity to effectively utilize external assistance. This will involve various levels of support aimed at, inter alia, ensuring integrated planning and utilization of national and external assistance resources;

# The Development Context of Cambodia

## Sectoral Position Papers

March 1994



Prepared for the Second Meeting of the  
International Committee on the Reconstruction  
of Cambodia in Tokyo on March 10 -11, 1994

# AGRONOMY

## 1. GENERAL BACKGROUND

- 80 % of Cambodia's population rely on income from agriculture, primarily rice based systems.
- 90 % of the rice crop is lowland rain fed wet season rice, using traditional low-cost inputs and traditional varieties.
- Average rice yields are amongst the lowest in the world - 1.4 tonnes /ha..
- There have been few agricultural machinery innovations in the last 20 years.
- During the last 20 years rice production has failed to reach subsistence levels. Rice imports were required to meet shortfall.
- There is little diversity in the cropping system - only small areas of soy and mung bean, maize and vegetables are grown.
- There are poor support services and infrastructure, including lack of quality seed and fertilizers, and poor irrigation facilities.
- Education of the rural population is very poor.
- Soils of the lowland rice system are infertile, of poor structure, low in phosphate and acid in nature (below pH 5 CaCl)

## 2. NGO EXPERIENCE

### During the 1980' s.....

- Agricultural development centres were used to develop and introduce new technologies and rice varieties.
- There was little farmer participation, and no formalized extension system existed.
- High input agriculture was promoted without a capability assessment of the target population.
- Limited impact was made by research and extension on the vast wet season rice crop. Improvements to the dry season irrigated and flood recession rice crop through introduction of suitable IRRI varieties and improved cultural techniques, made substantial impact
- Little research and development was made on secondary crops.
- Subsidised fertilizers, seed and pesticides were available to farmers through the government.



គណៈកម្មាធិការ សហប្រតិបត្តិការ ដើម្បីកម្ពុជា

Cooperation Committee for Cambodia  
Comité de Coopération pour le Cambodge

CCC  
PO BOX 885  
PHNOM PENH  
CAMBODIA

Office address : 21, Street 360, Boeung Keng Kang 1, Phnom Penh, Cambodia.

Tel / Fax : (855 23) 26009, Mail address : CCC-PNH, P.O.Box 2420, Bangkok 10500, Thailand.

The *Cooperation Committee for Cambodia* of non-governmental organizations - the CCC - is honored to participate once again in a meeting of the *International Committee on the Reconstruction of Cambodia*. The attached papers have been developed to prepare for this March 1994 Tokyo meeting. It is our hope that the extensive and long-term experience of the NGO community in Cambodia can contribute so that international assistance brings effective and just improvements for the people and country of Cambodia.

Non-government organizations - NGOs - have been working in partnership with people and institutions in Cambodia since 1979. The Cooperation Committee for Cambodia was established in 1991; it was formed by NGOs with the objectives of better information exchange, stronger participation and cooperation, and a forum to speak on issues of common concern. As one aspect of that work, the CCC supports the activities of *Sectoral Groups*. The Sectoral Groups themselves are a voluntary partnership between agencies with shared concerns and work experience in various sectors - CCC members, other local NGOs, other international NGOs, government departments and institutions, and international organizations.

Each Sectoral Paper following presents background information, current issues, and recommendations, and the papers may be read separately for insight into just one area. However, certain themes that emerge time and again through these papers. These include:

- working in partnership with existing structures, institutions and government bodies
- learning from the successful models and experience that already exist in Cambodia
- concern that assistance does not marginalize vulnerable people
- developing human resources through skills training and education
- actively building on the critical role of women in society including the field of economy
- concern for the environment
- action on land mines
- sustainability

In addition to the Sectoral Papers, the CCC is pleased to be able to include also the Statement from a Workshop on National Development by Ponleu Khmer - the Federation of Cambodian Non-Governmental Organizations. This statement - the result of a three day process - speaks to and highlights similar over-arching concerns.

The people, communities and government of Cambodia have the prime responsibility and opportunity to make changes in their country. It has been a privilege for international NGOs, and a challenge and fulfillment for local NGOs, to be part of this process over the years. We welcome the ever increasing participation of the international community in this larger shared partnership.

Janet Ashby  
Acting Chairperson  
COOPERATION COMMITTEE FOR CAMBODIA

1 March 1994

### During the 1990' s.....

- There is more bottom up determination of research, based on needs analysis.
- There is more emphasis on community based programs. Baseline surveys are used to determine community needs and enable evaluation and modification of programs.
- There is more use of existing resources rather than introducing outside ones.
- A village farming system approach, rather than rice production in isolation is favored.
- Training for farmers, technicians, and NGO counterparts is a high priority.
- There is educational institutional support to Chamkar Daung Agricultural Institute (CDAI) and Prek Leap College.
- The co-ordination between NGO' s and IO' s is strong.

### Constraints.

NGO Programs are constrained by:

- A lack of qualified / skilled Cambodians, poor schooling facilities etc..
- Lack of security in program areas.
- Lack of structure or incentive for agronomists to work at the village or commune level.
- Lack of and extension service to promote International Rice Research Institute (IRRI) and NGO research findings.
- Communication possibilities within the country are poor.
- Most publications are in English or French, not Khmer.
- The roads system (particularly secondary roads) is in poor condition.
- No pesticide legislation exists, and there is no training in safe use of pesticides.

### **3. COORDINATION WITHIN THE SECTOR**

- Monthly Agronomy meetings held are at the IRRI office.
- The Cooperation Committee for Cambodia (CCC) assists in coordination.
- There are good links with national programs such as IRRI, Integrated Pest Management (IPM) and Rural Credit.
- There are provincial NGO forums.
- There is an apparent inequitable level of assistance to provinces close to Phnom Penh due to security situation.

### **4. ISSUES AND RECOMMENDATIONS**



### Limited Capacity of the Country to Absorb Financial Aid in Most Sectors.

This is primarily due to the lack of trained personnel, lack of functional government structures, and a lack of accountability.

- Projects must be long term with an initial emphasis on training.
- Aid should be channeled through established aid organizations where possible.
- Smaller programmes are more effective.
- There should be more consultation with NGOs when bilateral programmes are moving into a field or area where an NGO is presently working.
- There should be a screening process on aid and commercial investment to prevent marginalisation of people, particularly on private company investment for the production of intensive cash crops for export.

### Pesticide Usage and Safety.

- Support pesticide legislation.
- Enact a permit system as an interim measure.
- All labeling to be in Khmer.
- Support Integrated Pest Management programmes
- Training in pesticide safety.

### Human Resource Development, Education and Training.

- Support established agricultural institutions including Chamkar Daung Agricultural Institute, Prek Leap Agricultural College, and agricultural schools in Takeo, Battambang, and Kompong Cham.
- Support development of agriculture in school curriculums.
- Support farmer training centres and programmes for the different agro-ecosystems.
- Support agricultural teacher training,
- Assist translation and improved availability of training materials.
- Training should be based on culturally acceptable practices.

### Lack of National Research Programmes.

- Support IRRI.
- Support existing proposals from International Organizations to establish national research programmes such as the IBSRAM soil network.
- Support regional research centres such as the Kbal Koh vegetable research station.

### Lack of Applied Research, Pilot Programmes

- Support integrated farming systems and perma-culture programmes with the aim of improving soil fertility and family nutrition.
- Support agro-forestry systems and forest farming systems.

### Lack of National Extension Programme.

- Support efforts to develop national extension programmes

### Lack of National Rural Credit Programmes.

- Support existing rural credit programmes of international and non-government organizations.

### Lack of Agricultural Infrastructure.

- Repair secondary roads in rural areas.
- Develop irrigation structures on suitable soil types. All irrigation systems require community ownership to ensure sustainability, and emphasis should be placed on small scale systems.
- Rebuild schooling facilities.
- Support opportunities for machinery manufacturing and servicing facilities.
- Improve storage and marketing facilities.
- Ensure that large scale water control structures, particularly those relating to the Mekong must not have adverse effects on soil and water resources.

### Surveys, Inventories, Mapping and Data Bases.

- Develop soil maps and soil capacity classifications.
- Carry out aerial and ground surveys to identify vegetation, ground water, and surface water sources.

### Natural Resource Use and Conservation.

- Conserve indigenous genetic materials.
- Research the use of local species.

# IRRIGATION

## 1. GENERAL BACKGROUND

Cambodia's long history of hydraulic control goes back to before the Angkor Period. The Angkor Kings built large reservoirs with an intricate network of canals and control structures. During the early part of the 20th Century under French colonial rule, preliminary plans were made for some large projects while medium-scale works such as the Bovel scheme in Battambang were completed. Throughout this period small-scale indigenous works were being built locally.

The Bovel scheme was destroyed during World War II, and little development occurred in terms of projects or institutions until Cambodia attained independence in 1953. Activity in the water sector surged with the creation of the Mekong Committee in 1957 and the increased involvement of the United States, whose USOM agency constructed or funded 11 medium-scale works until their withdrawal from Cambodia in 1963. Many of these projects were rehabilitation of French colonial-period works and included the construction of the Barai irrigation system in Siem Reap.

The first of these projects designed and built by a technical staff of Cambodians was completed in July 1959. The Mekong Committee had investigated 2 mainstream projects and 5 tributary projects for hydro-electricity and irrigation but was only able to begin construction on one during the 1960s. The government of Prince Sihanouk emphasized a policy of small-scale water resource development through the Département du Génie Rural (Department of Rural Engineering) by concentrating on numerous District- and Commune-level projects with the government supplying material and technical support and the people contributing their labour.

The Lon Nol coup of 1970 and the 5 years of civil war that followed eventually stopped all work in the rural areas as the Khmer Rouge grew and the government retreated to the cities. The Khmer Rouge victory on 19 April 1975 began the terrible history of "Democratic Kampuchea" where the whole of Cambodia was turned into a communal labour camp for agricultural production. The population was forced to dig and build a vast gridwork of canals and other hydraulic works that were conceived and implemented with no technical understanding or design at an appalling human cost. The majority of the trained Cambodian engineers and technicians either fled the country or were killed. An astonishing number of works were undertaken during this time, and the majority of them failed due to poor design and construction. The scale of the works is such that they have caused massive changes in the landscape and hydraulic regime.

## 2. NGO EXPERIENCE

The Department of Agricultural Hydraulics and Hydro-Meteorology (DAHMM) is the Cambodian government agency responsible for all irrigation development and was reconstituted in 1979 after the defeat of the Khmer Rouge as the Department of Hydrology (DoH) with 4 trained staff from the former "Génie Rural". The DoH received assistance at this time from: the Soviet Union with heavy equipment, construction materials, experts and training; Vietnam with technical assistance in survey, design and training; and NGOs with heavy equipment. NGO assistance increased to design and construction of projects with Provincial and Central DoH, provision of construction materials and pumps, training staff abroad and direct technical support to the Central DoH. The situation was extremely difficult due to the continuing state of war reducing security and budget available in combination with the embargo on Cambodia. Finally, the Soviet Union and Vietnam drastically curtailed aid towards the end of the 1980s.

NGOs were providing advisors to Central DoH by 1986 and have been doing project work with Central and Provincial DoH staff in rural areas since 1988 ranging from building small-scale weirs and culverts to rehabilitation of medium-scale irrigation projects such as Kompong Sne in Prey Veng. NGO assistance increased rapidly, and by shortly after the signing of the Paris Peace Accords in October 1991 water sector aid included pump irrigation projects of thousands of hectares and a joint-NGO support program to the Central DoH in addition to small grassroots development projects.

In 1991, UN agencies started returning to Cambodia with project support particularly in refugee resettlement areas and for emergency rehabilitation projects. The UN presence swelled with the arrival of UNTAC during the transition period leading to the election of May 1993. By this time there were over 100 NGOs with projects in Cambodia and UN agencies were building roads and rehabilitating the Bovel and Barai irrigation schemes. The successful election led to the eventual formation of the Royal Cambodian Government and withdrawal of UNTAC in September 1993.

Multi- and bi-lateral agencies are returning slowly to Cambodia and most are considering where to provide assistance in the future. In response, the NGOs are moving away from continuing assistance at Central levels towards their more traditional work at the grassroots. This is leaving a gap in terms of support to the Central DAHMM.

There has been a history of unsuccessful medium-scale projects since the end of the Khmer Rouge regime. Many of these failed because they were rehabilitation of "Pol Pot" schemes that were never properly designed and shouldn't have been built in the first place. Sometimes no technical considerations were made before there was a decision to

construct a project. There were numerous physical, institutional and financial constraints that resulted in poor project design and construction in many cases. The technical support capacity of the external support agencies and the DoH was also very limited even in comparison to the relatively modest levels of spending that have occurred. No large-scale works have begun since the Prek Thnot project was abandoned in 1974. There has been a higher success rate for small-scale projects built during this period than for any of the medium-scale projects undertaken.

### **3. COORDINATION OF THE SECTOR**

The monthly irrigation sector meeting is open to all interested agencies and currently includes about 30 NGOs, IOs, multi-, and bi-lateral organizations as well as the Central, Provincial, Municipal, and District DAHHM Offices.

### **4. ISSUES AND RECOMMENDATIONS**

#### **Analysis of Current Situation and Role of Irrigation**

At present, approximately 16% of the cultivated area in Cambodia is irrigated in the classical sense of canals conveying water directly to fields from the source. It is estimated that it is physically possible to approximately double this area. There are 3 types of this irrigation:

- Wet Season Lowland Rice with Supplementary Irrigation (9%)
- Dry Season Lowland Rice with Irrigation (2%)
- Flood Recession Rice with Supplementary Irrigation (5%)

These irrigated areas currently account for approximately 30% of the total rice production of Cambodia. The amount of area that is used for multiple cropping is quite low however. This indicates the importance of having supplementary irrigation water for crop security, improved yields and for other uses.

#### **Large-Scale Multi-Purpose Systems**

- currently none are operated or under construction. The Mekong Secretariat and other interested organizations are currently examining 3-4 systems for possible rehabilitation or construction.
- uncertainty prevails due to: large financial commitments required; continuing security problems in project areas; and possible effects of upstream development of the Mekong River Basin.

- projects of this complexity and scale are beyond current Cambodian government capability to design, construct, operate and maintain and would take 7-10 years to complete even if they were started immediately by external agencies.

### Medium-Scale Irrigation Systems and Hydraulic Works

- several projects have had headworks completed, work continuing on distribution systems, community organization and extension activities. Operation and maintenance has been a major problem with these systems up to this point in time. Several projects have failed entirely.
- few projects of this size are justifiable solely in economic terms, but some can be considered worth building when other factors are taken into account. Ten projects of this size have been identified for pre-feasibility studies by the on-going UNDP Irrigation Rehabilitation Study.
- work on these projects has been undertaken by NGOs and IOs in partnership with the Central or Provincial DoH Offices. The DAHHM has not yet completely implemented a medium-scale project on their own although they have had a role in most of the different project phases.

### Small-Scale Irrigation Systems

- although these systems are less costly and are more easy to be implemented with the participation of the local people, they are still very complex in nature and require significant material and strong technical support. Several systems have been completed.
- work on these projects has been undertaken by NGOs in partnership with the Central, Provincial, or District DAHHM and Department of Agronomy (DoA). Operation and maintenance of these systems has been a major problem to this point in time. Several projects have failed entirely, particularly pump irrigation projects.

The remainder of the arable land in Cambodia (84%) is classified either as rainfed wet season rice, deep water floating rice, or upland rice and other crops. In reality, much of this area receives supplementary water in addition to rainfall though not through formal distribution systems. As a result, it can often be considered irrigated also. These areas also were very affected by the Pol Pot works. These areas require agricultural hydraulic works usually of small scale to provide improved drainage, flood protection, access to water for supplementary irrigation and water for fisheries, livestock and domestic use. As such, this work falls under the mandate of the Provincial DAHHM and has formed the basis for the several successful projects with the NGOs. While these projects will not provide multiple cropping, they are very important for ensuring the single crop badly needed by the majority of the people and for other rural development activities.

## Small-Scale Hydraulic Works

- these works include small diversion weirs, spillways, canals, culverts, shallow reservoirs, ponds, water gates, dikes, wells and pumps. Numerous successful projects have been built by NGOs in partnership with Central, Provincial and District DAHHM and DoA. Farmers build many temporary works of indigenous design of this scale as well as some permanent ones.
- these projects are less complex in nature than irrigation systems and are usually identified and constructed by local farmers who understand how to operate and maintain them.

The on-going UNDP Irrigation Rehabilitation Study has concluded that;

- Cambodia can achieve and maintain self-sufficiency in rice production without major investments in irrigation infrastructure,
- Few investments in irrigation of rice are likely to have high tangible economic benefits, and
- Economically justifiable irrigation projects are likely to involve major new water storage reservoirs and crop diversification, which are not considered practicable in the short term.

## Overall Recommendation

**Support to the irrigation sector over the next 5 years should emphasize: institution building at the Central and Provincial levels; small-scale irrigation system and hydraulic works construction; training of government staff; gathering, compiling and analyzing relevant data; creation of watershed development plans and an overall water sector coordination mechanism.**

## Recommendations by Topic

### **1. Infrastructure Projects**

- *The physical and financial sustainability of all projects should be demonstrated by appropriate study before implementation. Studies should include consideration of each project within the framework of a catchment plan and should take account of social and environmental issues.*
- *Any loan-funded projects should have sufficient tangible economic benefits to give an EIRR of at least 10%.*

- *All external agencies involved should provide assistance in institutional development through working closely in partnership with and training Cambodian government staff throughout the life of the project. This should be accounted for by increased budgets for time and cost.*

**1.1 Large-Scale Multi-Purpose Systems** are a long-term development option.

- There is insufficient data available and little local capability at present to analyze the hydrology of the catchments and the environmental impact of large projects properly. There have been very large changes in the forest cover and landscape in Cambodia in a very short time. *It is recommended that technical and material support is given to the Cambodian Government offices engaged in gathering, compiling and analyzing this and other necessary data as an immediate first step. Training Cambodian staff in all concerned agencies should also be an immediate priority.*
- No large project should begin before there is a comprehensive watershed management plan for its catchment.

**1.2 Medium-Scale Irrigation Systems and Hydraulic Works** are a medium- to long-term development option.

- Longer lead times required for project study should be used for supporting community development and extension activities, possibly in conjunction with local or foreign NGOs. The extension agents and community workers should play an active role in irrigation development. *There should be agreement and participation of local people in all project activities.*
- Great care should be taken with respect to the engineering properties of the soils used in construction, and measures for alleviating problems from this must be designed.
- Post-construction support for agricultural extension and other community development work should be included in any project to assist in the process of change.

**1.3 Small-Scale Irrigation Systems** are a short- to medium-term development option.

- *These complex projects require sound technical assistance and should follow accepted standards in design.*
- External support agencies should promote cooperation in projects between Provincial and District DAHBM and DoA staff. Qualified expatriate technical staff should work closely with and train Provincial and District staff. Organizations working at this level should also consider providing support for Provincial-level planning and other coordination activities.



- Irrigation development should be integrated with other rural development and extension work in the area. Lessons learned and successful approaches developed with these systems need to be transferred to larger project work.

#### 1.4 Small-Scale Hydraulic Works are an immediate and on-going development option.

- These projects are simple, cheaper to build, are identified and built by the villagers with some technical and material assistance from the Province or District government. These types of projects are needed throughout the country, not just within well-defined irrigation systems.
- These projects can be designed, constructed and managed by local government staff with backup and support from the Central DAHBM. These projects are endorsed strongly by King Sihanouk and formed much of the work of the Génie Rural and local efforts of indigenous design in the past.
- *These projects are the most appropriate for the current situation and should be supported immediately with technical assistance, material and budget. They offer the best chance for constructing successful projects throughout the country and providing valuable experience and training for all levels of Cambodian government staff.*

## 2. Institutional Issues

- Provincial and District DAHBM Offices will carry the burden of support for small-scale irrigation systems and hydraulic works as well as for operation and maintenance of medium-scale irrigation systems and hydraulic works. They will require the following:
  - training for Provincial and District personnel
  - budget for transport and per diems and construction materials
  - technical support in standardization of construction and design
  - guidance in methods of rehabilitating the altered landscape
  - monitoring and evaluation of projects and programs
  - institutionalization of farmer participation in policy and practice
  - coordination and catchment-wide planning of water resource development.
- The Province and District Offices will come under the authority of Central Departments unlike in the past. Thus, there is also a need to enable the Central Government Agencies to fulfill this support role. *With NGO assistance to the Central DAHBM decreasing rapidly, there is an urgent need for larger external*

*support agencies to replace them there. NGOs and IOs should provide corresponding institutional development support at the Provincial level.*

### **3. Need for Long-Term and Integrated Project Approach**

- Changing farming practices and eating habits will take a long time. Farmers will resist diversifying crops due to culture, market uncertainties and recent history. Rapid and large-scale diversification schemes are open to abuse, and are high risk for the farmers.
- Coping with change is a long-term activity involving all sectors. Other options need to be examined as well such as livestock, fisheries, rural industry, and cottage industry. All of this implies a need for a flexible, coordinated, community-based development approach.
- *A long-term commitment to projects, funding for staff to work at the community level and less capital-intensive but more time-intensive work is required. There is a strong need for flexibility by donors in terms of funding and timeframes.*
- Environmental changes that have been caused, and that will be caused need to be closely examined. These are also issues of long-term aspect, and thus need to be prepared for with support to and cooperation with the Secretariat of the Environment.

### **4. Human Resource Development**

- There needs to be a successful civil service reform within the Cambodian government and a solution to the structural problem of low government salaries.
- Outside work must be in partnership with and balanced with government projects and policies. As such, *NGOs and IOs must avoid raiding employees from the government.* Outside organizations should make a commitment to use less experienced staff even if it causes project delays and increases costs in recognition of long-term benefits to Cambodia and problems that are caused if all better-trained staff are removed from government agencies.
- There is a pressing need amongst Cambodian government staff for successful practical project experience.
- *Support to the Cambodian institutions educating future technical and managerial staff is a priority. Continuing education and training of existing staff should be part of any external assistance.*

### **5. Coordination Issues**

- *The Department of Agronomy should be integrally involved in all phases of agricultural water resource development, a weak point in the past.*

- There is a need to consider existing plans and institutional structures in order to avoid the formulation of a series of incompatible externally-imposed programmes.
- It is important to link with other donors/outside agencies to increase compatibility of projects, common approaches, cross-learning and to avoid conflicts. Participation in sector meetings can help this. Donor agencies should work closely with existing NGOs in project areas.
- Watershed approach is very important and cannot be done if people go outside and don't coordinate with or inform others of their project activities. *There needs to be an overall coordinating structure within the government for the water resource development sector.*

## 6. Farmer Involvement in All Project Activities

- *Farmer involvement means their active participation in all phases of project from pre-design stages, through design, construction and operation and maintenance. This means that farmers are not just a labour force, they should be included in management and given responsibility and training also. This also means that project terms of reference must be flexible enough to allow changes after consulting local farmers. This is absolutely necessary for projects to be sustainable.*
- There is a need for flexibility by financing bodies to allow for the extra time, effort and costs that are connected with increasing farmer involvement.
- Community Organizers and water user groups are useful means of encouraging farmer involvement but these efforts should be integrated within other rural development activities.

## 7. Economic Considerations

- The benefits of irrigation include: risk reduction, especially keeping people out of the debt cycle due to a single crop failure; security and stability of rural areas; providing dignity and livelihood to rural poor; recovery of community, culture, and religion; and reduced migration and urban problems. Any water source is used for more than just irrigation as well.
- It is the NGO experience that double-cropping of rice as a criteria to justify irrigation is not feasible in most areas due to poor soil, high input costs and low product prices, as well as cropping patterns which generally mean cropping occurs in different hydraulic regimes and different areas, rather than on the same plot all the time. Irrigation can however open possibilities for alternate crops, fisheries, livestock or to grow organic matter for soil improvement.
- There should be a moral obligation to help farmers given the history of the past 24 years and the role of foreign powers in the destruction of Cambodia. Projects that are economically more feasible will also likely be in communities that are better off,

# COMMUNITY DEVELOPMENT

## 1. GENERAL BACKGROUND

- Eighty percent of the population are rural farmers, living at a subsistence level.
- Population growth is currently a rapid 3.2%.
- Cambodia has a recent background of war, instability and insecurity - this means aid must encourage reconstruction of relational community structures.
- There is still a secure knowledge base among even uneducated farmers, and this should be utilized, supported and strengthened during decision making processes.
- There is a lack of infrastructure, communications and institutional frameworks to support sustained community development initiatives.

## 2. NGO EXPERIENCE

- During the 1980's, independent Cambodian NGO's did not exist and International NGO's were involved in non-traditional roles such as emergency relief and the provision of material and technical resources to support the government and its initiatives.
- Not until the 1990's, were NGO's able to hire and train their own staff or live within the communities assisted. This has meant that experience of working in rural areas is fairly recent and there is a lack of trained staff who have been exposed to rural development ideas and programmes targeted at basic village/community level needs.

## 3. COORDINATION OF THE SECTOR

- There are monthly community development meetings of NGO's working in Phnom Penh and also in Battambang.
- The Cooperation Committee for Cambodia assists in this co-ordination.
- Closer links are being explored with the new State Secretariat for Rural Development (SRD).

- The multi-sectoral nature of community development means a system of linking NGO, IO and Government efforts is critically needed.

#### 4. ISSUES AND RECOMMENDATIONS

##### Absorptive Capacity at Government and Community Levels

- Aid support to increase governmental capacity should be closely linked to the SRD national programme.
- Human resource development (training and scholarships) should be targeted to policy makers and those who will return these benefits to rural communities. Screening and incentives are needed to ensure this.
- Aid support to increase community level capacity should have as its priority to develop village level decision making system.
- Trust funds could be made available for initiatives developed at community levels, encouraging decision making and ownership by the community as part of the selection process.

##### Support and Promote Women's Role

- There is a high degree of women who are widows and heads of households with responsibilities in the family, agriculture and income generation.
- Women should receive special emphasis in all development projects to ensure access and more control within village decision making structures.

##### International NGO's Extension Guidelines

- Extension strategies must be relevant to the greatest needs, sensitive to the community, sustainable and develop the capacity of individuals and the community
- Projects should have a long term focus and able to be sustained by the people.
- Extension/development should be based on consultation and baseline analysis of target regions.

- Models and systems should be tested in realistic, Cambodian socio-economic conditions before wider implementation.
- Development should be managed within communities and cross pollination encouraged.

### Promotion of Trust Funds.

- National Trust funds should be set up to allow the current aid allocation to be held until appropriate and optional use strategies have been developed, avoiding negative effects of funding beyond the systems absorptive capacity.
- Promote village trust funds for grass roots development that are accessible by communities with appropriate schemes and implementation facilities.
- Training funds to cover appropriate training or community development projects should be made available with enough security to promote long term objectives.

### Environmental Aspects.

- Individuals, communities and the socio-cultural links between them must be recognized as an important aspect of the environment, with development integrating human and environmental well being.
- Environmental Impact Assessments (EIA's) for large projects must recognize environmental, social, and cultural implications.
- De-mining must be a development priority, especially where it returns access and control of valuable agricultural land or natural resources.
- There is a need for forestry, fishery, water-resource, human resource and biodiversity inventories, including details of management for use by communities where appropriate. Aerial surveys require ground-truthing.

### Priorities

- Food security, rural credit, crop diversification, low input or integrated farming systems, demining, village health education, local water supply and sanitation systems should be considered essential and addressed immediately.

## RURAL CREDIT (8/2)

### 1. GENERAL BACKGROUND

#### The Situation:

- No banking system in rural areas.
- Expensive credit (interest rate from 30 to 60% per month) through informal sector.

#### The Results:

- Lack of access to affordable credit.
- Weight of indebtedness results in the foreclosure of farmer's land.
- Lack of investment capital for diversification of activities.

### 2. NGO EXPERIENCE

- NGOs and IOs are presently the institutions providing affordable credit to farmers in Cambodia.
- NGOs and IOs have designed and tested various successful models and have a wealth of experience, technical capacity and knowledge of the socio-economic environment.
- NGOs and IOs have started credit programs in 1990, reached more than 20,000 families, and disbursed close to one million US dollars. Still, a very small proportion of the population has been reached and most programs remain on a small scale.

### 3. COORDINATION OF THE SECTOR

#### Inter-NGO Coordination:

- At present, coordination between NGOs is informal and flexible with information and concerns shared and discussed. Efforts are now underway to implement more effective coordination through working groups on issues such as interest rates and mapping of credit programs.

### NGO-Government Coordination

- Some programs are already working in coordination with the government.
- Because of their sufficient experience, NGOs are very well placed to participate with the government as an advisory group in the development of a rural credit policy.

## 4. ISSUES AND RECOMMENDATIONS

A system for rural credit is presently the most effective way to get capital directly to villagers.

There is a lack of human resources and organizational capacity in terms of:

- financial resources for monitoring by implementing organizations;
- financial sustainability of the credit projects;
- creating a negative impact of subsidised loans;
- lack of a government institution responsible for rural credit; and
- an unstable security and economic environment.

At a macro level, there is a need to allocate more capital for rural credit:

- to preserve the variety of existing rural credit models;
- to strengthen the human resources and organizational capacity through training;
- to allocate financial resources for monitoring costs of the credit programs;
- to establish an appropriate body (i.e. advisory group) gathering IOs, NGOs and government institutions to discuss policies (e.g. interest rates);
- to make resources available for study and documentation on informal credit sector.



## 参考資料

### 4 平成6年度カンボディア農村開発コース研修概要

- (1) 研修日程
- (2) 研修員名簿
- (3) カンボディアにおける農村開発セミナー概要
- (4) 見学・訪問先リスト
- (5) 講師リスト
- (6) 講義レジメおよび配付資料（別冊）



(1) 研修日程

国際協力事業団  
筑波国際農業研修センター

研修コース：カンボディア農村開発(12名)

(H7・3月)

| 日     | 曜       | 研修科目                                 | 研修方法 | 研修機関／講師等        |
|-------|---------|--------------------------------------|------|-----------------|
| 2月28日 | (火)     | 来日                                   |      |                 |
| 3月1日  | (水)     | ブリーフィング                              |      |                 |
| 2     | 木 AM/PM | ブリーフィング(オリエンテーション)                   |      |                 |
| 3     | 金 AM    | プログラムオリエンテーション (9:30)                |      |                 |
|       |         | 農林水産省表敬訪問 (11:00)                    |      |                 |
|       | PM      | JICAの農業開発分野での協力方針                    |      |                 |
| 4     | 土       | バスツアー                                |      |                 |
| 5     | 日       | 休日                                   |      |                 |
| 6     | 月 AM    | 小規模農村開発 (バングラデシュの事例)                 | 講義   | 恵泉女子学園大学 大橋正明氏  |
|       | PM      | 同上 (タイ、ガーナにおける事例)                    | 講義   | 中林専門員           |
| 7     | 火 AM    | 農村・地域開発における女性の役割・その為の諸施策             | 講義   | ジュニア専門員 畑中氏     |
|       | PM      | 日本の普及事業—生活改善及び女性ビジョン概要 (14:00～16:00) | 講義   | 婦人生活課 中村普及指導官   |
| 8     | 水 AM/PM | 地域開発論                                | 講義   | JICA国総研 笠井専門員   |
| 9     | 木 AM    | 日本における水資源開発について                      | 講義   | 構改局総務課 橋本課長補佐   |
|       | PM      | 日本の農業用水利用の変遷                         | 講義   | 地域計画課 中川課長補佐    |
| 10    | 金 AM    | 農民金融                                 | 講義   | 農業総合研究所 両角室長    |
|       | PM      | 農業協同組合                               | 講義   | IDACA常務理事 中岡義忠氏 |
| 11    | 土       | 休日                                   |      |                 |
| 12    | 日       | 休日                                   |      |                 |
| 13    | 月 AM/PM | 日本の普及事業について                          | 講義   | 中村成二氏           |
| 14    | 火 AM/PM | カンントリーレポート発表会                        | セミナー | JHD, JICA       |
| 15    | 水 AM    | 移動 東京 → 鹿児島                          |      | 鹿児島県庁           |
|       | PM      | (詳細プログラムは別紙参照)                       |      |                 |
| 16    | 木 AM    |                                      |      |                 |
|       | PM      |                                      |      |                 |
| 17    | 金 AM    |                                      |      |                 |
|       | PM      |                                      |      |                 |
| 18    | 土       | 移動 鹿児島 → 大阪 → 京都                     |      |                 |
| 19    | 日       | 移動 京都 → 名古屋                          |      |                 |
| 20    | 月 AM    | 国営尾張西部事業水利事業所                        | 講義   | 工事第一課長 加納美千男氏   |
|       | PM      | (詳細プログラムは別紙参照)                       | 見学   | 同上              |
| 21    | 火 AM/PM | 祝日 (移動日) 名古屋 → 東京                    |      |                 |

研修コース：カンボディア農村開発

| 日  | 曜          | 研修科目                       | 研修方法     | 研修機関／講師等      |
|----|------------|----------------------------|----------|---------------|
| 22 | 水 AM<br>PM | 移動 東京 → つくば<br>鯉淵学園        | 見学       |               |
| 23 | 木 AM/PM    | 農村開発                       | 講義       | 筑農センター 千田徳夫氏  |
| 24 | 金 AM<br>PM | 土地改良区の組織運営<br>福岡県 土地改良区の現況 | 講義<br>見学 |               |
| 25 | 土          | 移動 つくば → 東京                |          |               |
| 26 | 日          | 休日                         |          |               |
| 27 | 月 AM/PM    | クエスチョネア作成                  |          |               |
| 28 | 火 AM/PM    | カンボディアにおける農村開発セミナー         | セミナー     | JICA, コンサルタント |
| 29 | 水 AM<br>PM | 評価会および閉講式<br>帰国準備          |          |               |
| 30 | 木          | 帰国                         |          |               |

## 研修旅行詳細日程

### 鹿児島（3月15日～17日）

|           |             |                           |
|-----------|-------------|---------------------------|
| 3 / 15（水） | 14:00～14:15 | 知事表敬                      |
|           | 14:15～15:30 | 鹿児島県農業の概要                 |
|           | 15:35～16:50 | 農地開発等の概要                  |
| 3 / 16（木） | 11:00～12:00 | アジア太平洋農村開発センター（普及指導活動の概要） |
|           | 13:30～15:00 | 農村改善センター（農村婦人活動の概要）       |
|           | 15:30～16:30 | バイオテクノロジー研究所（概要説明と施設見学）   |
| 3 / 17（金） | 10:00～10:30 | 桜島観光                      |
|           | 13:00～14:00 | 農業試験場（概要説明と施設見学）          |
|           | 14:40～15:30 | 南さつま農業協同組合（事業概要）          |
|           | 16:40～17:00 | 南薩畑地かんがい視察                |

### 名古屋（3月20日）

|  |             |                         |
|--|-------------|-------------------------|
|  | 10:00～11:00 | 国営尾張西部水利事業所（事業概要説明）     |
|  | 11:25～12:00 | 日光川河口排水機場見学             |
|  | 13:20～13:50 | 鍋田干拓地（整備状況見学）           |
|  | 14:15～14:50 | 木曽3川公園（河川および農村整備状況見学）   |
|  | 15:15～16:00 | 木曽川総合用水（馬飼頭首工・海部幹線水路見学） |

(2) 平成6年度 カンボディア農村開発コース研修員名簿 (1995年2月28日～3月30日)

List of Participants The special course in Rural Development for Republic of Cambodia

| NO | NAME (呼称名)                     | Age(年齢) | Present Post (現職・所属機関)  |
|----|--------------------------------|---------|---|
| 1  | Mr. Try Meng<br>(トライ)          | 47      | Director, Department of Community Development, Ministry of Rural Development<br>農村開発省 地域開発部、部長  |
| 2  | Mr. Thor Sen<br>(ソー)           | 47      | Director, Department of Rural Development, Takeo Province, Ministry of Rural Development<br>農村開発省 タケオ州地域開発部、部長                                    |
| 3  | Mr. Kong Sarith<br>(コング)       | 46      | Director, Department of Rural Development, Kompong Spue Province, Ministry of Rural Development<br>農村開発省 コンボンズプー州地域開発部、部長                         |
| 4  | Mr. Hak Seng Ly<br>(ハク)        | 45      | Director, Provincial Office of Education, Youth and Sport, Takeo Province, Ministry of Education, Youth and Sport. 教育・青年・スポーツ省 タケオ州教育青年スポーツ事務所、所長 |
| 5  | Mr. Bin Sareth<br>(ビン)         | 40      | Director, Department of Agriculture, Kompong Spue Province, Ministry of Agriculture Forestry and Fisheries<br>農林水産省 コンボンズプー州 農業部、部長               |
| 6  | Mr. Chhiv Nam<br>(チヴ)          | 55      | Vice Chief, Cabinet in charge of Agricultural Extension, Ministry of Agriculture Forestry and Fisheries<br>農林水産省 官房 普及担当補佐官                       |
| 7  | Mr. Kongthai Bunthan<br>(コンタイ) | 62      | Deputy Director, Department of Planning and Statistics, Ministry of Agriculture Forestry and Fisheries<br>農林水産省 企画統計部、副部長                         |
| 8  | Mr. Chan Nareth<br>(チャン)       | 49      | Acting Rector, Royal University of Agriculture, Ministry of Agriculture Forestry and Fisheries<br>農林水産省 王立農業大学、学長代理                               |
| 9  | Mr. Uk Sim<br>(ウク)             | 55      | Deputy Director, Department of Fishery, Ministry of Agriculture Forestry and Fisheries<br>農林水産省 水産部、副部長   |
| 10 | Mr. Kep Thar<br>(ケブ)           | 52      | Deputy Director, Agricultural Engineering Department, Ministry of Agriculture Forestry and Fisheries<br>農林水産省 農業技術部、副部長                           |
| 11 | Mr. Suon Som<br>(ソム)           | 51      | Deputy Director, Department of Animal Health and Production, Ministry of Agriculture Forestry and Fisheries<br>農林水産省 家畜衛生・生産部 副部長                 |
| 12 | Mr. Sim Moeum<br>(シム)          | 53      | Chief of Personnel Administration, Department of Agronomy, Ministry of Agriculture Forestry and Fisheries<br>農林水産省 栽培部 人事課長                       |

### (3) セミナー：カンボディアにおける農村開発

日時：1994年3月28日（火）

#### 研修員代表による発表

KONGTHAY BUNTHAN氏（農林水産省代表）

カントリーレポートに基づくカンボディアの農業の概要説明

農業開発における優先事項

- ①灌漑設備のリハビリと整備
- ②肥料の普及
- ③農民金融の設立
- ④農業協同組合の設立
- ⑤農作物市場改善
- ⑥普及活動のシステム確立

- ①1994年のUNDP/ADBの調査によれば、100カ所700haがリハビリの対象になっている。
- ②肥料については、日本・ドイツなどから援助を受けている。

－阻害要因

- 1) 人的資源の欠如
- 2) 予算の不足
- 3) 関係省庁間の調整不足と職能分担の不明確さ

－日本滞在中の所感

- ・日本が発展した理由として、官と民の役割分担がうまくいっている、農民自身で組織した農協のシステムがよく機能している、などがあげられる。
- ・今後もこの研修を長く続けてほしい。また、テーマ別研修も行ってほしい（農協設立の経緯／土地改良／普及等）

\*TRY MENG氏（農村開発省代表）

－国の再建は、農業を中心に行うべきである。その他、カンボディアにおける農村開発で考慮すべき項目は

- ①灌漑・排水設備
- ②教育（特に、農村部における）
- ③飲料水
- ④家族計画
- ⑤インフラ（特に、地方へのアクセスを確保するための道路整備）
- ⑥ポスト・ハーベスト（特に、貯蔵用倉庫の整備）
- ⑦地雷撤去（1千万にもおよぶ）
- ⑧局所的戦闘

－日本滞在中学んだこと

- ・勤勉さとアジア人としての意識
- ・日本政府の農民に対する援助の有効性
- ・農協の役割の重要性：カンボディアでもまず、政府主導型でない小規模の農協を作り後にそれを統合していく方式を考えている。
- ・日本の戦後の復興の過程を学ぶことに意義がある。

\*CHHIV NAM 氏（農林水産省普及室）

-カンボディアにおける普及活動について

- ・1976-86年にかけて、カンボディアには農業普及機関がなく、各地方レベルで直接普及活動が行われていた。宣伝手段として、主にラジオ・テレビが使われていた。その後、国連・NGOの協力のもと組織作りの研究をし、1994年にはextension support team（専門家・extension workerの指導者からなる）を組織し、extension workerを養成している。
- ・まず、普及システム作りが急務であり、普及技術の研究、種苗センターの設立も必要である。
- ・農民のニーズを的確に把握し、その心をいかにつかむかが鍵である。

\*UK SIM氏（農林水産省水産局）

-日本の印象

- ・都市と地方の格差が少ない。（交通手段・電気事情などに差がない）
- ・6%の農民で、主食の米を自給している事実には驚いた。

-カンボディアでも過去農協組織を導入したが、失敗に終わった。農民全員参加等を規定する法律が必要だと思われる。

-カンボディアの水産

- ・小グループによる養殖を奨励したい。
- ・魚の数の減少が顕著になってきているので、禁漁期間をもうけるなどして保護を行っている。
- ・支流では河岸の浸食により河床に砂が堆積し、魚が通れなくなっている。
- ・灌漑・排水工事のため、魚の回遊路・産卵場に被害が及んでいる。
- ・森林の開拓・伐採による環境破壊が深刻であり、魚のすみかであった水浸林が減少している。

\*SOUN SOM氏（農林水産省 畜産・家畜衛生局）

-カントリーレポートに沿ってカンボディアでの畜産活動と問題点を説明

### 質疑応答・討議

1. 農村開発省の役割と活動は？

-農村部での ①飲料水確保・供給

②保健衛生

③生活改善

④ため池・学校の建設

⑤経済活動の発展を助長

⑥稲の種子銀行の設立

⑦市場の拡大

-農林水産省・厚生省・文部省・運輸省4省との権限と活動の重なりがあるので、デマケと調整が必要。たとえば、村-村間の道路は農村開発省、第2・第3水路も同省が担当する。

-州（KHET）、郡（SROK）までが、中央政府直轄。



2. 日本の農協のどういうところに興味があるのか？
- 農民主導型の組織という点。いかにカンボディアの農民に意識をもたせ、組織していくのか、学びたい。
3. カンボディアの土地制度は？（所有権・貸し借り・耕作権）
- 1979-89 までは、土地は政府所有であった。89年に農家1戸当たり平均で1haを分配し農民の所有権を認めた。1994年をめどに土地登記をすすめたが、人員不足・測量技術不足・地方レベルでの不徹底などの理由で、現在までに約30%の登記が完了したのみ。ドイツの援助を受け、この事業を継続している。
4. 食料増産のために、農地面積を増やすのか、収量の増加をめざすのか？
- 基本的には、両方を同時に進めていく。肥沃なメコンデルタが有望視されているが、地雷が多く残っていて開発が進まない。また、機械化（ハンドトラクターへの移行）も促進している。森林伐採による開発はしない。
5. 受益者負担の考えはあるか？
- そういう方向にもっていききたい。建設は政府負担で行い、農民グループを組織し維持管理にあたらせようと指導したが、グループの組織も困難な状況である。
  - 日本のように受益者（農民）申請型の方式を採りたいが、カンボディアではなかなか要請が上がってこない。
- 今後は、援助の肥料等は無料で配付しないようにする。
6. 権限・活動のデマケ
- 農林水産省は農業生産基盤整備を、農村開発省は農村生活環境改善を、2省間の分担を明確にしなければいけない。
7. 戦後日本政府が農業奨励のために設置した法律が、現在のカンボディアで役立つかもしれない。これら法律の制定過程を知りたい。
- 重要な法律としては、農地法・農地配付均等法・農業改良助長法・農業協同組合法があげられるだろう。
8. どのようにして義務教育履修率を100%にできたのか？
- まず、基本となる教育システムの確立が肝心である。
9. 日本の農業機械化に際し、政府は農民にどのような援助を行ったのか？
- 大きな開発プロジェクト（北海道や青森の干拓地等）の場合など必要な際は政府が農民に補助金を与え機械購入を助けた。S32年頃からは、ローンとなった。
10. 日本の農産物市場のシステムは？
- 食料管理法によって、米の値段は調整されていて、流通もコントロールされていたが現在では、自主流通米も認められている。また、農作物の包装・輸送などは、生産者負担であり、生産者は普通専門の業者に委託している。農作物の輸出入も商社等を通して行われ、植物検疫は農林水産省の管轄である。

#### 日本人専門家からのコメント・アドバイス

- 農村開発には多くの構成要素があり、それらが複雑にからみあっている。よって、上からの（政府）圧力だけでは、実施が難しい。まず、農村部でリーダーを育成し、農民の意見を集約し、農村の連合体を作り上げていかなければならない。
- 政府主導型には疑問。農民の意見や要望をくみ上げて政策決定にいかし、研究・普及活動を繰り広げていかななくてはならない。そのためにも、複数のリーダーを育成し、農民をまとめ、意見を集約し上へ伝達するシステムを確立する必要がある。
- 華僑の再進出、活動の再開が見られ、本来であれば農協が行うべき活動（貸付・農作物の集荷・生産に必要な資材に提供など）を担っている。政府としては華僑の活動をこのまま放置し、それを前提として政策を立案していくもか、それともこれを機に華僑を入れないシステムを構築していくのか？
- フィリピンでは、灌漑設備は建設も管理も国が負担しているが、国による維持管理は効率が良くない。最近、それを使用者の組織である水利組合に委託し成果を上げている。
- 同じくフィリピンでは、政治の安定期に経済の発展も見られ、自然災害よりもなによりも政治の不安定が国の発展の妨げになる。
- 農協などのテーマ別特設コースの開設については、JICAの現地事務所に相談、要請するように。

(4) 見学・訪問先リスト

| 見学・訪問先        | 担当者                    | 連絡先                   |              |
|---------------|------------------------|-----------------------|--------------|
| JICA本部        | 農業開発協力部計画課 課長代理 美馬 巨人  | 03(3346)5253          |              |
| 農林水産省         | 経済局国際協力課 海外技術協力官 加藤 千尋 | 03(3502)8111 内線2871   |              |
| 鹿<br>見<br>島   | 県庁                     | 総務部国際交流課国際交流係 係長 中村 洋 | 0992(26)5446 |
|               | アジア太平洋農村研修センター         | 県庁総務部国際交流課 主査 青木 利博   | 0994(45)3288 |
|               | 鹿屋農業改良普及所              | 所長 野付 臣朗              | 0994(43)3121 |
|               | バイオテクノロジー研究所           | 細胞機能研究室長 土井 修         | 0994(62)4112 |
|               | 県農業試験場                 | 副場長 白石 優一郎            | 0992(68)3231 |
|               | 南さつま農業協同組合             | 代表理事 組合長 長崎 等         | 0993(53)8111 |
|               | 南薩畑地かんがい               | 指宿農林事務所 次長兼農政課長 玉井 睦郎 | 0993(22)2171 |
| 国営尾張西部農業水利事業所 | 工事第一課 課長 加納 美千男        | 0567(67)3111          |              |
| 福岡堰土地改良区      | 工務管理課長 磯部 倉雄           | 0297(52)4232          |              |
| 鯉淵学園          | 常勤講師 涌井 義郎             | 0202(50)2811          |              |

## (5) 講師リスト

| タイトル                      | 講師名   | 所属先/役職名                       | 連絡先                     |
|---------------------------|-------|-------------------------------|-------------------------|
| 小規模農村開発 (バングラデシュの事例)      | 大橋 正明 | 恵泉女学園専任講師                     | 0423(76)8215            |
| 小規模農村開発 (ガーナの事例)          | 中林 一夫 | JICA/IFIC国際協力専門員              | 03(3269)3851            |
| 農村・地域開発における女性の役割・そのための諸施策 | 畑中 初音 | JICAジュニア専門員                   | 03(3346)5130            |
| 日本の普及事業-生活改善および女性ビジョン概要   | 中村 利夫 | 農林水産省農蚕園芸局婦人生活課 普及指導官         | 03(3502)8111            |
| 地域開発論                     | 笠井 利之 | JICA/IFIC国際協力専門員              | 03(3269)3851            |
| 日本における水源開発について            | 橋本 昇  | 農林水産省構造改善局総務課公団管理室 課長補佐       | 03(3502)8111<br>内線 3459 |
| 日本の農業水利用の変遷               | 中川 敬夫 | 農林水産省構造改善局計画部地域計画課 計画調整室 課長補佐 | 03(3502)8111<br>内線 3683 |
| 農民金融                      | 両角 和夫 | 農林水産省農業総合研究所経済政策部 金融研究室長      | 03(3910)3946            |
| 農業協同組合                    | 中岡 義忠 | (財) アジア農協振興機関 (IDACA) 常務理事    | 0427(82)4331            |
| 日本の普及事業について               | 中村 成二 | (社) 全国農業改良普及協会                | 03(5561)9564            |
| 農村開発                      | 千田 徳夫 | JICA筑波国農業研修センター付参事            | 0298(38)1771            |
| 土地改良区の組織・運営               | 佐藤 政良 | 筑波大学農林工学系 助教授                 | 0298(53)4648            |







