

インドネシア共和国
農業省官房計画局

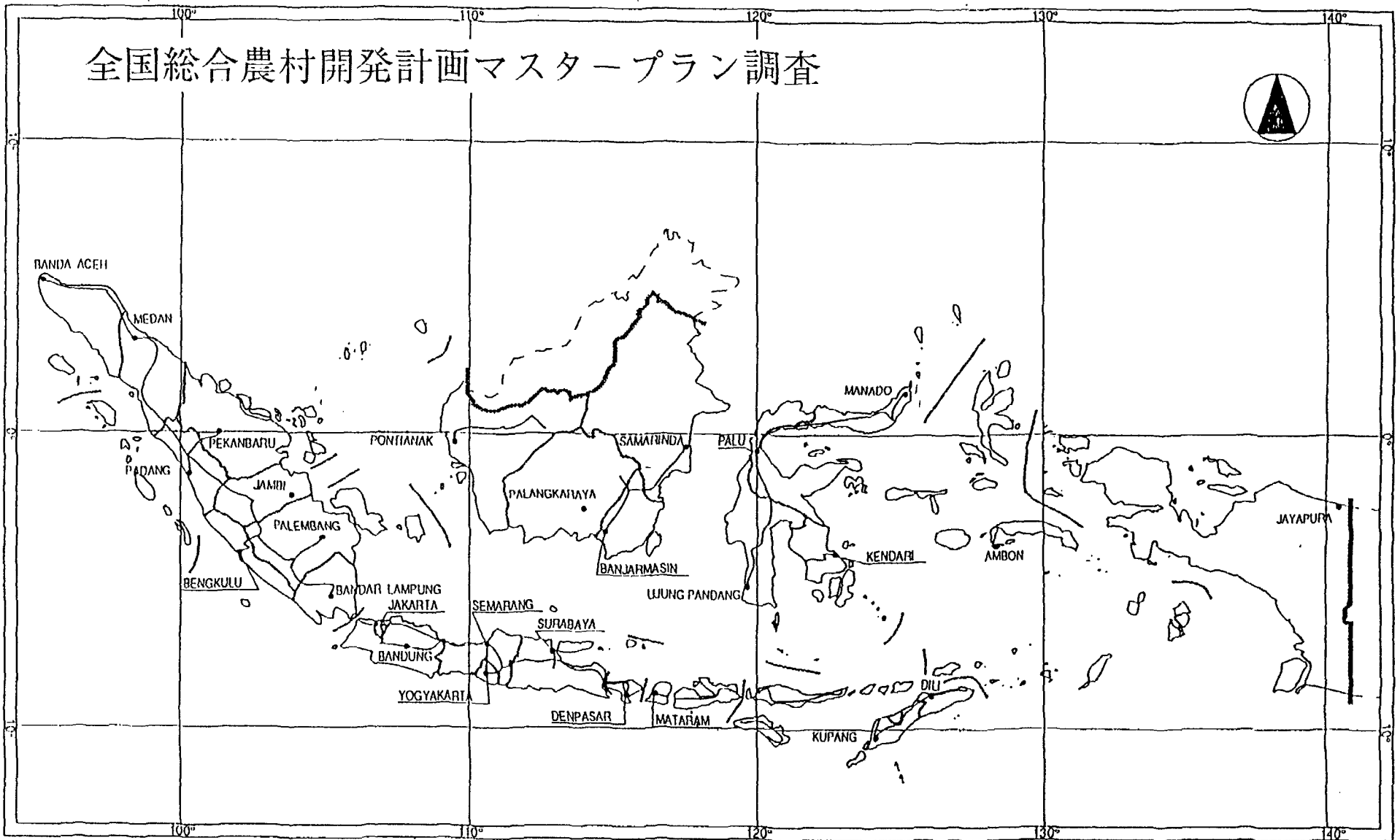
インドネシア全国総合農村開発計画
マスタープラン調査

プロジェクト・ファインディング調査報告書

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社団法人 海外農業開発コンサルタント協会

調査対象位置図



インドネシア共和国
農業省官房計画局

インドネシア全国総合農村開発計画マスタープラン調査

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報告書

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マスタープラン調査実施のためのTOR（案）

第1章 緒言

1.1 はじめに

本報告書は、インドネシア共和国、全国総合農村開発計画マスタープラン調査の計画に係わるファクト・ファインディング調査の結果を取り纏めたものです。

インドネシアの農業は、国家経済及び社会活動の中で依然重要な位置を占めています。しかし、農業部門は、伝統的生産構造を抱え、貧困、地域経済格差、開発に対する経済的非効率等の問題を残しています。事実、近年の国民総生産指数にも見られる様に、工業セクターが10.4%と著しい成長を示しているのに反し、農業セクターは僅かに2.6%と低い状況にある。インドネシア政府は、現在、農業セクターと他産業部門、特に工業セクターとの経済格差是正を開発の重点施策の一つとし、国家並びに地域経済開発計画を進めているが、最近の経済の高度成長の中でこれら格差は更に拡大してきています。従って、健全な国家経済開発計画を推進する上で、農村地域の経済の建て直しは基礎的対策であり、また、緊急課題となっています。

以上の現況に鑑みて、インドネシア政府は、現在推進中の農業及び農村整備計画を見直し、地域の特性に整合し、かつ、開発投資効率の高い計画に再編成すべく、全国規模で農業開発及び農村開発の実情を把握と地域の生産構造改善の総合的対策検討を企画しております。尚、インドネシア政府は、本計画を進めるに当たり、日本政府の技術的支援協力を期待しています。

海外農業開発コンサルタント協会(ADCA)派遣ミッションは、以上のインドネシア政府農業省の意向をうけて1992年11月4日から21日までの18日間を費やし、現地踏査並びに政府関係機関との協議を行ない命題の「全国総合農村開発計画マスタープラン調査」の計画に係わるインドネシア政府関係機関の意向等の確認を行なってきました。ファクト・ファインディング調査は、農業省並びに国家開発計画庁等政府関係機関の支協力・支援を得て順調に行なうことができ、当初の目的を達成することができました。

1.2 ADCAミッション

ADCAミッションは、日本工営（株）第三事業部副事業部長 本間進（総括／農業及び地域開発計画）及び同社農業水利部鍋田和伸技師（灌漑・排水計画）の2名で1992年11月4日から21日までの18日間に亘り現地調査を実施してきました。

現地調査の期間中、ミッションは、農業省、国家開発計画庁の責任者等と命題の「全国総合農村開発計画マスタープラン調査」の計画に係わる政策並びに技術的事項等について協議を持ち、また、計画実施に係わる諸問題、政府側の意向等についてもファクト・ファインディングを行ないました。これら調査結果に基づき、ミッションは、農業省が構想している基本的開発の方針に基づき、今後の農業並びに農村地域開発の基本的なアプローチ及び開発戦略について概略検討を行なうと共に、マスタープラン調査を実施するためのTOR（案）を取り纏めました。

1.3 謝辞

本調査の実施に当たり、ミッションは、インドネシア政府関係方面、特に、農業省地域開発局のトガール・ナビツプル計画局長はじめ多くの関係者の親切な協力／支援を得ました。ここに慎んで感謝の意を表します。

また、在インドネシア日本大使館角谷一等書記官、農業省・食糧総局の及川専門家には調査、開発政策方面で懇切丁寧なご指導を賜りました。この場を借り心から謝辞を表する次第です。

第2章 計画の背景

2.1 インドネシア共和国の農村／農業セクター

2.1.1 インドネシア共和国の社会、経済現況

1989年現在におけるインドネシアの総人口は、約1億7,800万人であった。最近10年間の年平均人口増加率は、2.15%である。就労可能人口は6,800万人、内約55%相当が農業セクター、10%が工業セクターである。

1989年に於ける国内総生産（GDP）は約166兆3,300億ルピア（853億米ドル）であり、1州あたりのGDPは、93万8,000ルピア（480米ドル）である。1983年の基準価格によるGDPで見られる経済成長率は、前年の5.7%伸びに対し、1989年には7.4%の伸びとなっている。1989年時価での経済各セクターのGDPシェアは、夫々、農業が23.5%、工業が18.4%、貿易及び商業が17%、また、鉱山業が13.1%であった。

1980年代半ば、インドネシアの経済は、1985年にバレル当たり26.7米ドルから1986年の13.6米ドルに下落した原油価格がもとで、強烈な打撃を受けた。GDPの年間成長率によると1980年に於ける7.9%から1986年に於ける3.2%へと著しく下降している。このような不況経済環境のもと政府の財政赤字は、1986年GDPの約6%に相当する5兆7,500億円に増加した。インドネシア政府は、この経済危機の打開策として次のような基本的な経済修正とその対策を実施に移した。

- 政府支出の削減
- 非原油税収集の増加
- 1986年9月におけるルピーの31%平価切り下げ、及び
- 経済行動の規程の緩和

これらの努力の結果、GDPの年間成長率は1986年の3.2%から1988年の5%へと回復し、現在、継続的に経済成長している。

2.1.2 農村地域／農業セクターの現況

1989/90年の畜産、漁業、林業を含む農業生産は、GDP全体の20%を占めた。農業セクター内で

は、食糧作物生産が全体の約60%を優位に占め、次いでプランテーション作物が16%、畜産が11%、漁業が7%また林業が5%となっている。食糧作物生産では、米の生産が群を抜いて高く、農業GDPの約25%のシェアを占めている。

外貨獲得の輸出農産物は、コーヒー、ゴム、パームオイル、タバコ、茶、木材、海老、籐等である。これらは、1989/90年の非石油商品の輸出産品の約48%に及ぶ。

農村部の人口の約75%は農業セクターに属する。就労人口の大多数は、農業生産活動により生計を立てている。1989年現在、農家数は約195万世帯と見込まれている。総農家数の内、約70%は1ヘクタール規模以下の小農家である。漁家は140万人（総農業セクター世帯数の約7%相当）である。農業生産は、耕種の違いにより以下の農業タイプに分類することができる。即ち、

1. 主食糧作物と経済作物生産

- a. 良好な生産環境、即ち、相対的に高い生産量、高収益、集約灌漑、低標高/低平地、都市/経済センターに近い等に恵まれた小規模農家。
- b. 低位生産、低賃金、遠隔地の高地、基本的社会インフラ施設整備の不備等不十分な生産環境下にある小規模農家。

2. 輸出指向プランテーション作物

- c. ココナッツ、コーヒーは小規模農家によって生産される。これらの作物は主として農家の庭先で生産される。
- d. ゴムは生産量のほとんどが小規模農家によって生産される（85%）。国営及び私営のエステートからの生産は各々概ね10%及び5%である。
- e. オイルパームは、国営のエステートにおいて栽培されている(80%)。近年、国営エステートを核として周辺の小規模農家が栽培生産に増加してきている。
- f. カカオはインドネシアの多雨地域に新しく導入されたプランテーション作物ある。この作物は、典型的な小規模農家の換金作物になろうとしている。これらカカオは、最近、成熟期に入り生産が開始しつつある。

遠隔僻地に於ては、インフラ施設の整備並びに経済構造、特に投資の環境は必ずしも適性とはい

えない。従って、農業生産の振興、農産物の付加価値生産並びに関連する各種事業活動は、未だ効率の低いレベルに留まっている。事実、これら地域に生活している各小規模農家の農業収入は生活を維持する限界の低水準の状況である。現況農業の改善し農業関連事業の活性化及び農業を基盤とした農村工業の開発を推進するためには、農村金融特に長期貸付の開設は、かかる地域の農村／農業開発を支援するうえで重要かつ急務である。

インドネシアでは、農業が引き続き国家経済開発のなかで重要な役割を果たす。即ち、農業生産は、国家の持続的経済成長を支持し、また、増大する労働力に対し雇用機会を与え、もって、農村地域の貧困撲滅と地域経済の格差是正とバランスのとれた地域開発の基礎となるものである。

2.1.3 国家経済開発5ケ年計画と農業政策

第一次国家経済開発5ケ年計画及び第二次計画の施行期間中（1967/70-1978/79）、開発の重点は、米の増産に置かれた。農業セクターの開発予算の半分以上が米の増産対策、特に灌漑施設の改修及び拡充に費やされた。第三次国家経済開発5ケ年計画及び第四次計画の実施に於ては（1979/80 - 1988/89）、開発の重点が換金作物の導入と増産振興に置かれ、農業生産の集約化が進められた。これら第一次計画から第四次計画までの実施に於て、米は大幅に増産し、1984年には米の自給が達成された。しかしながら、それ以降に於ては米の実質的な増加はみられていない。よって、米の国内需要は、漸次伸び、米の生産を上回ろうとしている。米生産の停滞している主な理由は、概ね以下の3点によるものである：

- 米の生産集約化計画は、当初目的とした開発段階に達した。
- 米の生産集約化計画のための可能耕地が限界にきた。
- 生産性の高い水田の一部が、特にジャワに於て都市及び工業開発用地に振り当てられ減反している。

1989年4月、インドネシア政府は、第五次国家経済開発5ケ年計画（1989-94）を策定し、実施に移した。第五次計画で構想された基本的開発目標は以下の通りである：

- 生活水準の向上、自己啓発及び全ての人々における公平で対等な福祉の改善。
- 引き続き開発のための基盤を創設する。

政府は、以上の経済開発戦略として農村及び地域開発に重点を置いている。また、この達成を目的し、農業開発には以下の戦略目標に視点を置いて構想されている。

- 食糧の国内需要を満たす農業生産、特に米の増産を図る。
- 農村地域での雇用機会の創設。
- バランスの取れた地域開発の推進。

この計画は、農業生産の多様化及び集約化並びに経済の効率化を通して経済成長を促進する構想である。インドネシア政府は、この実施に当たり以下の事項について最大限の努力を払っている。

- プランテーション作物生産について国家的事業の経営とその収益性の強化を図る。
- 各種振興対策の合理化。
- 既存灌漑事業地区の灌漑施設維持運転管理費用の調達に係わる事項を含め多目的水利用の管理を強化。
- 換金作物を含む耕種並びに集約的栽培体系に係わる農事普及及び試験研究に拡大。

尚、農業及び農業関連の産業、特に付加価値生産、または、輸出のポテンシャルを持つ事業については、制度金融等の支援が必要である。制度金融は、農業セクターに非伝統的な事業の様な新しい経済成長の素を創設する上で重要である。この場合、農業は、気象場のリスクや生産課程でのロス、市場での価格変動等不安定要素に対応して長期に亘り投資を支持しなければならず、従って、こうした農業及び農業関連の事業を開発するには長期の金融の適用が必要である。

2.2 計画の背景と経緯

以上に述べた通り、インドネシアの農業は、国家経済並びに社会構造の中で重要な役割を担っている。即ち、1989/90年度の国民総生産の中にあつて農業セクターの生産額は、約20%を占め、また、農村部の総人口の約75%が農業セクターに属する。また、農村部の総労働人口の約55%(1991年現在)が農業生産に従事している。従って、インドネシアに於ける農業は、今後も引き続き国家経済の発展並びに地域開発の原動力または農村部の主要な雇用機会として重要な役割を果たすものと期待されている。

しかし、農業の実情は、未だ伝統的生産構造を抱え、貧困、地域経済格差、開発に対する経済的非効率等まだまだ多くの問題を残している。インドネシア政府は、近年、農業セクターと他の経

済セクター、特に工業セクターとの経済格差の是正を重点施策の一つとして国家経済開発計画を進めているが、政府の努力と裏腹に1990年代に入って著しい成長を示した国家経済の中で、都市と農村部との間の経済格差は益々拡大し、深刻な社会問題となってきた。従って、農村部の経済建て直しは、健全な国家並びに地域経済開発計画を推進する上で重要な政策課題であり、早急な対策が必要となっている。以上の現況に鑑みて、インドネシア政府は現在推進中の農業及び農村整備計画を見直し、地域の特性に整合し、かつ、投資効果の高い計画とすべく、農業開発及び農村整備の状況把握並びに地域の生産構造改善の総合検討を企画するに至り、全国総合農村開発計画マスタープラン調査として実施する計画となった。

本調査計画は、全国レベルで実施し、最も適性かつ持続性の高い農業並びに農村開発を総合的に進めるためのマスタープランを作成する。特に、このマスタープランの策定に当たっては、農業並びに農村インフラの整備、末端圃場整備計画に重きを置き、農業生産並びに農村地域経済の活性化を振興する方針としている。また、個々で構想される開発計画は、現在農村地域に顕在している次の諸問題を解決する戦略的対策としても効果的と考えられている。即ち、

- 農村地域の貧困撲滅
- 農村地域経済の活性化
- 地域開発及び経済の格差是正
- 農民の生活水準の向上と経済的自立の推進

インドネシア政府に対する我が国の技術並びに経済協力は、既に長年に亘り農業開発及び農村地域開発／整備計画等数多くの実施案件について基本調査から開発事業の実施まで各種多岐にわたって実質的な支援を行ってきました。また、これら開発計画の実施に関連し、プロ技協方式、個別専門家派遣等による技術移転（農業機械化センター、畜産技術センター、農業技術普及センター、リモセン・センター等）、試験研究、開発事業の運営指導等も広範な技術分野に亘り行なわれてきました。インドネシア政府は、我が国が戦後国内において実施してきた各種農業開発並びに農業／農村の近代化事業の成果とインドネシア政府に対するこれまでの援助協力を通じて培った豊富な経験を高く評価すると共に、我が国のこれら豊富な経験が本計画調査の実施に有意義に反映出来るものと理解を高め、協力を得たい意向を強く持っています。

第3章 計画の概要と目的

3.1 計画の目的

この全国総合農村開発計画マスタープラン調査計画の基本的な目的は、農業及び農村開発計画に係わる各種既存の調査資料、解析資料等データベースを構築し、今後の地域開発計画推進に資すること、また、全国総合農村開発計画マスタープラン並びにマスタープランの中でゾーニングされた特長的地域の典型的な地区に対するモデル開発計画の策定を期待している。

- 1) 既存の生態系を含む自然環境、社会・経済現況、農業及び農村地域の各種産業活動、生産構造並びに市場流通機構等に係わる資料をベースに全国を特長的開発ゾーンに区分し、各々自然環境、社会経済並びに資源開発各々が抱える問題点と開発ポテンシャルを明らかにし、データベースに構築する。
- 2) マスタープランは、以上の解析結果と国家経済開発の基本政策に沿って、特長的開発ゾーン毎にマクロ経済を展望し、基本的開発コンセプト並びに開発戦略を提言する。
- 3) 特長的開発ゾーン毎に典型的な地区を選定し、農業生産基盤整備、生産構造改善、農業及び農村開発支援制度の改善強化並びに農村インフラ整備を骨子とした有機的農業及び農村総合開発計画モデル事業を策定。

以上に計画された総合農村開発事業について、事業実施後の適正な運営管理の方法を検討し、今後の開発事業推進に資する。

インドネシアの大半の地域では、農村地域の経済開発が未だ遅れている。事実、農村部に於ては、相当数の地域住民が定職を持たず、従って、住民一人当たりの所得は、辛うじて生活を維持する程度と低い状況にある。最近著しいインドネシアの経済成長の中にあつて、工業並びにサービス業が特に注目する発展を遂げ、また、今後も引き続き国家経済の発展をリードして行くものと思われる。但し、これらは、何れも都市またはその周辺に集約しており、地方農村部と大きな隔たりが生じてきている。これら都市部及び地方農村部との経済格差は、政府が現行の国家経済開発5ヵ年計画の中で社会経済格差是正を基本政策の一つに掲げているが、現行の開発計画の実施状況では、今後益々拡大するものと考えられる。従って、こうした弊害を最小限に止め、社会経済格差を是正するには、地域経済の活性化が是が非でも優先的に推進されなければならない。

かかる地域経済の発展を実現化するには、先ず、現在地域経済発展を阻害している各種問題点を解明し、その各々に対する改善策、対処策の検討が急務である。これら問題点の解明並びに改善策

の検討は、また、開発行為が終了した計画事業の運営管理に大きな便宜をもたらす意味においても効果的である。

3.2 計画の概要

ここに計画したマスタープラン、スタディー調査は、インドネシア全域を対象に、「目的とする開発の実施対象地域の選定及び開発の適性規模の決定に必要な検討基準の作成」並びに「最も持続的開発を推進するための適正な枠組みの作成」を含む全国総合農村開発計画の実施マスタープランの作成を目的とする。この計画調査は、概ね次の工程並びに手法で進められる予定である。

- 1) 目的とする開発のための対象地域のゾーニングの実施。
- 2) 顕在する問題点及び阻害要因の解明並びに地域に賦存する資源の開発ポテンシャルの検討。
- 3) ゾーニングした地域について、各種資源の開発計画を個別に検討する。
- 4) 開発方針の策定並びに方針に基づく開発のフレームワークを煮詰める。
- 5) 開発に関連する環境アセスメント並びに環境に対するインパクトを評価する。
- 6) 検討した各種開発計画を社会経済環境並びに自然環境、更に地域の開発ニーズと照合して適性開発の方向づけ並びに開発の適性規模を決定する。
- 7) 以上の計画を基に、典型的モデル計画または代替案等を含む地域総合開発計画マスタープランを作成する。
- 8) 以上に策定された開発事業の効果的実施について助言事項を取り纏め提言する。

総合農村開発計画は、先にのべた地域開発の政策的目的または開発達成目標に留意し、農業を基本とした開発とし併せて農村環境並びにインフラ施設整備に視点を置いた実施プランとする。この総合農村開発計画に含まれる基本的な構成要素は概ね以下の通りである。

- 1) 水資源開発： 灌漑施設、農村生活雑用水の供給施設、農村工業用水供給施設、並びに排水改良、洪水防御、地域の水需要に対応した流域変更計画等。
尚、流域下流部の水資源開発については、特に海水遡上の問題及び環境保全の観点から水質汚染の問題に十分留意する。
- 2) 土地資源開発： 農家の入植及び増反、エステート／プランテーションを対象と

した可耕地の開墾、国立公園、自然動植物保護、森林保全、景観の開発／保全等。

- 3) 農業開発： 末端圃場整備事業を含む農業インフラ施設整備並びに農業生産支援制度の強化等を前提とした食糧作物増産振興と安定化対策、工芸作物及び各種換金作物の生産拡大振興。
農業生産の集約化並びに多様化は以上農業開発計画の基本である。
- 4) 植林事業： 各河川の上流域、山岳または丘陵地が該当する水源涵養域の保全対策を含め植林事業を構想する。
植林事業には、農村工業を振興する目的も含め藤、竹、材木用各種樹種の植林と、茸、山菜等の栽培も計画に含む。
- 5) 水産開発： 特に喫水域または海岸平野の湿地等を利用した魚貝類の養殖事業並びに漁労振興。
- 6) 農村工業開発： 農業、畜産、水産、林産等の生産物を原料とした農村工業の開発振興。その他天然資源開発を通じ農村工業を振興する。
- 7) 農村インフラ整備： 道路、水供給施設、電化、農業技術訓練センター、保健衛生施設、通信施設、交通運輸施設、等。
- 8) 観光及び商業活動： 地域に賦存する天然資源並びに農業開発を通じ農村に於ける商業活動の振興を図る。また、自然動植物、景観等を活用した観光開発の推進。
- 9) 環境及び自然動植物保護計画

3.3 調査対象地域

マスタープラン・スタディー調査は、インドネシア国全域を対象とし、各州並びに県単位で行なう。

3.4 基礎資料及び情報の有無

インドネシアでは、これまで各地域に於て地域開発を目的として地域に賦存する各種の資源探査を行なっている。国家移住省は、国家移住計画の推進の一環としてRePPPProT調査（移住適地選定調査）を行ない、全国地域の土地利用現況、植性、土壌及び地質状況を明らかにすると共に地域に

賦存する天然資源の初歩的調査を終了している。また、これとは別に、森林保全と自然保護総局は、1984年に国際自然保護と天然資源(IUCN)並びに世界自然動植物基金(WWF)と共同でインドネシア地域の保全計画並びに天然資源の効果的利用法について調査検討し、膨大な量に昇資料を作成している。

以上の他、各地に於て農業及び農村開発をはじめとする各種の地域開発または資源開発計画が企画され、フィージビリティ・スタディー調査が行なわれて折、本計画調査の実施に必要な地域の情報は、極めて豊富に賦存している。

3.5 調査経費

本計画調査の実施には、概ね次の費用が必要である。

経費項目	数量	経費(US\$)
1) 調査及び計画作成作業要員費	135 M/M	4,295,000
2) 調査資機材	一式	90,000
3) 要員訓練費	一式	430,000
合計		4,815,000

(円相当額1.0US\$=110Yenとして529,650,000円)

3.6 計画調査の実施計画

マスタープラン・スタディー調査は、フェーズI及びフェーズIIの二段階の工程で実施する計画である。夫々の段階に於ける主たる調査業務は概ね次の通りである。

1) フェーズI:

- a. 全国州並びに県を単位とし、気象・水文、土壌、土地利用現況、植性、農業生産及び生産活動現況、社会経済現況、地域の風俗・習慣、自然動植物の分布、各種保全または保護指定の状況等関連資料及び情報の収集。
- b. コンピューターヘデーターベースを構築し、以上の収集データーと情報を登録する。

工業を振興。

- 農村インフラ整備 道路、水供給施設、電化、農業技術訓練センター、保健衛生施設、通信施設、交通運輸施設等。
- 観光開発及び商業の活性化 地域に賦存する天然資源並びに農業開発を通じ農村に於ける商業活動の振興。また、自然動植物、景観等を活用した観光開発の推進。
- 環境保全対策 自然林の保全、自然動植物保護計画。

h. 各計画対象地域にモデル地区を選定し、典型的開発の実施計画を策定する。また、特に緊急を要する地区についても緊急開発計画を策定し開発事業推進に資する。

i. 地域農村開発に対する助言を取り纏め提言する。

付 録

- 付録-1 ADCAミッションの調査工程
- 付録-2 面会者リスト
- 付録-3 収集資料及び情報
- 付録-4 インドネシア全国総合農村開発計画
マスタープラン調査実施のためのTOR（案）

ADCA ミッションの調査工程

付録 - 1

Members of the ADCA Mission

Mr. Susumu Honma

: Team Leader

Mr. Kazunobu Nabeta

: Irrigation Engineer

Itinerary of ADCA Mission

Itinerary	Date	Day	Starting Point or Via Point	Lodging Point Staying Point	Description
1	1992.11.4	Wed.	Tokyo	Jakarta	Arrival in Jakarta
2	1992.11.5	Thr.		Jakarta	Visit to Ministry of Public Works,
3	1992.11.6	Fri.		Jakarta	Visit to Ministry of Agriculture, JICA, Embassy of Japan, Data Collection
4	1992.11.7	Sat.		Jakarta	Visit to Ministry of Transmigration Data Collection
5	1992.11.8	Sun.	Ujung Pandang	Jayapura	Move to Jayapura (Irian Jaya)
6	1992.11.9	Mon.		Jayapura	Visit to Regional Public Works Office, Department of Forestry, Regional Planning Office (BAPPEDA), Ministry of Transmigration
7	1992.11.10	Tue.	Jayapura	Merauke	Move to Merauke, Site Reconnaissance Data Collection & Visit to Regional Swamp Area Development Project Office
8	1992.11.11	Wed.		Merauke	Site Reconnaissance
9	1992.11.12	Thr.	Merauke	Jayapura	Return to Jayapura Report to Regional Public Works Office Data Collection
10	1992.11.13	Fri.		Jayapura	Visit to Department of Transportation, Ministry of Agriculture
11	1992.11.14	Sat.	Ujung Pandang	Jakarta	Return to Jakarta
12	1992.11.15	Sun.		Jakarta	Data Check / Arrangement
13	1992.11.16	Mon.		Jakarta	Report to JICA Expert in Ministry of Agriculture, Data Check / Arrangement
14	1992.11.17	Tue.		Jakarta	Report to JICA Expert in Bina Program Data Check / Arrangement, Report Preparation
15	1992.11.18	Wed.		Jakarta	Report Preparation
16	1992.11.19	Thr.		Jakarta	Report to Ministry of Public Works, Ministry of Agriculture Ministry of Transmigration
17	1992.11.20	Fri.	Jakarta		Report to Embassy of Japan, JICA Leave for Japan
18	1992.11.21	Sat.		Tokyo	Arrival in Tokyo

Name	Position	Occupation
<u>Ministry of Public Works</u>		
1. Ir. Djoko S. Sardjono	Director Programming	Water Resources Department
2. Ir. Soenarto Sundjoyo, M.Eng	Head of Subdirector	River Development Planning for Central Region
3. Ir. Edy Wahyono, M.Eng	Section Chief	River Development Planning for East Region
4. Ir. Harisus	Staff	Survey Section for River Development Planning
5. Ir. Lukitaningsih Aripurnomo	Staff	River Development Planning for East Region
6. Ir. Irama A	Staff of Directorate of Swamp	Technical Planning for Central Region
7. Ir. Mansye Nahumury	Staff of Directorate of River	Technical Planning for East Region
8. Ir. Y. Hidayat	Staff	Foreign Aid Administration Division
9. Mr. Sukoco	Staff	River Development Planning for Central Region
10. Mr. Toshiki Saito	JICA Expert of Bina Program	
<u>Ministry of Agriculture</u>		
1. Ir. Togar A. Napitupulu, Ph.D	Head of Planning Division	Agriculture Regional Planning Division
2. Ir. Putu B. Arsana	Staff	Eastern Region Development Head sub Division
3. Ir. Irlal Kamaruddin	Staff	Identification Agricultural Resources
4. Mr. Akira Oikawa	JICA Expert in M.O.A	
<u>Ministry of Transmigration</u>		
Ir. Supardja	Head of Planning Division	Directorate of Development Planning
<u>Ministry of Transmigration Provincial Office (Irian Jaya)</u>		
Drs. Suyanto	Chief of Section	Planning and Program
<u>Department of Forestry Provincial Office (Irian Jaya)</u>		
Ir. B. Leloho Dirgantoro	Chief of Section	Forest Utilization
<u>Regional Planning Office (Irian Jaya)</u>		
M.H. Thamrin Sagala, SH	Acting Staff	
<u>Regional Public Works Office (Irian Jaya)</u>		
Ir. Hilman Manan, Dipl. HE	Head	Regional Water Resources Development Division (Irian Jaya)
<u>Department of Transportation Provincial Office (Irian Jaya)</u>		
Ir. Chayono Partawijaya, MsTr	Chief	Planning Division
<u>Ministry of Agriculture Provincial Office (Irian Jaya)</u>		
Ir. Cosmas Sampe Birana, MS	Chief	Planning Division
<u>Public Works Project Office (Zone Salor, Kurik)</u>		
1. Ir. Bambang Mardijanto	Head	Public Works Division
2. Ir. Warsito SW.	Head	Development Project of Swamp Area
3. Ir. Syahrul Karim	Staff	Directorate of Swamp
4. Ir. Izardi	Staff	Development Project of Swamp Area
5. Ir. Eep Supriadin	Staff	Development Project of Swamp Area

収集資料及び情報

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13. Transmigration Planning
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14. Rencana Pengembangan Fisik Transmigrasi Di Irian Jaya Selatan (Map)
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<Ministry of Transmigration Jakarta>
15. Land Status/Recommended Development Areas, Irian Jaya (Map)
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16. Joint Operations Graphic (Ground) Irian Jaya (Map)
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インドネシア全国総合農村開発計画
マスタープラン調査実施のためのTOR（案）

PROJECT DIGEST

1. Project Title : MASTER PLAN STUDY ON INTEGRATED AGRICULTURAL AND RURAL DEVELOPMENT PROJECT (IARDP)
2. Location : Whole over the Indonesian territory
3. Executing Agency : Bureau of Planning of Secretariate General (BPSG), Ministry of Agriculture
4. Objectives : The essential objectives envisaged in the master Planning Study are:

To construct a data base as a tool for identifying the constraints and problems as well as potential resources for rural agricultural development

The data base also be functioning to clarify not only the regional needs but also development impacts especially improvement of socio-economic disparities with other region.

To prepare the Master Plan on the Integrated Agricultural and Rural Development Projects (IARDP) based on the specific ecological zones and to propose the development policy, including the most appropriate approach to the rural development. In the development policy, it is emphasized that development of all the potential resources shall be made in harmonising with the natural environment at a sustainable basis

To promote the priority schemes for early implementation

5. Project Description : The agricultural sector of Indonesia plays an important role in the economy and social welfare. However, regional disparity between urban and rural areas has recently been enlarged to a significant extent.

The proposed master plan study will be conducted to grasp the present situation of rural areas in Indonesia and to know constraints to future development. Then the specific zoning will be made in the entire Indonesian territory with particular attention to the ecology, structural pattern of agricultural production, socio-economic setting, current development of infrastructure, existence of potential resources, real constraints and problems, etc.

Based on the above zoning, the most appropriate development policy as well as framework will be proposed for each specific zones. In line of the development framework, a kind of development schemes as well as an integrated development package(s) will be formulated in each zone. Among the said formulation, a priority schemes and/or development package(s) will be taken up and be prepared as one of the model program for early implementation.

6. Scope of Assistance Required	Field Investigation and Master Planning Equipment Fellowship	135 M/M L.S.	US\$3,780,000 36,500 100,000
	Total Fund Required		US\$3,916,500

7. Duration of Study : 24 months (two years)
8. Related to Project Aid : None

The Application Form for Japan's Technical Aid Assistance

TECHNICAL AID PROPOSAL

Application:

The Government of Republic of
Indonesia

Project Title:

Master Plan Study on the Integrated Agricultural
Rural Development Project (IARDP)

Total Project Cost:

US\$ = 4,815,000 (eqv. Yen = 529,650,000)
(exchange rate at US\$ 1.0 = Yen 110)

**Responsible Ministry:
(Ministry required it)**

Ministry of Agriculture

**Implementing Agency:
(Agency in Charge of Execution of the
Program)**

Bureau of Planning of Secretariate General (BPSG),
Ministry of Agriculture

Project Description:

1. Background**(1) Current Situation of Agricultural Sector**

The agricultural sector in Indonesia has been playing an important role in its economy as well as social welfare. The sector accounts for some 20% of the total gross domestic product (GDP) in 1989/90. In terms of the sector GDP, the food crop sub-sector is dominant, sharing about 60% followed by tree crops, 16%; livestock sub-sector, 11%, fishery, 7% and forestry, 5%. In the food crop production, rice is predominant and shares almost 25% of the agricultural GDP. Approximately 75% of the rural population is involved in the agricultural sector. The sector contributes about 55% to the rural employment as of 1991. It is foreseeable that the agriculture will continue to play an important role in the economic sector, and help not only to sustain the momentum of economic growth, but more specifically in providing employment for expanding the labour force, emancipating the rural poverty and serving as the basis for balanced regional development.

(2) National Five-Year Plan and Agricultural Policy

The Government of Indonesia prepared and launched the REPELITA-V (1989 -94) in April, 1989. The principle goals expected in the development program are:

- To uplift the living standard, enlighten the mind and improve the well-being of all the people more evenly and equitably, and
- To lay a solid foundation for subsequent development.

The economic development strategy of the Government places strong emphasis on rural and regional development. To this end, agricultural development has placed particular attention to the following goals:

- To increase food production especially rice to meet increasing domestic demand,
- To enlarge rural employment opportunity and alleviate rural poverty,

- To achieve balanced regional development and improve an economic disparity of the regions each other,
- To grow in the self-reliant farmers in connection to the above goals.

(3) Necessity and Importance of Improvement in the Sector with Lead to the Formulation of the Project

An socio-economic disparity between agricultural and industrial sectors or the rural and urban areas have been enlarged into significant extent due implementation to the recent economic development projects. In fact, an economic growth of agriculture has been slowed down as low as 2.6 %/ annum on an average during the recent years between 1989 and 1991, comparing with 10.4 % in industry sector and 7.4 % in total non-oil sector. Therefore, the improvement and upliftment of the rural economy through development and/or activation of agriculture become very important program for further development of the national economy at this henceforth stage.

Taking the above policy into consideration, the subjected Project has put a high priority as one of the essential program which should be implemented urgently so as to meet the above Government intention on further development of the national economy. In reality, however, no comprehensive investigation and study on the domestic resources, except RePPProt study on the land suitability for sustainable agricultural development under the national transmigration program, have been made up to present. The agricultural and/or rural development projects being under implementation are, in all the cases, designed area and area individually, at the single purpose basis. To accelerate the agricultural and rural development, and then, secure development impacts and/or an investment effect, as high enough as possible, it is essential and urgently needed to prepare more concrete development framework with precise evaluation of the domestic resources.

(4) Relation between the Sector and the Project

Agricultural production is the mainstay of the present socio-economy of Indonesia. It is also essential that the agriculture is the basis for further development of all the sectors. However, greater part of the agricultural sector still lies under traditional situation though the Government has paid its utmost effort for irrigation development as well as agricultural modernization.

The Project herein conceived is aiming at preparation of the "Master Development Plan" that should be the most optimum and sustainable Integrated Agricultural and Rural Development in the entire country. The Project will emphasize on development of the agricultural infrastructure and on-farm works as well as the rural infrastructure so as to realize an attractive agricultural cum rural economic setting, effectively and successfully. The Project will also contribute to solving the problems in the sector, such as:

- 1) alleviation of rural poverty,
- 2) acceleration of the rural economic growth in the rural area,
- 3) mitigation of regional development imbalance and economic disparity,
- 4) activation of the economic activities of farmers and grow in a self-reliant farmers.

(5) Reasons why Japan's Technical Aid Assistance is Required for this Particular Project

The Government of Japan (GOJ) has ever assisted in execution of a lot of feasibility study and design works on the projects in respect to development of the rural/ agricultural sector in the entire Indonesia. The Government of Indonesia (GOI) is so expecting that such abundant experiences will really contribute to a successful performance of agricultural and rural economic set up. Moreover, GOJ has abundant experience in the agricultural modernization and set up of the self-reliant farmers in Japan. The subjected Project is one of the integrated rural/ agricultural development program, therefore, the experience of GOJ, which gained with

the same cultural background in agricultural and rural development, is considered to be highly effective and helpful for implementing this special program.

2. Objectives and Outline of the Project:

(1) Objectives of the Project

The objectives of the Project are:

- a. To construct the data base in the computer system so far as to preserve all the data and information to be necessary for agricultural and/or rural development as well as operation and management of those setting after development.
- b. To prepare the most appropriate framework for agricultural and rural development projects which will be formulated or planned, area and area, in each specific zone.
- c. To demonstrate the most sustainable development plan or the specific development package (project) which would be formulated with integration of the domestic resource development schemes, improvement or development program of the infrastructure and reinforcement program of the institutional supporting services.
- d. To improve development imbalance in the regions each other, and then, easily and satisfactorily manage the integrated agricultural and rural development projects

Please fully describe the relations between the Project and objectives, and how the Project will contribute to the accomplishment of the objectives

The rural economy is still under slow development in the most areas.. In fact, a large percent of the local inhabitant has no regular job, and accordingly, the per capita income in the rural area is as low at the subsistence level.

Considering the recent trend of economic growth in Indonesia, it is likely that the industry and service sectors whose activities are mainly concentrated in urban area, will lead further economic development. The above circumstances suggest that the economic and social disparity between the rural and urban areas will be more enlarged in the future in contradiction to one's development objectives conceived in the current REPELITA that is to say an equitable or well balanced development among the regions or socio-economic areas each others. Activation of rural economy, therefore, is keenly required to improve the said disparities as well.

For realizing an economic development in the rural area, clarification of all the constraints and/or problems which have appeared in the current rural development and then identification of an appropriate counter solution those development are the essential basis. These clarification/ identification will also be effective and helpful for execution and management of the development schemes even after completion of the agricultural and rural development.

(2) Outline of the Project

The proposed master plan study (the Project) aims at preparing the "Master Development Plan for the Integrated Agricultural and Rural Development Project (IARDP)" in the entire country, including an establishment of the specific criteria for selecting the subjected development areas as well as preparation of the framework for execution of the most sustainable development. The Project will be implemented with the following schedule and procedure:

1. Zoning of the specific areas for subjected development,
2. Clarification of the constraints and/or problems as well as assessment of the development potential of the domestic resources,
3. Identification of the development scheme(s) in each specific area.

4. Establishment of the development policy as well as framework of the development project,
5. Assessment of the environmental impacts
6. Optimization of the development scheme(s) based on the socio-economic circumstances and physical background as well as the regional needs,
7. Formulation of the master development plan for each specific area or region, including typical model and/or the alternatives of the integrated development program,
8. Preparation of the recommendation for effective implementation of the development scheme(s)

In line with the development objectives or target achievement envisaged in the regional development, IARDP would be programmed accordingly with particular emphasis on the agricultural based development schemes as well as development and/or improvement of the rural infrastructure. The essential components to be integrated into this development program would be as follows:

- a. Water resources development, including irrigation development scheme, rural water supply system, industrial water development, drainage improvement and flood protection schemes, and trans-basin scheme for meeting the regional water demand, etc.

In the water resource development particularly in the lower reaches of the basin areas, it shall pay attention to the sea water intrusion and water contamination in each river especially from the environmental conservation point of view. As for the irrigation development, an irrigation optimization shall be made with particular emphasis on an effective use of irrigation water. Energy saving might also be the essential objective on this regard.

- b. Land resources development, including reclamation of arable land, i.e. small holder transmigration settlement scheme, estate plantation scheme, etc. as well as development and/or conservation of the national park and forest reservation schemes, sight development for eco-tourism and wild-life tourism, etc.
- c. Agricultural development, including an increase and stabilization of food crop production, expansion of industrial crops, tree crops and agro-forestation schemes, etc. through development of agricultural infrastructure, including the on-farm development as well as reinforcement of the institutional supporting services.

Intensification and diversification of the crop production will be the essential basis on this program.

- d. Re-forestation schemes in the water shade area, i.e. mountain ranges and hilly areas in the upper reaches of the rivers. Development of forest product, such as rattan, timber logs, mushroom, etc. especially for promotion of the rural industrial development.
- e. Fishery and aqua-culture development schemes especially in the brackish water area and/or the coastal swamp areas.
- f. Industrial development, including processing of forestry product scheme, agro-based processing scheme, and other rural and/or light industrial development schemes.
- g. Rural infrastructure development, including road system, water supply system, rural electrification, agricultural training centre, health and sanitation service facilities, communication facilities, rural transportation, etc.
- h. Tourism and other commercial activities

There are some natural resources to be useful for the regional economic development for the rural industrialization. Beside, such resources as wild-lives, spectacular sight of beaches and primary tropical forest, etc. would also useful for eco-tourism or wild-life tourism development, etc.

i. Environmental and wild-life conservation schemes

In formulation of the development schemes, special consideration shall be paid to an environmental conservation at a sustainable basis.

(3) Location Plan

The proposed master plan study will be made covering the entire Indonesian territory

(4) Cost estimates

(please describe in detail all premisses in which the cost estimate are based)

The financial budget to be required for execution of the master planning of the Project is as follows:

Cost Items		Amount (US\$)
a. Field Investigation and Master Planning	135 M/M	4,295,000
b. Material and Equipment	L.S.	90,000
b. Fellowship	L.S.	430,000
Total		4,815,000

(eqv. to about Japanese Yen 529.65 million)

3. Other Assistance

(If there was any assistance in the past from JICA or other donor or request closely related to this Program will fill in below)

(i) Name of the donors

JICA

(ii) Title and Outline of the assistance

- Integrated Agricultural and Rural Development Projects
- JICA Project Type Technical Cooperation

(iii) Possibilities that the donor will extent the assistance requested

A possibility is not distinct at this moment.

(iv) In the case where other donors do not extend assistance, please describe in detail appropriateness and effective of the Program

The proposed master plan study is one of the comprehensive technical approach to the agricultural and rural development in the specific regions in Indonesia. It is highly expected that through this study, the most appropriate development strategy and technical proposal for properly approaching to integrated agricultural and rural development will be prepared with particular emphasis on a locality and development potential of each respective region. Therefore, continuous assistance of JICA is strongly requested to this study.

4. Priority

(Please describe priority of this Program among other Projects/Programs for which requests are made to Japan)

The Government has continuously paid utmost effort to the agricultural and rural economic development under implementation of the REPELITA program every stages. The Government strongly wishes that the proposed study will bring in the most useful and effective proposal "how to approach to the development "

5. Preparation:

(1) Site for execution of the Program (Please attach photographs and maps if it's possible)

(i) (a) Address of the site

The main working place will be arranged in the head office of Bureau of Planning of Secretariate General, Ministry of Agriculture in Jakarta

Provincial Agricultural Office will also provide the working spaces for the field investigation and data collection, etc.

(b) Total area of the site

The study will cover the entire Indonesian territory, that is to say whole 24 provinces.

(ii) Land Preparation

(a) To which extent has the land been expropriated for the Program ?

This is not the subject matter to this Program.

(b) When will the expropriation of the land be completed ?

(Please attach the laws and procedures concerning the expropriation of the land)

(2) Electricity, Water Supply, telephone, Drainage, and Other Facilities (Please describe the extent to which the above mentioned incidental facilities have been prepared)

All the facilities to be necessary for implementing the Project works have already been developed and sufficiently functioning in the subjected working areas, i.e. Jakarta, the capital cities in each province.

(3) Is there any information, statistics and data regarding geographical, geological, meteorological, oceanographical situations, etc. (If any please attach those information)

Over the years many resource studies had been made in each region in anticipation of substantial regional development. Under promotion of the national transmigration program, the Ministry of Transmigration has commissioned the RePPProT study, covering the present land use, vegetation, soils and general lithology/geology as well as broad investigation of the domestic resources in the entire country.

Other than the above, the Directorate General of Forest Protection and Nature Conservation (PHPA) together with the World Wild-life Fund (WWF) and the International Union for the Conservation of Nature and Natural Resources (IUCN) has prepared valuable descriptive document in the field of the conservation planning as well as for rational resource utilization, 1984.

6. Implementation Plan

(If any, please describe in detail the contents of such plan that will enable the Agency to handle the Program more effectively and efficiently)

(1) Phase I stage:

- a) Collection of relevant data and information, including meteo-hydrological observation record, soil and present land use, including vegetation, etc., investigation record on mining resources, present agricultural setting and production aspect, socio-economic setting and its activities, local culture, special wild-life or vegetation which have been subjected to conservation, regional needs, etc.
- b) Construction of the data base function using the computers
- c) Establishment of the specific criteria for zoning the entire country with particular attention to the natural environment, ecology, present socio-economic setting, local culture, existence of the domestic resources, etc. in the region areas.
- d) Based on the above relevant data and information, an specific zoning of the agricultural areas will be made, i.e. Coastal Swamp, Flood Plain and Back-swamp, P
- e) Clarification of the constraints and problems, and identification of the development needs, including the schemes for solving the existing constraints and problems.
- f) Preparation of the framework on the integrated agricultural and rural development project(s) through identification and optimization of the development schemes on the domestic resources.

(2) Phase II stage:

- g) Based on the results of the basic study stated above, the development master plan on the Integrated Agricultural and Rural Development Project will be formulated for each specific zone.

The Project will include the following schemes:

- Water resources development schemes
 - Land resources development schemes
 - Agricultural development schemes
 - Forestry development schemes
 - Fishery and aqua-culture development schemes
 - Industrial development schemes
 - Rural infrastructure development schemes
 - Tourism and other commercial activities
 - Environmental and wild-life conservation schemes
- h) Selection of the typical areas in each specific zone, and prepare the typical or model development program for response to an urgent need of the regions for proper approaching to the regional economic development and its early realization.
 - i) *Preparation of the recommendation how to approach to the subjected agricultural and rural development program.*

7. Operation and Management of the Program:

(1) The number of personnel

(In the case where necessary personnel are not yet accrued, when and how this is to be done)

The counterpart personnel are ready available from the Bureau of Planning of Secretariate General (BPSG) and the concerned Department of the Ministry of Agriculture and the concerned Ministries in each Province as well as the Kabupaten offices in the respective development areas to be selected..

(2) Financial Budget
(Please fill in the budget arrangement in the below Table)

	<u>The First Phase Operation</u>	
	1993/94	1994/95
- Supervising Ministry	MOA	MOA
- Implementation Agency	BPSG	BPSG
- Direct Budget of Program	Budget not secured yet	Budget to be secured

(In the case where additional budgetary Allocation is needed for the implementation of the Program, please answer the following question)

(i) has the additional budget been allocated ?

1. **Yes**

2. **No**

(ii) If not , when and how will be additional budget be allocated ?

BPSG/MOA will allocate necessary counter budget immediately after the technical aid assistance program is agreed upon between the GOJ and GOI. Thus, the budget will be ready at the commencement of the proposed program.

(3) Technical Ability of the Local Staff

(i) Please describe technical abilities of the local staff to be engaging in the Program

The counterpart personnel to be assigned have an experience on the respective technical field through previous engagement. However, further training will be required so far as to efficiently perform the agricultural and rural development, including the respective institutional setting up as well as operation and management of the project facilities in the future after materialization of the development schemes.

(ii) Please describe in detail the educational background of those staff who are in charge of operation and management of the Program

Most counterpart personnel will be of university graduate grade.

8. List of the related Projects

(please fill in below if there is a project executed by another donor country of the international organization in related areas)

- (1) Name of Donor:None
 - (2) Title of the Project/Program:.....None
 - (3) Outline of the Project/Program:.....None
 - (4) Type of the Assistance:.....None
 - (5) Project/Program Period:.....None
 - (6) Relation with this Project/Program:.....None
-

**TERMS OF REFERENCE
FOR
MASTER PLAN STUDY
ON
INTEGRATED AGRICULTURAL AND RURAL DEVELOPMENT
PROJECT
IN
INDONESIA**

I. THE PROJECT PROFILE

1.1 Name of the Project:

**MASTER PLAN STUDY FOR INTEGRATED AGRICULTURAL
DEVELOPMENT PROJECT IN INDONESIA**

1.2 Executing Agency:

**BUREAU OF PLANNING OF SECRETARIATE GENERAL (BPSG),
MINISTRY OF AGRICULTURE, THE GOVERNMENT OF THE
REPUBLIC OF INDONESIA**

1.3 Outline of the Project

1.3.1 Objectives

The objectives of the proposed master plan study (the Project) are:

- a. To construct the data base in the computer system so far as to preserve all the data and information to be necessary for agricultural and/or rural development as well as operation and management of those setting after development.
- b. To prepare the most appropriate framework for agricultural and rural development projects which will be formulated or planned, region and region, in each specific zone.
- c. To demonstrate the most sustainable development plan or the specific development package (project) which would be formulated with integration of the domestic resource development schemes, improvement of development program of the infrastructure and reinforcement program of the institutional supporting service function.
- d. To improve development imbalance in the regions each other, and then, easily and satisfactorily manage the integrated agricultural and rural development projects

1.3.2 Scope of the Project

The Project aims at preparing the "Master Development Plan for the Integrated Agricultural and Rural Development Project (IARDP)" in the entire country, including an establishment of the specific criteria for selecting the subjected development areas as well as preparation of the framework for execution of the most sustainable development. The Project will be implemented with the following schedule and procedure:

1. Zoning of the specific areas for subjected development,
2. Clarification of the constraints and/or problems as well as assessment of the development potential of the domestic resources,
3. Identification of the development scheme(s) in each specific area.
4. Establishment of the development policy as well as framework of the development works,
5. Assessment of the environmental impacts
6. Optimization of the development scheme(s) based on the socio-economic circumstances and physical background as well as the regional needs,
7. Formulation of the master development plan for each specific area or region, including typical model and/or the alternatives of the integrated development program,
8. Preparation of the recommendation for effective implementation of the development scheme(s)

In line with the development objectives or target achievement envisaged in the regional development, IARDP would be programmed accordingly with particular emphasis on the agricultural based development schemes as well as development and/or improvement of the rural infrastructure. The essential components to be integrated into this development program would be as follows:

- a. Water resources development, including irrigation development scheme, rural water supply system, industrial water development, drainage improvement and flood protection schemes, and trans-basin scheme for meeting the regional water demand, etc.

In the water resource development particularly in the lower reaches of the basin areas, it shall pay attention to the sea water intrusion and water contamination in each river especially from the environmental conservation point of view. As for the irrigation development, an irrigation optimization shall be made with particular emphasis on an effective use of irrigation water. Energy saving might also be the essential objective on this regard.

- b. Land resources development, including reclamation of arable land, i.e. small holder transmigration settlement scheme, estate plantation scheme, etc. as well as development and/or conservation of the national park and forest reservation schemes, sight development for eco-tourism and wild-life tourism, etc.
- c. Agricultural development, including an increase and stabilization of food crop production , expansion of industrial crops, tree crops and agro-forestation schemes, etc.through development of agricultural infrastructure, including the on-farm development as well as reinforcement of the institutional supporting services.

Intensification and diversification of the crop production will be the essential basis on this program.

- d. Re-forestation schemes in the water shade area, i.e. mountain ranges and hilly areas in the upper reaches of the rivers. Development of forest

product, such as rottan, timber logs, mushroom, etc. especially for promotion of the rural industrial development.

- e. Fishery and aqua-culture development schemes especially in the brackish water area and/or the coastal swamp areas.
- f. Industrial development, including processing of forestry product scheme, agro-based processing scheme, and other rural and/or light industrial development schemes.
- g. Rural infrastructure development, including road system, water supply system, rural electrification, agricultural training centre, health and sanitation service facilities, communication facilities, rural transportation, etc.
- h. Tourism and other commercial activities

There are some natural resources to be useful for the regional economic development for the rural industrialization. Beside, such resources as wild-lives, spectacular sight of beaches and primary tropical forest, etc. would also useful for eco-tourism or wild-life tourism development, etc.

- i. Environmental and wild-life conservation schemes

In formulation of the development schemes, special consideration shall be paid to an environmental conservation at a sustainable basis.

1.3.3 Project Benefit

It is expected that an implementation of the proposed Project will bring in an accrument of the following benefits and/or the impacts to both the national economy and the social welfare in the rural area.

- a) Increase in production of the food crops through improvement of the on-farm works as well as post-harvest service and marketing function
- b) Strengthening of the rural communities through growing up of self-reliant farmers in terms of both financial and vital force.
- c) Economic enhancement of the rural area through crop diversification and agro-based industrial development.
- d) Up-liftment of the living standard in the rural area through improvement of the social welfare as well as rural infrastructure
- e) Increase of employment opportunity
- f) Improvement of the socio-economic imbalance in the rural and urban area as well as region and region.

1.4 Institutional Framework

1.4.1 Liaison and Coordination

The Bureau of Planning of the Secretariate General (BPSG) of the Ministry of Agriculture will be the executing agency of the Project. The Project will be implemented by the Study Team dispatched by JICA and the counterpart staff to be assigned by BPSG. BPSG will be responsible for the study work and will provide logistic support to this project operation. Liaison and coordination with other

Ministries concerned including the local Government will be undertaken by BPSG. The supporting services at the rural sites will be provided by the respective representatives of each Provincial Agricultural Office (DIPERTA) in cooperation with the Planning Bureau of Province (BAPPEDA).

1.4.2 Connection with the Government Policy

In the present Government policy, the regional balanced development is one of the most important issue. Through integrated approach for regional development, the study will identify the present constraints of the rural area and establish the basic development approach. Those study results will become a useful tool for formulating the integrated rural development schemes aiming at economic enhancement of rural area, then, will contribute to mitigation of regional imbalance and poverty alleviation of farmers.

In addition, the study will consider the *crop diversification and strengthening of farmers' association*. Those matters are also important target of the Government in its present five-year national development plan (REPELITA-V).

1.5 Project Implementation Period

The Project will be implemented by two phases, i.e.

Phase I: Eight months preferably from July, 1994 to February, 1995

Phase II: Seven months preferably from June, 1995 to December, 1995

The proposed implementation schedule is as shown in Fig. xxxxx

II. TERMS OF REFERENCE FOR TECHNICAL SERVICES IN EXECUTION OF MASTER PLAN STUDY

2.1 Scope of the Services

The technical services expected in execution of the master Plan Study on Integrated Agricultural and Rural Development Project are as follows:

(1) Phase I stage:

a) Collection of relevant data and information, including:

- Government development policy at both national and regional levels
- Current development program
- meteo-hydrological observation record,
- location and topography
- soil
- present land use, including vegetation, etc.,
- present agricultural setting and production aspect, including farming practices
- present setting of post-harvest service function and marketing aspects
- existing and on-going development of agricultural infrastructure
- socio-economic setting and its activities,
- existing and on-going development of rural infrastructure
- local culture,
- institutional setting for the supporting services
- farmers organization and activities
- environmental constraints

- farmers organization and activities
 - environmental constraints
 - special wild-life or vegetation which have been subjected to conservation,
 - regional needs, etc.
- b) Construction of the data base function using the computers
- c) Establishment of the specific criteria for zoning the entire country with particular attention to the natural environment, ecology, present socio-economic setting, local culture, existence of the domestic resources, etc. in the region areas.
- d) Based on the above relevant data and information, an specific zoning of the agricultural areas will be made, i.e. Coastal Swamp, Flood Plain and Back-swamp, P
- e) Clarification of the constraints and problems, and identification of the development needs, including the schemes for solving the existing constraints and problems.
- f) Preparation of the framework on the integrated agricultural and rural development project(s) through identification and optimization of the development schemes on the domestic resources.
- (2) Phase II stage:
- g) Based on the results of the basic study stated above, the development master plan on the Integrated Agricultural and Rural Development Project will be formulated for each specific zone.

The Project will include the following schemes:

- Integrated water resources development schemes, i.e. improvement and/or development of irrigation facilities, drainage improvement, flood protection, rural water supply system including industrial water,
- Land resources development schemes, including reclamation and improvement of farm land, land for industrial development, land to be subject to urbanization, etc.,
- Agricultural development schemes, including crop intensification and diversification, development of the plantation estate in combination with the smallholder plantation, farm mechanization, modernization of the post-harvest service function and marketing function, etc.,
- Forestry development schemes, i.e. re-forestation, agro-forestation, etc.,
- Fishery and aqua-culture development schemes mostly of inland fisheries and aqua-culture in brackish water area,

- Industrial development schemes mostly of the agro-based industry, i.e. agro-processing, processing of forest products, small scale and light industries,
 - Rural infrastructure development schemes, including village and farm road network, rural water supply system, rural electrification, health control facilities, technical training centre, public buildings, etc.,
 - Tourism and other commercial activities using the domestic resources,
 - Environmental and wild-life conservation schemes in relation to the above development.
- h) Selection of the typical areas in each specific zone, and prepare the typical or model development program for response to an urgent need of the regions for proper approaching to the regional economic development and its early realization.
- i) Preparation of the recommendation how to approach to the subjected agricultural and rural development program.

2.2 Reports/Documents Required

The Study Team shall prepare and submit the progress reports listed below to the Ministry of Agriculture and JICA during the services.

1) **Inception Report:**

The Inception Report shall submit three (3) months after commencement of the services. The report will contain the primary judgment of the Consultant based on the observation obtained through the first three months services, and the action plan to proceed with the henceforth services and project execution.

2) **Bi-monthly Progress Report:**

The progress report will be prepared bi-month interval and submitted to the Ministry of Agriculture and JICA at the end of each second month. The report will present the progress of the services, observation, counter action, and outstanding problems, etc. The report also contains the working schedule for the next bi-month, including the training schedule for the counterpart staff.

3) **Guideline, Instruction, etc.**

reference to the master planning study as well as use for the training of counterpart staff.

4) Interim Report

The interim report will be prepared and submitted at the end of the phase I work. The report will contain all the progress of works which have been undertaken during the Phase I period, and the results of the respective study, i.e. specific zoning of the subjected development areas, clarification of the constraints and problems, assessment of the development potential of the domestic resources, identification of the development schemes, basic framework for the agricultural and rural development, including the development policy and strategy, etc.

5) Draft Final Report

The draft final report will be prepared and submitted to the Ministry of Agriculture at the end of the Phase II stage. The report practically the Master Development Plan on the Integrated Agricultural and Rural Development Project in the entire Country. The report will also be functioning as the guideline for execution of the regional agricultural and economic development program, representing the development policy to be applicable for the respective regions, development strategy and practical approach to the regional development, and the proposed development program and sustainable development schemes, etc.

6) Final Report

The final report will be prepared according to the comments to be given by the Ministries concerned of the Government of Indonesia. The report will then be submitted one month after receiving the comments.

All the above reports and documents will be prepared in English and submit 15 copies for the Ministry of Agriculture and 3 copies for JICA.

III EXPERTISE REQUIRED

The Government of Indonesia expects that the subjected master plan study will be carried out by JICA under the technical aid assistance program of the Government of Japan.

JICA will organize the Study Team that will be of the following experts and specialists. Total man-month to be required for the subjected study will be 135 M/M.

<u>Expertise</u>	<u>M/M Required</u>	
	<u>1st Phase</u>	<u>2nd Phase</u>
(1) Team Leader	6	6
(2) Planning Expert on Regional Development	6	6
(3) Agronomist	6	6
(4) Agro-Economist	6	6
(5) Specialist on Institutional Services	4	2
(6) Land Use Planner	5	3
(7) Livestock Expert	4	2
(8) Fishery Expert	4	2
(9) Agro-Industry Expert	4	6
(10) Post-Harvest/Marketing Specialist	3	3
(11) Planning Expert of Rural Infrastructure	4	6
(12) Irrigation Engineer	6	6
(13) Structural Engineer	2	3
(14) Meteo-Hydrologist	6	-
(15) System Engineer	5	-
(16) Sociologist	2	-
(17) Environmentalist	2	3

Total	75	60

The specialist to be assigned as the Team Leader and Co-leader must have a good knowledge on Indonesia and be able to work with the Ministries concerned either central and provincial level. He should also have a deep enough knowledge on the procedure of JICA technical aid assistance and be able to keep well coordination between the Ministries concerned and JICA.

Each specialist should be qualified with the professional experience or strong technical background in the respective technical field relating to the rural/agricultural development and/or the institutional setting up for the rural development supporting.

IV. GENERAL CONDITIONS

4.1 Location of Office

The Study Team will be based in Jakarta. The office space will be provided by MOA under its administrative management.

4.2 Language and Need for Translation

The Study Team will be responsible for provision of the translator(s) as required. The metric system will be used for weights and measures, and the language of the various documents will be based on the followings:

Day-to-day correspondence with the Ministries concerned will be in English. Indonesian version might be required for the letters forwarded to the local government and non-government agencies.

The reports will be made in English, but the instruction and/or guideline will be translated as may be required

4.3 Existing Report and Data

The Study Team shall, in the performance of his duties, take full account of the existing reports, documents, and other data relating to the project objectives and areas.

4.4 Equipment and Facilities to be Provided by the Consultant

The Study Team shall provide and maintain all facilities and equipment necessary for the efficient execution of the services, except for items to be provided and/or operated and maintained by MOA.

The Study Team may also propose additional goods and facilities which he considers to be necessary for the performance off the services.

V. UNDERTAKINGS OF MOA

5.1 Reports and Data

MOA shall, as its own expense, provide the relevant data and information for the Study Team in cooperation with the other government agencies concerned.

5.2 Accommodation and Office Space

The Study Team will make all necessary arrangement to organize their own accommodation.

The office space required for the Study Team in Jakarta, including necessary equipment and utilities, shall be provided by MOA.

5.3 Appointment of Officials

MOA in collaboration with the inter Ministries concerned will appoint officials, agents and representatives as may be necessary for effective implementation of the subjected technical assistance services.

5.4 Visas and Permits

MOA will assist the Study Team in obtaining necessary entry and exit visas, residence permits and travel documents required for their stay in Indonesia.

5.5 Expert Status

Foreign nationals of the Study Team will be given the status of experts performing the services for MOA during their stay in Indonesia. The Study Team shall ensure, however, that their personnel abide by all applicable laws and regulations of the Government of Indonesia and its authorities.

5.6 Taxes and Duties

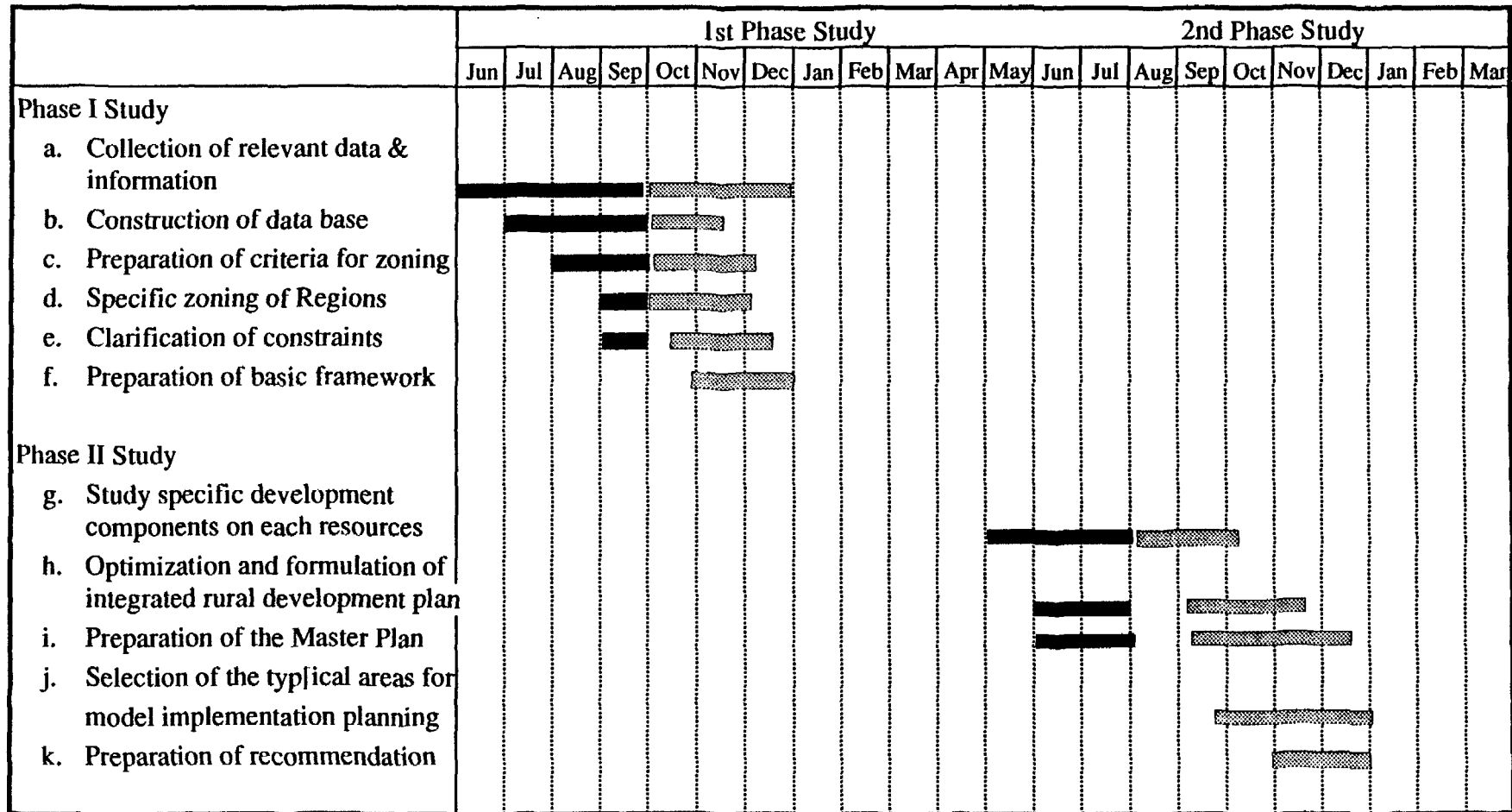
The Study Team shall fully exempt from the current Government regulations on taxes and other charges to be imposed on..

5.7 Cooperation and Counterpart Staff

MOA in collaboration with the inter Ministries concerned will issue to the officials, agents and representatives concerned all such instructions as may be necessary or appropriate for effective implementation of the services.

The Study Team shall make every effort to maintain and keep close contact with the Ministries and those representatives concerned in respect of the execution of the services.

**Implementation Schedule of the Master Plan Study on
Integrated Rural Development Projects in the Entire Country**



LEGEND : ■ Study and investigation at site
 ■ Home office works

**Proposed Assignment Schedule for Implementation of Master Plan Study on
Integrated Rural Development Project in the Entire Country**

Experts	1st Phase Study												2nd Phase Study												Man-Month Required	
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	1st Phase	2nd Phase		
Team Leader	■			■	■	■	■			■			■	■	■			■	■				6	6		
Regional Development Planner	■	■	■	■		■	■			■			■	■	■	■	■	■					6	6		
Agronomist	■	■	■	■		■	■			■			■	■	■	■	■	■					6	6		
Agro-Economist		■	■	■		■	■						■	■	■	■	■	■					6	6		
Specialist on Institutional Services			■	■		■	■						■	■		■	■	■					4	2		
Land Use Planner		■	■	■	■	■				■				■	■	■						■	5	3		
Livestock Expert		■	■	■	■	■							■	■		■	■	■					4	2		
Fishery Expert		■	■	■	■	■							■	■		■	■	■					4	2		
Agro-Industry Expert			■	■	■	■	■						■	■	■	■	■	■					4	6		
Post Harvest/Marketing Expert			■	■			■	■						■	■	■	■	■					3	3		
Expert on Rural Infrastructure			■	■	■	■	■						■	■	■	■	■	■	■				4	6		
Irrigation Engineer	■	■	■	■		■	■			■			■	■	■	■	■	■				■	6	6		
Structural Engineer				■			■	■						■	■		■	■	■				2	3		
Meteo-Hydrologist	■	■	■	■	■	■																	6	-		
System Engineer	■	■	■	■																			5	-		
Sociologist		■	■				■	■															2	-		
Environmentalist		■	■				■	■						■	■			■	■				2	3		
Total																							75	60		

LEGEND ■: Study and investigation at site
 ▨: Home office work